

A Fistful of TOWs 3



Miniature Wargame Rules
Modern Mechanized Warfare
1915–2015

by Ty Beard
and
Paul Minson

A Fistful of TOWs 3



Like Tanks?

Enjoy fighting mechanized battles in miniature? How about a game that's fun, fast playing, easy to learn, and still gives historical results? A Fistful of TOWs 3 is all that, and more. Oh, and did we mention the largest set of vehicle and gun data ever published in an individual rule set? Or the largest set of army lists ever printed in a single volume?

A Fistful of TOWs 3

A fast-playing, hard hitting set of miniatures rules for mechanized warfare. The rules are comprehensive, yet playable. And fast. Real fast. A typical game turn should average no more than 15 minutes. And it's designed to let you play big battles if you want, and use all those miniatures you have!

Game Features

Troop Quality Matters A Whole Lot. Troop quality affects every system in the game. Just like in the Real World.

Elegant Artillery Rules. Fast to resolve and no pre-plotting required. And you'll actually use artillery.

Simple Command Rules. Clean and simple, the command system accurately models mechanized command and control, without a bunch of leader stands cluttering up the playing surface.

Virtually Every Major Weapon System from the 1930s to present is covered, along with data for different time periods and conflicts.

Full Campaign and Scenario Generation System. Plus advice and guidance for do-it-yourself scenario designers. And a point system to help balance scenarios.

Rules to Determine Your Own Equipment Ratings. If you think the Merkava III's ratings aren't right, we give you the rules to fix them.

Flexibility. Designed for play with miniatures from 2mm up to 15mm in scale with no modifications. Because stands represent infantry platoons or 4-6 vehicles, the game comfortably handles battles from company/battalion-sized to brigade/regiment-sized and larger. And no specific basing requirements!

Unprecedented Historical Coverage. With a single game system and data set, you can fight engagements from diverse times and conflicts of your choosing—such as Poland in 1939, France in 1940, Kiev in 1941, Tunisia in 1942, Kursk in 1943, Bastogne in 1944, the Ruhr in 1945, the Tet Offensive in 1968, the Golan Heights in 1973, the Fulda Gap in 1984, Iraq in 1991 and 2003, and many, many more.



A Fistful of Games

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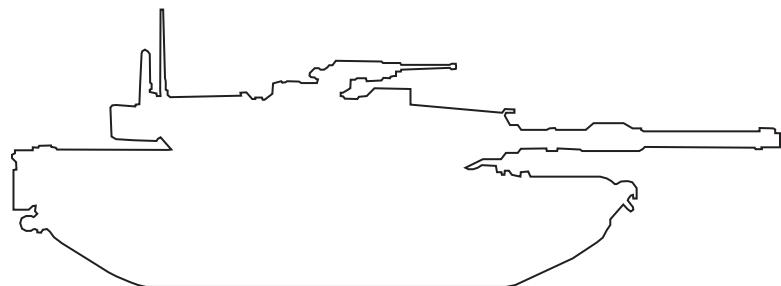
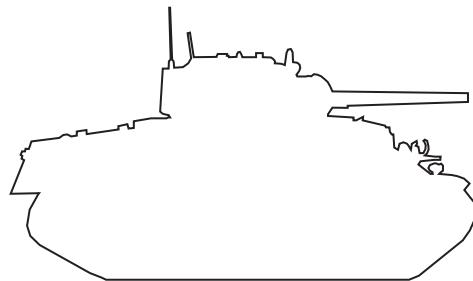
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A Fistful of TOWs 3

Miniature Wargame Rules

Modern Mechanized Warfare
1915–2015



By Ty Beard and Paul Minson

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Version 1.1

Dedication

With love,
to our wives *Torri* and *Johanna-Maria*,
who so gracefully put up with our obsession with this hobby.

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Courtesy of Jody Harmon

Check out Jody's fantastic military artwork at www.jodyharmon.com.

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The Guys at QRF—Outstanding 15mm Minis

Kent Minson

And dozens of friends spanning the globe who've played the various versions of the game and were kind enough to send their comments and suggestions....

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1: Miniature Wargaming

1.1 What Is Miniature Wargaming?

The miniatures wargaming hobby is nothing more than playing with toy soldiers. Of course, there are sophisticated rules to resolve combat, to simulate certain historical periods, and to portray and resolve the dilemmas that faced real commanders. But the bottom line is that we play with toy soldiers. And it's a lot of fun.

1.2 Periods

Most miniatures wargame rules focus on a particular period—i.e., the Napoleonic Wars, the Middle Ages, the far future, etc. *FFT3* focuses on mechanized combat, from 1916 to 2015. Other games based on *FFT3* are planned—*FFT:2060* will cover mechanized combat in the mid to late 21st century; *Railgun* will cover mechanized combat in the far future.

1.3 The Miniatures

FFT3 is designed for 1/285, 1/300 or 6mm scales (often called “micro” scales), but you can play it with any scale of miniatures. There are some nice 15mm and 10mm/N-Scale lines out there; give them a look, if you can get them. We currently play with N-Scale and 15mm and the spectacle is awesome. If you want to represent platoons with multiple vehicles, 1/600 scale miniatures are now available for vehicles and aircraft. But since most wargamers play with micro scale miniatures, we'll concentrate these notes on those scales.

The first choice you'll need to make is “which army?” For “modern”, i.e., post-World War II wargames, the best approach is to consider what kind of army you like to play. If you like hordes of troops, try the Russians. If you like high tech armies, try the Americans. The American Stryker Brigades are equipped entirely with wheeled vehicles and look great on the table. The West German Army is a highly mobile, aggressive army. The French Army is an exotic army with lots of cool looking vehicles. If you like high quality, steady troops, take the British. Plus, with the British you get lots of cool light vehicles. The US Marines are another high quality force. They're equipped with a variety of wheeled, tracked and amphibious vehicles. The French Foreign Legion is yet another

veteran force, largely equipped with light equipment. The choice is yours, but pick an army you'll like. (The "micro" scales are significantly less expensive than larger scales, which lets you buy numerous armies without taking out a second mortgage.)

For World War II, the same approach applies—ask yourself what kind of army you want to play. For hordes, try the Soviets or Americans. For quality, the Germans. Or for a wide variety of troops and vehicles, the British.

Then, go buy your miniatures. First, pick the scale—1/285 or 1/300 (also called 6 mm). The two are slightly different, so be careful mixing them. If you do mix them, try to keep all vehicles in the same scale and manufacturer. For instance, all of your M1s might be 1/285 GHQ models, while all of your BMP-2s might be 1/300 Heroics/Ros. If you're in the US, 1/285 is probably the best choice. In the UK, 1/300 is more popular. The Internet has made it possible for gamers to easily get either scale.

Regarding miniature quality, different lines vary tremendously. Some manufacturers vary tremendously within their line. However, note that a decent paint job can make a substandard model look pretty good. We recommend that you visit some of the websites that compare model lines.

In 1/285 scale, GHQ unquestionably has the most detail. Of course, they're also the most expensive. If you decide to go with GHQ, do take a look at their Combat Command packs. They contain 1-2 battalion's worth of troops at a more economical price. C-in-C, on the other hand, approaches GHQ in quality and is less expensive. And C-in-C is packaged with fewer miniatures per package, which helps minimize the purchase of redundant miniatures. We have both lines in my army, and like them both. Again, we recommend that you stick with the same manufacturer for a given type of vehicle, at least in the same unit. C-in-C also has more esoteric vehicles than GHQ, so the lines complement one another. Our only complaints with these lines are their limited selection (compared with 1/300 companies below) and the incredibly high price of helicopters and aircraft (\$9.95 for a single GHQ AH-64 Apache!). We also recommend that you try to get a look at particular C-in-C models if possible. Some are virtually indistinguishable from GHQ, while others are very bland compared to GHQ. Of course, the price is right regardless of the quality.

In 1/300, the major players are Irregular, Scotia and Heroics & Ros. They look roughly comparable in quality to us, though opinions vary. These lines have two significant advantages over 1/285 manufacturers like GHQ and C-in-C.

First, they cost around 1/3 the cost of GHQ miniatures. Even paying shipping costs, US customers can get them for less than half the price of GHQ. Second, these lines have far more variety available. You can find virtually any vehicle in existence today in 1/300. Of particular note is the fact that Scotia makes a very nice line of US and Soviet landing craft in 1/300.

Third, even if you prefer 1/285 scale, 1/300 lines can provide you with an inexpensive source of helicopters. A single GHQ AH-64 is \$9.95 in the US. A Heroics & Ros AH-64 is £2, or about \$4.20 delivered to the US. C-in-C splits

the difference; its AH-64 costs \$7. So you may want to mix the lines. Ty uses GHQ/C-in-C for main combat units and fills in the gaps with the 1/300 lines. He uses C-in-C and Heroics Ros helicopters almost exclusively. And sometimes, the 1/300 vehicles are the same size as GHQ — Navwar's BMP-2's for instance. And if you're building a "horde" army — Russians, Chinese, etc., 1/300 is much easier on your wallet. For that matter, if you're unsure about whether you really want to get into modern wargaming, 1/300 allows you to buy starter armies much more cheaply than 1/285.

You can also use 1/300 turrets with 1/285 hulls to make variants that are unavailable in 1/285 scale.

Also, you may want to plan your purchases so that you can model more than one army. For instance, if you're going to fight European wars in the 1970s through 1990s, you should buy plenty of Leopard 1s and M113s. Many European armies used these two vehicles, and you can optimize your vehicle purchases. The Leopard II is now in service with the Germans, Danes, Dutch, Belgians and Swedes. It's a good multi-purpose purchase as well.

If you want to do 15mm, you'll spend a great deal more money—though you'll have a much more impressive setup. Ty uses QRF for most of his 15mm vehicles. They offer economical "platoon packs" and have the greatest variety of any 15mm manufacturer. Peter Pig and Old Glory also make 15mm moderns. Variety is much more limited in 15mm, so you'll probably use multiple manufacturers.

15mm also gives you the opportunity to scrounge for toys. Matchbox, for instance, makes a very nice M4 Sherman that's just the right size. The Johnny Lightning M1 Abrams is exactly 1/100 scale and is a beautiful model. You can still find them on the web (and they might well go back into production). Any number of companies have Centurion and Chieftain toys. At \$1-\$2 each, these are great ways to stretch your gaming budget. Maito die cast helicopters and aircraft are perfect—and they come preainted! 1/144 scale plastic models are inexpensive sources of 15mm helicopters. They are smallish, but they look fine on the playing table. Ty also finds that he has to do a lot more substitution in 15mm—for instance, 15mm T-62s routinely stand in for T-72s or T-80s in his games.

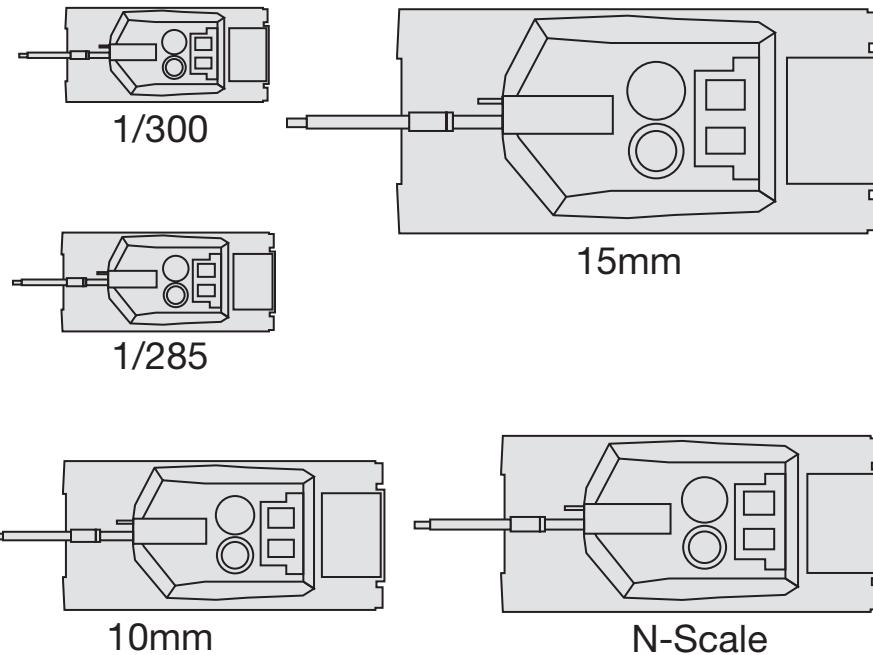
Plastic HO scale model railroad tanks can work well with 15mm. They are a bit large, but the key is to keep them in homogenous units. Roco tends to cost as much or more than QRF. But their earlier stuff is a little cheaper and is close enough in size. EKO and Roskopf are hard to find, but their early cold war stuff is priced very reasonably.

For 15mm buildings, consider using N-Scale model railroading buildings, supplemented with appropriately sized painted ceramic cottages that can be found at dollar stores. N-Scale is a bit small, but it looks fine, especially if you setup a large town. A number of manufacturers also make true 15mm buildings. HO scale buildings work okay with 15mm; just pick one scale for all the buildings on the table.

Skytrex makes a line of 1/200 scale miniatures that might be attractive to wargamers who want a bit more size.

Finally, there is N-Scale, which is currently produced by Minifigs USA and Minifigs UK. This is a new modern wargaming scale (both ROCO and GHQ make a few modern vehicles for model railroading). It offers the intriguing ability to use N-Scale model railroad terrain and vehicles, as well as 1:144 scale aircraft.

Here is a size comparison for the various scales:



Some miniature manufacturers are listed below. Asterisked manufacturers are companies that we believe are out of business, but their figures still turn up from time to time. Check the FFT3 website for links or Google them:

1/600 Scale Miniatures

Europe:

Oddzial Osmy

UK:

Fighting 15s

Tumbling Dice

USA:

PicoArmor

1/285, 1/300 and 6mm Scale Miniatures

UK:

Adler Miniatures

Armstrong Miniatures

Heroics & Ros

Irregular Miniatures, Ltd.

Pewtercraft*
Scotia/Grendel
Simply 6 (Buildings/Terrain)
Skytrex, Ltd.
Timecast (Buildings/Terrain)

USA:
C-in-C Miniatures
GHQ Micro Armor
In Service Miniatures*
JR Miniatures (Buildings/Terrain)
Main Force (Regal-Noble)

10mm/1:200 Scale Miniatures

Skytrex, Ltd.

N-Scale Miniatures

USA:
Minifigs USA
UK:
Miniature Figurines Limited

15mm Scale Miniatures

New Zealand:
Battlefront Miniatures, Ltd.

UK:
Peter Pig
QRF/Quick Reaction Force

USA:
Old Glory Miniatures
Quality Castings (available from OldGlory15s.com)
Edwards and Company (formerly Yucca)

1.4 Painting the Miniatures

The easiest approach is to get a spray can of olive drab, forest green or desert tan and spray away. When you're just starting out, this is a great way to get a playable army quickly. If you do this, you might want to touch up the vehicles later on. First, drybrush the tanks with a lighter shade of the base color. This works best if you chose a darker base color. Drybrushing is taking a flat tipped paintbrush and putting a little paint on the end. Wipe off most of the paint and lightly draw it across your thumb. If you can only see your fingerprints, then you have the right amount of paint. Now do it to your vehicle and see how it emphasizes the raised details on the vehicle. Second, pick out grilles and suchlike with flat black. If paint has flaked off your vehicle, touch it up with flat black. An airbrush is a great help with 15mm vehicles.

Stain Painting is another fast method for painting micro scale miniatures. This works best on highly detailed miniatures (like those from GHQ). It does not work so well on vehicles with large, undetailed areas (like some C-in-C miniatures). First spray the vehicles in a very light flat or satin tan color (Krylon Almond works well). Let thoroughly dry, for at least a day. Then prepare a wash by diluting a medium-to-dark green acrylic paint with water, about 2:3 ratio of water to paint. We've found Delta Ceramcoat Pine Green works well. Apply liberally all over the vehicle and allow to dry. The paint will collect in the recesses and corners, leaving raised details lighter. If desired, additional camouflage colors can be applied. Prepare them as washes, at 1:2 or 1:3 ratio of water to paint. Rather than cover the whole vehicle though, just dab the wash onto the area you wish to have the color. Brown and black or grey are typical camo colors. Delta Ceramcoat Spice Brown, Brown Iron Oxide, and Autumn Brown are good colors, and Delta Ceramcoat Charcoal does well for black and dark grey.

For larger scales, Ty uses an airbrush. He prefers a double action airbrush, but a cheap single action airbrush also works well. An airbrush lays a very fine layer of paint and covers superbly, which makes it perfect for 15mm and larger models. He recommends that you invest in a compressor, as small propellant cans get very expensive.

Of course, there are far more sophisticated miniature painting techniques and entire books written on the subject. Get one and read it, but remember that the purpose of the exercise is to play wargames. Paint some up and get to shooting!

You also need to identify your vehicles. Again, this is a matter of choice. Ty puts a colored dot on each vehicle, corresponding to that vehicle's company (or battalion for Russians). Paul writes a small number on the back of the base. Another solution is to put stick-on colored dots on the bottom of the vehicle. Some folks apply numbered decals to their models, but that's too much trouble for us.

Many gamers mount vehicles on rectangular bases (width depending on vehicle, but $\frac{3}{4}$ " is common; length 1"). The advantage is that the vehicles are better protected when stored and played with. Ty doesn't base his vehicles, but he does have good storage trays. Paul bases his 1:285 vehicles and his N-scale vehicles. You should definitely mount your infantry. A US penny (or similar sized coin), painted or flocked the color of your terrain makes a nice infantry base. Balsa, basswood, plasticard, or cardboard squares or rectangles are also popular. Be sure to mark them so that they can be identified.

To store your miniatures, you can use cases specifically made for miniatures, or you can use commercial storage cases. For his micro scale miniatures, Ty use flat gift boxes designed to hold ties. He puts a layer of foam in the bottom and cuts boxes out of a second piece of foam. He places that piece on top and sticks the vehicles in it. Cheap, but effective. Paul puts bits of business card magnet on the bottom of his bases, then stores the miniatures in multidrawer tool chests, where the magnets adhere the miniatures to the drawer bottoms. For transport, he uses cheap wooden paper storage boxes you can get at Michaels or Hobby lobby for about \$10 USD, with a single galvanized steel shingle glued in the bottom for the magnets to stick to. Not so cheap, but takes less precious time to prepare!

1.5 Terrain

Entire volumes have been written about wargaming terrain. One of the neatest and easiest approaches are any of the hexagon-based lines. Ty bought a green flocked battlemat and a basic terrain system and presto, instant terrain. If you're just getting started, the kitchen table is fine with a few books or other objects for hills. Other manufacturers make modular terrain systems — check them out. Many folks make their own terrain, using styrofoam or ceiling tiles. Terrain can be costly, but the effect is well worth it.

We use gray, irregularly shaped felt pieces for the towns. We put buildings on them, but the buildings are for effect only. Anything in the felt is in the town. This is a very playable approach (and you can move buildings around for convenience).

Here's a description of a cheap desert terrain system:

Cheap Portable Desert Terrain

Materials:

- For the ground, 3 yards of tan vinyl fabric—\$14.00
- For hills, 3/4" thick 4' x 8' foam insulation board (blue or pink)—\$6.00
- Cheap battery powered foam cutter—\$7.00
- 4 D cell batteries—\$5.00
- Latex paint mixed to match fabric—5.00
- Brown and dark tan spray paint—\$5.00
- 1/2 yard Blue vinyl for rivers, streams and lakes—\$5.00
- Total cost: \$47.00 for 4 x 9 surface

Procedure

- Use the foam cutter to cut the hills. Glue two pieces of insulation together for double-thick hills. Paint the hills with the latex paint and let dry.
- Lightly mist the tan vinyl fabric and painted hills with brown and dark tan spray paint.
- Cut river, ocean and marsh segments from blue vinyl.

Comments

- Time spent buying materials (went to 2 hardware stores and 2 fabric stores): 2 hrs
- Time spent cutting hills: 2 hrs
- Time spent painting hills: 1 hr
- Time spent spraying hills and ground: 1 hr

Total expenditure: 6 hrs, \$47.00 for a 4'x9' desert battlefield.

1.6 A Few Good References

On the World Wide Web, check out The Miniatures Page at <http://www.theminaturespage.com/>, the basic miniatures reference source on the net. Also, the official *Fistful of TOWs* 3 website at www.fft3.com is a good place for variants, new orders of battle, etc. and links to various useful sites. Finally, the *Fistful of TOWs* email group at <http://groups.yahoo.com/group/Fistful-of-TOWs/> is very active and has a number of useful files, including the latest errata, explanations of how tank ratings were derived, scenarios, etc.

An excellent and inexpensive reference book on modern military vehicles is *Collins/Jane's Modern Tanks*, by Christopher Foss, Harper Collins, 1995, \$5.95, ISBN: 0004708482. It's packed with information on modern tanks and light vehicles. At 4.6" x 3.2" x 0.6", it's small enough to carry in your pocket, should the need arise. A more expensive and more comprehensive alternative is the fourth edition of *Jane's Tank Recognition Guide*, by Christopher Foss, Harper Collins, 2006, \$24.95, ISBN: 0007183267. This has descriptions, 500 color photos, and data for about 200 tanks and armored vehicles. Very nice. If you like to wargame in the Glory Days of the Central Front—the 1980s—there's a huge variety of reference books available in used bookstores. Beware, though, as these books were often very inaccurate about Soviet equipment. In particular, Soviet tank nomenclature was highly problematic, with models being confused, conflated and mis-reported. Other wargames and supplements covering that period may contain useful information such as orders of battle.¹ But they tend to be highly inaccurate regarding Soviet equipment and somewhat inaccurate regarding Western equipment.² Finally, old copies of the annual *IHS Military Balance* series can be very helpful in determining what equipment various nations had. Unfortunately, these books don't have much unit organization data. But they will tell you how many of each AFV and artillery piece each nation had. For instance, the 1977-78 edition tells us that Iran had 760 Chieftains, 400 M-47/48, 460 M60A1s and 250 Scorpion light tanks, along with 2000 APCs including M113, BTR-40/50/60/152, and that they used TOW, Dragon, SS-11, SS-12 and ENTAC antitank missiles. These books also cover minor nations that would probably never be covered in mainstream publications. Finally, for definitive information on Soviet organization and doctrine, see the 3-volume US Army field manual series 100-2, "The Soviet Army."

For World War II, a good inexpensive reference is from the Vital Guide series, called *World War II Tanks and AFVs*, by Jonathan Sutherland, The Crowood Press, 2005, \$12.95, ISBN: 1840373814. If you're willing to spend more, to seek out out-of-print books, or to focus on one army, there are many other references. Please see the bibliography for possibilities.

1 We particularly recommend *TacForce* by Game Designers Workshop for its detailed and extensive TO&E charts for US and Soviet organizations in the 1970s.

2 Since 2001 (when *A Fistful of TOWs* 2 was written), a tremendous amount of new information has become available regarding modern tank protection levels and weapon penetration. We have used this new information extensively and have completely re-rated every vehicle. As a result, dedicated NATO Central Front grognards will find many surprises in the FFT3 vehicle data. It turns out that many widely-held assumptions about Soviet and Western tanks were wrong; in some cases badly wrong.

1.7 Playing Your First Game

Don't use the optional rules for your first few games. Concentrate on learning the mechanics. *Fistful of TOWs 3* is fast and playable — we promise. After you've played a couple of games, incorporate the optional rules you wish to use.

1.8 Fistful of TOWs 3 Tactical Primer

Here are some general wargaming notes that we've compiled after designing, refereeing, and playing *FFT3* for the last decade.

Overwatch

Use stands on overwatch to pin enemy forces. If you're advancing against enemy positions, cover your advancing forces with stands on overwatch. Do this especially if the enemy has a reserve force that can move in on your flank. And pick appropriate overwatch stands. If you're worried about enemy light vehicles, then missile armed stands on overwatch are great. If you're worried about enemy main battle tanks, be sure that your overwatch stands can destroy the enemy tanks. If you're worried about enemy infantry, then your own infantry or infantry fighting vehicles make good overwatch stands.

Likewise, if the enemy doesn't have forces on overwatch, encircle him in your Movement Phase and get flank shots on his vehicles. Of course, you need to encircle him in such a way that if he pivots to face one encircling stand, another stand will be able to shoot him in the flank. So be sure to encircle him from both sides. Otherwise, he'll just pivot to face you.

Infantry

Infantry tactics are the most demanding tactics in *FFT3*. But your infantry *must* be used properly; meaning that you can't leave them out in the open—they'll be quickly slaughtered. If they aren't in their infantry carriers, they should always dig in or be in some form of covering terrain—forest, woods, town, etc. Being behind a ridgeline will help against direct fire, but not against artillery, so it's better to dig in on the hill than rely on the ridgeline for cover. Unprotected infantry is very vulnerable to artillery, which gives you an additional incentive to keep them out of sight and/or dug in.

Infantry weapons are short-ranged and their anti-tank weapons are best used in flank shots. We like to put infantry *inside* the terrain (rather than on the edge of the terrain), but close enough to the edge so that enemy forces will have to engage them in close combat if those enemy stands enter the terrain. If the enemy doesn't try to flush them out, then our infantry will move to the edge of the terrain and take a few flank shots with their LAWs and MAWs. The same trick works if you put your infantry behind the slope of a hill, but within 1 inch of the slope. Any enemy stand coming over the hill is immediately in close combat with your infantry.

And note that attacking enemy infantry in close combat can be a very expensive proposition, especially for vehicles. Remember that in close combat, infan-

try gets to make flank shots on enemy vehicles if no enemy infantry is also engaged in the close combat. And since most infantry have both LAWs and MAWs, this means that each infantry stand could kill two enemy vehicles per round of close combat. So always use your infantry to go after enemy infantry in towns. A player once lost an entire battalion of M1A1s in an assault on a town held by enemy infantry.³ Ouch. And remember that the cannon on infantry fighting vehicles can really devastate enemy infantry; be sure to make good use of them. In particular, use fire from your infantry fighting vehicles and any artillery you can spare to suppress enemy infantry while you assault them.

There are two basic tactics you can use for conducting an infantry assault on a terrain objective, depending on whether the defending infantry is spotted or unspotted. If the defenders are already spotted, then at the start of your turn hit them with any artillery you have available to suppress as many defender stands as possible. Then move your infantry into effective range and fire with them and any direct fire support weapons, again to suppress as much of the enemy as possible and to cause losses. Next turn paste them with artillery again, using fireblows, and move your infantry into close combat for the assault. If the defenders are unspotted when you begin your attack (and usually sporting overwatch markers), then again first hit them with artillery, although it will be less effective. Then move your infantry into range and give them hold fire markers (in case the enemy becomes spotted before his Fire Phase), while any support weapons take overwatch markers. Next turn, if they've become spotted then use the spotted target method above. If they've remained unspotted, dump artillery on their heads again, and have one-third to one-half of your infantry stands take overwatch markers while the rest advance into close combat. The task of your overwatching infantry stands is to suppress any enemy infantry which fire overwatch at your advancing infantry and become spotted.

Rather than assault an enemy-held town, you may prefer to bypass it. If the defenders are not at the edge of the town, then use infantry to screen it by dismounting infantry within 1" of the town edge. Then any enemy unit moving to the town edge is immediately in close combat with your infantry, and your infantry will get to fire first. Artillery can also screen a town if you can spare the fire units and an observer, by maintaining a sustained barrage at the edge of the town.

Armor

The Main Battle Tank (MBT) is the Queen of Battle in *FFT3*. MBT's are fast, well-armed and well-protected. But remember that they are all vulnerable to flank attacks. And they make lousy choices to close-assault enemy infantry. So use them appropriately.

Modern MBTs (M1, Leopard 2, Challenger, T-80, etc.) are well protected and tough targets for missiles from the front. They're more threatened by other MBTs. So be sure to go after the enemy tanks. Also, if you're attacking, try to commit as many of your stands as possible at the same time. Nothing is sadder than to watch a player commit his forces piecemeal and have them destroyed by enemy forces in detail. This, by the way, is the real secret to winning with

³ In a case of life imitating art, several years after this event the Russians had a similar experience in real life in Chechnya that undeservedly sullied the reputation of the T-80.

Russian armies. Try to hit your opponent with overwhelming numbers *in the same turn*. Modern MBTs are also quite fast. Reserves can be useful to flank enemy forces that are attacking one of your positions. If the enemy forces turn to face your reserves, your other stands get flank shots. If they don't turn to face your reserves, your reserves get flank shots. Whatever you do, treat your modern MBTs like gold, especially if you're fighting hordes.

The main problem with modern MBTs is that they're very expensive. An M1 costs over one and a half times as much as a T-72. So if you're the "hordes," go to great lengths to kill enemy MBTs. If you can trade one T-72 for one M1, you'll win. Conversely, if you're the "Thin Blue Line", be sure to maneuver and avoid a slugfest with superior enemy numbers. Use shoot-and-scoot, overwatch and hold fire. Try to force your opponent to commit piecemeal. Be willing to give up ground if you have to. Maneuver, maneuver, maneuver. If all you do is dig in, he will likely overrun you—and you'll deserve the beating you get. Also remember to concentrate your fire on a single battalion (or company) at a time. After you kill 2/3, it may well rout.

Older MBTs and light vehicles are very vulnerable to antitank missiles, so be careful where you site them. In the attack, try to concentrate and destroy enemy units quickly. If possible, avoid frontal assaults against enemy antitank vehicles. And try to use your artillery to run the enemy missile stands off (see below).

Missile vehicles may have their movement halved or reduced to zero if they plan to fire in a turn. This makes them most useful in defensive roles or in slugfests. In the attack, use them as overwatch elements, which doesn't require advancing with the main force. If attacking enemy forces that possess lots of missile stands, try to suppress the enemy stands with artillery fire, or try to force your opponent to move the missile stands. If they move, they may not be able to fire. Also, many Western armies have soft vehicles armed with missiles. Artillery is particularly effective against these stands, so use the artillery technique described below.

Artillery

Your artillery will help you tremendously if you use it right. Heck, it helps a lot even if you don't use it right. You can use it for two primary functions: causing casualties, and suppressing enemy units. Causing significant casualties requires massed artillery fire, but you can suppress a stand with a single fire unit, so as a practical matter you'll use artillery more frequently for suppression. Besides shooting poorly, enemy units suppressed by artillery fire have reduced movement. Use this to interdict and harass enemy units as they move.

In the attack, use your artillery to suppress enemy defenders. If you get your recon stands into good observation positions, they can spot for artillery fire to hinder the movement of reserves and prevent shifting of enemy defenders to the point of your attack. Employ sustained barrages on your flanks to seal off enemy counterattacks. And never forget smoke, but make sure you know whether you are facing thermal sights, which can see through smoke.

In the defense, artillery can wear down advancing enemy forces. But remember that artillery wears the enemy down slowly; it's not usually decisive in one turn. Just as important, artillery can break up an attack and disrupt movement and coordination of the attackers.

Artillery can also deliver smoke. Smoke is great if nobody has thermal sights, and even better if you have thermal sights and the enemy doesn't. You can shoot through the smoke and he can't. Remember this if *you* are the one without thermal sights. A Russian tank regiment can get wiped out if the Russian player lands a smoke barrage on top of American M1s on the Russians' flank. Sad. Incendiary smoke makes a better choice for smoke if the enemy has thermal sights, but it's still not perfect.

A particularly nasty tactic if you're the attacker and have shorter ranged weapons is to place the smoke so that when you come out of it, you're already at your effective range.

1.9 Formatting

Words that are **boldfaced** are either defined terms (i.e., terms defined in the glossary) or references to rule sections. Typically, defined terms will only be boldfaced once in a given chapter. Boldfacing a defined term is a stylistic choice and is not done in every case.

Words that are *italicized* are done so for emphasis.

1.10 Chapter Organization

Many chapters begin with an **executive summary**. The executive summary contains a short summary of the most important rules and concepts in that chapter. The executive summary is designed to (a) familiarize the reader with a chapter; and (b) to help jog a player's memory when looking up a rule. Because of its abbreviated format, an executive summary is necessarily incomplete. Therefore, in the event of an apparent conflict between the executive summary and the rules in a chapter as a whole, the rules take precedence.

1.11 Resolving Ambiguities, Contradictions and Omissions

1.11.1 General

Wargame rules are complex. And while we have gone to great lengths to make them as clear as possible, sometimes we fail.

A long-standing wargaming tradition is to "dice off" when there is a disagreement. While that may work for some folks, we believe that it can incentivize players to find ambiguities where none exist. This section provides an alternative methodology that we think works better (and that works well in other games).

1.11.2 Initial Approach

Anytime everyone agrees on a solution, *use that solution for the current game*. However, write it down so that there's no confusion.

If that fails, *read the actual rule*, including examples and footnotes. Many times, wargamers will spend far more time arguing about a rule than they would spend actually looking it up.

Be sure to check any posted errata. Ideally, write the appropriate corrections into your copy of the rules (or at least a notation that the errata contains a correction).

If it turns out that there really is a problem, decide what kind of problem you're dealing with. If a hypothetical *reasonable* wargamer, with no stakes in the outcome of the current game would agree that a rule:

- Is unclear or capable of being interpreted different ways, then the rule is *ambiguous*.
- Is clear but contradicts another clear rule, then the rule is *contradictory*.
- Does not exist to cover a situation in the current game, then you have a *missing rule*.

Note the use of the term “reasonable”. Almost anything is arguable. But not everything is reasonable.

Each type of problem requires a different approach to solve. However, certain global principles apply to all types of problems.

1.11.3 Global Principles

The following global principles apply to resolving rules problems:

- Look to the following sources to determine a word's definition (in order of precedence):
 - Definitions in the glossary.
 - Definitions in the text of the rules
 - Definitions as commonly used in the wargame hobby.
 - Definitions that appear in colloquial US English.
- Always prefer the solution that is consistent with other rules and examples. Ideally, no solution should invalidate or be inconsistent with other rules and examples.
- If there are several equally *reasonable* interpretations, prefer the one that is simplest, fastest and least frustrating for the players.

1.11.4 Ambiguous Rules

Use the following sources, in order of precedence, to resolve ambiguities:

- Examples in the rules section. Examples exist to clarify complex rules, so use them.
- Examples in the chapter. Often, an example in one section will use rules from other sections.
- Examples in any other chapter. Often, an example in one section will use rules from other chapters.
- Executive summary in the chapter.
- Footnotes in the rules section.
- Reference charts.
- Posted comments from the designers *after* the rules were published (time permitting).
- Designers notes.
- Posted comments from the designers *before* the rules were published (time permitting).

If all else fails, ask yourself “what was the designers’ intent?”

1.11.5 Contradictory Rules

Use the following approach to resolve contradictory rules, *in order of precedence*:

- Prefer the solution that is consistent with other rules.
- Prefer the solution that is consistent with examples.
- Prefer the solution that is consistent with the reference charts.

1.11.6 Omitted Rules

Use the following approach to create *omitted rules*:

- Prefer the solution that is consistent with other rules.
- Prefer the solution that is easiest to implement.
- Prefer the solution that uses existing mechanics.
- Prefer the solution that requires the fewest special rules.

1.11.7 After the Game

After the game, submit rules questions to the designers. We attempt to be very accessible and most rules questions will be answered in a matter of days.

If you're playing a game that has less-responsive designers, keep a notebook of rules issues. Before playing the next game, agree to a solution and *write it down*. Until a more authoritative solution appears, use this in all future games.⁴

It's always a good idea to review the latest errata before a game and be sure that everyone is aware of its contents.

1.12 Glossary

The following defined terms are used in FFT3. They will *not* generally be capitalized in the text. Please note that these terms may have somewhat different meanings in the game than they do in the Real World, so players should familiarize themselves with them:

- **Armored** — the stand has both a front and flank armor value that is not 's' (i.e., the vehicle is not soft).
- **Carriers** are any vehicles with a Cap rating greater than zero (i.e., rating is not "-"). Carriers can include trucks, jeeps, armored personnel carriers, mechanized infantry fighting vehicles, landing craft and helicopters.
- **CITV** — Commander's Independent Thermal Viewer. A second thermal sight for the commander. He can acquire new targets while the tank is shooting at a current target.
- **Combat Unit**—The basic unit of the game. Usually companies for Western militaries, and battalions for Russian/Third World militaries. The term "troop" or "squadron" is used by some armies for company-sized units.
- **Debark** means to drop a stand off. The debarking stand is placed adjacent to and in contact with the **carrier**.
- **Die Rolls**. The rules often say "roll 4+" or "roll 2+", etc. This means you must roll the stated number or higher on a six sided die.
- **Embark** means to pick a stand up with a carrier to transport it. The stand is transported by the **carrier**.
- **Flank arc** is any part of a vehicle not covered by its front arc.
- **Formation or Combat Formation**—Higher echelon units identified in the Army Lists. Generally, battalions and battalion-equivalents are Formations for Western militaries and regiments/brigades are Formations for Russian/Third World militaries. Note that the term "regiment" or "squadron" is occasionally used by Western armies to designate battalion-sized Formations.

⁴ In the days of *Warhammer 40K second edition*, the members of the East Texas Wargame Club assembled a list of rules interpretations that were voted on by the WH40K players and were binding on all club games (unless the players agreed otherwise in advance). This list ultimately exceeded 20 pages in length, but there were very few arguments.

- **Front arc** is the front 120 degrees of a vehicle's front (60 degrees on either side of straight ahead). That's where the armor is the thickest.
- **Gun-Armed**—In *FFT3*, a stand is “gun-armed” if it mounts guns larger than machineguns.
- **HEAP or HEAT** warheads are high explosive warheads that use a shaped charge to penetrate a tank's armor. Most commonly found on missiles and LAWs, though they were used in tank gun rounds in the 1960s and 1970s. But in the late 1970s, a new generation of advanced armors was designed to defeat HEAT/HEAP rounds.
- **Infantry stands** are groups of armed men. Infantry stands are listed in the Infantry Data sections.
- **LAW** — Light Antitank Weapons carried by infantry.
- **Line of Sight** — an imaginary line drawn from one stand to the other. If the line isn't blocked, the stands have a line of sight on each other.
- **MAW** — Medium Antitank Weapons carried by infantry. Longer ranged and usually heavier than LAWs.
- **Overwatch** is the tactic of waiting for the enemy, then shooting him as he moves.
- **Rear arc** is the rear 120 degrees of a vehicle's rear (60 degrees on either side of straight behind). A few vehicles have weapons that can only fire in this arc.
- **Shoot-and-Scoot** is the tactic of firing at a target, then running away before it can fire back.
- **Thermal Sights** are night vision sights that also allow you to see through smoke in the daytime.
- **A Towed Weapon** is a towed weapon stand that represents several towed weapons and their crews. Towed weapons are listed in the Artillery data sections.
- **A Transported Stand** is a stand that is **embarked** on a **carrier**.
- **A Vehicle** is any vehicle stand and represents 4-6 vehicles. Vehicle stands are listed in the Vehicle Data sections and the Artillery Data sections.

2: Introduction

2.1 What You Need To Play

To play FFT3, you need a handful of six sided dice, tape measure, paper, pencils, miniatures and a place to play. You should also have a photocopy of the Army Roster and a Quick Reference Sheet. Finally, you'll need the markers described in Chapter 4 or the counters provided with the rules.

2.2 Scale

The standard scale of *FFT3* is one inch equals 100 meters. For large battles, players may wish to use centimeters instead of inches, so that one centimeter equals 100 meters (equivalent to one inch equals approximately 250 meters, but by using centimeters no numbers in the game need converting). Similarly, for early periods or for scenarios with lots of infantry, players may wish to adopt a 1" = 50 meters scale—simply double all movement distances, and ranges.

One vehicle represents four to six vehicles (occasionally three), and a stand of infantry represents a platoon. If you like, you can play *FFT3* at 1:1 scale with very few modifications (see Chapter 26).

One turn represents about 12 minutes (you can use $5+2d6$ if you want variable length turns). If you use variable length turns, reinforcements should enter at a certain *time* rather than on a certain turn. That will make reinforcements less reliable, which we think is more accurate.

When the rules require that distances (such as ranges) or movement points be halved, do not round the results. When other numbers are halved, round up to the next whole number unless stated otherwise. This game uses only six sided dice.

2.3 Measuring

All measuring for ranges is done from any part of one stand to any part of another stand, as chosen by the firing player, similar to line of sight (LOS) measurements (see Rule 7.2 for LOS measuring).

Players may not measure distances before they declare fire. They may never check whether their shot will hit the front or flank of a target until all attacks are declared against that target.⁵

If a player declares an attack, measures the range, and determines that the target is out of range, the attack is considered made (and ammunition expended), but it has no effect on the target.

2.4 Optional Rules

Optional rules are additional rules that players (by mutual agreement before the scenario begins) can add. They typically appear at the end of each section and are marked as such. Optional rules usually provide a greater level of detail and different flavor to the game, at a higher cost in playing time. Since the primary design goal of FFT3 was to create a fast-playing set of rules, a number of rules were rejected merely because they slowed the game down “too much” — in our opinion. Nonetheless, some rules were just too good to leave out entirely. Plus, many were suggested by very thoughtful players who really liked them. So the solution was to implement them as optional rules. But please bear in mind that using optional rules will tend to slow the game down somewhat. It’s your decision as to whether the tradeoff is worth it.

⁵ Oh sure, we have ballistic computers and such stuff, but allowing players to pre-measure slows the game to a crawl. If it makes you feel better, blame it on fog of war, or something similar....

3: Sequence of Play

3.1 Executive Summary

There are two player turns in each game turn. Each player turn is divided into segments. In a player turn, a player (1) moves his stands; (2) conducts indirect fire; and (3) conducts direct fire (anti-vehicle fire, anti-infantry fire, and direct artillery fire).

3.2 General

Two player turns comprise each game turn. A game lasts a number of game turns as determined by the referee. A good limit is ten turns for a game that will last two and a half hours.

3.3 Sequence of Play

Each player turn is composed of a series of phases as detailed below.

General Overview of a Game Turn

Attacking Player Turn

1. Attacker places his reinforcements.
2. Attacker resolves airstrikes and area fire.
3. Attacker moves.
4. Attacker resolves direct fire.

Defending Player Turn

5. Defender places his reinforcements.
6. Defender resolves airstrikes and area fire.
7. Defender moves.
8. Defender resolves direct fire.

Detailed Overview of a Game Turn

Attacking Player Turn

Command Phase

1. The attacker places reinforcements on the board.

No overwatch activity is allowed during the Command Phase.

Area Fire Phase

1. Defender removes all Suppressed-A markers.
2. Attacker removes all of attacker's sustained barrages, all attacker smoke, and attacker irritant chemical zones.
3. Attacker places airstrike barrage markers, rolls for arrival and resolves if arrived.
4. Attacker rolls for available fire units from off-table artillery battalions.
5. Attacker places barrages, designates type as either fire blow or sustained, and allocates fire units to them. All barrages should be placed before any are resolved, including indirect and direct area fire from on-table stands.
6. Resolve fire results for each barrage, and chemical zone attacks.
7. Remove attacker's 'fire blow' barrages, leaving 'sustained barrages' in place.
8. Place and resolve nuclear attacks.

No overwatch activity is allowed during the Area Fire Phase.

Overwatch First Phase

1. The defender may resolve overwatch fire before any attacking stands have moved.

Movement Phase

1. The attacker moves his stands, one at a time.
2. At any time during the phase, Defending stands may conduct overwatch fire or shoot and scoot fire if eligible.
3. Defender's stands pivot, if eligible.
4. Quality checks are taken. No overwatch activity is allowed during this sub-phase.

Close Combat Phase

1. Defender fires.
2. Attacker resolves quality checks due to enemy close combat attacks.

-
- | | |
|--|--|
| <ol style="list-style-type: none"> 3. Defender pivots. 4. Attacker fires. 5. Defender resolves quality checks due to enemy close combat attacks. 6. Attacker pivots. 7. Reduce remaining movement by one. | |
|--|--|

Repeat steps 1-7 of the Close Combat Phase until there are no opponents within close combat range. No overwatch activity is allowed during the Close Combat Phase.

8. Complete remaining movement (if any) of stands that participated in step 7 of the Close Combat phase. Resolve additional close combats as necessary.

Overwatch Last Phase

1. The defender may resolve additional overwatch fire after all attacking stands have moved.

Fire Phase

1. All fire within this phase is simultaneous. Combat results take effect at the end of the phase.
2. Defender removes all Suppressed-B markers.
3. Attacker resolves anti-vehicle (AV) fire and anti-infantry (AI) fire (including direct AV or AI fire by artillery).
4. Defending stands with hold fire markers fire. This fire is simultaneous with attacker fire in step 1.
5. Remove destroyed stands.
6. Resolve quality checks.
7. Attacker may place overwatch markers on stands that did not fire or move during the turn.

Final Phase

1. Resolve any housekeeping chores.
2. Make quality checks for unit losses.

No overwatch activity is allowed during the Final Phase.

Defending Player Turn

Use the same sequence for the Attacking Player Turn, but reverse the roles.

3.4 Time Limits (Optional, but highly recommended)

To properly capture the intensity of command, it's essential that time limits be imposed on the commanders. Some of the greatest blunders in military history have occurred because one side failed to react in time. Therefore, the following time limits are imposed on each side:

- 1 minute to place artillery barrages (does not include rolling for fire units or resolving barrages).
- 5 minutes to conduct movement. If overwatch fire is conducted during the Movement Phase, the clock is stopped while the overwatch attacks are resolved. So the nonmoving player should (if possible) conduct overwatch fire during the Overwatch First Phase or the Overwatch Final Phase.

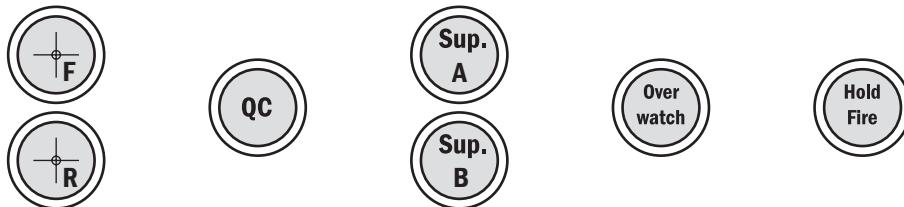
When time is called, all movement must stop. A player may move the rest of the unit he was moving when time was called. Referees may adjust these turn lengths to suit the scenarios. Also, the referee may call an administrative time out if a rules question comes up or if something needs to be resolved.

Players can have one "time out" per game. This allows them to stop the clock for 5 minutes. Referees make call time outs to resolve game matters and should penalize players who try to slow their opponents down so that they will run out of time before completing their turn. As a practical matter, in 13 years of using timed turns, Ty has never had a player fail to complete his turn. But the presence of timed turns makes players focus on playing the game rather than socializing or being indecisive. In large games with multiple players, this can easily be the difference between finishing a game in a reasonable amount of time, or having to call it a draw because it's late.

4: Markers and Forces

4.1 Markers

You will need the following templates and markers in order to play *FFT3*. A marker sheet is provided with the rules, although some players prefer to use pennies with colored dots instead. The *FFT3* website (www.fft3.com) has color marker sheets and templates for stick-on dots that you can download.



Fire zone markers indicate the location of artillery barrages. They should be 0.5" to 1" in diameter, marked with a small dot or crosshair, and one side marked 'F' for 'full effectiveness' and the other marked 'R' for 'reduced effectiveness'. All should be the same size. All measurement is done to the dot or crosshair center.

Quality check markers identify which stands must take a quality check at the end of the phase. A penny with a red stick-on dot makes a good quality check marker.

Suppressed markers come in two flavors, Suppressed-A and Suppressed-B. They identify which stands are suppressed, and both have the same effect on a stand. The only difference is what causes them and in what phase they are removed: Suppressed-A markers are caused by area fire and removed at the start of the opponent's area fire phase, and Suppressed-B markers are caused by anti-infantry fire and are removed at the start of the opponent's fire phase.⁶ Pennies with yellow stick-on dots make good Suppressed-A markers, and pennies with orange stick-on dots make good Suppressed-B markers. We strongly recommend making them different colors to make removal during game phases fast and easy. Note: a stand should not have more than one suppression marker on it. The most recent suppression result takes precedence. So if a stand with a

⁶ The two types of markers allowed us to put the Area Fire Phase at the beginning of the turn so that using artillery to support attacks is more intuitive while still allowing anti-infantry fire in the fire phase to suppress enemy infantry through the following friendly movement phase.

Suppressed-A marker later receives a Suppressed-B marker, the Suppressed-B marker replaces the Suppressed-A marker, and vice versa.

Overwatch markers identify stands that are on overwatch. Pennies with blue stick-on dots make good overwatch markers.

Hold fire markers identify stands that are on hold fire. Pennies with green stick-on dots make good hold fire markers.

You can also use coins for markers that have a specific diameter. A US penny is $\frac{3}{4}$ " in diameter (a dime is slightly smaller), a US nickel is $\frac{7}{8}$ " in diameter and US quarter is slightly less than 1" in diameter. You can get washers at any hardware/DIY store in virtually any diameter needed.

4.2 “Units” and “Stands”

“Stand” refers to individual vehicles and infantry stands. “Unit” refers to the entire command unit or “Combat Unit” in the army lists (companies or battalions, depending on the army list), which comprises several vehicles and/or infantry stands.⁷

4.3 Basing Your Troops

Micro scale infantry should be mounted on $\frac{3}{4}$ " round or square bases. Pennies make great bases for infantry. Infantry stands should have about twice as many men as infantry teams. Vehicles can be based if you wish. The advantage to basing is that the vehicles aren’t handled by players (they’re gripped by the sides of the bases), and they can be labeled. The disadvantage is that it takes time to base vehicles, and the flocking may not blend with the terrain. For the best visual effect, flock bases in the same color as your most commonly used terrain.

Mount N Scale, 10mm or 15mm infantry on 1" round or square bases, 2-5 figures per base. Washers make good bases. It’s usually unnecessary to mount vehicles in these scales.

4.4 Identifying Stands

FFT3 leaves stand identification up to the players but here are some guidelines. The goal is to enable players to quickly identify which stands belong to which combat units. A fast and flexible identification method is to apply a colored dot to each vehicle in a given combat unit. Do not mark recon stands and other stands that ignore cohesion. Before the game starts, simply identify which companies go with which battalions (or in the case of Russian/Third World, which battalions go with which regiments). Some players prefer to mark the stands on the bottom, but it speeds play to mark them on top. However you choose to mark your stands, remember that the most important thing is for the players to be able to tell which unit the stand is part of. In small games, players

⁷ Western armies generally use companies as the basic command unit, while Russian, Chinese, Arab and Third World armies use battalions as the basic command unit.

may be able to dispense with marking stands entirely and just rely on memory and designation (“that group is A company and that group is B company...”).

4.5 Vehicle, Antitank Gun, and Antiaircraft Gun Data Chart, and Artillery Data Chart

Vehicles and towed weapons have their characteristics listed on the Vehicle, Antitank Gun, and Antiaircraft Gun Data Chart or the Artillery Data Chart.

The Data chart abbreviations are:

- Vehicle/Weapon: The vehicle or weapon's name.
- Period: The time period that these ratings are valid for.
- PV: Point value of the vehicle.
- Move: Movement allowance. “a” means that the vehicle is amphibious. “w” is a wheeled class vehicle; “t” is a tracked class vehicle; “ht” is a half-tracked class vehicle, “h” is a helicopter. “p” means the vehicle or weapon is airmobile. “s” means the vehicle runs on skis. “x” is a towed weapon; if the move allowance is larger than “0x” then the weapon has that move allowance without being towed, moving by efforts of crew or integral motor. For example, “2x” means the weapon has a move of ‘2’ without being towed.
- Armor: Armor value. The first number is the front armor rating, the dash or letter indicates the h-class armor modifier, and the second number is the flank armor. An ‘s’ means the vehicle or that facing is soft (unarmored).
- Pen: Penetration. An “h” indicates that this is an h-class weapon. An “he” indicates an he-class weapon. A † indicates a top-attack weapon. A superscript 1 indicates a 1st generation missile. A superscript 2 indicates a 2nd generation missile. A superscript 3 indicates a 3rd generation missile.
- ROF: Rate of fire. A superscript @ means the weapon is an anti-aircraft gun and the rating is for anti-aircraft fire.
- Rng: Effective range of a gun; minimum and maximum range of an anti-tank missile; minimum and effective range of a SAM (surface-to-air missile) or AAM (air-to-air missile). A range of ‘C’ means the weapon can only be used in close combat, and fires at effective range when doing so. A superscript @ means the weapon is an anti-aircraft gun and the rating is for anti-aircraft fire.
- AI: Anti-infantry to-hit die-roll modifier for the weapon.
- Ind Fire Rng: The maximum range for indirect or direct area fire by the gun; rocket launchers list a minimum and maximum range.
- Ind Fire Ammo: Ammunition types that the weapon can fire:

- h - standard HE (high explosive) munitions
 - s - smoke (normal and incendiary)
 - c - chemical
 - i - improved conventional munitions (guns and howitzers use the ICM line in the Guns/Howitzers section of the artillery data chart when firing this ammunition type)
 - l - laser guided projectile
 - g - GPS guided projectile
 - m - artillery delivered mines
- Equip: Special equipment carried by the vehicle and special vehicle capabilities/limitations:
 - s - stabilized gun
 - ss - advanced stabilization
 - t - first-generation thermal sights
 - 2 - second-generation thermal sights
 - i - infrared or image intensification sights
 - c - commander's independent thermal viewer (CITV)
 - v - IVIS system
 - n - NBC protection (Nuclear/Biological/Chemical protection)
 - o - open-topped vehicle
 - f - vehicle's gun has limited traverse (forward firing)
 - r - vehicle's gun has limited traverse (rearward firing)
 - d - smoke dischargers (only marked on pre-1950 vehicles; all vehicles from 1950 on are assumed to have smoke dischargers)
- Cap: For vehicles, the size of the infantry stands or towed weapons that the vehicle can transport (its capacity); for towed and manportable weapons, the capacity used when being transported/towed; a ‘-’ means the vehicle can't carry stands, or the stand cannot be transported.
- Msl: If a ‘u’ appears here, the vehicle has unlimited missile ammo. Otherwise the vehicle has a limited missile ammo supply, if it is armed with missiles.
- Notes: Any other data relevant to the vehicle, including main gun type and missile type. Multiple rocket launchers list the size classification and the number of fire units per stand.

4.6 Infantry Data Chart

Infantry stands have their characteristics listed on the Infantry Data Charts. The chart abbreviations are:

- Type: The type of infantry stand.
- Period: The time period that these ratings are valid for.
- Size: How many spaces the stand takes up on a transport.
- PV: Point value of the stand.
- Move: Movement allowance of the infantry stand.
- (Anti-Infantry) AI: The anti-infantry to-hit die-roll modifier for the stand.
- (Anti-Infantry) ROF: The stand's rates of fire when using anti-infantry fire. The first number is the ROF to use in ranged combat (fire at targets over 1" away), the second is the ROF to use in Close Combat. If the ROFs are enclosed in parenthesis, then the stand loses 1 ROF if it moved in the same turn that it is firing.
- (Anti-Infantry) Range: The stand's effective range when using anti-infantry fire.
- Pen: Penetration of the weapon. An "h" indicates that this is an h-class weapon. An "he" indicates an he-class weapon. A "†" indicates a top-attack weapon. The superscript number is the generation of the missile.
- Rng: Effective range of the weapon. Missiles list a minimum and maximum range. SAMs list a minimum and effective range. A range of 'C' means the weapon can only be used in close combat, and fires at effective range when doing so.
- LAW: Ratings for the stand's Light Antitank Weapons.
- MAW: Ratings for the stand's Medium Antitank Weapons. An asterisk "*" after the MAW's ROF means the weapon is a missile and is subject to the generation-dependent movement restrictions for firing missiles.
- SAM: Ratings for the stand's Surface to Air Missiles.
- Equip: Special equipment carried by the infantry stand:
 - t - first-generation thermal sights
 - 2 - second-generation thermal sights
 - i - infrared or image intensification sights
- Cap: The capacity used when being transported by a carrier; a '-' means the stand cannot be transported (usually means it has integral transport like motorcycles, bicycles, or horses).

- Notes: Lists the type of LAW and MAW reflected in the ratings, and any other relevant data.

4.7 The Army Lists

The Army Lists specify the troop quality, Artillery Accuracy and Friction Response numbers as well as the Combat Formations, Attachments, and Artillery Support Groups available for a particular army and period. Combat Formations are usually battalions in Western armies and regiments/brigades in Russian-style and Third World armies.

Combat Formations are composed of Combat Units and supporting stands. At the end of each combat formation entry is a stand inventory totalling the number of each type of stand needed to field the formation as listed. The army lists are generally based on tables of organization and equipment (TO&E), so it should be noted that units in the field could have fewer stands than given in the lists. For instance, during World War II, German and Soviet units sometimes got as low as 30% of their TO&E strength before being pulled out of combat.

Stands listed in parentheses (usually support stands for that combat formation or unit) aren't subject to cohesion, nor are stands listed as "Base" for a formation.

Per Rule 6.5, stands and Combat Units listed as "recon" or "recce" on the Army lists aren't subject to cohesion. Frequently these will be listed in parenthesis.

For cases where a unit varied in the types of equipment it has, an enumerative term is used in the list, to represent the different possible equipments. The enumerative term is printed in small caps, such as SCOUT VEHICLE. The Equipment Notes section of the army list gives the definition of the enumerative term, listing what types of equipment it represents, as well as date ranges of availability in some instances. MBT is the most commonly used enumerative term.

For example, in the British Army 1939-1945 list, ARMORED AA VEHICLE is defined as Light Tank AA, Crusader III AA Mk I, Crusader III AA Mk II.

Here's how to find the data for the stands listed in an Army List: First, first look in the specific data charts (vehicle, infantry, artillery, etc.) under the army's country. If you don't find the stand type listed there, look under the country in which it's manufactured (the U.S., Russia, France, Germany, and the U.K. are likely places). If you still don't find the stand type under the country it was made in, then look in the Generic lists of equipment and troops included at the end of each data chart.

5: Troop Quality

5.1 Executive Summary

A quality check is rolled on 1d6 and must equal or exceed the stand's quality. If the roll fails, the stand is usually eliminated. Troop quality is the most important variable in *FFT3*.

5.2 Troop Quality

FFT3 assumes that troop quality is the most important variable on the battlefield. Accordingly, troop quality affects almost every major game system.

Stands in *FFT3* fall into one of seven quality classes—poor, marginal, fair, average, good, excellent, or superb. Quality is a composite rating of training, combat experience and morale.

Poor troops have poor leadership and lack combat experience, though they may have minimal, low-quality military training. They are often third world militias, insurgents, poorly trained and led conscripts, or rabble. They have a quality of 7 and have a to-hit adjustment of -3. Their rate of fire (ROF) is reduced by 2 but cannot be less than 1. Multiply Poor stands' point cost by 0.29.

Marginal troops lack combat experience though they may have limited military training. They are often trained conscripts. They have a quality of 7 and have a to-hit adjustment of -2. Their rate of fire (ROF) is reduced by 1 but cannot be less than 1. Multiply Poor stands' point cost by 0.45.

Fair troops have some military training and may have limited combat experience, but may be lacking in skills, motivation, or leadership. Fair troops have a quality of 6, have a to-hit adjustment of -1, and no ROF adjustment. Multiply Fair stands' point cost by 0.75.

Average troops are adequately trained, reasonably well-led, and effective, sometimes with some combat experience. Average troops have a quality number of 5, and no to-hit or ROF adjustment. Average stands cost the normal point cost.

Good troops are well-trained, with solid leadership and usually some combat experience. They have a quality number of 4, a to-hit adjustment of +1, and no ROF adjustment. Multiply Good stands' point cost by 1.21.

Excellent troops are very well trained and highly motivated; they may have extensive combat experience. Their quality is 3. They have a to-hit adjustment of +1 and a ROF adjustment of +1. Multiply Excellent troops' point cost by 1.54.

Superb troops have outstanding training and outstanding leadership; they are often special forces. They have a quality of 2, and have a +1 to-hit adjustment. They also have a +1 ROF adjustment. Multiply Superb stands' point cost by 1.74.

Troop quality in a scenario is typically assigned by combat formation, although scenario designers can specify different troop qualities for each combat unit, or even each stand (though that would be painfully inconvenient during play). Each Army List gives a range of overall quality levels available to each army, with rough percentages for each level. Troop quality ratings in scenarios are subjective, and should be determined by the scenario designer, using the listed quality ranges and proportions as a guideline. Typical troops from the army should have quality levels taken from the middle of the range. Historically high-quality units in that army should have quality levels drawn from the upper section of the range, while historically low-quality units should have ratings from the lower part of the range. If you disagree with a scenario's quality ratings, feel free to change them (with your opponent's agreement, of course), but keep in mind that the change may unbalance the scenario. And be sure to adjust points costs for troops with the changed quality levels as well.

5.3 Quality Checks

Whenever a stand takes a quality check, it must roll its quality number or higher on one die. A natural "1" always fails and a natural "6" always succeeds. Stands take quality checks at the end of the phase in which the event requiring the quality check occurred. During each phase, mark units that need to take quality checks with quality check markers.

A stand can take a maximum of three non-close combat quality checks in a player turn, excluding close combat. It can take one check from each of the following sources each turn:

- area fire (including chemical and nuclear attacks);
- direct fire combat (during the Fire Phase or due to overwatch fire); and
- losses (its unit has taken 2/3 losses or the stand has become the last stand in its unit that turn).

If a stand incurs multiple area fire quality checks (for instance, by incurring both an artillery quality check and a chemical attack quality check), it takes the worst check.

Quality checks in close combat don't count against these limits. In addition, a stand can take any number of quality checks in close combat (see Close Combat below).

If a stand has already taken and passed a particular type of quality check in a player turn, later quality checks of that same type during the same player turn are ignored (except for checks in Close Combat).

5.3.1 Quality Checks Due to Fire Combat

Take quality checks that occur as a result of fire combat at the end of the Fire Phase. Only one fire combat quality check (including overwatch fire) per player turn is permitted per stand. For purposes of this rule, "fire combat" includes overwatch fire.

5.3.2 Quality Checks Due to Overwatch Fire

A quality check caused by overwatch fire occurs at the end of whatever phase the overwatch fire occurred in. Additional quality checks due to overwatch fire and fire combat are ignored for the remainder of the turn.

For example, an M1A1 is advancing in its Movement Phase towards a T-80U that is in overwatch. The T-80U fires and hits the M1A1, causing a quality check. The quality check is taken at the end of the Movement Phase and the M1A1 passes. Later, during the Fire Phase, another T-80U on overwatch fires at the M1A1 and causes a quality check. The M1A1 automatically passes the check because it can take a maximum of 1 quality check from either fire combat or overwatch fire in a turn.

5.3.3 Quality Checks Due to Area Fire Attacks

Quality checks occurring as a result of area fire are taken at the end of the phase in which they occurred (usually they're from indirect artillery fire, taken at the end of the Area Fire Phase), and again, only one test per player turn is taken per stand.

5.3.4 Quality Checks Due to Losses

When a unit loses two-thirds (or more) of its armed⁸ stands, or loses two-thirds (or more) of its total stands - whichever comes first - the entire unit must make a single quality check (one roll for the whole unit).⁹ This check occurs in the Final Phase of the player turn in which the unit's losses of either type reach 2/3 (armed stands or total stands).

A unit that has already lost 2/3 or more of its stands (again either armed or total stands) must make a quality check in the Final Phase of every player turn in which it takes additional losses.

⁸ A stand having a weapon of any type.

⁹ This rule was changed from FFT2 to prevent abuse, mainly by truck-borne infantry units. Under the old rule, a unit's unarmed stands like trucks could be hidden away on the table to make tripping the two-thirds losses rule difficult or impossible.

A stand that becomes the last stand in a unit must make a quality check during the Final Phase of the player turn in which it becomes the last stand in the unit.

5.3.5 Quality Checks Due to Close Combat

A stand can take a maximum of one quality check per close combat round. Close combat quality checks take place at the end of each close combat round.

5.3.6 Effects of Failed Quality Checks

Unless stated otherwise, remove a stand that fails its quality check. The stand counts half for enemy victory conditions. Note that a removed stand isn't destroyed; it has ceased pursuing its mission for the remaining duration of the game. It probably took some personnel casualties, might well be demoralized or broken, may have suffered officer casualties, could be scattered and disorganized, and/or may have incurred some losses or damage to vehicles and equipment.¹⁰

¹⁰ Given time to clear casualties, rally troops, reorganize, fix easily repairable damage to weapons and vehicles, and possibly rest, the stand can probably become combat effective again relatively soon, but the time required to do so is usually beyond that available in a normal game.

6: Movement & Cohesion

6.1 Executive Summary

There are two types of movement, normal and strategic. Strategic movement is faster, but stands are hindered in combat (they can't fire, can't move within 10" of enemy stands, etc.). Stands must also stay in cohesion—within a certain distance of other stands of the same unit—or suffer penalties.

6.2 General

Players may move as many of their stands as desired during their Movement Phase. Stands may use as much of their movement allowance as the owning player wants. Friendly stands may move through each other at no extra cost.

In general, a player must complete a stand's move *before* he moves the next friendly stand. Exceptions to this rule are **carriers** and **transported stands** (see Rule 9.5) and stands that engage in **close combat** (see Chapter 11). This rule does not mean that multiple players on a side have to wait on each other. It is applied on a *per player* basis.

There are two classes of movement, normal and strategic. Strategic movement lets a stand move faster, but at significant combat penalties.

All stands in a unit must maintain cohesion—i.e., stay within a certain distance of another stand in the unit—or suffer various penalties. A stand may voluntarily move out of cohesion. If a stand starts its movement out of cohesion and moves, it must move to reestablish cohesion.

Stands may turn during movement at no additional movement cost. Turning isn't considered movement for firing and overwatch purposes. A vehicle (except helicopters¹¹) may move backwards at 4 times the normal movement cost. Infantry can move any way they want.

Some kinds of terrain cost more to move through, and some types of terrain are impassable to certain types of stands. A tracked stand moves twice as fast along a road; a wheeled stand moves four times as fast along a road. See the Terrain Effects Chart for movement point costs of various terrain types.

¹¹ Helicopters can't generally fly backward safely for any distance.

It costs a carrier stand two movement points to either embark or debark an infantry stand, or to embark or debark a towed weapon.

A suppressed stand's movement allowance is reduced by two movement points while suppressed. If a stand becomes suppressed during movement due to overwatch fire, reduce its remaining movement points by two. If it had less than two movement points left, it stops where it became suppressed.

6.3 Movement Classes

In clear terrain, a stand spends one movement point per inch moved. But certain types of terrain may cost "double" (or triple or quadruple) to move through. In other words, the stand expends one movement point for every half inch the stand moves. Similarly, some terrain types (roads, usually) cost "half" or "one-fourth", like roads. The stand expends one movement point for every 2 or 4 inches of movement respectively.

A stand's movement class determines the effect that terrain has on that stand's movement. Movement class is noted after the movement allowance on the data charts.

All infantry stands have a leg movement class. They can be transported by vehicles with a Capacity rating equal to or greater than their capacity rating.

Stands with a "t" after their Move rating are tracked vehicles and have a tracked movement class. Stands with a "w" are wheeled vehicles with a wheeled movement class. Stands with an "h" are helicopters with a helicopter movement class.

Stands with an "ht" are half-tracked vehicles with a halftrack movement class.

Stands with an "x" are towed weapons and have a towed movement class. These can pivot but cannot move unless being towed by a vehicle or if they have a move larger than "0x". If the move allowance is larger than "0x" then the weapon has that move allowance without being towed, moving by efforts of crew or integral motor. For example, "2x" means the weapon has a move of '2' without being towed.

Vehicle and weapon stands with a "p" are airmobile stands.

Stands with an "a" are amphibious vehicles and may cross impassable rivers (see below). Amphibious vehicles may cross rivers and streams at a cost of four movement points per inch crossed. They may not fire while in the water. The referee may rule that some rivers or streams are impassable to amphibious vehicles because the banks are too steep.

Stands with an "s" are ski units. Ski units can only be used on ice or snow. On ice or snow, ski units move using the 'tracked' movement terrain costs. Personnel stands have the "leg" movement class on any other kind of terrain, and vehicles on skis are immobile on any other kind of terrain.

6.4 Terrain Effects on Movement

As noted earlier, movement through some types of terrain may cost more or less than the cost of clear terrain.

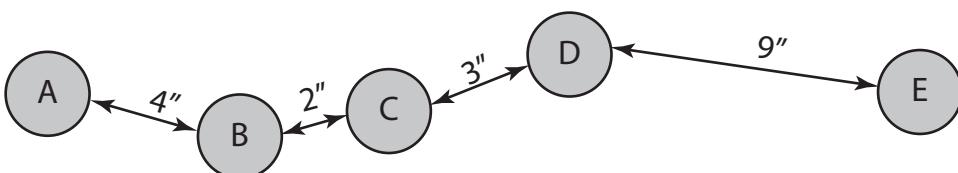
6.5 Cohesion

To determine if a stand is in cohesion:

1. At the beginning of the Movement Phase, designate any stand in a unit as the “command stand” for the turn. (Players can often skip this in the case of units that are clearly in cohesion).
2. For a stand of that unit to be in cohesion, it must begin the Movement Phase within cohesion distance of the command stand or within cohesion distance of another friendly stand that is in cohesion distance of the command stand or within cohesion distance of another friendly stand.
3. Stands and Combat Units listed as “recon” or “recce” in the Army Lists ignore all cohesion rules.
4. Stands listed in parentheses in the army lists ignore all cohesion rules [for example: (1 recon CFV; 1 M125 SP 81mm Mtr)].
5. Stands listed as “Base” stands of a combat formation in the army lists ignore all cohesion rules.

Cohesion distance depends on troop quality:

- Poor troops have a cohesion distance of 2”.
- Marginal troops have a cohesion distance of 2”.
- Fair troops have a cohesion distance of 4”.
- Average troops have a cohesion distance of 4”.
- Good troops have a cohesion distance of 6”.
- Excellent troops have a cohesion distance of 6”.
- Superb troops have a cohesion distance of 8”.



Assume that the cohesion distance is 4" and all stands are in the same combat unit. A, B, C, and D are all in cohesion. E is not. If E moves, it must move towards A, B, C, or D.

Players may intentionally move a stand out of cohesion, but the stand must move to re-join its unit if the stand moves in a later turn. A stand that is out of cohesion must move towards the other stands in its unit, if the stand moves at all. A stand out of cohesion has its quality number increased by one until it restores cohesion.¹²

For scenarios in which one side is fighting a prepared defensive battle, the referee may choose to allow that defensive side to add 2" to the cohesion distances of all its units.

6.6 Strategic Movement

Strategic movement is a special mode of movement. A stand enters the mode at the start of its Movement Phase, and remains in that mode until the start of its next player turn. Ground stands and helicopters can make strategic moves. A vehicle, infantry, towed, or helicopter stand that makes a strategic move has its base movement rate doubled. While in strategic movement mode, a stand must obey the following restrictions:

1. It must start its Movement Phase more than 10" away from any enemy stands before it can make a strategic move.
2. It can't move within 10" of any enemy stand, regardless of whether it can see the enemy stand or not. Of course, this means that it can't initiate a close combat. Enemy stands may, of course, move within 10" of it during the next enemy Movement Phase without removing its strategic move status.
3. It can't fire during its Fire Phase.
4. It can't have an overwatch marker or a hold fire marker placed on it.

A stand that is making a strategic move is subject to the following penalties:

1. Enemy anti-vehicle and anti-infantry attacks are at +1 to hit. Anti-aircraft attacks do not get a to-hit bonus.¹³
2. All quality checks that the stand takes as a result of enemy anti-vehicle or anti-infantry fire are at -1.
3. If attacked by close combat, the stand fights normally.

A towed weapon stand that is unloaded/unlimbered by a strategically moving transport stand is not treated as moving strategically after it is dropped off. An infantry stand that is unloaded by a strategically moving transport stand is not treated as moving strategically after it dismounts unless it has remaining movement points and expends those in strategic movement of its own.

¹² This rule simulates the additional command and control burden of having a detachment running around the battlefield, as well as the brittle nature of detachments.

¹³ The increased speed and reduced time of exposure is assumed to roughly compensate for the reduced ability of the crew to spot threats. Besides, helicopters are already pretty fragile in the game, and a further penalty made them too much so.

6.7 Friction (Optional)

Movement, coordination of movements by multiple units, command and control, and communications all tend to be more difficult in close terrain. Also, commanders are sometimes reluctant to rush from protective terrain onto less favorable ground. Because of this, any time a ground Combat Unit (western company or Russian-style battalion) begins the Movement Phase with at least one stand in terrain that would provide a terrain saving throw for anti-vehicle fire or anti-infantry fire, it must make a Response check before it moves. To do so, the unit must roll its Response number or greater on one die, after die roll modifiers. A natural roll of “1” always fails, a natural roll of “6” always passes. If the unit passes the Response check, its stands move normally. If the Combat Unit fails the Response check, only those stands not in protecting terrain may move normally, and stands in protecting terrain may not move, but may change facing or pivot.¹⁴ A stand conducting a shoot-and-scoot attack may move its half-move regardless of the Response check result.

Response numbers for each army are listed in the army lists. Generally, western and Russian mechanized armies’ regular units with modern electronic communication equipment will have a Response number of 2+. Third world armies and reservist formations with substantial amounts of older electronic equipment will have a Response number of 3+. Armies with very little electronic communication equipment would have a response number of 4+.

Modifiers to the die roll are (these are all cumulative):

- Poor and Marginal units get a -1 modifier.
- Excellent units and Superb units get a +1 modifier.
- At night or in very bad weather conditions use a -1 modifier.
- If the opposing side is using electronic warfare (EW), use a -1 modifier.
- If the combat formation’s HQ stand has been eliminated, use a -1 modifier.¹⁵

6.8 Formation Headquarters (Optional)

We recommend that if you use the Formation HQ rules you also use the Friction rules above in Rule 6.7. If you don’t use Friction, ignore references to it below.

The cohesion rules eliminate the need to represent lower level headquarters (HQs) with a stand on the tabletop (i.e., there are no headquarters stands for Combat Units, such as western companies or Russian-style battalions). However,

¹⁴ This rule simulates Clausewitz’s friction of war—things such as buildings, hills, foliage, weather, or enemy EW interfering with electronic or visual communications, a vehicle throwing a track on a narrow forest road and blocking the column behind it, a commander being slow to execute orders due to confusion or the dangers involved, a large armored vehicle getting stuck on a narrow side street and delaying movement while it turns around, a 2nd Lieutenant having a problem reading a map, and so on. All of these are unexpected and make timely and coordinated movements more difficult, and they are generally beyond the control of the force commander.

¹⁵ You must be using the optional HQ rules to use this modifier.

players may wish to represent Formation headquarters on the tabletop. These would be western battalion HQs or Russian regimental HQs. For each Formation on the table, use a single stand to represent the formation's HQ. In general, they will be APC stands for mechanized armies, and either truck or infantry stands for non-mechanized armies.

A Formation HQ stand has the same quality as the majority of the Combat Units it commands, and it ignores cohesion rules for its own movement and quality checks. In addition to being in cohesion through the normal cohesion rules, stands of any Combat Unit that a Formation HQ commands are also considered to be in cohesion for quality check purposes if they are within cohesion distance of the HQ stand, using the HQ stand's cohesion distance.¹⁶

A Formation HQ stand moves, spots, and is spotted like the type of stand representing it (e.g., if it's represented by an M113 APC stand, it moves like an M113 APC stand). Formation HQ stands don't fire, but can act as forward observers (FOs) for artillery and airstrikes. An HQ stand is fired upon like the type of stand representing it. Fire at Formation HQ stands is subject to the normal targeting restrictions (see Rule 12.4), and artillery fire called down on unspotted HQ units is treated just like artillery on any other unspotted unit (see Rule 15.7).

If a Formation HQ stand is eliminated, all friction response rolls for Combat Units it commanded get the modifier listed above in Rule 6.7. Optionally, to make Formation HQ stand elimination have a stronger impact on the battle, if all players agree to this before the scenario begins apply a -1 to the quality checks of any stand whose Formation HQ has been eliminated.

¹⁶ Essentially, this allows you to have a combat unit split into two groups on the battlefield: you can have the line combat stands forward maintaining cohesion with each other, and non-line units like trucks and artillery in the rear being in cohesion with the HQ.

7: Terrain

7.1 Executive Summary

Terrain affects movement, combat and spotting. Terrain in FFT3 is defined according to its effects, not according to its description, so one type of game terrain may represent more than one type of Real World terrain (Bad Going, for example). This chapter details common terrain types, but feel free to create your own types or to modify existing types. There are two basic types of terrain—linear obstacles and area terrain. Linear obstacles are terrain features defined by some kind of line—ridgelines, hedgerows, stone fences, streams, etc. Area terrain is terrain that occupies a spatial “area”—forests, towns, swamps, rivers, roads, etc. Area terrain typically has a defined edge and an interior. In the following rules, terrain features are area terrain unless they are explicitly identified as linear obstacles. Terrain may also be defined as “cover”, which can block line of sight and usually confers a defensive advantage.

7.2 Line of Sight

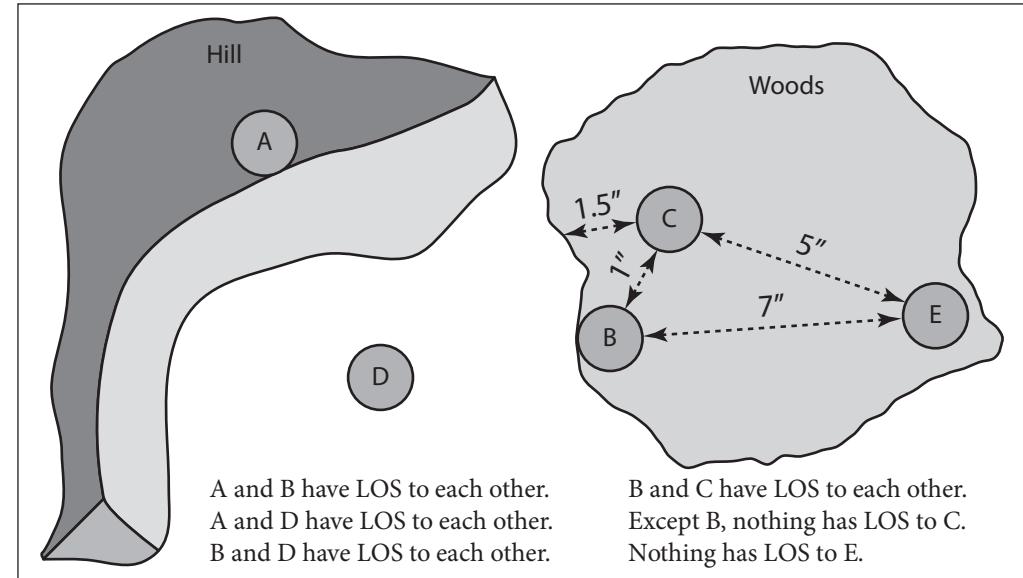
Line of sight (LOS) is an unblocked line from any part of one stand to any part of another stand.¹⁷ LOS is blocked by the edge of cover or by most linear obstacles. LOS is not blocked if traced to a stand that is touching either the edge of the cover or the edge of a linear obstacle. A stand in cover may trace LOS 2 inches into the cover. See Rule 10.4 for LOS over terrain/cover to targets beyond it.

7.3 Cover

Cover is terrain that may affect line of sight and usually provides a protective advantage. Cover may be either “light cover” or “heavy cover.” For instance, woods and swamps are light cover, and towns are heavy cover. Most cover is one level high, but towns and cities can be higher if you desire. Stands that are already in area terrain that is also cover may see up to 2” through the cover. This stops at the edge of the cover. So a stand 1” inside a forest cannot see out of the forest. Its LOS stops at the forest edge. To be considered “in cover” the stand must be completely in the cover, although it may touch the edge in order to see and fire out of the cover. For stands in cover, players may wish to state whether

¹⁷ Gun barrels are generally excluded from this. For vehicles, use vehicle hulls, or you can use the bases if they’re based. Just be sure to agree which method to use before the game. Bases are used for infantry and towed weapons.

their stand is touching the edge so there is no misunderstanding during spotting and combat, but if not, remember that if a stand has LOS to an enemy stand, the enemy has LOS to it. We encourage referees to take special care in clarifying whether stands are on the edge of cover.¹⁸



7.4 Linear Obstacles

Linear obstacles are terrain features (like streams, ridges, walls, etc.) that are defined on the game table by a line. Some linear obstacles also “block LOS”. This means that the obstacle blocks line of sight traced across it, unless either the spotting stand’s edge or the target stand’s edge touches the feature. A stand touching some kinds of linear obstacles is counted as being in cover for spotting purposes if it is touching the linear obstacle and if the line of sight goes through the linear obstacle. If opposing stands are firing across the same linear obstacle and both stands are within 1 inch of the linear obstacle, the linear obstacle is ignored for combat and spotting purposes. Linear obstacles do not count as cover against area fire. Some linear obstacles cost extra movement to cross, usually two movement points.

7.5 Hills and Ridgelines

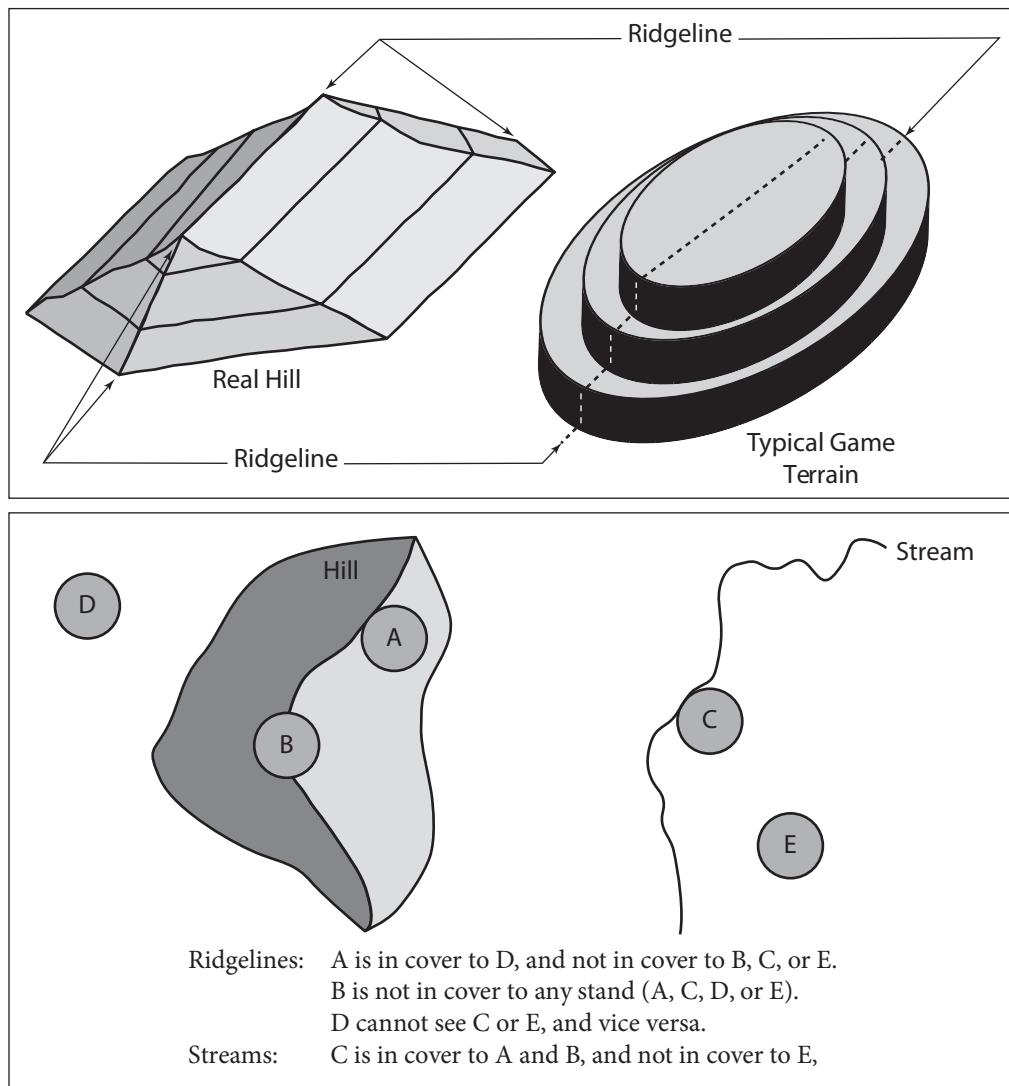
Hills aren’t shaped like wedding cakes (usually). Instead, they slope from the ridge of the hill to its base. Hills can be one or more levels high. Good-sized hills should be at least two levels high, but you can make them as high as you want, and flat areas like desert may be littered with 1-level high hillocks. Ideally, you should mark a ridgeline on your hill. They usually run lengthwise through the rough center of the hill. Each physical contour of a hill on the table is usually 1 or 2 levels high, and works well if represented by a 1" thick section of terrain. The

¹⁸ The edge of cover is not a literal edge. Rather it’s the point at which the cover is dense enough to seriously obstruct line of sight. In the real world, the terrain feature may extend significantly beyond the edge represented in the game. When designing scenarios based on real maps, players should bear in mind that the map will tend to overstate the size of cover compared with the game.

height represented by a level is at least 4 meters and can be as high as 10 meters according to the scenario designer's wishes.

Ridgelines are linear obstacles. In anti-vehicle fire and anti-infantry fire, stands behind ridgelines have a saving throw of 4+, if the stand is touching the ridgeline and if the fire is traced through the ridgeline. A stand touching a ridge-line is considered to be in cover for spotting purposes if the LOS must be traced through the ridgeline. Ridgelines block LOS to stands that are behind and not touching the ridgeline.

For movement purposes treat ridgelines like the surrounding terrain.



7.6 Clear Terrain

Clear terrain doesn't affect movement, combat or line of sight.

7.7 Light Woods

Light woods have no movement effect on helicopter and ground stands. Light woods are cover for spotting and LOS purposes and are usually 1 level higher than the ground they cover. In anti-vehicle fire and anti-infantry fire, stands in light woods have a saving throw of 5+ (4+ versus missile fire). Light woods are light cover for area fire.

Orchards are usually light woods.

7.8 Heavy Woods

Heavy woods have no movement effect on leg stands and helicopters. All other stand movement classes pay double to move through heavy woods. Heavy woods are cover for spotting and LOS purposes. Heavy woods are usually 1 level higher than the ground they cover. In anti-vehicle fire and anti-infantry fire, stands in heavy woods have a saving throw of 5+ (4+ versus missile fire). Heavy woods are light cover for area fire.

7.9 Forest

Forest is impassable to all stands except leg stands and helicopters. Forest is cover for spotting and LOS purposes. Forests are usually 1 level higher than the ground they cover. In anti-vehicle fire and anti-infantry fire, stands in forest have a saving throw of 4+ (3+ versus missiles). Forest is light cover for area fire.

7.10 Sand and Snow

Sand and snow have no movement effect on leg stands, tracked stands, or helicopters. They cost triple for halftracked or wheeled stands, double for towed stands. Ice is treated the same as snow. Sand and snow have no effect on combat.

A vehicle (or helicopter in NOE mode) moving in sand can be detected during the day at double the normal spotting range or at the visibility limit, whichever is shorter.

7.11 Bad Going

Bad going represents mud, soft ground, deep snow, ice, cratering, or other conditions that hinder movement. It doesn't affect LOS, spotting, or combat. It has no movement effect on leg stands or helicopter stands. Tracked and towed stands pay double to move through it. All other movement classes pay triple. Bad going may not apply to some stands. For instance, deep snow may be Bad Going for vehicles and leg infantry, but clear terrain for ski troops.

7.12 Rough

Rough terrain represents rocky, broken, or heavily cratered ground. It has no movement effect on leg stands or helicopter class stands. Tracked and towed

stands pay double to move through Rough terrain. All other stands pay triple. Rough is cover for spotting purposes. Rough is one level higher than the surrounding terrain, for example it may be broken ground with lots of small knobs and rocky outcroppings. Determine LOS over Rough as you would over any other terrain feature (see Rule 10.4). In anti-vehicle fire and anti-infantry fire, stands in Rough have a saving throw of 5+. Rough terrain counts as light cover for area fire.

7.13 Swamp

Helicopter stands ignore Swamp. Leg pays double to move through swamp. All other stands pay four times the movement cost when moving through swamp. They must also make an *immobilization roll* at the end of any Movement Phase in which they *moved* through swamp. A stand that does not move in the entire turn does not have to make the immobilization roll. Pivots and turning do not count as movement. The immobilization roll is on 1 die. On a 1 or 2, the stand is *immobilized* and cannot get out. On a 3+, the stand is unaffected. Place an immobilized stand at the point it would have been after expending half of its movement allowance that turn. If this takes the stand out of the swamp (or if the stand fails to reach the swamp), place the stand on the edge of the swamp nearest to the halfway point (it is still immobilized).

An armored recovery vehicle may attempt to extract an immobilized stand. It must move into contact with the immobilized stand and stop. At the end of the Movement Phase the recovery vehicle must make an immobilization roll. If it fails the roll, it is now immobilized. If it succeeds, it is unaffected and the immobilized stand is now extracted and can move normally next turn. Both vehicles will have to roll for getting stuck again as they move out of the swamp.¹⁹

Swamp is cover for spotting and LOS purposes and is one level higher than the ground it covers.

In anti-vehicle fire and anti-infantry fire, stands in swamp have a saving throw of 5+ (4+ versus missiles). For area fire, swamp counts as light cover.

7.14 Streams

Streams are linear obstacles. They have no width for game purposes, although they can be represented on the table by a 1" wide or narrower strip. Streams have no effect on leg stands or helicopter stands. All other stands must spend 2 movement points to cross the stream.

Stands that are both behind a stream and touching it are in cover for spotting and LOS purposes, if the spotting stand must trace its LOS through the stream.²⁰ If the LOS doesn't go through the stream, use the surrounding terrain type for spotting and LOS. If a stand isn't touching the stream, the stream doesn't affect LOS to the stand or spotting.

¹⁹ The swamp rules are a lot of trouble. If you want, you can simply make swamp impassable to vehicles. In any case, the moral of the story is that tanks should avoid swamps.

²⁰ The stand is considered to be using the depression of the streambed and its banks for cover.

In anti-vehicle fire and anti-infantry fire, stands that are behind and touching a stream have a saving throw of 4+ against fire that is traced through the edge of the stream. Streams don't affect area fire.

7.15 Rivers and Canals

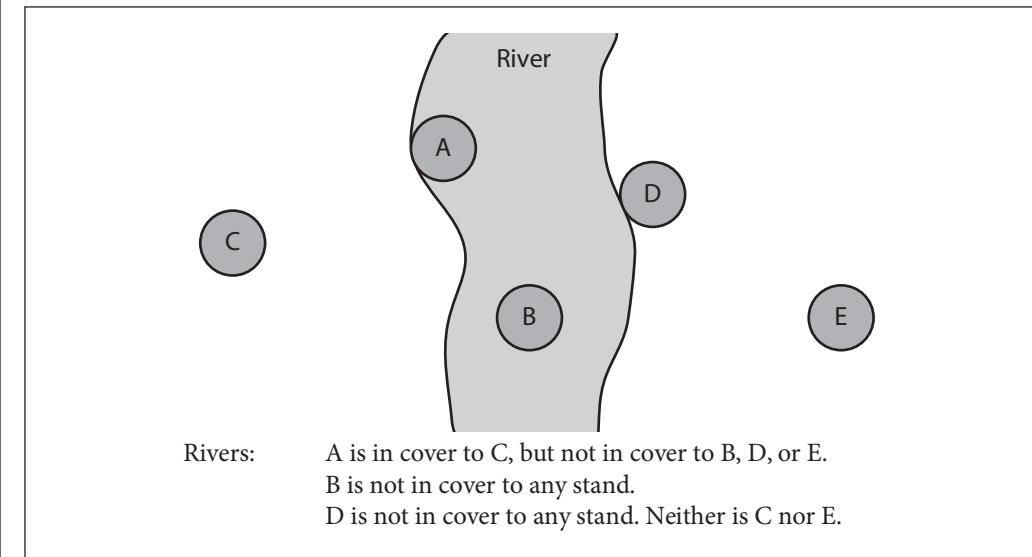
Rivers and canals have no effect on helicopter stands.

Non-amphibious stands can only cross rivers and canals at fords. A ford is any section of the river that is shallow and has gentle banks. Stands crossing at fords pay double the movement cost. For example, a 2" wide river costs 4 movement points to cross.

Amphibious stands may cross rivers and canals at crossing areas. A crossing area is any section of the river that has gentle banks but is too deep to ford. Amphibious stands cross the river at quadruple cost (e.g., a 2" wide river costs 8 movement points to cross). These stands may not fire (except in close combat) while in the water. At the referee's discretion, infantry stands may have integral rubber rafts. They can cross rivers/canals at crossing areas at 1" per turn and may not fire while in the water. Crossing amphibious units and infantry are considered in the open for spotting and cover unless against the near bank (see diagram below).

Fords and crossing areas should be designated by the scenario or referee before the game starts.

LOS and cover for stands on the bank of a river or canal are determined by the terrain along the bank.



Infantry stands may be designated as "Amphibious stands" in particular scenarios if they are equipped with rubber boats or similar transport. Enterprising scenario designers can allow infantry (or even vehicle) stands to be amphibious at certain places due to the presence of ferries, fishing boats, etc.

7.16 Roads, Bridges and Paths

Roads or Bridges have no effect on helicopter stands and leg stands. Roads and bridges cost $\frac{1}{4}$ for wheeled class stands when moving along a road. Roads and bridges cost $\frac{1}{2}$ for all other stands when moving along a road.

Roads are blocked if a vehicle is destroyed on them.²¹

If an armored vehicle is blocking the road, it may only be pushed out of the way by an engineer vehicle or another armored vehicle whose front armor rating is no less than two below the destroyed vehicle's. For example, a vehicle with front armor of '5' can push a destroyed vehicle whose front armor is '7', but cannot push one whose front armor is '8'. A vehicle spends 2 movement points pushing a vehicle off of a road.²² Soft vehicles can be pushed off the road by other soft vehicles or even by an infantry stand. Alternately, a vehicle can move past a blocking vehicle at an extra cost of 2" of movement through the surrounding terrain (the moving vehicle is going around the blocking vehicle), so moving around a vehicle blocking a path in Heavy Woods would cost 4 movement points. This option isn't available if a bridge is being blocked, or if the road's surrounding terrain is impassable to vehicles. In such cases, the blocking vehicle must be pushed out of the way to unblock the road/bridge.

For example, an M4A1 Sherman II is advancing in its Movement Phase down a road through heavy woods that has a destroyed Pz.IVF2 stand 4" ahead blocking it. To move 6" down the road the Sherman would pay 7 movement points: 3 movement points for the 6" of road, plus an extra 4 movement points for the extra 2" through the heavy woods to pass the blocking Pz.IV.

When a blocking vehicle is pushed out of the way, any vehicles or towed weapons passing that point on the road during the rest of that movement phase must pay 2 movement points.²³

For spotting and combat purposes, treat roads like the surrounding terrain.

7.17 Paths

Paths cannot be used by helicopters. All other stands are treated as if they were moving through clear terrain as long as they move along a path. For spotting and combat purposes, treat paths like the surrounding terrain.

Paths are *blocked* if a vehicle is destroyed on them. The rules for blocked roads apply for blocked paths.

7.18 Cliffs

Cliffs have no effect on helicopter stands. Cliffs are impassable to all other stands, except some types of light infantry. Light infantry (e.g., alpine troops,

21 A vehicle removed for failing a quality check does not block the road.

22 The stand is not literally moved off the road. So you can "push a vehicle out of the way" in terrain that is impassable to vehicles.

23 This represents the time lost waiting for the block to be cleared.

mountain troops, and troops trained and equipped to scale cliffs) may cross cliffs after they have spent a full turn adjacent to the cliff.²⁴ For spotting and combat purposes, treat cliffs like the surrounding terrain, remembering that the elevation change affects LOS. Some less imposing cliffs may be impassable to vehicles but passable to infantry at their normal move rate (for example, some terrain in the Sinai and Golan Heights); use these at the scenario designer's discretion.

7.19 Towns

Towns have no effect on movement of leg class stands or helicopters. All other movement classes pay double to move through towns. Towns are cover for spotting and LOS purposes. Towns are normally 1 level high.

In anti-vehicle fire and anti-infantry fire, stands in Towns have a saving throw of 4+ (3+ versus missiles). In area fire, towns count as heavy cover.

7.20 Optional Area Terrains

Some conflicts or battlefields have terrain characterized by additional area terrain types. Common ones are given below.²⁵

7.20.1 Low Crops

Low crops do not block LOS, and count as light cover for infantry only, giving infantry a 6+ terrain save. If the field is muddy then it counts as Bad Going, if dry there is no extra movement cost.

7.20.2 High Crops

High crops are 1 level high, block LOS, and count as light cover, giving a 6+ terrain save. If the field is muddy then it counts as Bad Going, if dry there is no extra movement cost.

7.20.3 Paddy fields

Paddy fields are really a combination of area and linear obstacle terrain. They are zero levels high. If the field is muddy then it counts as Bad Going, if dry there is no extra movement cost. Paddy fields' edges are Low Earthen Berms or Planted Low Earthen Berms (see the optional linear obstacles).

7.21 Optional Linear Obstacles

Some conflicts or battlefields have terrain characterized by certain linear obstacles. Common ones are given below.²⁶ Keep in mind the ground scale when using these—a 50-meter-long fence is only $\frac{1}{2}$ " long!

²⁴ We leave it to the scenario designer to determine if a particular stand is "light infantry". Real World units often have designations that have little to do with their actual capabilities.

²⁵ These are not all possible types of area terrain. If they don't cover what you need, feel free to conjure up your own.

²⁶ It is patently impossible to write detailed rules for all possible types of linear terrain features. We considered making a linear obstacle classification system and leaving scenario designers to fit them to their terrain features,

7.21.1 Low Railroad & Highway Embankments, and Low Stone Walls & Fences

Low railroad embankments and low highway embankments represent low raised stretches of road, typically 3-4 feet high. Low stone walls and low stone fences have similar heights, and typically mark field boundaries or line roads. All these have a terrain save of 4+, are zero levels high, do not block LOS, and cost nothing extra to cross.

7.21.2 High Railroad & Highway Embankments, High Stone Walls & Fences, and Hedgerows

The taller versions of their cousins above, high railroad and highway embankments are typically at least 10 feet high. Similarly tall, high stone walls and high stone fences can represent privacy walls around properties such as large estates. Hedgerows represent nasty, tall, earth-and-vegetation obstacles like those of Normandy fame. All these have a terrain save of 4+, are 1 level high, block LOS, and cost two movement points to cross.

Optionally, overwatch anti-vehicle fire at vehicles crossing hedgerows may attack the vehicle's flank armor unless the vehicle is equipped with hedgerow cutters. Vehicles possessing hedgerow cutters should be designated by the scenario designer or referee before the game begins.

7.21.3 Dense Wind Breaks & High Hedges

These represent the poplar trees planted along European farm field boundaries and along roads, the tall privacy hedges planted at the boundaries of estates, and other high vegetative obstacles.

All these have a terrain save of 5+, are 1 level high, block LOS, and cost two extra movement points to cross.

7.21.4 Low Hedge

Low hedges represent typical short hedges like those that often mark property lines between fields. They have a terrain save of 5+, are zero levels high, do not block LOS, and cost no extra movement to cross. These are typical hedges around dwellings.

7.21.5 Low Earthen Berm

Low earthen berms have a terrain save of 4+ for infantry and towed weapons and 6+ for vehicles, have zero height, do not block LOS, and cost no extra movement to cross. Paddy dikes are typical examples of low earthen berms.

7.21.6 Planted Low Earthen Berm

Planted low earthen berms have a terrain save of 4+ for infantry and towed weapons and 5+ for vehicles, are 1 level high, block LOS, and cost no extra movement to cross. Planted paddy dikes are typical examples of planted low earthen berms.

but decided we preferred to give players more guidance on how to treat common features. If these don't fit the characteristics of the terrain for your particular historical scenario, customize them or make up your own.

7.21.7 Small Canals and Large Ditches

Due to their typically steep banks and significant depth, small canals and large ditches are impassable to vehicles and towed weapons except at bridges or ferries and to infantry except infantry with integral rubber rafts. To cross using rubber rafts, the stand must start its movement phase in contact with the small canal or large ditch and spend its entire movement to cross it (regardless if the stand is suppressed or not).

Small canals and large ditches provide no cover or combat benefits, and they don't block LOS.

7.21.8 Causeways and Dikes

Causeways and dikes are typically 1" wide on the table, and are 1 level higher than surrounding terrain and block LOS. They often have a road running along the top. Due to typically steep sides, vehicles may only drive along the top. The top of causeways is treated as open terrain, and they can only be used as linear obstacles by infantry which get a 4+ terrain save.

7.22 Terrain Overlap

In laying out scenarios, some types of terrain are allowed to overlap, so that a stand could be in both types simultaneously. Smoke is included here, even though smoke is an environmental factor and not really terrain. For linear items (roads, streams, ridgelines) see the specific terrain sections above for how to treat them. Unless explicitly listed below, terrain types are NOT allowed to overlap.

- Bad Going can overlap with clear, light woods, heavy woods, forest, sand, swamp, towns, smoke, rough, crops, and paddy fields. Note that it cannot overlap with water (river or lake/ocean).
- Smoke can overlap with all terrain types. Although a smoke barrage aimpoint cannot be placed on water, the resulting smoke screen can extend onto the water.

In cases where multiple terrain types are present, use the following to determine how to resolve LOS, spotting, combat, and movement (a good summary is "hardest to see in and see through, hardest to hit, and hardest to move through"):

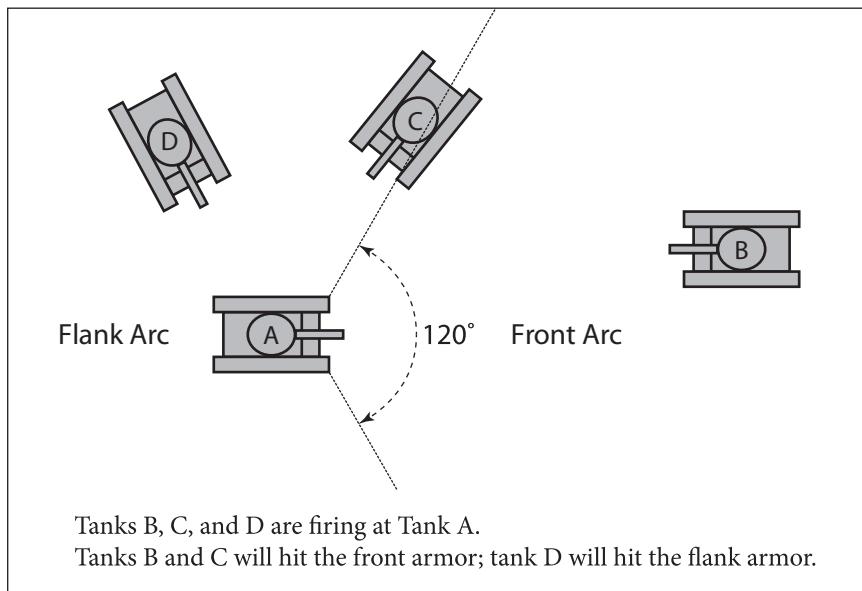
- LOS: If any of the terrain types is cover for LOS, use the cover rules for determining LOS (see Rule 7.3)
- Spotting: To determine spotting, if any of the terrain types the target is in count as cover, the target is in cover.
- Combat: To resolve combat, count the target as being in the terrain type that has the best defensive benefit (the one with the lowest terrain saving throw number).
- Movement: To resolve movement, count the stand as moving through the most difficult terrain type (the one that has the highest move cost).

For example, a tracked vehicle in Bad Going Light Woods would use the cover LOS rules due to the Light Woods, would count as "in cover" for spotting due to the Light Woods, would have a terrain saving throw of 5+ due to the Light Woods, and would pay double movement cost due to the Bad Going.

8: Vehicles

8.1 General

Vehicles stands represent 4-6 vehicles (occasionally 3 vehicles). In these rules, “vehicle” or “vehicles” mean “vehicle stand” or “vehicle stands”. The most important thing to remember about vehicles is that they have two aspects when targeted, front and flank:



Front and flank each have an armor value against KE weapons and he-class weapons. In addition, there may be a modifier to the armor value for use against h-class weapons. See Rule 13.6.1 for details. A vehicle uses its front armor value when attacked by an enemy stand located wholly or partially in the vehicle’s front 120-degree arc (see diagram). If a target’s armor rating is “s” (the vehicle is soft, i.e., unarmored), treat it as armor 0 for anti-vehicle fire. Soft vehicles can be fired on by both anti-vehicle fire and anti-infantry fire.

8.2 Vehicle Firing Arcs

Vehicles can fire in any direction, except for vehicles with limited-traverse forward-firing guns, such as most WWII assault guns, the post-war German

Jagdpanzer Kanone and the Swedish S-Tank. These vehicles have an “f” noted in the Equipment column of the data chart. These vehicles can only fire through their front arc.

Similarly, a few vehicles have rear mounted weapons, noted as “r” in the Equipment column, which can only be fired through the rear 120-degree arc of the vehicle (same size as the 120-degree front arc, but oriented rearward instead of forward).

8.3 Open-Topped Vehicles

Open-topped vehicles are denoted in the Equip column of the vehicle data with an “o”. They never count as being in cover when fired on by an artillery barrage. Additionally, they suffer a +1 modifier to the die roll on the Area Fire Resolution chart when fired on by an artillery barrage. Optionally, starting in 1960 and thereafter (1970 if the firer is a Third World or Arab nation) treat open-topped vehicles as “soft” targets when targeted by an artillery barrage.²⁷

²⁷ This is due to airburst artillery shells coming into common use around this period.

9: Infantry, Carriers and Towed Weapons

9.1 Executive Summary

- Infantry stands can fire all their weapons in the same Fire Phase.
- ROF is reduced by 1 on some infantry stands if they move in the same turn they fire. The ROF of such stands is enclosed in parenthesis. If this reduces ROF to zero, they cannot fire in the turn they moved.
- Towed weapons can't fire and move in the same turn.
- A carrier spends 2 movement points to **embark** (pick up) or **debark** (drop off) an infantry stand or a towed weapon.
- Towed weapon stands are referred to as “towed weapons”.

9.2 Types of Infantry Stands

There are four classes of infantry stands:

- **Leg Infantry** are infantry that have no integral transportation (i.e. they walk).
- **Motorcycle Infantry** are infantry that ride motorcycles. In combat, they generally assumed to dismount as needed, so there are no special rules for this.
- **Bicycle Infantry** are infantry that ride bicycles. They are also assumed to dismount as needed in combat.
- **Cavalry** are infantry units mounted on horses.

There are two sizes of infantry stands in this game.

- **Normal-sized infantry stands** are infantry units with a dismounted TO&E strength of 20+ men. They have a standard assortment of weaponry — personal weapons, light machineguns, light antitank weapons, and possibly medium antitank weapons. Some infantry stands

have substantial numbers of heavy weapons. Their ROF is reduced by 1 if they move in the same turn they fire. Their ROF is enclosed in parentheses to indicate this, for example "(2 / 3)". If this reduces their ROF to zero, they cannot fire in the turn they moved. Infantry stands take up 1 space on a carrier.

- **Infantry teams** are half-sized infantry stands, typically with a dismounted TO&E of less than 20 men. They are usually armed with specialist heavy weapons like missiles, SAMs, or medium/heavy machineguns. Like infantry stands, some teams have their ROF enclosed in parentheses to indicate it is reduced by 1 if they move in the same turn that they fire. A team takes up ½ space on a carrier.

9.3 Infantry Movement and Facing

Infantry stands have no facing. They can move in any direction they want to.

9.4 Infantry Firing

Infantry stands may fire each type of weapon each turn. An infantry stand may split its ROF amongst multiple targets with no penalty. Also, remember that they get to fire at a vehicle's flank in close combat (no matter how it's facing), if unengaged in close combat by any enemy infantry.

9.5 Embarking, Debarking and Carrying Stands

A **carrier** (a vehicle with a capacity greater than zero) may carry a number of infantry stands or towed weapons equal to the vehicle's capacity. The carrier expends two movement points when it **embarks** (picks up) or **debarks** (drops off) an infantry stand or towed weapon.

A stand must be in contact with a carrier to embark.

A stand that debarks is initially placed in contact with its carrier. The owning player chooses the side and orientation. If the carrier is not in close combat with a nearby enemy stand but the transported stand debarks within 1" of an enemy stand, the debarked stand is automatically in close combat with that enemy.

Note that carriers and stands can alternate moving in the same movement phase:

For example, a Warrior IFV with a movement of 10t moves 2" in open. A friendly infantry stand moves 2" into contact with the Warrior. The Warrior and infantry stand both spend 2 movement points to embark the infantry stand. At this point, the Warrior has 6 movement points remaining and moves 6" in the open terrain.

A carrier may embark or debark stands at any time during its Movement Phase. The carrier isn't considered to have moved for overwatch purposes if it only debarks or embarks. Embarked stands move with the carrier and are usually kept off table for clarity and convenience. For aesthetics, players may

place embarked towed weapons behind the carrier, but all ranges, line of sight, etc. are traced to the carrier.

Infantry stands pay 2 movement points to embark or debark.

Infantry stands may embark and debark in the same movement phase, but only if they have sufficient movement points to pay both costs.

Towed weapons pay no movement cost to embark, and they may move *before* embarking, but after debarking they cannot move in the same movement phase in which they debarked.

Two carrier stands with a capacity of ‘½’ may combine to carry a size ‘1’ infantry stand. While doing so, the two Vehicles must remain adjacent to each other (e.g., within 1”). Vehicles cannot combine to carry towed weapons.²⁸

For example, a Warrior IFV with a movement of 10t moves 2” in open and drops off an infantry stand. The Warrior has expended 4 movement points—2 for movement and 2 to drop the infantry off. The infantry stand has a move of 4, but expended 2 movement points unloading, so it has 2 movement points left. If the infantry stand were to become suppressed as it unloaded due to overwatch fire, it would lose 2 more movement points and have no movement left.

In **close combat**, mounted infantry can dismount after the first round of close combat. The carrier loses two movement points at the end of the close combat (or all if it has less than two movement points remaining). The infantry may not move after close combat. After dismounting, the infantry may participate in the close combat, but dismounting does not cause any new close combats.

9.5.1 Tank Riders

Some infantry historically rode tanks or self-propelled guns into battle. Tank riders function like infantry riding in an APC, with the following additional rules.

Tank and self-propelled gun stands are assumed to have a capacity of 1 for carrying tank riders.

Tank riders can be attacked by AI fire while riding a tank, for cover purposes they count as being in the same terrain as the tank carrying them.

9.6 Towed Weapons

Unless otherwise stated, treat towed weapons as infantry stands. Towed weapons have their own line on the spotting chart.

Towed weapons have a front and flank arc just like vehicles. Towed weapons marked with an “f” in the Equipment column of the data chart may only fire through their front arc. Towed weapons are usually guns, and will fire just like vehicle mounted guns.

²⁸ To reduce the number of models needed for large games, you may wish to simply replace the ½ capacity stands with 1 capacity stands in the scenario OB (i.e, the stand represents more vehicles than normal).

Towed weapons are treated as infantry stands when attacked. Optionally, towed weapons with a Cap rating of 1 or higher may be attacked by second generation or third generation missiles. In that case, the towed weapon is treated as an AFV with an armor rating of 0.

Towed weapons may move their listed movement (if their move rating is greater than “0x”), or may be transported by carriers. Depending on the actual systems involved, the carrier may tow or actually carry the towed stand. In game terms they are the same.

A towed weapon with a movement of “0x” may pivot, but can’t move unless being towed.

The space “occupied” by a towed weapon on the carrier is listed in the Cap column of the data; many take 1 space, some take only $\frac{1}{2}$ space.

A towed weapon that moves or debarks may not fire in its next Fire Phase.

10: Spotting

10.1 Executive Summary

- To spot a stand, you need an unblocked line of sight and it must be within the visibility limit and within detection range. The visibility limit is determined by environmental conditions. Detection range for automatic detection is the visibility limit of the scenario.
- Smoke and Cover blocks line of sight.
- Thermal sights ignore smoke for spotting purposes. They also have a detection range of 10" against any enemy stand.

10.2 General

Before a stand may make an anti-vehicle attack or an anti-infantry attack, it must spot its target. Two things are required to spot a target:

1. You must have an unblocked line of sight (LOS) to the target; and
2. The target must be detected.

Note that you can have an unblocked line of site to a target without detecting it. But an unblocked line of sight and detection is required to spot the target.

10.3 Visibility Limit

Conditions	Visibility Limit
Good Visibility	70"
Moderate Visibility	30"
Bad Visibility	15"
Night	8"
IR, II, and 1 st Gen. Thermal Sights	20"
2 nd Gen. Thermal Sights	40"

The visibility limit is determined by environmental conditions, and is fixed for the length of the scenario. Thermal sights have a different visibility limit

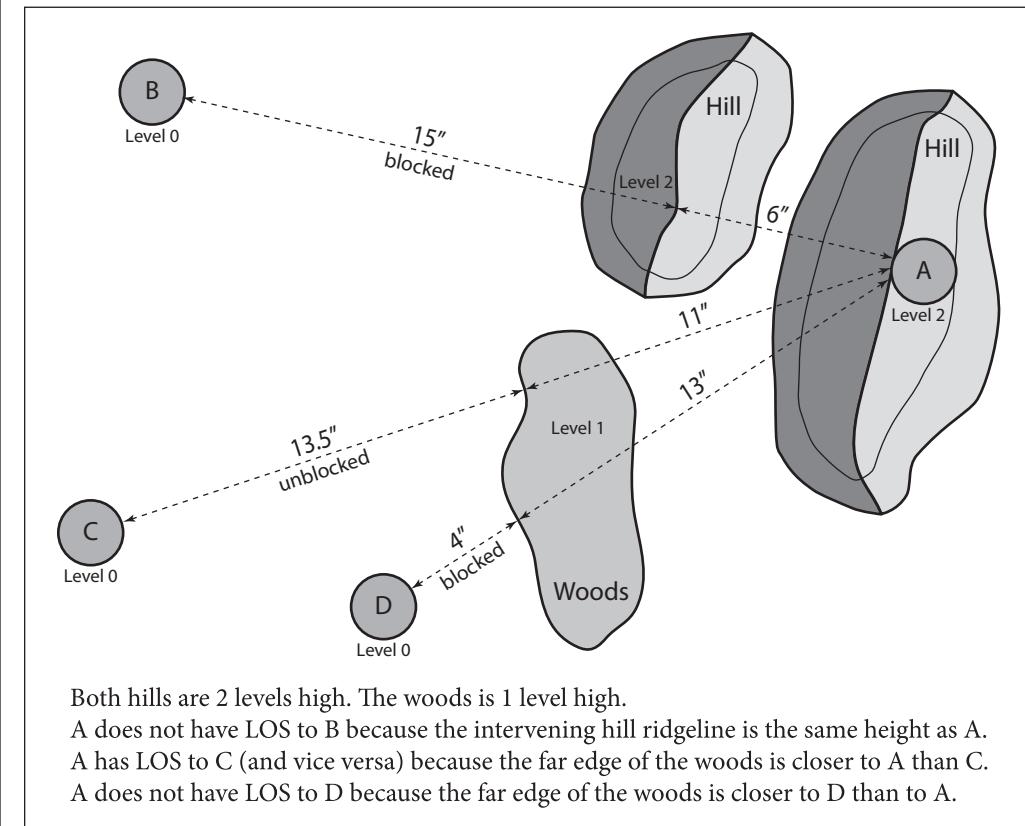
than other sight types. The final choice of visibility limit is up to the scenario designer, but these are some guidelines.

10.4 Line of Sight (LOS)

Stands trace line of sight from any part of a stand to any part of a stand.

LOS may be blocked by certain types of terrain (cover, see Rule 7.3) as well as geographic features such as hills or towns. Friendly and enemy stands don't block LOS.

Players may agree to use the Carl Rule, which provides that a stand inside the edge of cover facing outward may only spot or fire through its front arc or be spotted or fired at through its front arc if the enemy stand is outside the cover.²⁹ Infantry is exempt from the Carl Rule.



To see over intervening terrain that is higher than one of the stands, the intervening terrain must be lower than the higher stand, and the intervening terrain must be closer to the high stand than the low stand.³⁰ For example, to have LOS to a target at ground level (level zero) over a level one forest, a stand must be on terrain at least two levels high, such as on a level two or level three hillside, and

²⁹ The Carl Rule is realistic, but painfully non-intuitive. Therefore, we made it optional. If you use the Carl Rule, you should allow players to check the angle of their stands before they finish moving, so that they can be certain that they can fire at a target.

³⁰ Also known as the rule of halves. Yes, the real geometry is more complex than this simple rule, but to evaluate the actual height required to have LOS over the intervening terrain needs either several measurements and a calculator, or a very detailed and cumbersome LOS table, both of which drastically slow down play. This improves on the earlier edition's rule, where dead ground was all-or-nothing.

the point where the LOS crosses out from the forest toward the low stand must be closer to the high stand than to the low stand. In other words, along the LOS, the range from the high stand to the far edge of the intervening terrain must be less than half the range from the high stand to the low stand.

10.4.1 Recon Stand Spotting

For spotting purposes only, a recon stand may trace a LOS from any point within 1" of itself, except while the stand is moving during the Movement Phase.³¹ For firing AV fire or AI fire the recon stand must still trace LOS from a part of the stand itself.

10.5 Detection

A stand is detected the instant it is within detection range *and* within the visibility limit of an enemy stand that has LOS to it. The Spotting Chart lists detection ranges. Detection range for automatic detection is the visibility limit of the scenario.

A target stand is considered moving for spotting purposes only during the Movement Phase in which it moves. If an enemy stand has LOS to it at the end of the Movement Phase in which it moved, check for detection using the appropriate “moving” spotting range on the Spotting Chart. If no enemy stand had LOS to it at the end of the Movement Phase, but an enemy stand gets LOS to it during the enemy turn, then check for detection using the “stationary” spotting range.

10.6 Spotting

Once a stand is spotted—i.e., LOS to it is unblocked and it is detected—by any stand, the spotted stand is spotted by all enemy stands.

A stand becomes unspotted during the beginning of any *phase* in which it is out of all enemy stands’ LOS or visibility limit.³²

10.7 Terrain Effects on Spotting

The terrain a stand is in may affect LOS and detection range. See the Terrain rules and the Spotting Chart for more information.

10.8 Smoke

Smoke blocks line of sight just like cover (see Rule 7.3). But stands equipped with thermal sights ignore normal smoke for spotting purposes (smoke does

³¹ This allows recon stands inside cover or behind a ridgeline to use specialized observation equipment or to dismount scouts to observe, so that “recon by death” isn’t their primary means of finding the enemy. Hint: this can be used by recon stands to observe for artillery and airstrikes.

³² Alternatively, to save time and simplify things, have a stand become unspotted at the end of any player turn if it is out of LOS of all enemy stands.

affect their firing, see Rule 10.8.2). All smoke goes away at the start of the owning player's Area Fire Phase.

10.8.1 Thermal Sights

A stand with thermal sights and an unobstructed LOS to an enemy stand within 10" will spot that enemy stand. A stand with thermal sights can see through normal smoke. However, all anti-vehicle and anti-infantry fire through normal smoke using thermal sights has a -1 to-hit modifier, because smoke does degrade rangefinder performance. Incendiary smoke such as white phosphorous smoke degrades a thermal sight more than normal smoke, so all anti-vehicle and anti-infantry fire through incendiary smoke with thermal sights is at -2 to hit.

If a target is in smoke³³, and the firer doesn't have thermal sights, the target gets a +1 die roll modifier to its terrain saving throw, or a saving throw of 6+ in open terrain.

10.8.2 Discharger Smoke (Optional)

Vehicles with a "d" in the Equipment column can create one discharger smoke marker (1" x 1" for microarmor) per game. The marker is placed on the vehicle, and the vehicle is considered to be inside the smoke and not touching the edge, for LOS purposes. The marker can be created by both side's units in either player's turn at the *start* of any phase where overwatch fire is permitted. Discharger smoke for both sides goes away at the start of the owner's Fire Phase just like other smoke. Discharger smoke may either be normal smoke, or (if using the optional Multi-spectral smoke rules) multi-spectral smoke.

10.8.3 Multi-Spectrum Smoke a.k.a Visual/Infrared Smoke (Optional)

In scenarios taking place after 1998, smoke may be multi-spectral. Treat multi-spectral smoke just like normal smoke, except that stands with thermal sights don't ignore this smoke—it blocks LOS for thermal sights.³⁴

³³ For example, either inside the smoke and touching the edge, so it can still be spotted. Also applies if both firer and target are inside the smoke and within 2".

³⁴ Larry Bond postulates this in his novel *Cauldron*. We can't confirm its existence, but it is fun to play with, and it takes the edge off of thermal sights.

11: Combat Overview

11.1 General

There are 3 types of combat in *FFT3*:

Anti-vehicle fire: direct fire against vehicles usually using armor piercing ammunition.

Anti-infantry fire: fire against infantry and soft stands usually using automatic weapons and high explosive warheads.

Area fire: indirect area fire delivered by all types of artillery systems, and direct area fire from mortars and automatic grenade launchers.

Airstrikes may be anti-vehicle fire, anti-infantry fire, area fire, or special. See Chapter 20.

11.2 Cover

Cover is terrain that hides stands—woods, towns, etc. See Chapter 7 for details, especially Rule 7.3 for cover details. A stand must touch the edge of cover for the stand to fire out of the cover or be fired at by stands outside the cover. LOS is blocked by the edge of the cover. A stand in cover may trace a line of sight two inches through the same cover (but the LOS is blocked by the edge of the cover). It may fire at a target 2 inches or less away in the same cover.

12: Fire Combat

12.1 Executive Summary

- A Vehicle can move and fire its guns. If it has no stabilization, it can move $\frac{1}{2}$ its movement and still fire. If it has stabilized guns it can move its full movement and still fire. This applies to anti-vehicle fire, direct area fire, and indirect area fire. A vehicle may always make anti-infantry attacks, no matter how far it moved.
- A stand cannot move and fire 1st generation missiles in the same turn. A stand can move $\frac{1}{2}$ its movement and still fire 2nd generation or 3rd generation missiles.
- A stand that can fire but chooses not to may take a **hold fire** marker, which lets the stand fire in the next enemy Fire Phase.
- A stand that can fire and that didn't move may take an **overwatch** marker, which lets it fire almost anytime in the enemy turn or even during its next Movement Phase. It can also "shoot and scoot" if armed with a gun or 3rd generation missile. A stand with advanced stabilization ("ss" on the data chart) can move $\frac{1}{2}$ its movement and get an overwatch marker.
- A target stand can turn to face an enemy stand that moves from the target stand's front to its flank before the enemy stand gets a shot. It can **pivot** like this once per Fire Phase.

12.2 General

Stands execute fire combat during the Fire Phase, or, in the case of overwatch fire, during the Movement Phase or Fire Phase of the opposing player's turn. All fire during a Fire Phase is considered to be simultaneous except for overwatch fire. This means that unspotted stands which become spotted by firing during the phase can only be shot at in that phase by overwatch stands, not by normal fire or by stands marked hold fire.³⁵

³⁵ This rule prevents abuse of hold fire markers and further differentiates between held fire and overwatch fire.

Vehicles with multiple weapons systems (i.e., both guns and missiles, or multiple guns) must choose one weapon system to fire. Vehicles may conduct anti-infantry fire or anti-vehicle fire, but not both.

Infantry may attack regardless of how far they moved, except for the movement restrictions on firing missiles. Infantry stands may use all of their weapons in the same turn, against different targets, if the owning player decides. This applies to close combat as well.

If the infantry stand's AI ROF is listed in parenthesis, for example, "(2 / 3)" the stand has its ROF reduced by 1 in the Fire Phase after it moves. Towed weapons stands may only fire if they didn't move during the Movement Phase.

All attacks against a given target must be declared before they are resolved. This doesn't apply for stands conducting overwatch fire.

Vehicles that moved more than half their movement (not including turning or picking up/dropping off infantry) aren't eligible to fire in the Fire Phase or the Area Fire Phase, unless the vehicle has stabilized guns (see Movement and Firing; Stabilized Guns below). This includes artillery vehicles.

12.3 Procedure

A player may conduct fire with his stands in any order. The player indicates one or more firing stands, identifies the target, and states the type of weapon(s) being fired. The player then resolves the attack(s). The player then declares and resolves the next attack. Note that this allows a player to see the effect of the first attack before he declares the second attack. However, all fire against a given target must be declared before resolving any attack against that target.

12.4 Target Priority

A stand must fire at the nearest enemy stand, at the moment it fires, subject to the following exceptions:

- Firing stands may ignore any enemy stands being fired at by other friendly stands during the current phase. All overwatch fire in a given phase counts for this rule. So, a stand firing in overwatch at a tank 10" away may ignore the tank 5" away, if a friendly stand has already made an overwatch attack against the stand, during the current phase.
- Firing stands may ignore infantry in favor of vehicles or vice versa.
- Firing stands may ignore a target in cover or behind an obstacle in favor of a target in the open.
- Firing stands may ignore lighter vehicles to fire at heavier armored vehicles (but not vice-versa).³⁶ Compare the vehicles' front armor

³⁶ Yes, this means that your BMP-2 must fire at the M1 right in front of him, even though the BMP-2 can't hurt the M1. Even if there's a nice juicy M113 two inches behind the M1.

ratings if there's a question which is the heavier armored vehicle. Soft vehicles may be ignored to fire on armored vehicles.

- Treat helicopters as armored vehicles with armor '0' for targeting restrictions, except that an anti-aircraft stand may always engage the nearest helicopter over any other type of stand.

Artillery stands (on-board and off-board) aren't subject to this rule when making indirect-fire attacks. They are subject to it when making direct-fire and direct-area-fire attacks.

12.5 Movement and Firing; Stabilized Guns

Vehicles that moved more than half their movement (not including turning or picking up/dropping off infantry or towed weapons) aren't eligible to fire in the Fire Phase or Area Fire Phase, unless the vehicle has stabilized guns. This includes artillery vehicles (e.g., self-propelled howitzers, self-propelled mortars, etc.). However, a vehicle may always make anti-infantry attacks, no matter how far it moved. Vehicles that have stabilized guns have an "s" or "ss" in the "Equip" section of the vehicle data chart.

Vehicles with "s" stabilized guns may move their full movement and still be eligible to fire. Vehicles with "ss" stabilized guns may move their full movement and still be eligible to fire. Also, vehicles with "ss" class guns can move up to half their movement and still get an overwatch marker (if they don't fire in the Fire Phase).

Missiles have movement restrictions when firing. For ground stands, 1st generation missiles may not be fired if the stand moves in the Movement Phase. 2nd and 3rd generation missiles may be fired if the stand moved half or less of its movement. These restrictions are unaffected by the stabilization level of the stand's guns. Helicopters can fire 1st generation missiles if they move half or less, and can move full and fire 2nd or 3rd generation missiles.

12.6 Overwatch

A stand that doesn't move during its Movement Phase and doesn't fire during its Area Fire Phase nor during its Fire Phase may have an overwatch marker placed, that allows it to fire during the enemy's turn or even during the player's next Movement Phase. If a stand has advanced stabilization ("ss"), it can move up to half its movement and place an overwatch marker (if it didn't fire in its Area Fire Phase or Fire Phase).

A stand that conducts overwatch fire in its own next Movement Phase incurs the following restrictions:

1. The stand may not move in the same friendly Movement Phase in which it conducts overwatch fire, regardless of its stabilization. Notwithstanding this, the stand may conduct a "shoot-and-scoot" attack per the normal rules regarding "shoot-and-scoot".

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2. The stand may not fire in its next Fire Phase.
 3. The stand may take an overwatch marker at the end of its next Fire Phase, if the conducted overwatch fire was not a “shoot-and-scoot” attack.

For example, an M1 has an overwatch marker placed on it at the end of the Attacker’s Turn 1. It does not fire during Defender’s turn 1. During the Movement Phase of Attacker’s Turn 2, a T-80B conducts overwatch fire and becomes spotted by the M1. The M1 fires. It cannot fire again in the Fire Phase of Attacker’s Turn 2. But since it did not move in the Movement Phase or fire in the Area Fire Phase or Fire Phase (it conducted overwatch in the Movement Phase), the M1 can have an overwatch marker placed on it.

Overwatch markers are placed at the end of the owning player’s Fire Phase.

Overwatch fire may be made at any point during the Movement Phase or the Fire Phase— before, during or after movement or firing, except that a stand on overwatch may not use overwatch fire while engaged in close combat (it does not lose the overwatch marker though). Overwatch fire may not be conducted during any other phase. All normal targeting restrictions must be obeyed during overwatch fire. A stand loses its overwatch eligibility after it fires all of the shots that it is eligible to fire (i.e., once it exhausts its ROF).

Overwatch fire is resolved with other fire in the order the fire announcements are made, except if using the optional ATGW overwatch rule below.

When a stand executes an overwatch attack during an enemy Movement Phase, all anti-vehicle and anti-infantry attacks are at -1 to hit. This penalty does not apply if the stand fires before any enemy stands move or after all enemy stands have moved. A friendly stand on overwatch must declare all shots against an enemy stand before resolving any of those shots. If the enemy stand survives the overwatch attack(s), the friendly stand may not fire at the enemy stand again, unless the enemy stand initiates close combat. This restriction is lifted, of course, at the end of the friendly stand’s next Movement Phase.

For instance, an M2 Bradley (ROF 4) on overwatch is facing two BMP-1s. During the enemy Movement Phase, the Bradley fires 2 shots at BMP-1 #1. He declares that he’s firing 2 shots and rolls the dice. The shots have no effect and BMP-1 #1 continues to advance. The Bradley may not fire again at BMP-1 #1. Instead, it takes one shot at BMP-1 #2. Since it lost one ROF for changing targets, the Bradley has fired all of its shots.

12.6.1 Missile Overwatch (Optional)

When a stand announces an attack using 1st generation or 2nd generation missiles, opposing stands that are (a) marked with overwatch markers; and (b) armed with guns or cannon; can fire on the ATGM-launching stand if all other targeting requirements are met (i.e., they have LOS to it, they can detect it once it has fired, and it is in range). In this case, the overwatching stand may immediately declare overwatch fire at the missile-firing stand. In effect, the overwatching stand interrupts the missile firing stand and shoots first. The overwatch fire is resolved before the ATGM fire, and any effects of the overwatch fire, includ-

ing quality checks, are applied before the ATGM fire resolution and affect the ATGM fire resolution (e.g., modifier for being suppressed).³⁷ If the ATGM unit is eliminated by the overwatch fire, its ATGM fire has no effect.

12.7 Shoot-and-Scoot

Shoot-and-Scoot is a form of overwatch. A stand on overwatch may make a special “shoot-and-scoot” attack instead of its normal attack, using guns or cannons or 3rd generation missiles (but not 1st generation or 2nd generation missiles).

To execute a shoot-and-scoot attack, the stand makes an anti-vehicle attack at half its ROF rounded down. If the stand has an ROF of 1, it still gets 1 shot. In any case, the stand is deemed to use all of its ROF in this attack. The -1 modifier to hit for firing overwatch during the movement phase does not apply to shoot-and-scoot fire.

After taking this shot, the stand may immediately move half of its movement. The stand may not be fired at by enemy stands on overwatch until after it has moved the first $\frac{1}{4}$ ", and it must move at least $\frac{1}{4}$ ".³⁸ During the rest of the stand's movement after the first $\frac{1}{4}$ ", it may be fired at by eligible enemy stands on overwatch, if they can spot it and are in range. If you are using the optional friction rules (see Rule 6.7), a stand making a shoot-and-scoot attack may always make its shoot-and-scoot movement regardless of the friction roll result for its unit.

If a combat unit has multiple stands marked for overwatch and one or more conduct shoot-and-scoot attacks, any remaining stands in the combat unit marked for overwatch may shoot-and-scoot without actually firing.³⁹

If a carrier and its dismounted infantry stand (or towed weapon) are both marked overwatch and in base contact, one or both may shoot, and then together scoot, with the infantry or towed weapon embarking on the carrier prior to moving the first $\frac{1}{4}$ ". The costs to embark for each are paid from the half move they have during the scoot portion of the maneuver.

For example, a German SdKfz.251/4 Tractor halftrack and PaK 40 75mm ATG are marked for overwatch at the edge of a light woods. During the enemy movement phase, they elect to shoot-and-scoot at a group advancing Soviet T-34/76C m.1942. The halftrack does not fire, as its machinegun can't hurt the T-34, but the PaK 40 fires its 1 shot (its ROF 3 when halved is rounded down to 1). Then the halftrack embarks the PaK 40, and moves 1" into the woods. The halftrack has a move rating of 7ht, so halved its movement points become 3.5. The halftrack spent 2 movement points to embark the PaK, and the remaining 1.5 movement points to move 1.5" further into the woods. This completes its scoot move.

³⁷ This is to represent the vulnerability of the ATGW launchers to suppressive fire during the missiles' long time of flight.

³⁸ The intent here is to allow a shoot-and-scoot stand firing from the edge of cover to break LOS by moving further into the cover before overwatch fire at it can occur.

³⁹ This rule is intended to allow the combat unit to maintain cohesion after the firing stands have moved.

12.8 Hold Fire

A stand that is eligible to fire during its Fire Phase may choose instead to “hold fire”. The stand cannot fire in its own Fire Phase, but can fire during the enemy’s next Fire Phase. All fire in a Fire Phase is simultaneous except overwatch fire (see Rule 12.2). This means unspotted enemy stands which become spotted by firing during the phase cannot be fired at in the same phase by stands marked hold fire. And unspotted enemy stands marked hold fire which become spotted during the phase by firing cannot be fired at in the same phase by normal fire. Stands that have a hold fire marker may also pivot (see next).

12.9 Pivot

A stand may pivot at the end of the enemy movement phase. The stand may only pivot when an enemy stand that began its movement phase in the friendly stand’s front arc moves into the friendly stand’s flank arc. The pivoting stand must pivot to keep the enemy stand in the pivoting stand’s front arc.⁴⁰ The pivot happens before close combat.

12.10 Special Anti-Armor Ammunition For pre-1950 Guns

For vehicle data prior to 1950, the missile data columns are replaced by “special AT ammo” rating columns, showing the Pen, ROF, and Rng of the gun when firing the indicated special armor-piercing ammunition. Special ammunition was usually more effective than the standard rounds, but was available in very limited quantities and thus usually reserved for emergencies. Examples would be US HVAP rounds, German APCR rounds, and sometimes HEAT ammunition. Ordinarily, a stand with a listed special ammo rating may only fire one phase during the game using the special ammunition’s Pen, ROF, and Rng, and then it is exhausted. Any ROF unused when the stand shoots is lost. Mark the stand as having consumed its special ammo. Scenario designers can change the availability of special AT ammo if desired.

12.11 Infantry in Personnel Carriers, and Tank Riders

Infantry may fire anti-infantry fire from a vehicle, but the effective range is halved and a -1 adjustment is applied to the to-hit number.

Infantry in a vehicle that fails a quality check are eliminated with the vehicle.⁴¹

Infantry in a vehicle that is destroyed (not one that fails a quality check) must make a quality check. If they fail this quality check they’re destroyed and removed with the vehicle. If they pass the quality check they survive, dismount from the destroyed vehicle stand, and are suppressed—mark them with a Suppressed-B marker.

⁴⁰ This prevents players from exploiting the sequence of play and “panzerbushing.”

⁴¹ The infantry are staying in the vehicle as it seeks “better firing positions” to the rear.

Tank riders follow the above rules. In addition, if the tank being ridden gets hit by anti-vehicle fire, and the fire eliminates the tank either by destroying it or causing a failed quality check, the rules for infantry in personnel carriers apply (see Rule 12.11). If the hit(s) from anti-vehicle fire fail to eliminate the transporting tank, for each hit the tank received the infantry riding on it must take an anti-infantry attack from the weapon that hit the tank, with 1 ROF for each hit on the tank, with no additional terrain save.⁴²

For example, a Soviet SMG Infantry stand is riding on a T-34/76B in light woods. A German PaK 38 50mm ATG fires ROF 3 at 2" (close range), scoring two hits, and the T-34 fails both terrain saves for the light woods. The penetration rolls for the two hits cause a quality check that the T-34 passes. The SMG infantry stand must now take a ROF 2 anti-infantry attack from the PaK 38, at the same range, using the PaK's -2 AI modifier. The PaK needs a 3+ to hit, and rolls a '4' and a '6', which the AI modifier reduces to a '2' and a '4', so it gets one hit. The SMG Infantry stand must make a quality check. It passes the check and is suppressed, so it is marked with a Suppressed-B marker.

⁴² The terrain save for the fire was already taken by the vehicle the infantry is riding on.

13: Anti-Vehicle Fire

13.1 Executive Summary

- Roll to hit—1d6 per ROF of the weapon. To hit requires a 3+ at close range, 4+ at effective range and 5+ at long range. Missiles' to-hit numbers are:
 - 1st generation missiles with unlimited ammo: 5+; with limited ammo: 6.+
 - 2nd generation missiles with unlimited ammo: 3+; with limited ammo: 4+.
 - 3rd generation missiles with unlimited ammo: 2+; with limited ammo: 3+.
- Add quality modifiers and other applicable modifiers to all to-hit rolls.
- An armor value modifier is used when attacked by h-class weapons.
- If the target is in some kinds of terrain, or behind some types of obstacles, it may get a saving throw on 1d6 for each hit you score.
- For each hit that isn't saved, roll the number of dice equal to the weapon's Pen minus the target's Armor.
- If any die is a “6”, the target is destroyed. If any die is a 4 or 5, the target must make a quality check. One anti-vehicle fire quality check maximum per phase.

13.2 General

Anti-vehicle fire is direct fire at enemy vehicles usually using armor piercing ammunition, although HE may sometimes be used (i.e., he-class weapons).

Guns with a “-“ for their penetration value may only fire on soft vehicles (vehicles with an “s” armor rating). Treat their penetration value as “0” when doing so.

Anti-vehicle fire requires the following:

- An unblocked line of sight from the firing stand to a spotted target stand; and
- The target stand must be within range of the firing stand.

13.3 Attacked Facing

If there is an unblocked line of sight, determine the angle of the attack. An attacker wholly or partially in the target's front aspect (120°) uses the target's front armor value (see diagram in Rule 8.1). An attacker not in the target's front aspect uses the target's flank armor value. Use an armor value of '0' for a vehicle with "s" armor on that facing.

13.4 Rolling to Hit

13.4.1 Gun Procedure

To resolve an anti-vehicle attack, roll dice equal to the ROF of the weapon.

For guns, at short range (one half of effective range), the target is hit on a 3+. At effective range, the target is hit on a 4+. At long range (1.5 times effective range), the target is hit on a 5+. A weapon listing a range of 'C' can only fire in close combat, and is considered to be firing at effective range when doing so.

A natural "1" always misses; a natural "6" always hits.

13.4.2 Quality Modifiers

Poor troops get a -3 to their to-hit roll, and a -2 to their ROF for guns (not missiles). Marginal troops get a -2 to their to-hit roll, and a -1 to their ROF for guns (not missiles). Fair troops get a -1 to their to-hit roll. Good troops get a +1 to their roll. Excellent and Superb troops get a +1 to their roll and a +1 to their ROF for guns (not missiles).

13.4.3 Suppressed Modifier

Suppressed firing soft stands get a -2 to their to-hit roll. Suppressed firing armored stands get a -1 to their to-hit roll.

13.4.4 ROF Reduction for Multiple Targets

A stand with a ROF greater than 1 may fire at different targets and may allocate the number of shots among the different targets as the owning player wishes, but it loses one ROF for each target it engages after the first. Therefore, a stand with an ROF of 3 can fire 3 shots at one target, or 1 shot each at 2 targets.

A stand with CITV (a 'c' in the Equip column of the vehicle data), does not lose one ROF when it changes targets. So a stand with a ROF of 3 and CITV can fire 1 shot each at 3 different targets.

This rule applies to vehicles and towed weapons. Infantry stands do not lose one ROF when switching targets.

13.4.5 Point Defense Systems

Some vehicles now have an active countermeasures system installed to defeat antitank missiles. These systems fire flechette grenades in the direction of incoming missiles and also incorporate jammers to interfere with the missile controller.

Vehicles equipped with point defense systems add one to their terrain saving throw against missiles. If the vehicle is in terrain with no saving throw, the vehicle gets a saving throw of 6+. Such vehicles are marked in the Vehicle Data sheets with “ATGM Defenses: +1 to save.”

13.4.6 Missile Procedure

Resolving a missile anti-vehicle attack is similar to a gun attack, but see the following for differences.

Missiles always have a minimum range and a maximum range. A Missile’s hit number is the same at all ranges. Missiles can be first-generation, second-generation, or third-generation. Missile generation is indicated by a numerical superscript on the missile’s Pen rating. So, a stand with a missile Pen rating of 9h² would be a second generation missile. The missile’s generation determines a stand’s ability to fire the missile if it moved this turn:

- Stands with first-generation missiles cannot fire missiles if the stand moved this turn. A pivot does not count as moving.
- Stands with second- and third-generation missiles can fire missiles if the stand moved half or less this turn (similar to unstabilized guns).

Missiles have a minimum and maximum range. For example, “1-40”: the missile may not be fired at less than one inch or more than 40 inches. In close combat, a missile with a 1” minimum range may only be fired in the first round of close combat.

- First-generation missiles with unlimited ammo hit at all ranges on a 5+; with limited ammo this becomes 6+.
- Second-generation missiles with unlimited ammo hit at all ranges on a 3+; with limited ammo they hit with a 4+.
- Third-generation missiles with unlimited ammo hit at all ranges on a 2+; with limited ammo they hit on 3+.

Poor troops get a -3 to their to-hit roll. Marginal troops get a -2 to their to-hit roll. Fair troops get a -1 to their to-hit roll. Good troops get a +1 to their roll. Excellent and Superb troops get a +1 to their roll. No troop quality ROF modifiers apply for missiles. A suppressed firing soft stand gets a -2 to its missile to-hit roll, and a suppressed firing armored stand gets a -1 to its missile to-hit roll. A natural “1” always misses. A natural “6” always hits.

Missiles get no penetration modifier for close or long range.

Some missiles are classified as top-attack missiles. These missiles attack a target's flank armor, no matter what angle they attack from. Top attack missiles are marked with a '+' after their Pen rating.

13.5 Terrain Saving Throw

A stand that is hit by anti-vehicle or anti-infantry fire gets one saving throw for each hit if it is in certain types of terrain, in smoke, or has certain systems or capabilities. The saving throw is made on 1 die, and a separate die is rolled for each shot that scored a hit. If a stand is eligible for more than one saving throw number due to overlapped terrain types (see Rule 7.22), use the one which gives the best protection (i.e., the lowest saving throw number).⁴³

If the target stand makes the saving throw, the shot misses.

See the chapters on Terrain and on Combat Engineering for terrain saving throw values, or see the quick reference sheet.

The following are all cumulative:

- If the attacker is **firing a missile** into woods, forests, a swamp, or a town, the target has its saving throw number reduced by one (e.g., a stand in a Town saves on 3+ versus missiles instead of a 4+).
- If the target has an **ATGM Point Defense System** and is fired at with a missile, it gets a +1 die roll modifier to its saving throw, or a saving throw of 6+ in open terrain.
- If the target is in **Smoke**, and the firer doesn't have thermal sights, the target gets a +1 die roll modifier to its saving throw, or a saving throw of 6+ in open terrain.

13.6 Penetration Rolls

13.6.1 Types of Attacks and Armor

The anti-vehicle fire system has three types of attacks—normal attacks, h-class attacks, and he-class attacks. Normal attacks are kinetic energy weapons, h-class attacks are specialized high explosive armor-piercing weapons (usually HEAT or HEAP, but they can also be HESH—high explosive squash head), and he-class attacks are normal high explosive shells.

Armored vehicles have two armor rating numbers, one for each arc (front then flank), separated by a dash or a letter that represents the h-class armor modifier. An example armor rating would be "5 A 3". The first number is the front armor rating against normal and he-class attacks, and the second number is the flank armor rating used against normal and he-class attacks. If attacked by h-class weapons, add the value of the h-class modifier to the armor rating when resolving the attack. The modifiers corresponding to the letters/symbols are:

⁴³ Using the terrain types included in the game this doesn't happen, but we include this rule in case user-created terrains come into play that can overlap and have different saving throws.

- = +0 A = +1 B = +2 C = +3 D = +4 E = +5 F = +6

In the “5 A 3” example above, against h-class attacks the vehicle has a front armor of 6 and flank armor of 4.

13.6.2 Procedure

For every shot that hits the target, roll dice equal to the weapon’s penetration minus the target’s armor. Modify the penetration for range if using normal ammunition, but not if using h-class or he-class ammunition. A player may roll a maximum of 10 penetration dice per shot that hits.⁴⁴ Range modifiers for gun penetration of normal ammunition are:

- **short range** gets a +2 modifier to the gun’s penetration value
- **long range** gets a -2 modifier to the gun’s penetration value

If a ‘6’ is rolled on any die, the target is destroyed. If a ‘4’ or ‘5’ is rolled on any die, the target must make a quality check. Only one quality check needs to be made, no matter how many ‘4’s or ‘5’s are rolled.

For example, a Russian KV-1 (pen 5) fires at short range and gets one hit on a German Pz.IIIH stand (armor 4 - 3) in the front. Short range gives a +2 modifier to penetration. The KV-1 gets (7-4=3) three dice and rolls them. He rolls a 1, 4, and 5. The Pz.IIIH must make a quality check. The Pz.IIIH is average quality so its roll must equal or exceed ‘5’ or it will be eliminated.

Since a stand can only take one quality check from fire in the Fire Phase, to help avoid accidental multiple quality checks on one stand in the phase it is suggested to simply mark each stand that has to take a quality check during the Fire Phase, and roll the checks once all firing is complete.

A weapon always rolls at least one penetration die per shot that hits the target. However, if the weapon’s penetration is less than the target’s armor, the penetration roll is adjusted by the difference. If the target’s armor value exceeds the weapon’s pen value by 3 or more, the hit cannot harm the target.

So, if a Pz.IIIH fires its gun (pen 4) at long range (-2 modifier to penetration) at a KV-1’s front (armor 5 - 5), the Pz.IIIH would roll 1 die per shot that hits, and since the penetration minus the target’s armor is a negative number ($2 - 5 = -3$), the Pz.IIIH would subtract 3 from its penetration roll. The maximum possible adjusted roll is thus a 3 ($6-3=3$), therefore, the Pz.IIIH cannot harm the KV-1 from the front (or flank!) at long range.

13.7 Soft Vehicles

Soft vehicles have an armor value of ‘0’ when fired at by anti-vehicle fire. Some armored vehicles have a flank armor of ‘s’, and this applies to them as well if fired at from the flank. Note that soft vehicles can also be fired at with anti-

⁴⁴ A good alternative to this rule is to only roll six dice maximum per attack, and if the pen minus armor exceeds 6, then a 5 or a 6 is a kill. This way, you don’t have to roll bucketfulls of dice when shooting at light vehicles. We call this the “It’s dead, Jim” rule.

infantry fire (and armored vehicles with an ‘s’ flank armor can be fired at with AI fire through their flank arc).

13.8 Advanced Armor

Advanced armors (Chobham, laminated, reactive, spaced, etc.) are reflected in a stand’s normal armor values and h-class armor modifier. Metallurgy, spacing, and ballistic shape are incorporated into the armor values and h-class modifier. Other things that can interfere with HEAT warhead armor penetration like trim vane plates, mesh screens, and storage box arrays, are also built into the h-class modifier.

13.9 Infantry Anti-Tank Weapons

Infantry stands have an anti-infantry rating, a LAW (light antitank weapon) and possibly a MAW (medium antitank weapon).

Some MAWs and LAWs have a long, an effective, and a short range just like most other weapons. These list a single number for their effective range. Some list a range of ‘C’, which means they can only be used in close combat and fire at effective range when doing so.

However, some MAWs are missiles and use the missile rules above, including the firing restrictions if the stand moved. MAWs that are missiles have an asterisk after their ROF, “1*” for example. All infantry MAWs that are missiles also list a minimum and maximum range, for example, “2-20” means the missile has a minimum range of 2 inches and maximum range of 20 inches.

Infantry stands do not suffer a ROF reduction when switching targets for anti-vehicle fire. Towed weapons do lose 1 ROF per switch.

If a suppressed infantry unit makes an anti-vehicle attack, apply a -2 modifier to the die roll (i.e., it is a suppressed soft stand).

14: Anti-infantry Fire

14.1 Executive Summary

- Only effective against infantry, towed weapons, soft vehicles, or a soft flank arc of an armored vehicle.
- Infantry stands have two ROFs listed for anti-infantry fire. The first is used in ranged fire (i.e., anything but close combat, which is anything beyond 1" range) and the second is for close combat.
- Roll to hit: 1d6 per ROF of the stand. Apply the die-roll modifier for firer quality, the firer's anti-infantry modifier, and all other applicable anti-infantry die-roll modifiers.
- Each roll that equals or exceeds the to-hit number scores a hit on the target.
- For each hit scored, the target stand gets a terrain saving throw, if the situation warrants.
- The first hit causes a quality check at the end of the phase; each additional hit this phase modifies the quality check die roll by -1.

14.2 Procedure

Anti-infantry fire may be conducted against any infantry stand, soft vehicle stand, or other soft stand. Anti-infantry fire also requires an unblocked LOS and a spotted target. Anti-infantry fire has a short, effective, and long range just like anti-vehicle fire. Infantry stands have two ROFs listed for anti-infantry fire. The first is used in ranged fire (i.e., not close combat which is anything beyond 1" range) and the second is for close combat. A stand with a ROF of "2 / 5" would have ROF 2 if using AI fire at ranges beyond one inch, and ROF 5 if using AI fire in close combat.

To conduct ranged fire, the firing stand nominates as the target any valid infantry stand, soft stand, or soft vehicle stand within long range and rolls a number of dice equal to its ranged combat ROF. Quality modifiers to hit and to the ROF apply, just like for anti-vehicle fire.

Similarly, to conduct close combat fire, the stand nominates an infantry, soft, or soft vehicle stand it is in close combat with, and rolls a number of dice equal to its close combat ROF. Again, quality modifiers to hit and to its ROF apply.

The target takes a hit for each of the firing stand's modified die rolls that equal or exceed the firing stand's to-hit number, with the provision that a natural "1" die roll always misses and a natural "6" always hits (see Rule 14.3 for some of the die-roll modifiers). Once the number of hits has been determined, if the target stand is in certain types of terrain, in smoke, or has certain systems or capabilities, it gets to make a separate terrain saving throw for each hit, just like in anti-vehicle fire (see Rule 14.3). If the target makes the terrain saving throw, that shot misses. Total the hits that weren't saved. The first hit causes the target stand to make a quality check. Every additional hit suffered that phase will subtract one from the quality check roll.⁴⁵ Infantry stands only have to make one quality check per phase, no matter how many attacks are made against them. If the infantry stand passes the quality check, the stand is marked with a Suppressed-B marker. See Rule 15.2.10 for a full description of the effects of being suppressed. While suppressed, a stand's movement is reduced by 2 movement points, and its fire gets a negative modifier. Note: a stand should not have more than one suppression marker on it. The most recent suppression result takes precedence. So if a stand with a Suppressed-A marker later receives a Suppressed-B marker, the Suppressed-B marker replaces the Suppressed-A marker, and vice versa.

Since a stand can only take one quality check from fire in the Fire Phase, to help avoid accidental multiple quality checks on one stand in the phase it is suggested to simply mark each stand that has to take a quality check during the Fire Phase, and roll the checks once all firing is complete.

If the firing stand is not infantry and fires at more than 1 target, the **ROF Reduction for Multiple Targets** rules apply (see Rule 13.4.4). Infantry stands do not suffer the ROF reduction for multiple targets when firing. Towed weapons do.

For instance, a Bradley fires its cannon at two enemy infantry stands in the open at effective range. The cannon has a ROF of 4, reduced to 3 because it is switching targets once. The Bradley allocates two attacks against enemy stand #1, and the remaining attack against enemy stand #2. The Bradley's anti-infantry modifier is 0, and it has a hit number of 4+. The dice on the attack against the first stand are '4' and '6'. The first stand takes two hits and must make a quality check with a -1 die roll modifier at the end of the phase. The die on the attack against the second stand is a '5'. The second stand takes a hit and must make a quality check at the end of the phase.⁴⁶

An infantry stand whose AI ROF is listed in parenthesis, "(2 / 3)" for example, has that ROF reduced by 1 if the stand moved this turn. This means a ROF "(1 / 3)" stand cannot fire ranged AI fire if it moved (it's ranged AI ROF '1' is reduced to '0' due to moving).

⁴⁵ We've found it useful to put a quality check marker by the infantry/soft stand for each hit it takes, as a memory aid for determining how many -1 modifiers will apply when the check is taken.

⁴⁶ Three shots, three hits—wish we had this kind of luck on our dice in real life!

14.3 Anti-Infantry Fire Modifiers

The following to-hit die-roll modifiers are cumulative:

- Apply the firing stand's **Anti-Infantry (AI) modifier**.
- **Apply a -1** to the to-hit die roll of a stand firing at a target that is in smoke or if using thermal sights firing through normal smoke (use a -2 for thermal sights firing through incendiary smoke, see Rule 10.8.2).
- **Apply a -1** to the to-hit die roll of a suppressed firing armored stand.
- **Apply a -2** to the to-hit die roll of a suppressed firing soft stand.
- **Apply a -1** to the to-hit die roll of an infantry stand firing from a vehicle and halve the effective range (see Rule 12.11).

Targets in some kinds of terrain and in entrenchments receive a Terrain Saving Throw. See Rule 13.5 for Terrain Saving Throw details and modifiers, and the Combat Engineering chapter for entrenchments (Chapter 19).

15: Artillery and Area Fire

15.1 Executive Summary

- Area fire is mainly performed by off-table artillery support groups, and by on-table artillery support groups, battalion guns, battalion mortars, helicopter rockets, and some airstrike types. Some on-table vehicle guns may also use area fire.
- The amount of area fire provided by the firing stands is measured in fire units.
- A barrage is composed of one or more fire zone markers, which must be placed in 2" cohesion with each other.
- A fire zone marker has a fire zone radius, and is assigned one or more fire units.
- Area fire resolution procedure is:
 - Roll for available fire units from off-table and on-table artillery for indirect area fire.
 - Designate an observer for each barrage.
 - Place fire zone markers for each barrage and allocate fire units to them.
 - For each barrage:
 - If the barrage is indirect area fire, roll for accuracy, then roll on *Artillery Problems Table* if needed, and roll on SNAFU table if called for.
 - If the barrage is direct area fire, do not roll for accuracy.
 - Resolve barrage effects using the area fire tables (the *Area Fire Zone Size*, *Area Fire Index*, and *Area Fire Resolution* tables).

15.2 Area Fire

15.2.1 Definition

Area fire attacks are any attacks by unguided munitions that are directed at an area of the terrain rather than at a specific point target. Area fire includes all indirect fire by artillery and multiple rocket launchers, and all fire (indirect and direct) from mortars. Indirect area fire is area fire by a stand that cannot see its target and is using an observer to conduct the fire. Direct area fire is area fire by a stand that can see its target. Some on-table stands may engage in direct area fire (see below).

An on-table stand may not use area fire while suppressed.

A stand that fires in the Area Fire Phase cannot fire in the Fire Phase.

Area fire occurs during the Area Fire Phase, except for battalion mortar/battalion gun stands and helicopter rocket attacks which may fire overwatch (see Rule 15.6).

15.2.2 Artillery Support Groups

Off-table artillery is abstracted as “support groups”. A support group is composed of one to four batteries of artillery of the same caliber (usually three batteries). For most post-WWII armies, a support group will usually be a homogenous battalion of artillery (e.g., a Soviet 152mm SP gun battalion). For armies with battalions of mixed caliber, which were common in some WWII armies, the batteries are grouped by caliber to make support groups of up to three (or occasionally four) batteries each.

When designing scenarios, if a support group has more or less than three batteries adjust its availability modifier. If it has only two batteries, reduce its availability modifier by 1 (e.g., a zero availability modifier would become -1). If it has only one battery, reduce its availability modifier by 2. If it has four batteries, increase its availability modifier by 1. A group of more than four batteries should be split into two groups of three or less.

Managing artillery fire by groups of batteries is done in FFT3 to limit the players’ control over artillery assets to a reasonable level for maneuver unit commanders, while still keeping the play fast. When the player-commanders want artillery, they’ll know how much they can get *right now*, but the details of fire direction and control are left to the artillery officers, and there is no certainty as to what will be available later. Originally the intent was to manage fire availability by battalion, but the support group was a necessary abstraction to permit inclusion of the batteries from mixed-caliber battalions without a lot of additional die rolls to determine which caliber batteries were the available ones.

15.2.3 Off-Table Artillery

Unless stated in the scenario, all off-table artillery is assumed to be in range of any target on the table, and can conduct indirect fire as long as an eligible

stand observes for them. As a practical matter, most artillery will be off-table. Off-table artillery may not fire overwatch.

Note that if an artillery support group is off-table, the only information you really need about it is the gun caliber, whether it's towed or self-propelled, the types of ammunition it can fire, and its availability modifier if any.

15.2.4 Direct Area Fire

Most area fire in a game will be indirect, requiring a separate observer stand. But on table mortars and any on-table stand that has a gun with a caliber of at least 30mm and a ROF of 3 or less (e.g., tanks, field guns, SP guns, etc.) may fire direct area fire with that gun out to its long range.⁴⁷ There is no availability roll for direct area fire. The firing stand must observe for its own area fire.⁴⁸ Direct area fire is resolved just like indirect area fire, except there is no area fire accuracy roll: the fire automatically lands on target with full effectiveness. Direct area fire is resolved in the Area Fire Phase.

15.2.5 Fire Units

For each on-table and off-table support group, and for each battalion mortar or battalion gun stand, that you wish to use in *indirect* area fire this turn, roll one die and consult the *Artillery Availability Table*. Apply the availability modifier for that support group or battalion stand, if any. Cross-grid the modified die roll with the appropriate column in the section for your force's artillery doctrine: Western-style artillery or Soviet-style artillery, to determine how many 'fire units' that support group or stand can provide this turn. Self-propelled artillery, towed artillery, and battalion mortars/guns each use a different column.

For on-table artillery, one stand must be designated as firing for each fire unit used. The owning player designates which stands are firing. If you roll more fire units than there are stands in the support group, all the group's stands are firing. A stand that fires in the Area Fire Phase cannot fire in the Fire Phase. The fire zone markers of the barrage must be within the indirect fire range of the stand. For multiple rocket launchers the fire zone markers of the barrage also cannot be closer to the firing stand than its minimum indirect fire range.

For example, a 1980's Russian player has two towed 122mm support groups and one 152mm self-propelled support group. In his Area Fire Phase he rolls availability for each 122mm group and gets a '4' and a '5'. The '4' gives one fire unit from the first group; the '5' gives three fire units from the second group. Then he rolls a '6' for the 152mm group, giving three fire units. So the Russian player has a total of four 122mm fire units and three 152mm fire units to use in barrages in this Area Fire Phase.

15.2.6 Placing Barrages

Each combat unit may place one barrage in its Area Fire Phase, and a forward observer stand (FO) or recon stand may place two barrages. A barrage consists

⁴⁷ Automatic grenade launchers (AGLs) are the most likely potential users of this mode of fire.

⁴⁸ Direct area fire is not usually as damaging as direct anti-infantry fire, but it can be useful for suppressing entrenched soft targets.

of one or more fire zone markers. A fire zone marker is round or square, $\frac{1}{2}$ " to 1" across,⁴⁹ marked with a dot or crosshairs as the center of the fire zone for that marker, and one side marked 'F' for 'full effectiveness' and the other marked 'R' for 'reduced effectiveness'. If you place more than one fire zone marker in a barrage, all fire zone markers in the barrage must be placed so that they maintain a 2" cohesion distance center-to-center (e.g., the cross-hair or dot on each marker in the barrage must be 2" or less from the cross-hair or dot on another marker in the same barrage).⁵⁰ Place each fire zone marker according to the rules for observing artillery fire (see Rule 15.3), and then allocate fire units to each fire zone marker. Within a barrage, all fire units must be of the same caliber of artillery and type of ammunition, every fire zone marker must have at least one fire unit allocated to it, and the fire units must be spread as evenly as possible amongst the markers in the barrage. All barrages for that Area Fire Phase must be placed before any fire is resolved, and all fire units in a barrage must be allocated to markers before you resolve the fire at any marker in the barrage.

Continuing our Russian example, the Russian player has a recon BRDM-2 that he wishes to observe for two barrages, and a motor rifle battalion which will have a stand observe for one other barrage. The BRDM-2 places one barrage consisting of three fire zone markers along a treeline occupied by three spotted British Challenger tanks. The fire zone markers are placed in a row, 2" apart along the treeline, with most of each fire zone in the trees, so the BRDM can see the edges of two of the three fire zones. The barrage covers two of the British tanks. The Russian player allocates one 152mm fire unit to each fire zone marker. Then the BRDM-2 places another barrage on a small patch of light woods on the flank that contains an unspotted British Milan Team stand and a light truck. This barrage has one fire zone marker. The player allocates two 122mm fire units to the fire zone marker. Finally, a BMP-2 stand from the motor rifle battalion places a barrage on a town edge to its front containing three FV-432s and three infantry. The markers are placed 1.5" apart with most of their fire zones overlapping the town, with the BMP-2 able to spot the edges of both fire zones. The fire zones cover two of the FV-432s and two infantry stands. The Russian player allocates one 122mm fire unit to each fire zone marker.

15.2.6.1 Barrage Types: Fire Blow and Sustained

When an HE barrage is placed, the owning player must designate it as a 'fire blow' or 'sustained' barrage. ICM barrages are always fire blow barrages, as are non-artillery barrages (e.g., airstrikes, and helicopter rockets).

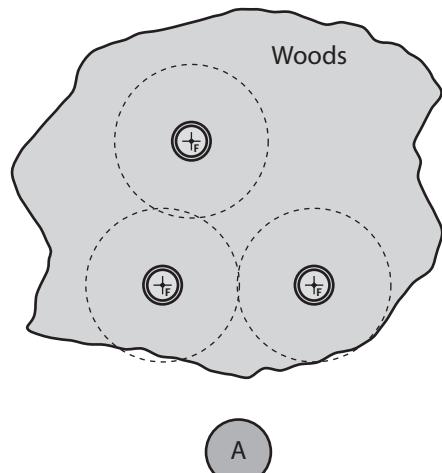
Fire blow barrages are removed immediately after they are resolved.

Sustained barrages remain on the table after resolution, until the next friendly Area Fire Phase. In the enemy Area Fire Phase, roll again for the effects on any stands (friendly or enemy) in the barrage's fire zone at that time. Roll on the Area Fire Resolution Chart using the same fire index row that was used when the barrage was placed. Additionally, if any enemy or friendly stand that was not

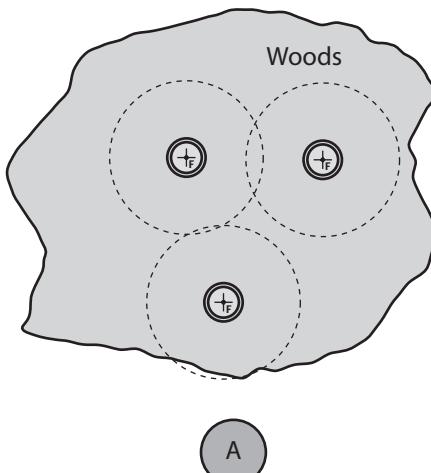
⁴⁹ You may find it useful to number the markers to help with identification when there are multiple barrages on the table, or if there are multiple fire zone markers in one barrage that have different numbers of fire units allocated to them.

⁵⁰ This simple rule gives more realistic flexibility for artillery fire patterns while replacing the complex sheaf rules of earlier FFT editions. It allows an observer to lay a barrage along a road or a treeline, or to blanket a large area with fire, with a minimum of artificial interference from the game mechanics.

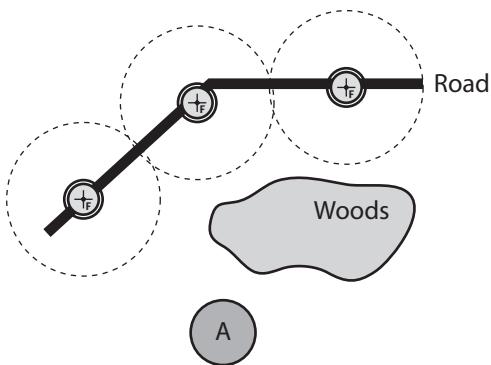
Examples of valid and invalid placement of fire zone markers in a barrage. Stand A is the observer. The barrage has 3 fire zone markers with one fire unit allocated to each. The fire zone radius is 1". Fire zones are marked by dashed circles.



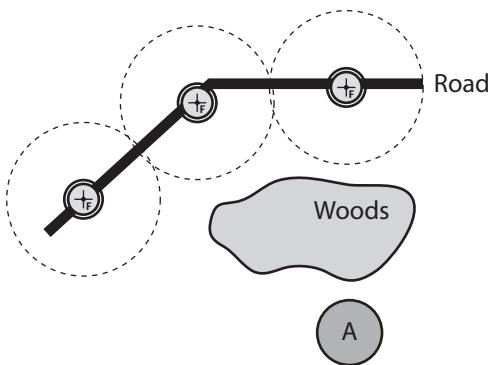
Valid. All markers maintain 2" cohesion. At least half the fire zones are spotted by A.



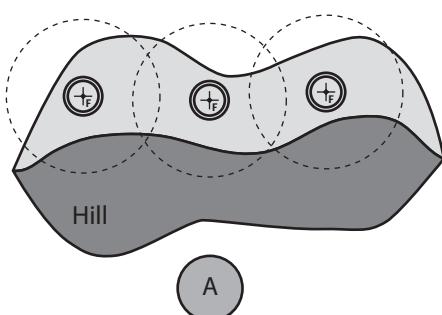
Invalid. Only one of the fire zones is spotted by A.



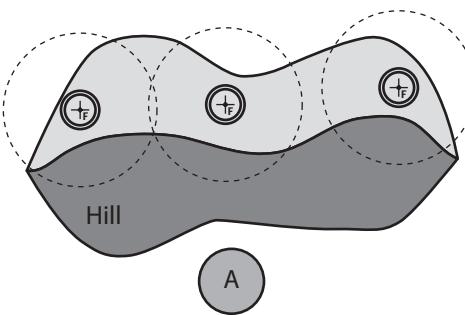
Valid. All markers maintain cohesion. Two of three fire zones are spotted by A.



Invalid. A cannot spot two of the three fire zones.



Valid. All fire zone markers have cohesion. All fire zones are spotted by A.



Invalid. The right fire zone marker in the barrage is outside of 2" cohesion.

already in the fire zone of a sustained barrage when it was placed moves through it, the barrage owner must roll for the effects of the barrage against that stand, again using the same fire index row on the Area Fire Resolution Chart that was used when the barrage was placed.

Carrying on with our example, the Russian player designates the barrage on the British tanks and on the town as fireblows because he has troops that will be attacking into them this turn and he doesn't want to run into his own fire zones, and he designates the barrage on the Milan Team as sustained, to encourage it to displace if it survives the first impact. He states that all three barrages will use HE ammunition.

15.2.7 Accuracy Roll

Once a barrage is placed and fire units are allocated to its fire zone markers, roll one die for the artillery accuracy of that barrage. Modify the die roll with the to-hit modifier for the quality of the observing stand, and modify it with an additional -1 if the observing stand is suppressed. If the modified roll equals or exceeds the artillery accuracy number for your force's artillery, then the fire lands on the markers with full effectiveness, so follow the Fire Results section below. If it is less than the accuracy number and a natural '1' was not rolled, the fire lands with reduced effectiveness on the markers, and again follow the Fire Results section. If a natural '1' was rolled, then roll one die and modify it with the to-hit quality modifier of the observer, and reference the *Indirect Area Fire Problems Table*.

Artillery accuracy numbers are provided in the army lists. To determine the accuracy number for an army or timeframe not covered in the lists:

- 2+ for 2nd generation digital computers and automated field artillery control systems such as the US AFATDS fielded in the mid-1990s
- 3+ for 1st generation digital computers and automated field artillery control systems such as the US TACFIRE system fielded in 1980/81
- 4+ advanced manual or analog computation and artillery control such as the US in WWII, Korea, and Vietnam
- 5+ primitive manual computation and artillery control such as found in some WWII armies and many Third World armies

15.2.8 Area Fire Problems Table

The *Area Fire Problems Table* is used to resolve what happens when something has not gone quite right.

For a scatter result, roll for the direction of scatter using scatter dice⁵¹ (or use any other means of choosing a random direction). Move each fire zone marker of the barrage that direction the specified distance on the table and resolve the fire at that location.

51 We suggest the use of a 'correct' scatter die (not GW-style). To make one, take a 6-sided die and draw an arrow on each face parallel to the die edge (not diagonally). If your artwork is a little crooked, it doesn't matter, direction is always read as parallel to the die edge. That way a straight edge can be laid alongside the die to measure the distance along the direction if needed.

For a counterbattery result, the fire lands at full effectiveness but all support groups firing on that barrage have a permanent -1 added to their availability modifier. These are cumulative. Each on-table group also has one firing stand eliminated, selected by the owning player. So a support group with no availability modifier that suffers counterbattery fire would then have a -1 availability modifier (and if on-table would lose one firing stand), and if it suffered counterbattery again would have a -2 availability modifier (and if on-table would lose another firing stand).

For a SNAFU result, roll 3D6 on the *Area Fire SNAFU Table* and apply the effect indicated.

15.2.9 Area Fire SNAFU Table

This table is used when something unexpected has gone wrong, maybe dreadfully wrong.

For a **cancelled fire mission**, remove the barrage marker, and the fire units allocated to it are lost.

For a **counterbattery or AAA disaster** result, the fire lands with full effectiveness. Then randomly select one of the artillery support groups assigned to that barrage—it was hit by very heavy, accurate counterbattery fire after the barrage and is no longer combat effective. It may not fire for the rest of the game. If on-table, all that group's stands are eliminated. If the attack was an airstrike, the airstrike is shot down after the fire is resolved.

For a **scatter** result, use the same procedure as for scatter results on the *Area Fire Problems Table*. Target location error results are similar. Move the fire zone marker(s) according to the table and fire hits the marker in its new location with the effectiveness specified in the table.

For the other more unusual results, follow the directions in the Effects column on the *Area Fire SNAFU Table*.

15.2.10 Fire Results

To resolve the effect of an indirect area fire attack, total the number of fire units allocated to that fire zone marker, and make note of the barrage caliber and ammunition type for artillery, or the type of fire being used for helo rockets and multiple rocket launchers.

On the *Area Fire Zone Size Table*, use type of fire and the number of fire units impacting on the fire zone marker to determine the radius of the fire zone for that marker. The fire zone radius is traced from the dot or cross-hair on the marker. All target stands that have any part of the stand within this distance are affected by the fire zone. If all vehicle models are based, the bases are part of the vehicle stands. If some vehicle models are unbased, disregard the bases and measure to the vehicle hulls for all stands. Ignore gun barrels in all cases.⁵² If a stand is affected by more than one fire zone in the same barrage, roll for effect on the stand using only the fire zone with the highest number of fire units assigned.

⁵² If all players agree, they can modify this rule to fit with their particular army's basing scheme.

If a stand is affected by fire zones from two or more barrages, roll separately for the effect of each barrage on it.

On the *Area Fire Index Table*, cross-reference the number of fire units impacting the fire zone marker and the barrage caliber (or ammo type) to determine the base fire index number for that marker. If the fire landed with full effectiveness, this is the index number for the barrage. If the fire landed with reduced effectiveness, subtract 5 from this number to get the index number for the barrage, but if subtracting 5 would make the fire index less than '1', then the fire index is '1'.

On the *Area Fire Resolution Chart*, find the line for the fire index number for the fire zone marker being resolved. For each stand affected, roll one die and use the appropriate column on that line of the chart to determine the result of the area fire on that stand. The entry on the *Area Fire Resolution Chart* will be a letter or dash, followed by a number, and then another letter (for example: "S 6+ Q"). The number listed is the minimum die roll needed to achieve the effect indicated by the last letter in the entry, otherwise the effect is that indicated by the first letter or dash.

If the affected stand is an open-topped armored vehicle, ignore cover (treat it as if in the open), and apply a +1 modifier to the die roll. Open-topped vehicles are indicated in the vehicle data's equipment column by an 'o'. Optionally, starting in 1960 and thereafter (1970 if the firer is a Third World or Arab nation), treat open-topped vehicles as "soft" targets when targeted by an artillery barrage.⁵³

The area fire system has four possible effects:

- '--'—**No effect.** Means just that, no effect at all on the stand.
- '**S**'—**Suppressed.** Mark the stand with a yellow 'Suppressed-A' marker if hit by area fire (use Suppressed-B if hit by AI fire). A suppressed stand's movement is reduced by 2 movement points; if it becomes suppressed while moving, its remaining movement is reduced by 2. A suppressed stand may load or unload transported stands if it has sufficient movement to do so. A suppressed infantry or towed weapon stand may load onto a vehicle stand able to transport it if the vehicle stand is in base-to-base contact with it. Infantry or towed weapons unloading from a suppressed soft vehicle are suppressed, those unloading from a suppressed armored carrier are not. A suppressed stand loading onto a non-suppressed soft vehicle remains suppressed but does not suppress the carrier. A suppressed stand loading onto a non-suppressed armored carrier becomes unsuppressed but may not unload the same turn it loads, and does not suppress the carrier. Treat tank riders as transported by soft vehicles for purposes of this rule. A suppressed stand may initiate and participate in close combat. A suppressed AFV stand has a -1 modifier to hit when firing, a suppressed soft stand has a -2 modifier to hit. A suppressed stand may not use indirect or direct area fire.⁵⁴ Suppressed-A markers on

⁵³ This is due to airburst artillery shells coming into common use around this period.

⁵⁴ If enemy fire has suppressed it, it won't be able to put out enough fire to suppress the enemy! It can still fire AV or AI fire, though.

a side's stands are removed at the start of the *opponent's* Area Fire Phase. Note: a stand should not have more than one suppression marker on it. The most recent suppression result takes precedence. So if a stand with a Suppressed-B marker later receives a Suppressed-A marker, the Suppressed-A marker replaces the Suppressed-B marker, and vice versa.

- **'Q'—Quality Check.** The stand must make a quality check. If it fails, it is eliminated. If it passes, it is suppressed and must be marked as such. Infantry carried in a vehicle that fails a quality check are eliminated as well (see Rule 12.11).
- **'D'—Destroyed.** The stand is eliminated. If the stand is a vehicle stand, treat it the same as a vehicle stand that suffered a destroyed result from direct fire (i.e., it leaves a wreck that blocks roads, etc.), and infantry carried in the vehicle stand must test for survival (see Rule 12.11).

Finishing our Russian artillery example, the Russian artillery for the scenario has an accuracy number of 4+. The Russian player rolls for accuracy for the barrage on the British tanks and gets a '3'. There is no modifier since the observing BRDM-2 is Average quality and is unsuppressed, so the fire lands on target with reduced effectiveness. Two of the fire zones in the barrage each overlap a tank. Since each fire zone has one 152mm HE fire unit allocated, each would have a fire index number of 8, but reduced effectiveness subtracts 5 to give a fire index of 3. The tanks are AFVs in cover, so an Area Fire Resolution Chart roll of 5+ will suppress, otherwise no effect. The player rolls a '2' for the first tank and a '6' for the second. The barrage has no effect on the first tank but suppressed the second tank, so the second tank gets a Suppressed-A marker.

Next the Russian player resolves the barrage on the unspotted Milan Team and light truck. Rolling for accuracy, he rolls a '5'. Again no modifiers for the observing BRDM-2, so the fire lands on target with full effectiveness. Two 122mm HE fire units gives a fire index of 10. The Milan Team and the light truck in the woods are both soft in light cover, so a resolution die roll of 6+ will cause a quality check, otherwise the stand is suppressed. The Russian rolls a '3' for the infantry and a '6' for the light truck. However, since both are unspotted, they get the 4+ saving throw for artillery versus unspotted stands. The infantry makes its saving throw by rolling a '5', so it is unaffected by the barrage this phase. The truck fails its saving throw and then passes its quality check, so it is suppressed. In the British Area Fire Phase, if either stand is still in the sustained fire zone, it will have to roll for resolution again using the same index number, and will get the saving throw again if still unspotted.

Last, the Russian player resolves the 122mm barrage on the town. The BMP-2 observer is Fair quality, so he gets a -1 die roll modifier for his accuracy roll. For accuracy, the Russian player rolls a '1'. This would be modified to a '0', but the natural '1' puts him on the Area Fire Problems table. On the Area Fire Problems Table, the Russian rolls a '5' which is modified to a '4'. The fire lands with full effectiveness, but one of the participating 122mm support groups now has a -1 availability modifier for the remainder of the game. The Russian rolls a die to decide which group will be affected. Since there is one 122mm fire unit allocated to each fire zone marker, the fire index for each is 8. The two FV-432s covered by the fire zones count as AFVs in cover, so a 3+ resolution roll will suppress, other-

wise no effect. The Russian rolls a '2' and a '6', suppressing one of the two FV-432s. The British infantry is soft in heavy cover, so a 3+ will suppress it as well. The Russian rolls two '5's, suppressing both infantry stands.

15.2.11 Counterbattery

Most counterbattery fire against on-table and off-table artillery is handled automatically by the *Area Fire Problems Table* and the *Area Fire SNAFU Table*. In addition, on-table artillery may be deliberately targeted by a barrage using the same rules and restrictions as for attacking any other stand with a barrage, if the owning player leaves his artillery positioned where this becomes possible.

15.3 Observing For Area Fire

Unless restricted by the scenario, any stand is eligible to observe for area fire, and each Combat Unit can observe for one barrage in the Area Fire Phase.⁵⁵ Each recon stand and dedicated FO stand may observe for two barrages.

A barrage can be placed anywhere the owning player wishes so long as the observing stand can spot the fire zones of at least half the fire zone markers in the barrage. To spot the fire zone of a marker, the observer must have LOS to any part of the marker's fire zone and be within the visibility limit of the scenario.

On-table artillery stands can observe for their own barrage if they can spot their targets.

15.4 Dedicated Forward Observers

There may also be separate FOs that are deployed on the battlefield. They act like any other stand with these exceptions:

- They may not fire at an enemy stand.
- As long as they are within 4" of a friendly stand, they may not be targeted by enemy troops, nor may they be affected by enemy artillery.

They ignore all cohesion rules.

15.5 Direct Fire (Anti-Vehicle & Anti-Infantry) By Artillery

An artillery stand (or any other stand) may not engage in direct AV or AI fire if it conducts indirect or direct area fire that turn.

On-board artillery stands, except for mortars, can engage in direct AV or AI fire. Target priority rules apply. For AV fire, the artillery stand fires in the same manner as a vehicle, uses its ratings for penetration, range, and ROF, and conducts the attack according to the Chapter 13. For AI fire, the artillery stand fires in the same manner as a vehicle, uses its anti-infantry rating, and conducts the attack according to Chapter 14.

⁵⁵ This is a simpler restatement of the old, explanatory observer rules, which read: Each combat unit is assumed to have one integral FO. The integral FO is with any stand the owning player desires at any time. The FO isn't destroyed until the entire unit is destroyed.

15.6 Battalion Mortars and Battalion Guns

Mortar or gun stands that are integral to a battalion (i.e., part of a Western-style Combat Formation or a Soviet-style Combat Unit) are more flexible and have slightly higher availability than higher echelon artillery. They use the ‘Bn. Mortar’ column of the *Artillery Availability Table*, and each battalion mortar/gun stand rolls individually for availability.

Battalion mortar stands are like other on-table artillery and can fire during the Area Fire Phase. Unlike other artillery, they can fire indirect area fire outside their Area Fire Phase using overwatch. To qualify for an overwatch marker, a stand must not move during its turn, must successfully roll during its Area Fire Phase to provide a Fire Unit (but not fire it), and must not fire any weapons during its Fire Phase. Once on overwatch, it may remain on overwatch until it moves or fires. It does not roll for availability a second time when conducting its fire on overwatch. It does not roll for availability again until the next friendly Area Fire Phase *after* it has lost its overwatch status by firing or moving.

These stands can fire indirect area fire at targets that they cannot see, as long as any stand in their battalion can see the target. Only stands from their own battalion can observe for integral artillery stands.

15.7 Artillery Fire Against Unspotted Stands

An unspotted stand that is within a fire zone marker’s radius is only affected if the firing player rolls a 1-3 on one die (i.e., the unspotted stand saves on a roll of 4+). This roll isn’t made if the center of the fire zone is on a spotted enemy stand.⁵⁶

15.8 Multiple Rocket Launchers

A multiple rocket launcher (MRL) stand represents a 4-launcher platoon or 6-launcher battery. Each stand starts the game with a fixed number of fire units, according to its type. At the start of the game the rocket type (high explosives, for example, or ICM) for each stand must be chosen from those available for that type of MRL. All fire units of that stand are considered to be of that type. Multiple rocket launcher fire units are always available; MRL stands do not roll on the *Artillery Availability Table*. When its fire units are expended, an MRL stand may not fire anymore.⁵⁷

Use the same rules as for other artillery to place fire zone markers in barrages, allocate fire units, and resolve the effect of multiple rocket launcher attacks. When resolving the attack, use the Multiple Rocket Launchers sections of the *Area Fire Zone Size Table* and the *Area Fire Index Table*.

⁵⁶ Do not use this rule if you are playing a scenario with completely hidden units and a referee. The intent is to allow players to blast likely terrain features that probably have enemy units in them, yet not take too much advantage of their omniscience.

⁵⁷ Why can’t an MRL reload in the game, you ask? MRLs have a lot of roles that are not under direct player control, like counterbattery, attacking higher echelon HQs, deep interdiction fires, etc. Add to that the need to displace after firing and the long reload times (20 min. to 2 hrs if not under fire, depending on the type of MRL). It is much simpler to say that an MRL that has expended the fire allocated to direct support is no longer available, rather than adjudicating *why* it isn’t available.

When used on-table, remember most MRLs have a minimum range listed in addition to a maximum range. We recommend placing MRLs off-table for most scenarios.

15.9 Firing Smoke Barrages

A smoke barrage can be normal smoke or incendiary smoke. Smoke barrages are placed and rolled for just like other artillery barrages, except the fire zone markers cannot be placed on water. A barrage that lands with ‘full effect’ or ‘reduced effect’ produces a smoke screen at each fire zone marker’s final location (each marker must have at least one fire unit allocated to it, just like for other artillery fire). Smoke screens have a width equal to the weapon’s HE fire zone radius, and a length three times the HE fire zone radius.⁵⁸

Roll a scatter die for wind direction. For a clear day roll once at the start of the game. For a stormy day roll once for each smoke barrage (not for each marker in a barrage) before placing the barrage marker(s) for it.

Place the screen lengthwise in the direction of the wind with one end centered on the fire zone center (marked on the barrage marker). For example, a 1”x3” smoke screen would be placed with the center of the fire zone $\frac{1}{2}$ ” inside the end of the smoke screen, a 2”x6” screen would be placed with the fire zone center 1” inside the end of the screen.

An incendiary smoke barrage has the same size as regular smoke. All soft or infantry stands in an incendiary smoke barrage when it lands are attacked with 1 shot of effective-range anti-infantry fire with a “0” anti-infantry to-hit modifier, with any applicable terrain saving throw. This does not apply for stands later moving through the barrage.

15.10 Firing FASCAM (Field Artillery Scattered Mines)

Artillery with an “m” in the ammo column can fire artillery scattered mines.

Resolve these like other artillery fire, using the ICM/Mines fire zone, and when the barrage impacts (regardless of full or reduced effectiveness), it lays a 2”x2” minefield (for guns) and a 4”x4” minefield (for multiple rocket launchers), centered on the fire zone of each marker. One fire unit per fire zone marker is sufficient to place a minefield on each marker in the barrage, so don’t waste fire units by allocating more than one fire unit per marker!

Individual fire units of mines must be purchased before the scenario begins. Point costs are:

- Antitank—95 points for guns, 380 points for multiple rocket launchers,
- Antipersonnel—39 points for guns, 156 points for multiple rocket launchers

⁵⁸ The most common smoke screen sizes will be either 1”x3” or 2”x6”. It is more efficient to make larger smoke screens by placing multiple fire zone markers in the barrage and allocating one fire unit to each (as per Rule 15.2.5), than by allocating multiple fire units to a single fire zone marker.

- Mixed—124 points for guns, 496 points for multiple rocket launchers

For the effects of mines, see Chapter 19: Combat Engineering.

15.11 Artillery Command/Control Effects (Optional)

Two other factors influence artillery availability besides the casualties and support group size listed above. One is the command level of the support group, and the other is communications.

15.11.1 Command Level

There are three different command levels artillery may be at, relative to the forces on the table. An artillery support group may be *dedicated*, in *direct support*, or in *general support*. The command level of a support group is determined by the scenario, and does not change during the scenario.

Dedicated artillery is under command of the force on the table, and as such has the highest availability. Increase the availability modifier of a dedicated artillery support group by 1.

Direct support is the default artillery command condition in FFT3, and has no additional availability modifier. Direct support artillery is usually at the next command level above the on-table force. For example, if a NATO brigade is on the table, the division guns of that brigade's division will normally be in direct support.

General support artillery is artillery further removed in command than the on-table force's parent unit, and their availability is limited by support obligations to many other units. For the example NATO brigade, corp guns, army guns, and guns of the adjacent division would be in general support. Reduce the availability modifier of a general support artillery group by 1.

Because they are always dedicated, battalion mortars and battalion guns do not have a command level availability modifier (it is built into the availability chart).

15.11.2 Communications

The *Artillery Availability Table* assumes adequate radio communications between front-line units and their artillery support to implement on-call fire. For armies which lacked adequate radio communications (or lacked radios entirely!), such as WW2 Soviets and many post-war Third World armies, response times for artillery fire could be an hour or more, which rendered it pretty ineffective in a mobile tactical battle. Because of the long delay relative to the length of a typical FFT3 game, we suggest the following options for modeling artillery in armies with poor artillery communications.

Our recommended approach is to simply restrict artillery for such an army to battalion mortars and battalion guns, which are allowed to fire normally using the *Artillery Availability Table*.

Another approach is to allow battalion mortars and battalion guns to fire normally, but to allow only preplanned barrages by other artillery. This uses the optional rules below for preplanned barrages.

The most complex approach is to require the army to split its artillery, allowing battalion mortars, battalion guns, and a fraction of the artillery support groups (we recommend roughly one-third) to fire normally, and the other two thirds of the artillery support groups to fire only preplanned barrages. Again this requires the optional rules for preplanned artillery fire.

15.12 Preplanned Artillery Barrages (Optional)

Warning: Preplanned artillery fire requires a lot of extra bookkeeping and time. Consider this carefully before using these rules.

If desired, scenario designers may allow one or both sides to use preplanned artillery barrages. For example, Russian-style armies should have from half to two-thirds of their artillery fire as preplanned barrages.⁵⁹ This will require a map of the table for each side using preplanned barrages, and each side using any preplanned barrages must have at least one artillery support group either off-table or on-table in the scenario.

A preplanned barrage is a barrage assigned to one or more artillery support groups in that side's order of battle, to be fired on a specified location in a specified game turn. For simplicity (and to make the game move faster), we recommend that the scenario designer provide separate artillery support groups dedicated to preplanned fire in addition to any providing on-call fire. We also suggest that the designer limit the dedicated pre-planned groups to firing a maximum of 3 fire units per two turns.

The following information must be recorded for each preplanned barrage before the game begins:

- the firing support groups(s),
- the turn the fire is conducted,
- the aimpoint of the barrage,
- the number of fire zone markers in the barrage, and
- the number of fire units assigned to each fire zone marker.

These must comply with the area fire rules, so for instance each fire zone marker must have at least one fire unit assigned to it. When recording the information, assume that all support groups will provide the maximum number of fire units they are able to in one turn (usually 3 fire units per support group). The number of fire units that will actually be fired by the support groups assigned to the barrage is the maximum they can provide *at the time of firing*. Counterbattery losses earlier in the game to support groups assigned to the barrage will reduce

⁵⁹ If playing the Russians and not using this rule, severely limit the amount of artillery support they have. Their radio network and command structure historically has greatly limited the responsiveness of their artillery for on-call fire.

the number of fire units supplied by an amount equal to the availability modifier for off-table groups, or the number of stands lost for on-table groups. This may compel a reduction of the number of fire zone markers for a barrage if enough fire units are not available to cover the plotted markers. If the support group cannot provide any fire units at all for the barrage, the barrage is cancelled.

For example, a support group that has a -2 availability modifier due to counterbattery results supplies two less fire units than it normally would. If it was assigned to provide one fire unit each to three different barrages in a turn, it could still provide one fire unit to one barrage, and the remaining two would need to be cancelled.

Preplanned barrages are resolved in the Area Fire Phase of the turn in which they were scheduled to land. The assigned support groups may conduct no other fire or movement that turn. To resolve the barrage, one fire zone marker is placed on the aimpoint, and any additional markers in the barrage may be arranged around it as desired by the player in accordance with the area fire rules.⁶⁰ An observing stand is not required to spot the barrage, but if at the time of firing an eligible observing stand can see a spotted enemy stand within 5" of the barrage, the aimpoint of the barrage may be adjusted onto the enemy stand. The rules limiting the number of barrages a stand can observe for apply.

Once placed, the barrage is resolved according to normal area fire procedures, including rolling for accuracy and any problems or SNAFUs that may result, but treating SNAFU results requiring an observing stand simply as reduced effectiveness fire if no stand was observing for the barrage. Unspotted stands hit by preplanned barrages are not eligible for the unspotted stand saving throw against artillery.

15.13 Limited Artillery Ammunition (Optional)

It would be rare that an artillery group or stand would expend its available ammunition during the timeframe of a typical game. Because of the variable nature of ammunition expenditure as a function of target type, target area, and target terrain, because of the variation in starting ammunition availability that is possible, and because of the variation in potential resupply rates and conditions, there are no absolute rules for artillery ammunition limitation. Rather, here are some suggestions for scenario designers who wish to model ammunition limitations.

The easy way to model the limited ammunition is to add a -1 or -2 to the availability modifier for the support groups in question for that game. This requires no bookkeeping and simulates the possibility of some resupply during the battle (which is something that would be beyond the tactical ground commander's explicit control anyway).

The hard way to model limited ammunition is to set a limited number of fire units for each affected support group. When that number of fire units has been

⁶⁰ A real-life preplanned barrage usually has the benefit of many types of pre-battle reconnaissance, which improves its effectiveness above blind map fire, but which is too complex to easily replicate on the tabletop. This rule is a compromise intended to reproduce some of the inflexibility of preplanned artillery fire, without making it excessively useless as occurs in some rule sets.

expended by the support group, it is out of ammunition and may not fire. The support groups using this rule must still roll for fire unit availability each turn the player wishes to fire them.

15.14 High Explosive Artillery Fire Terrain Damage (Optional)

Sustained use of high explosive (HE) shells and rockets against a target area tends to result in craters, fallen trees, and rubble from damaged buildings. To simulate this potential for damage, any time an HE artillery barrage lands roll 1d6. On a roll of 5+ make the area covered by the fire zone Bad Going in addition to the existing terrain, if Bad Going is allowed to overlap with the existing terrain (see Rule 7.22 for a list of allowed terrain overlaps).⁶¹ Road and paths in the affected area are also converted to Bad Going (in other words, craters, rubble from collapsed buildings, fallen trees, etc., have negated the benefit of the road or path).

15.15 Residual ICM Bomblets (Very Optional)

ICM munitions have dud rates of 1%-5%, which leaves the battlefield littered with unexploded ordnance that poses a hazard to friendly troops moving through an area previously targeted by ICM. Any time an ICM barrage is fired, from that moment on, there is a 2"x2" (for guns) or a 4"x4" (for multiple rocket launchers) low-grade mixed minefield centered on each fire zone in the barrage. This low-grade minefield hits all ground stands on a 6+ per inch traversed. Hits on all stand types (soft and armored) cause a quality check.

⁶¹ Yes, this ignores the airburst/groundburst fuzing mix of the fire, the number of guns or weight-of-fire being applied, and other variables, but the mechanic needed to be *fast* and easy to remember.

16: Close Combat

16.1 Executive Summary

- If a stand moves within 1" of enemy stands, it must stop and initiate close combat. Mark it with a die showing how much movement it had left (maximum of 6").
- After all movement for the Movement Phase is complete, resolve all close combat.
- Nonmoving stands fire first. Then surviving moving stands fire. Keep doing this (reducing the movement die 1 pip at the end of each close combat round) until one side is totally destroyed (moving vehicles may disengage from infantry).
- Surviving stand can continue moving if they have movement left.
- If not engaged in close combat by enemy infantry stands, your infantry stands fire at the flanks of vehicles in close combat.

16.2 Procedure

A stand that moves within 1" of an enemy stand must halt and initiate **close combat**. The player places a die or a numbered marker beside the moving stand with its remaining movement allowance showing (maximum of 6"). During the Close Combat Phase, stands take turns firing at each other (nonmoving player first). After each round of close combat, decrease the remaining movement allowance by one inch. At the end of any round of close combat, a moving vehicle stand that has movement remaining and is only in close combat against infantry may elect to disengage and continue its movement. A stand completes close combat when it no longer has a target within one inch.

After the close combat is over, stands that have any movement left may continue moving.

16.3 Firing in Close Combat

In close combat, stands take turns firing (the non-moving stand fires first) until one side or the other has been destroyed. For anti-vehicle fire and anti-

infantry fire, range is considered to be 1", so it's almost always short range. A weapon listing a range of 'C' can only fire in close combat, and fires at effective range when doing so. For anti-infantry fire, firing vehicles use their normal ROF, and firing infantry stands use their close combat ROF.

16.4 Missiles in Close Combat

Due to minimum range restrictions, stands may only fire missiles in the first round of close combat, and only if the missile has a minimum range of 1 or less. Note that some infantry stands have missiles as MAWs and are subject to this as well.

16.5 Soft Stands in Close Combat

When fully tracked armored vehicles initiate close combat with soft stands (e.g., infantry, antitank guns, unarmored vehicles, etc.) that are poor quality, marginal quality, or in the open, the soft stand must make a quality check at +2 to the roll. A soft stand counts as in the open if it is in non-covering terrain and not touching a linear obstacle. If the soft stand passes the check, it may fight as normal. If the soft stand misses the roll, it may not fire in the first round of close combat. If the soft stand initiates the close combat, no check is needed.

In close combat, infantry (but *not* antitank guns or soft vehicles) firing at enemy vehicles can attack the vehicle's flank armor, regardless of facing, if there are no enemy infantry stands also in close combat with the firing infantry stand.

16.5.1 Infantry Escorting Vehicles

When an enemy infantry stand initiates close combat against a friendly vehicle stand, any friendly infantry stands within $\frac{1}{4}$ " of the attacked vehicle stand which are not already engaged in close combat may participate in the close combat against the enemy infantry.⁶² Fire is still considered to be at 1" range for all participants in the close combat.

16.5.2 Vehicles Disengaging from Infantry

At the end of any round of close combat where a moving vehicle that still has movement remaining is only engaged with enemy infantry (not towed weapons or vehicles), it may elect to disengage and continue moving past, through, or away from the infantry. After disengaging, it may move into close combat with another stand if it has enough movement to do so, but may not move into close combat again this player turn with the stand from which disengaged.

16.5.3 Infantry in Cover Allowing Armored Vehicles to Pass Through (Optional)

When an armored vehicle (one with an armor rating of 0 or higher) initiates close combat with infantry in cover that was unspotted until the vehicle engaged it in close combat, if the infantry passes a normal quality check, it may choose

⁶² This rule is a compensation for the fact that two stands cannot physically occupy the same space on the table. In reality the escorting infantry would be dispersed amongst the vehicles, but on the table the infantry stand is to one side of the vehicle.

to fight as above and if required must make the +2 quality check described, or it may choose to remain concealed. If the infantry fails the normal quality check, it must fight as above and must make the +2 quality check if required.

If it chooses to remain concealed, it stays unspotted, no close combat occurs and the vehicle continues its move through the location and may not attempt to engage that infantry stand in close combat again this turn. If the vehicle begins a close combat with another stand while within 1" of the concealed infantry stand, the concealed infantry stand may elect to join the close combat after the first round is complete.

If the vehicle ends its move still within 1" of the infantry, in the infantry's turn the infantry may engage the vehicle in close combat or may elect to remain concealed. If the infantry becomes spotted while within 1" of the vehicle, it *must* engage the vehicle in close combat. If the infantry remains concealed, on the vehicle's next Movement Phase the vehicle may attempt to engage the infantry in close combat again or may move away.

16.6 Pivoting in Close Combat

Defending stands may pivot before firing in the second and subsequent close combat rounds. This pivot will not cause the stand to engage in other close combats. In other words, only those stands within 1" of the stand at the start of the close combat participate in close combat with that stand. Any subsequent pivots of the stand during that close combat which bring part of the stand within 1" of enemy stands don't cause close combat to be initiated with those stands.

16.7 Miscellaneous Close Combat Rules

When close combat is over, any of the moving player's stands that survive may continue to move if it has any movement remaining (check the movement die or marker beside the stand). They may engage in additional close combats at this time. Stop and resolve each new close combat after all eligible stands have moved.

Stands that participate in close combat may also fire in their normal Fire Phase.

Stands on overwatch remain on overwatch after close combat is over.

Overwatch fire may not be conducted at stands that are engaged in close combat. Overwatch fire at an enemy stand that moves into close combat must have been announced before the enemy stand moved into close combat. Once close combat is resolved, overwatch fire may be conducted at the enemy stand if it survived.

17: Helicopters

17.1 Executive Summary

- For the most part, a helicopter is treated as a very fast vehicle with special movement rules.
- Non-antiaircraft weapons:
 - Guns, second generation missiles and third generation missiles hit on a “6”. No to-hit modifiers (including quality, range, suppressed, etc.) apply.
 - First generation missiles cannot shoot at helicopters.
 - Guns with a ROF of 3 or less get one shot and use their entire ROF.
 - Guns can fire at helicopters at effective range.
 - Second and third generation missiles can fire at helicopters at 1/2 their normal range.
 - All stands have integral machineguns which can engage helicopters-- Pen 1, ROF 1, Range 10”.
- Antiaircraft weapons (SAMs, AAMs and AA guns):
 - Get full ROF against helicopters.
 - Hit helicopters on a 5+ at short and effective range, and hit on a 6+ at long range. A natural ‘1’ always misses, and a natural ‘6’ always hits.
 - Rear aspect SAMs and AAMs may only fire at a helicopter from the 120 degree rear arc.
 - Add troop quality modifiers when rolling to hit with SAMs, AAMs, and AA Guns.
 - AA gun units engage ground targets at double ROF or 12, whichever is less. After shooting at a ground target, roll one die, on a 5+ the AA gun stand is out of ammo for the remainder of the game.

- Helicopters have two movement modes, high and nap of earth. High mode provides unlimited movement, but the helicopter can be shot at by any stand and there's a 1 in 6 chance of it being destroyed by off-board antiaircraft assets.

17.2 Movement

17.2.1 General

Helicopters function in one of two modes: high mode or nap of the earth (NOE). A helicopter enters one mode or the other at the start of its Movement Phase. It must spend the entire turn in that mode. Transport helicopters must be in NOE mode to load and unload stands, they load and unload just like ground vehicles do (see Rules 9.5 and 9.6).

17.2.2 Nap of the Earth Mode

A helicopter in NOE mode is flying very close to the ground. It is treated as an armored vehicle for all purposes. The Helicopter Data Chart lists the movement points of the helicopter in NOE mode. A helicopter in NOE mode may not enter cover, but the helicopter may fly over it. A helicopter in NOE mode ignores terrain costs for linear obstacles and broken terrain. All terrain moved over costs the same as clear terrain for movement purposes. Treat the helicopter as being 1 level higher than the terrain it is moving over (e.g., 1 level higher than the ground or the cover it is over) for spotting and LOS purposes.

A helicopter in NOE mode may use strategic movement.

17.2.3 High Mode

A helicopter in high mode has an unlimited movement allowance. All enemy stands spot the helicopter and may trace a clear line of sight to the helicopter regardless of intervening terrain. At the end of the Movement Phase in which a helicopter flies in high mode, the owning player rolls one die. If the roll is 1-5, there is no effect. On a “6”, the helicopter will be destroyed by enemy antiaircraft missiles or heavy anti-aircraft guns. These are assumed to come from off table.⁶³ Helicopters in high mode may not fire at targets on the ground (though they can fire at enemy helicopters also in high mode).

17.2.4 Cohesion

Helicopters have a cohesion distance of 6”.

17.3 Combat

17.3.1 General

Just like any other vehicle, a helicopter may attack with one type of weapons system (guns, missiles, or rockets). It attacks during the Fire Phase for guns and

⁶³ Obviously, if the enemy army historically had no long-range air defenses in the region, ignore this roll.

missiles, or during the Area Fire Phase for rockets, or during the opposing player's turn if the helicopter is on overwatch. It may fire all guns together, or make one rocket or one missile attack. Guns must be fired together at each target engaged, each gun paying the normal ROF reduction if fire is split among two or more targets. Missiles and rockets only fire once (missiles using their listed rate of fire), regardless of the number of pods present. The number of pods determines the ammo status for missiles and the number of Fire Units for rockets.

Helicopters with 1 missile pod have very limited ammo and may fire missiles twice in the game as limited missile ammo. Helicopters with 2 or 3 missile pods have limited missile ammo. Helicopters with 4 missile pods have unlimited missile ammo.

Helicopters can fire 1st generation missiles if they move half or less, and can move full and fire 2nd or 3rd generation missiles or guns or rockets. Helicopters may move half and take an overwatch marker.

Helicopter rocket pods come in two types. See Rule 17.7 for how to resolve the rocket attack.

17.3.2 Pop-Up Attacks

When it fires, instead of a normal attack, the helicopter may make a special pop-up attack. The helicopter executing the pop-up attack may fire over intervening terrain and attack a target. To make the attack, it rises to a height one level higher than the highest intervening terrain between it and its target, but must be able to trace LOS to the target from that height to be eligible to attack the target (see Rule 10.4 for LOS). Any enemy stands on overwatch may fire at the helicopter as it rises before the helicopter makes its attack. These stands must trace a LOS to the helicopter at its attack height (which is one level higher than highest intervening terrain between the helicopter and its target).⁶⁴

17.3.3 Close Combat

Helicopters are subject to the normal close combat rules, but close combat occurs at 4" range from enemy infantry. Only helicopters in NOE can engage in close combat. If a helicopter is engaged by a ground stand, it may refuse to enter close combat by:

- disengaging (see below);
- moving outside close combat range; or
- entering high mode (make an antiaircraft roll as described in Rule 17.2.3).

After each round of close combat helicopters may disengage by entering high mode (make an antiaircraft roll as described in Rule 17.2.3), or by moving 6" away from (or past) the enemy stands.

⁶⁴ Yes, the real geometry is more complex than this simple rule, but to evaluate the actual height required to have LOS to the target needs either several measurements and a calculator, or a very detailed and cumbersome LOS table, both of which drastically slow down play.

17.4 Non-Antiaircraft Units Firing At Helicopters

Fire against helicopters by non-antiaircraft stands is generally treated the same as fire against any other vehicle, with the following special rules:

- Non-antiaircraft weapons score a hit on a helicopter on a 6+; apply no range or troop quality modifiers.
- Guns with a base ROF of 4+ may fire at helicopters within effective range.
- Guns with a base ROF of 3 or less may fire at helicopters within effective range, but they have to use all of their shots and only get one to-hit roll.
- Second generation and third generation missiles may fire at helicopters if the helicopters are within $\frac{1}{2}$ of the missile's maximum range.
- First generation missiles may not fire at helicopters.
- All stands have integral machineguns which can attack helicopters. For anti-helicopter fire, each of these machineguns have a pen of 1, ROF of 1 and an effective range of 10". If a stand uses its integral machineguns, it cannot fire any other weapons at helicopters.
- Artillery area fire barrages treat helicopters in NOE mode as though they are AFVs in the open. Helicopters in high mode are immune to artillery strikes.

17.5 SAMs, AAMs, and AA Guns

SAMs, AAMs, and AA guns are specially designed to engage aircraft and are much more effective against helicopters. SAMs, AAMs, and AA guns fire at helicopters like any other stands (with full ROF), except:

- They hit on a 5+ at short and effective range, and hit on a 6+ at long range. A natural '1' always misses, and a natural '6' always hits.⁶⁵
- Note that machine-gun armed AA stands with a Pen of "-" can only engage aircraft and soft helicopters (helicopters with an "s" armor rating); treat them as having a Pen of 0 versus armor of 0 when doing so.
- Some SAMs and AAMs are listed as being rear aspect missiles in the vehicle data charts. These missiles may only fire at a helicopter from the 120 degree rear arc. The arc is determined by placing the front/flank template against the rear of the helicopter. Missiles listed as being all-aspect can attack a helicopter from any angle.
- Add troop quality modifiers when rolling to hit with SAMs, AAMs, and AA Guns.
- AA gun units may engage ground targets. When firing at ground targets, their rate of fire is doubled but their range is halved or 12, whichever is

⁶⁵ It adds complexity, but you can more accurately model lower quality troops (i.e., poor, fair and marginal), by halving the range of their air defense weapons when they fire at aircraft.

less. After resolving fire at a ground target, roll one die, on a 5+ the AA gun stand is out of ammo for the remainder of the game. Note, this does not apply to scenarios where an AA gun was planned to be used in a ground role, such as frequently happened with the German 88mm flak guns in WWII.

17.6 Other Special Rules

Unless otherwise stated, treat helicopters as vehicles.

Friendly forces may not place (or adjust) any artillery barrage markers closer than 20" from friendly helicopters. If a friendly helicopter is within 20" of a preplanned barrage aimpoint when the fire is scheduled to land, the barrage is canceled.

17.7 Rockets

Helicopter rockets have a maximum range of 30.

Helicopter rocket pods come in two types: high explosive (HE) rockets, or submunition (SBM) rockets. Each pod fires once during the game and provides one Fire Unit of area fire when it fires.

Helicopter rockets are fired in the Area Fire Phase using direct area fire (see Rule 15.2.4), or during the opponents' turn if firing overwatch.

To fire rockets, the helicopter observes for a barrage marker that it places itself. A helicopter stand may only place one barrage per turn. The barrage may contain more than one barrage marker, but the helicopter must be able to see all the markers, and the markers must obey the 2" cohesion rule for a barrage. Each marker must have at least one fire unit (i.e., one rocket pod) assigned to it. There is no to-hit roll, the fire lands with full effectiveness. Resolve using the area fire charts for the fire zone size, the area fire index, and resolution.

17.8 Laser Designation

Helicopters equipped with laser designated missiles may fire them just like any other missiles. They may also fire missiles at targets that are designated by other stands.

A helicopter stand may designate for any other stand in the same company if the stand can trace an unobstructed LOS to the target. The designating stand must not have moved that turn (or during the previous turn if the attack is occurring as an overwatch attack).

Referees may also give this designating capability to other helicopter or non-helicopter stands when designing scenarios.

A helicopter that is firing missiles designated by another stand may execute a much quicker pop-up attack than normal. The effect of this is that all weapons except SAMs, AAMs and AA guns have their effective range halved when firing

at a helicopter executing this quick pop-up attack. SAMs and AAMs are -1 to hit.

17.9 Outfitting Helicopters

Most helicopters have a number of “pods”, each of which can hold a weapons system. The Helicopter Data Chart lists the characteristics of each available weapon system. Each system takes up one pod and has a points cost that you must add to the helicopter’s base cost. Missile pod point costs are listed by the total number of that type of pod on the helicopter.

17.10 Transport Helicopters Special Rules

Transport helicopters—i.e, helicopters that can carry at least 1 stand of infantry—must leave the board immediately after dropping cargo off. They must take the shortest route using NOE flight. If players want them to hang around, they must be bought as “dedicated transports”. In this case, they cost double points and can remain on the battlefield even after they drop off cargo. These restrictions do not apply to Russian Mi-24 Hinds.

18: Night Fighting

18.1 General

Modern armies plan and claim to be able to fight wars at nighttime. So, we have to be able to model it on the wargame table.

18.2 Range and Effect on Combat

At night, the maximum range in combat is 8 inches, unless a stand has night vision gear. If the stand has First Generation Thermal Sights, Image Amplification, or Infrared Sights, the maximum range is 20 inches. Second Generation Thermal sights have a maximum range of 40. All fire by a stand at night is at -1 to hit for anti-vehicle fire and anti-infantry fire, unless the stand has First or Second Generation Thermal Sights.

Note that starting around 1993 Russia has thermal sights available for most of its anti-tank missiles, including the AT-4c, AT-5 Spandrel-M, and AT-13 (Metis-M). As far as we know, cost greatly delayed their general issue until sometime after 2000, at which point they've been included in the data. If you wish to model their issue closer to 1993, add first-generation thermal sights to vehicles and infantry equipped with these missiles, and multiply their point cost by 1.06.

18.3 Fratricide

At night, if a target stand is within 4 inches of a spotted friendly stand, *and* both stands are more than 4 inches from the firing stand, the firing stand must make a quality check. If the firing stand makes the quality check, it may fire at the enemy stand. If it misses the quality check, it must randomly select either the enemy stand or the friendly stand. Roll 1d6 — on a 1-3 the friendly stand is fired at. On a 4-6 the enemy stand is fired at. Add 1 to the roll if the friendly stand is infantry or a towed weapon and the enemy stand is a vehicle, or vice versa. Subtract 1 from the roll if the spotted friendly stand is from a different battalion (regiment for Russian/Third World armies) than the firing stand.

Example: At night, an average M1A1HA declares 3 shots at a T-80U. Within 4 inches of the T-80U is an M2A2 Bradley from a different battalion.

The T-80U and the Bradley are both more than 4 inches away from the M1A1HA. The M1A1HA's player must make a quality check to fire at the T-80U. He rolls a 1, which fails. He then rolls one die to see which stand he hits. Since the Bradley is from a different battalion, the roll is modified by -1. The roll is a "4", modified to a "3". The M1A1HA must fire all of the shots it declared at the Bradley. If the Bradley were instead an infantry stand, the roll would be modified by an additional +1 since it is a different type of stand (infantry) than the target stand (vehicle). In that case, the roll would be a "4", modified by +1 and -1, which would allow the M1A1HA to fire at the T-80U.

19: Combat Engineering

19.1 General

Engineers create engineering assets—obstacles, improved positions, minefields, etc. They also carry out engineering tasks—breaching obstacles, building entrenchments, etc.⁶⁶ Engineering assets include:

- **Entrenchments**—hasty or deliberate; for vehicles or infantry/towed stands.
- **Fortifications**—Heavy concrete and steel bunkers and pillboxes, often equipped with heavy weapons. In game terms they're treated as immobile armored vehicles with a few special rules.
- **Obstacles**—mine fields (antipersonnel, antitank or mixed), road craters, abatis, antitank ditches, dragon's teeth and barbed wire.
- **Bridges**—pontoon bridges and vehicle launched bridges.

The defender can build some engineering assets before the game by expending the appropriate number of points (as limited by the Referee or scenario designer). Some engineering assets can only be built before the game. Some engineering assets can be built during the game by engineering stands. Engineering vehicles typically build engineering structures faster.

Engineering tasks include:

- Breaching obstacles
- Bridging rivers
- Demolishing bridges
- Creating certain engineering assets -- abatis, road craters, antitank ditches, barbed wire, and some types of entrenchments.

⁶⁶ Modern combat engineers do a lot of things not modeled in FFT3. A future supplement may provide expanded rules and stands.

19.2 Pregame Engineering

Defending players may purchase engineering assets before the game. Referees should limit the number of points, as engineering obstacles slow the game down and reduce battles to set-piece slugfests. Deliberate entrenchments take a lot of time to create—eight hours minimum, typically a day or more. Therefore, the Referee or scenario designer should restrict deliberate entrenchments to situations where the defender would have had the necessary time before the game starts. Fortifications usually require many days or weeks to construct, and thus must have been planned and built well in advance of the fighting reaching their location.

19.3 Engineer Stands

Engineer stands are engineer infantry stands, engineering vehicle stands and bulldozers.

Engineer infantry stands act like normal infantry stands except that they can also perform engineering tasks during the game.

Similarly, engineering vehicle stands act like normal vehicles except that they can also perform certain engineering tasks during the game. However, they usually enhance the performance of engineer infantry stands. Some engineering vehicles are listed in the vehicle data; others may appear in a future supplement. If a real world engineering vehicle isn't listed, use the statistics for the vehicle on which the engineer vehicle was based (usually a main battle tank). Note that many engineering vehicles omit or change the main armament of the base vehicle.

Bulldozers move 5t and have an armor of "s". For anti-vehicle fire only, a bulldozer has an armor rating of 3 in the front, and "s" on the flank. They also enhance the performance of engineer infantry stands on certain tasks.

19.4 Engineering Tasks

19.4.1 General

Most engineering tasks are performed by engineer stands during the game. A few engineering tasks can be performed by non-engineer stands. In particular, infantry may dig hasty infantry entrenchments, see below. A stand may only attempt one engineering task per game turn.

Engineering tasks are performed during the friendly Movement Phase, with the results taking effect at the end of the phase after all movement and overwatch fire is complete. When it is a stand's turn to move, instead of moving it stays stationary and resolves its attempt to complete its task.⁶⁷ If applicable, the stand must be adjacent to the target of the engineering task.⁶⁸ The stand may be

⁶⁷ The stand spent its turn working on the task instead of moving.

⁶⁸ If the task's target is an obstacle to be breached, then the stand must begin its turn adjacent to the obstacle, for instance.

required to make a success roll. Place any result of the task on the table immediately (e.g., a hasty infantry entrenchment).

If the engineering task creates an engineering asset, the engineering asset is placed adjacent to the stand that performed the task. Exception: if a stand created an entrenchment for itself, place the entrenchment on the stand, and it immediately occupies it at no move cost.

Engineer stands performing an engineering task may not fire weapons, except in close combat.

Engineer stands can be “supported” by other engineer stands and bulldozers. Unless otherwise noted, non-engineer stands cannot be supported by other stands, and cannot support other stands. Supporting stands must be adjacent to the engineering stand. Each support stand adds +1 to the success roll (+2 if the support stand is an engineering vehicle or bulldozer).

19.4.2 Engineering Task List

- **Clear Minefield.** Clears a 1" square section of minefield adjacent to engineer stand that performed the task. Successful breach roll: 3+.
- **Fill Road Craters.** Removes a 1" square section of road craters. Successful breach roll: 3+.
- **Breach Abatis.** Removes 1" of abatis. Successful breach roll is 3+. Success is automatic if engineer stand is an engineering vehicle with a demolition gun.
- **Fill Antitank Ditch.** Removes a 1" square section of an antitank ditch. Successful breach roll: 3+.
- **Breach Barbed Wire.** Removes 1" section of wire. Successful breach roll: 3+. Any bulldozer or armored vehicle can drive through the wire (at no movement cost) and remove a 1" section.
- **Lay Bridge.** Only bridgelayers can perform this task. Success is automatic, though the bridge won't be useable until the next friendly Movement Phase.
- **Create Abatis, Road Craters, Buried Minefields, Antitank Ditches, or Barbed Wire.** Creates 1 inch of abatis, 1 road crater, 1 square inch of buried minefield, or 1 inch of antitank ditch; success roll is 5+. Success roll is 4+ to create one inch of barbed wire (if supplies are available; must be specified by Referee before game).
- **Create Surface Minefield.** Creates 1 square inch of surface minefield. Success is automatic.
- **Create Hasty Vehicle Entrenchment.** Creates a hasty vehicle entrenchment. Can be done only by engineer bulldozers. It takes two engineer bulldozer stands to construct one hasty vehicle entrenchment.

Success roll of 6+ is required. Cannot make success roll if either dozer stand is suppressed.

- **Create Hasty Infantry Entrenchment.** Creates a hasty infantry entrenchment. Can be done by *non-engineer infantry stands*, engineer infantry stands, engineer vehicle stands, and bulldozers. Success is automatic for engineer infantry, engineer vehicles, and bulldozers. Success roll of 3+ is required for non-engineer infantry. Success roll of 5+ is required for all stand types if stand is suppressed.

19.5 Occupying Positions

“Positions” are entrenchments and fortifications. A stand must “occupy” a position in order to get its benefits. To occupy a position, a stand must move adjacent to the entrenchment and then spend 2 movement points to occupy it (exception: a unit that created an entrenchment for itself occupies it immediately at no cost as per Rule 19.4.1). Having occupied a position, a stand exits the position if it moves. Infantry pivoting is not considered movement for this purpose, but a vehicle pivoting is. A stand may exit a position at no additional movement cost.

A vehicle may occupy a position and pickup/drop off infantry and towed weapons by spending 2 movement points.

A vehicle adjacent to a position may drop off infantry into the position at the normal cost for dropping off infantry. The infantry occupies the position at no additional move cost. The infantry stand does lose the normal amount of movement for being dropped off (see Rule 9.6).⁶⁹

19.6 Entrenchments

Represent entrenchments with markers or with models. If you use models, be sure to make them wide enough to accommodate your stands.

Entrenchments may be placed in any terrain except water (i.e. rivers, lakes, ocean). They may be placed in swamp unless the referee rules that the ground is too soggy.

Entrenchments count as cover for spotting purposes and area fire, and they provide saving throws in fire combat (see below).⁷⁰ If an entrenchment is in terrain that also provides a saving throw, the stand occupying the entrenchment should use whichever saving throw is most beneficial, just like for overlapped terrain. Entrenchments do not block line of sight. Vehicle entrenchments have a facing, which occupying vehicle stands must match. Facings cannot be changed during the game. For entrenchments created during the game, select the facing when it is created.

⁶⁹ This will affect their ability to fire heavy weapons and missiles, for instance.

⁷⁰ We counted hasty infantry entrenchments in woods as cover against area fire because, while the treebursts are more lethal, accurate spotting and placement of the fire is more difficult. If you disagree, then count infantry in hasty entrenchments in woods as being in open.

Each entrenchment has a capacity of one stand or two half-sized stands (e.g., infantry teams). Vehicle entrenchments only benefit vehicles; infantry entrenchments only benefit infantry and towed stands. An entrenchment may be occupied by any stand, even if that stand gets no benefit from doing so.

Entrenchments are summarized in this table:

Entrenchment	Point Cost		Terrain Save	Vs. Area Fire
	Pre-1950	1950+		
Hasty Vehicle	15	60	5+ ⁷¹	cover
Deliberate Vehicle	30	120	3+ ⁷²	cover
Hasty Infantry	12	21	4+	light cover
Deliberate Infantry	20	35	2+	heavy cover

Notes: All entrenchments act as cover for spotting purposes. They do not block line of sight.

Hasty Vehicle Entrenchments represent shallow tank scrapes and quickly prepared fighting positions. Deliberate Vehicle Entrenchments represent carefully prepared firing ramps and positions, usually with both hull-down and turret-down levels available. Hasty Infantry Entrenchments represent shallow foxholes and scrapes and quickly prepared fighting positions. Deliberate Infantry Entrenchments represent deep foxholes, trenches, log bunkers, and well-prepared camouflaged fighting positions, with possible overhead cover and sandbagging.

19.7 Fortifications

Fortifications represent concrete/steel bunkers and pillboxes. Fortifications are often equipped with heavy weapons. In game terms they resemble immobile armored vehicles, and can be listed with the vehicle data format. Each has a front and flank, and armor ratings assigned by the scenario designer. Each may have an integral weapon of some kind, and may have the capacity to be occupied (and defended) by additional infantry stands beyond the integral weapon's crew. Fortifications typically include access trenches and infantry fighting positions for local defense of the fortification. So while they resemble vehicles, we treat them differently in some respects.

A fortification has a stand capacity just like a vehicle, assigned by the scenario designer, typically 0, $\frac{1}{2}$, or 1. Infantry stands occupying it may not exceed its capacity. Integral weapons (and their crews) do not count against the stand capacity. Integral weapons cannot leave the fortification during the game.

Fortifications have a facing, and a front and flank, just like vehicles. The facing cannot be changed. Integral weapons, if present, have a quality rating just like towed weapons, and can only be fired at targets in the fortification's front

⁷¹ This gives less protection than positions along a ridgeline because a ridgeline can provide both hull-down firing positions and turret-down observation positions.

⁷² This gives more protection than positions along a ridgeline because ridgeline positions often don't provide as complete protection from all front and side angles.

arc, unless the fortification is historically known to have had an all-around arc for its primary weapons (this is rare). Occupying infantry stands may fire their weapons in any direction. Treat fortifications as stationary vehicles when trying to spot them.

Fortifications can be fired on with anti-infantry (AI) fire, anti-vehicle (AV) fire, and area fire. They give a saving throw versus AI fire of 2+ to the integral weapon and to any occupying infantry stands.⁷³ AI fire at the fortification affects both the integral weapon and any occupying stands. Anti-vehicle fire at the fortification is resolved exactly as if the fortification were an armored vehicle. A destroyed result eliminates the integral weapon, and any occupying infantry must pass a quality check to survive. If they survive, they remain in the fortification but are suppressed. A quality check result from AV fire causes the integral weapon and any occupying infantry to take quality checks, with passed checks resulting in suppression (mark with a Suppressed-B marker) and failed checks resulting in elimination. For area fire, treat the fortification as an AFV in cover, applying the results to the integral weapon and to any occupying infantry stands.

19.7.1 Fortification Armor Ratings

For steel fortifications, determine the game armor rating in the same manner as for an armored vehicle (see the chapter on designing vehicles, infantry, etc.). To determine armor ratings for concrete structures, concrete tends to resist modern armor piercing weapons with very roughly half the effectiveness of rolled homogenous steel armor, so take the concrete thickness, divide it in half, and use the vehicle armor ratings chart to get the game armor rating. For historical structures, sanity check the resulting ratings against their documented characteristics (e.g., “the early Shermans’ 75mm guns weren’t effective against it”) and adjust the ratings if necessary to produce the historical characteristics. Keep in mind that firing ports, air vents, doors, etc, all produced some level of vulnerability, so don’t overdo it.

19.7.2 Fortification Point Values

Compute the point value of a fortification as if it were a vehicle. See Appendix B.

19.8 Obstacles

Mine fields come in two types: surface and buried. Surface minefields are marked on the table from the start of the game if created by pregame engineering, or at the time they are created during the game. Buried minefields are hidden, and the details of their size and location must be recorded.

Minefields can be antitank, antipersonnel or mixed. Antitank mines affect only ground vehicles. Antipersonnel mines affect only infantry. Mixed fields contain both types of mines. For every inch (or fraction thereof) a stand moves through a minefield, it will be attacked on a 4+. Antitank mines attack the flank

⁷³ This means an enemy heavy fortification can be engaged in close combat by friendly infantry and cleared. Infantry with a high close combat ROF will do best in this role. Probably a costly exercise for both sides, but this is war, after all.

armor of a vehicle with a Pen 7he attack. Don't use any modifiers. Antipersonnel mines cause infantry and soft stands a quality check on a roll of 4+.

Point costs for a 1"x1" square are:

- Surface Antivehicle—6 points prior to 1950, and 22 points from 1950 onward.
- Surface Antipersonnel—4 points prior to 1950, and 8 points from 1950.
- Surface Mixed—10 points prior to 1950, and 29 points from 1950.
- Buried Antivehicle—8 points prior to 1950, and 29 points from 1950 onward.
- Buried Antipersonnel—6 points prior to 1950, and 11 points from 1950.
- Buried Mixed—14 points prior to 1950, and 39 points from 1950.

Road craters block a road (has same effect as road blocked by a destroyed vehicle) and cost 5 points each prior to 1950, and 20 points from 1950. Referees may disallow road craters if they wish.

Abatis is a linear obstacle and can be placed in woods or forest. It is impassable to all ground stands. Abatis costs 5 points per linear inch prior to 1950, and 20 points from 1950.

Antitank ditches are linear obstacles, and are impassable to vehicles. In addition, they may be occupied by infantry (one stand per inch) and count as hasty entrenchments. Antitank ditches cost 8 points per linear inch prior to 1950, and 32 points per linear inch from 1950.

Dragon's teeth are linear obstacles and are impassable to vehicles. Dragon's teeth cost 6 points per linear inch prior to 1950, and 24 points per linear inch from 1950.

Barbed wire is a linear obstacle, and hinders infantry and soft wheeled vehicles. Such stands must expend their entire movement in a turn to cross barbed wire. They must start the turn adjacent to the wire and end the turn on the other side of the wire. Barbed wire costs 4 points per linear inch prior to 1950, and 16 points per linear inch from 1950.

A **pontoon bridge** will cross any river or stream (treat as a road). A pontoon bridge must be deployed before the game begins. It cannot be constructed during the game. Costs 30 points prior to 1950, 120 points from 1950.

A **bridgelayer** is a special engineering vehicle that deploys a short bridge on demand. The bridge can only cross a stream, not a river. To deploy its bridge, a bridgelayer must spend a full move stationary touching the stream. The bridge may not be crossed by units until the following Movement Phase.

20: Airstrikes

20.1 Airstrikes

An airstrike represents an attack by a flight of four (sometimes three) aircraft up to 1950, and a section of two aircraft from 1950 onward.⁷⁴ As a guide, up to about four airstrikes with heavy weapons (bombs, rockets, or missiles) is appropriate for a typical large scenario, and the number of strafing attacks shouldn't usually exceed the number of heavy weapon attacks.

20.2 Purchasing Airstrikes and Resolving Airstrike Calls

Airstrikes are purchased before a scenario begins. When you want to call an airstrike in, during your Area Fire Phase you place the airstrike just like an artillery barrage, using a barrage marker spotted for by a forward observer (FO). Then roll 1d6 to see when the strike arrives on the battlefield:

- | | |
|-----|--------------------------------|
| 1 | Strike aborts / is destroyed |
| 2 | Strike delayed; roll next turn |
| 3-6 | Strike arrives |

Attacks by dedicated ground attack aircraft like the IL-2, Stuka, A-10, AV-8, and Su-25's will add +1 to their arrival rolls and cost 20% more than regular strikes.

A side given local air superiority in the scenario adds +1 to all its arrival rolls and its strikes cost 20% more; subtract -2 from the opposing side's roll and its strikes cost 40% less.

If the arrival roll indicates that the strike arrives, resolve the strike immediately. If the strike is delayed, the FO may reposition the barrage marker in his next turn's Area Fire Phase before checking for arrival again. A repositioned barrage marker is moved to any new location chosen by the owning player that still satisfies the normal requirements for placement of a barrage marker by that FO stand.

⁷⁴ To the ground commander, airstrikes are essentially flying artillery. Unless using the optional rule, we don't attempt to designate in these rules whether successive airstrikes are repeat attacks by the same flight or new attacks by other flights.

Multiple airstrikes of the same or different types may be assigned to a single barrage marker, observed for by a single FO.

20.3 Resolving Airstrikes

To resolve an airstrike, the attacking player designates the flight path to the barrage marker and designates target stands or places a template if required by the strike type.⁷⁵ The attacker has a *maximum* of ten seconds to select his flight path.⁷⁶ Then to-hit modifiers are determined by which anti-aircraft stands have LOS to the flight path. Finally, according to the airstrike type, the attacker rolls to hit for each target stand and resolves the results.

A flight path is a straight path starting from anywhere on the attacking player's table edge and ending at the barrage marker.⁷⁷ Use string or a straight edge to mark the path. For determining LOS to the flight path, the path is considered to be 2 levels higher than the highest terrain it passes over.

If at least one defending anti-aircraft gun stand has LOS to the flight path at any point where the path is within the stand's anti-aircraft effective range, then the airstrike gets a -1 modifier on its to-hit rolls. Having more than one AA gun stand does not increase the modifier. If at least one defending surface-to-air missile stand has the path in LOS while in effective range, then the airstrike gets a -2 modifier on its to-hit rolls. Having more than one SAM stand does not increase the modifier.⁷⁸

The to-hit modifier for the pilot quality modifies the strike's to-hit rolls.

If a template needs to be placed for the type of airstrike being resolved, some part of the template must touch the airstrike barrage marker's fire zone center mark. Orientation of the templates is not affected by the flight path.⁷⁹

20.4 Types of Airstrikes

As there are many kinds of airstrike available, you must specify at the before the game what type of strike was purchased.

Resolve **Bomb airstrikes** and **Rocket airstrikes** as area fire attacks, similar to artillery. They have a 3+ accuracy number, and use the Area Fire Problems and Area Fire SNAFU tables when a natural '1' is rolled for accuracy. If the accuracy roll is passed use the Fire Index listed below, if not then the attack has reduced

⁷⁵ If laying out a flight path and measuring enemy anti-aircraft stand ranges/LOS is too much hassle, then just give the airstrike a -2 to hit if there are any enemy anti-aircraft stands on the table.

⁷⁶ We don't want players wasting minutes taking advantage of their omniscient view of the enemy's air defenses to work out the optimal flight path. Real-life attack pilots don't have that luxury.

⁷⁷ Where appropriate for the scenario, the scenario designer may allow flight paths to start from any table edge.

⁷⁸ We chose not to allow long-range fire against fixed-wing airstrikes because their higher average speed as compared to helicopters reduces the effective envelope. As it is we're being generous, the actual firing envelope and practical firing ranges are frequently even lower than this rule produces.

⁷⁹ Yes, we know a strafing pass would parallel an aircraft's flight path, but remember an airstrike is multiple aircraft each attacking targets, it's not just one aircraft making a run. This also compensates for the limitation created by the artificial requirement that the flight path start at the friendly table edge.

effectiveness so subtract 5 from the listed Fire Index. Bomb and rocket airstrike types⁸⁰, Fire Zone radii, Fire Indices, Load points, and Point costs are:

Attack Type	Fire Zone Radius	Fire Index	Load Points	Point Cost Pre-1950	Point Cost 1950+
Light General Purpose Bomb	1"	5	1	3	8
Medium General Purpose Bomb	1"	15	2	8	23
Heavy General Purpose Bomb	1"	23	4	19	61
Light Cluster Bomb	2"	12	2	14	42
Heavy Cluster Bomb	2"	18	3	25	76
Light Rocket	0.5"	7	1	4	9
Heavy Rocket	1"	12	2	7	21
Missile	n/a	n/a	2	n/a	252
GB (Guided Bomb)	n/a	n/a	1	n/a	140

Strafing runs attack everything along a 6" straight line template. A stand is hit if any part of it is within the *area of effect*, which is $\frac{1}{2}$ " on either side of the line. Strafing attacks are delivered at 3+ to hit and are assumed to spot all targets in the area of effect. Strafing attacks strike the flank armor of armored vehicles regardless of the target's facing.

- **A Machinegun strafing attack** has a Pen of 2, a ROF of 3, and an anti-infantry modifier of -1. Point cost: 24 prior to 1950, 42 from 1950 on.
- **A Cannon strafing attack** has a Pen of 6, a ROF 3, and an anti-infantry modifier of 0. Point cost: 43 prior to 1950, 169 from 1950 on.
- **The A-10 strafing attack** has a Pen of 9, ROF 3, and an anti-infantry modifier of 0. Point cost: 250.

Missile strikes: Planes get two missile shots at targets within 4" of the barrage marker. A missile hits on a 2+ and has a Pen of 18h. Vehicles are hit on the flank armor. Point cost: 252.

GB (Guided Bomb) strikes: Planes get one guided bomb shot at a target within 4" of the barrage marker. A guided bomb hits on a 2+ and destroys the target stand it hits. Point cost: 140.

Napalm strikes get a 4" x 2" template. It affects any stands partially or wholly within the template. Soft stands are hit on a 2+ and armored vehicles on a 6+. A hit eliminates soft stands, open-topped armored vehicles, and armored vehicles with a 'soft' flank armor rating; a hit causes a quality check on all other armored vehicles. Point cost: 40 prior to 1950, 70 from 1950 on.

⁸⁰ For airstrike types, Light, Medium, and Heavy refer to the lethality of the strike, not necessarily to the size of the ordnance involved.

20.5 Residual Cluster Weapon Bomblets (Very Optional)

Cluster munitions have dud rates of 1%-5%, which leaves the battlefield littered with unexploded ordnance which poses a hazard to friendly troops moving through an area previously targeted by them. Any time a cluster bomb attack is made, from that moment on, there is 4"x4" low-grade mixed minefield centered on the fire zone of the attack. This low-grade minefield hits all ground stands on a 6+ per inch traversed. Hits on all stand types (soft and armored) cause a quality check.

20.6 Aircraft Load Capacities (Optional)

Many gamers requested a means to relate airstrikes to the aircraft assigned to provide support (e.g., they want to know how many missile strikes a section of A-10s can provide). This information is contained in the Aircraft Data Chart. Each aircraft type has a load rating, which is the maximum number of load points it can carry. Each type of airstrike has a load rating, indicating how many load points one strike of that type requires on the delivery aircraft. Also listed in the Aircraft Data Chart is what type and how many strafing attacks the aircraft can make.

When using this rule, players request and roll for the arrival of the flight or section, not for individual airstrikes. Once the flight or section arrives it may only loiter (i.e., conduct attacks) for two turns, the turn on which it arrives and the immediately following turn. It may make any number of attacks in one turn, up to the total it is carrying. Any unused attacks after two turns leave with the aircraft and are lost.

If you choose to manage airstrikes this way, remember to pay the point cost for all the attacks the aircraft is carrying. Should an 'aborts/is destroyed' result occur when calling the aircraft, the attacks carried by that flight or section are lost.

21: High Technology

21.1 General

Advanced technology is rapidly altering the modern battlefield. Of course, this is nothing new. Just ask the knights at Agincourt, the Israelis at the start of the Yom Kippur War or the Iraqis in Desert Storm. But what is new is how quickly the advanced technology is appearing. And armies that utilize this new technology may have a decisive edge over more primitive armies.

21.2 IVIS (Inter-Vehicular Information System)

The IVIS is a computerized communications system that links every vehicle in a unit with its headquarters, giving the commander unprecedented control over units.

Each stand that has IVIS is also treated as a separate FO. So, a company of 3 M1A2's can place 3 different artillery barrages in a turn.

Stands with IVIS also have their cohesion distance doubled.

21.3 CITV (Commander's Independent Thermal Viewer)

Vehicles equipped with a CITV allow the vehicle commander to target a second vehicle while the gunner is firing at the first vehicle. This has the game effect of allowing a vehicle to ignore the ROF Reduction for Multiple Targets.

For example, an M1A1HC with a ROF of 3 can fire one shot each at three different targets.

21.4 SADARM (Sense And Destroy ARMor)

SADARM is a new type of anti-armor artillery munition, which while developed, was only briefly employed in the 2003 Invasion of Iraq. For post-1999 hypothetical scenarios, players can purchase SADARM ammunition for 152mm+ artillery and MRLs. SADARM barrages have the same radius as regular artillery missions, but cost 300 points per fire unit. Any vehicles in the radius are automatically hit by a Pen 10 attack. The attack hits the flank armor.

21.5 Artillery Laser-Guided Projectiles

Artillery with an “l” listed in its indirect fire ammo column can deliver laser-guided projectiles (LGP) instead of a normal indirect area fire attack.⁸¹ Fire units of laser-guided projectiles (LGP) are purchased individually, and assigned to the artillery support groups that will fire them before the scenario begins.

An artillery support group wishing to use its LGP fire units in a friendly Area Fire Phase rolls normally for availability. It does not have to fire all the fire units rolled, and it cannot fire more LGP fire units than were assigned to it, but all fire units it uses that phase must be LGP.

An LGP barrage requires an FO with laser designation capability. Each unit or FO possessing laser designation capability as given by the scenario can place one LGP barrage in a friendly Area Fire Phase. Each barrage only contains one marker, and is placed according to the standard rules for placing artillery barrages.

There is no accuracy roll for the barrage. Instead, each LGP fire unit assigned to the barrage allows one attack on an enemy stand within 6” of the barrage marker. Each stand attacked must be spotted by the FO.

Each attack hits on a 3+. Against armored vehicles, it strikes the flank armor of the target on a second roll of 4+, otherwise it hits the front; the attack has a Pen of 15h. Against infantry, towed weapons, or soft vehicles, if the attack hits the stand is destroyed, if the attack missed the stand is suppressed, mark it with a Suppressed-A marker.

LGP fire units cost 80 points each.

21.6 Artillery GPS Guided Projectiles

These began entering service with a small number of countries starting in 2007, and appear to be very successful. Artillery with a “g” listed in its indirect fire ammo column can deliver GPS-guided projectiles (GGP). GGP attacks are the same as LGP attacks, except any FO stand can place a barrage (no designator capability is needed), and the attack hits on a 2+. Hit resolution and Pen is the same as for LGP attacks. GGP fire units cost 100 points each.

21.7 NLOS Missiles

The Japanese army has a missile system that can be fired at targets that the gunner cannot see. The gunner flies the missile to the target using a fibre-optic link. The US Army has also worked on such a system.

NLOS missiles have an “n” after their range on the vehicle data charts.

⁸¹ The US example of this system is the Copperhead. The Russians have a complete family of laser guided artillery rounds called Krasnopol.

NLOS missiles may be fired at any enemy stand as long as a friendly stand can see the enemy stand. A friendly stand can guide any number of NLOS missiles.⁸²

The stand firing an NLOS missile doesn't have to be able to trace a LOS to its target. See the chapter on designing vehicles for how to compute point costs for NLOS-equipped vehicles.

21.8 Brilliant Mortar AT Weapons

These nasty little weapons are on the drawing boards and may well see widespread service by 2015 or so. A mortar stand, when equipped with these weapons, can fire them during the Fire Phase at any point on the board within range. Place a 3" template centered on where the shot hits. The shot will randomly hit 1 vehicle in the template (enemy or friendly). The target is hit with a 6h attack on the flank. Each shot costs 35 points.

21.9 Stand Alone AT Systems

In the second decade of the 21st century, antitank missile systems may have a stand-alone capability fitted. Such weapons in FFT3 can be placed by infantry stands (1 per stand and the stand doesn't lose its LAW or MAW) in any terrain. This stand is hidden and can't be seen by enemy forces until it fires. Obviously, this requires a referee. They can be placed before a scenario (referee's discretion) or during a scenario. The placing infantry must not move in the turn that the weapon is placed. The weapon is placed facing a specific direction; it has a normal 120 degree front arc that it can fire through.

A weapon with *basic* capability will remain in overwatch until any vehicle (friend or foe) enters its front arc and closes to within 5". It will then fire and make a normal to-hit roll (treat the weapon as average quality). A stand with this ability costs 50% more.

A weapon with *advanced* capability is set to engage tanks or light vehicles and may be set to engage flanks only. It will remain in overwatch until *any* vehicle matching its profile enters its front arc and closes to within 0-10" (the placing player can decide). It will then fire and make a normal to-hit roll (treat the weapon as average quality). A stand with this ability costs 100% more.

When these weapons are placed, the owning player must write down the target types, flank engagement (if desired) and the range the system will engage.

21.10 Anti-Rocket Lasers

The US Army has successfully demonstrated a system that can shoot down a rocket from a multiple rocket launcher using a laser. In the US Army, such a system would probably have the following characteristics: use an M2A3 Bradley,

⁸² The friendly stand does not "designate" for the NLOS attack. Instead, the friendly stand tells the firing stand that enemy vehicles are nearby. The firing stand fires its missiles in the general area of the target, acquires the enemy vehicles, and flies the missile to them.

but remove its guns and missiles. The earliest such a system would be available is probably 2015.

If an anti-rocket laser stand has an overwatch marker, the stand may attempt to intercept one incoming artillery barrage within 30" of the laser. The incoming barrage is stopped on a die roll of 4+.

22: Airborne and Amphibious Rules

22.1 General

This chapter is intended to provide some basic rules and guidance for including airborne operations and amphibious assaults in scenarios. These types of scenarios tend to be very situation-specific, and the rules presented here are not intended to cover all possible cases.

22.2 Airdrops

Airdrops occur at the end of the owning player's Movement Phase.

The drop zone, and direction of flight of the aircraft across the drop zone must be designated either at the start of the game or just prior to executing the drop, at the scenario designer's or referee's discretion.

Each stand being airdropped is represented by a 1" square template of paper labeled to identify the stand it represents. To execute the drop, place the templates every 1" along a ruler. Hold the ruler above the drop zone, aligning it parallel to the flight direction. The altitude at which the ruler is held above the drop zone depends on the troop quality:

- Poor = 28"
- Marginal = 24"
- Fair = 20"
- Average = 16"
- Good = 12"
- Excellent = 8"
- Superb = 6"

Turn the ruler over and let the templates flutter to the game surface. Each stand ends up where its template landed. Stands that land in water are eliminated. Stands that land in cover—woods, towns, swamps, etc.—take a quality check.

Airdropped stands may fire in the Fire Phase, but are counted as having moved full with the normal effects of movement on firing. If an airdropped stand lands within 1" (or on top of) an enemy stand, it is considered to be executing close combat (assuming it survives any applicable quality check for landing in cover). To simulate the vulnerability of paratroopers while in the air, the defender gets a +1 to hit for the first round of close combat. Overwatch fire may be conducted against paratroopers, but only after they land. (A sadistic referee might let air defense guns like the Gepard and ZSUs shoot them in the air).

Starting in 1950, nations with highly developed airborne doctrines (e.g., the US, major NATO nations, and Cold War Soviets [not Warsaw Pact allies]) drop using the Excellent ruler height even if the troops are lower quality.⁸³

Optionally, if there's a strong wind blowing across the drop zone, set up a small fan (on low setting) to blow across the table when conducting the drop.

22.3 Amphibious Assaults

22.3.1 Amphibious Craft

Amphibious Craft are craft designed to transport troops and vehicles from land to sea. AC's come in 4 flavors—ships, hovercraft, amphibious vehicles, and dedicated amphibious vehicles. *Ships* are craft like the US LCVP ("Higgins Boat") or the various LCM ("Landing Craft, Mechanized") craft. Large amphibious ships, like LSTs ("Landing Ship, Tank") are not covered, since they would not typically appear in an FFT3 game. Ad hoc landing craft (motor boats, sampans, barges, etc.) are also ships. *Hovercraft* are air cushion vehicles designed to carry troops onto and over the beach. *Amphibious vehicles* are land vehicles designed to float and traverse water, such as the M2 Bradley or BMP-1. *Dedicated amphibious vehicles* are amphibious vehicles designed to actually cross large bodies of water, like the US LVTP.

22.3.2 Terrain

Beaches are clear terrain.

Ocean is treated like impassable river.

Shallow water is treated like fordible river and usually extends $\frac{1}{2}$ " to 1" from the shoreline. The exact distance should be specified by the scenario.

Water obstacles are obstructions placed in shallow and deep water to hinder landing craft.

⁸³ A hat tip to *Command Decision*, which features this rule, but a version of it appears in the first edition of WRG's *Armour & Infantry 1925–1950* (June 1973). It is the cleanest way to simulate in-game paradrops that we've found.

22.3.3 Movement

Ships can move at normal rate on ocean and must stop when they hit shallow water. To move 1", hovercraft spend $\frac{1}{2}$ movement point on calm water, 1 movement point on rough water, and 2 movement points on open land. To move 1", amphibious vehicles spend 4 movement points on ocean, and 2 movement points on shallow water. Dedicated amphibious vehicles cross ocean at 2 movement points per inch, and shallow water at 1 movement point per inch. Ships, hovercraft, and dedicated amphibious vehicles can debark transported stands at no additional movement cost. The transported stands pay no cost to unload either (on a hot beach, troops will move very fast). Amphibious vehicles debark transported stands normally. Water obstacles will damage a craft on a die roll of 5+. Roll whenever the craft moves within 1" of the obstacle.

22.3.4 Combat Rules

Amphibious and dedicated amphibious vehicles are attacked normally. Hovercraft and ships ("LC") use a modified procedure. Resolve all attacks normally. However, a "kill" (or failed quality check) causes a "hit" on the LC.

- Small LCs are *damaged* on the first hit and destroyed on the second hit.
- Medium LCs are *damaged* on the first hit, *crippled* on the second hit and destroyed on the third hit.
- Large LCs are *damaged* on the second hit, *crippled* on the fourth hit and destroyed on the sixth hit.

A *damaged* LC may not fire and has its movement allowance halved.

A *crippled* LC has its movement allowance quartered.

A *destroyed* LC is removed from the game. All transported stands are destroyed unless the transported stands can traverse the terrain they are in. In that case, the transported stands make a quality check to survive and debark just like infantry in destroyed APCs (see Rule 12.11).

22.3.5 Other Rules

22.3.5.1 Naval Gunfire

Naval Gunfire is just like other artillery, except ignore counterbattery results against them. Naval gunfire uses the army's Artillery Accuracy number. Remember to modify the point cost for the Artillery Accuracy number (the Availability Modifier is already built in).

Destroyer guns are treated as 127mm guns. Each Destroyer makes an availability roll each turn and on a 2+ provides 1 HE fire unit that turn, otherwise none. Base point value is 30 prior to 1950, 100 from 1950 on.

- Cruisers' main batteries (1960s and earlier) are treated as 203mm guns. Each Cruiser makes an availability roll each turn and on a 2+ provides 2 HE fire units that turn, otherwise none. Base point value is 150 prior to 1950, 430 from 1950 on.

- Battleships' main batteries have a 2" fire zone radius and attack with a Fire Index Number of 20. Each Battleship makes an availability roll each turn and on a 2+ provides two attacks. Base point value is 450 prior to 1950, 915 from 1950 on.
- Battleships' and Cruisers' secondary batteries are treated as 127mm guns.
- Each Battleship makes an availability roll each turn and on a 2+ provides 3 HE fire units that turn, otherwise none. Base point value is 90 prior to 1950, 300 from 1950 on.
- Each Cruiser makes an availability roll each turn and on a 2+ provides 1 HE fire unit that turn, otherwise none. Base point value is 30 prior to 1950, 100 from 1950 on.

Starting in 2015, a U.S. Zumwalt-class destroyer's integral vertical launch tubes provide the equivalent of up to 4 Heavy ICM multiple rocket launcher fire units. Base point value is 112.

22.3.5.2 Landing craft and Hovercraft

Craft	Dates	Move	Armor	Gun Ratings ⁸⁴	Capacity
<i>Russian</i>					
Lebed	1975+	12v	s	1 / 2 / 6 / -1	[6]
Gus	1969-92	8v	s		3
Tsaplya	1987-95	12v	0	1 / 1 / 6 / -1 3he / 2 / 12 / +0	[3] + 3
Aist	1975+	8v	0		[12] + 3
Zubr	1988+	11v	0	MRL: Rng 8-45, Light, 18 fire units	[30]
<i>US</i>					
LCAC	1986+	8v	s	1 / 2 / 6 / -1	[12]
LCM-3	1941+	4s	0		3
LCM-6		4s	0		3
LCM-8	1959+	4s	0		[8]
LCU-1600		4s	0		[21]
LCU-2000		4s	0		[20]

Notes:

1. "v" movement class is a hovercraft; "s" movement class is a ship
2. Carrying capacity is given in infantry stands. Capacity in brackets, for example "[8]", may be allocated to vehicles, towed weapons, or infantry. Costs to carry vehicles and towed weapons are:

84 Treat as AAA.

Transported Stand Type	Cost to Carry
Jeep, Hummer, etc.	1
Towed Gun	1
Prime mover for Towed Gun	2
Light IFV/APC ⁸⁵ (BTR-60, BMP-1, M113, etc.)	2
Heavy IFV/APC ⁸⁶ (Stryker, M2 Bradley, etc.)	3
Light Tank, or 1940s Medium Tank	3
MBT or SP Gun (T-62, M60, etc.)	6
Heavy MBT (M1, Leopard 2, Challenger, etc.)	7

22.3.5.3 Beach Defenses

Use the engineering rules for fortifications defending the beaches. They will often have ery pieces in them for direct fire.

⁸⁵ One infantry stand can be carried inside each IFV/APC without using additional hovercraft capacity.

⁸⁶ One infantry stand can be carried inside each IFV/APC without using additional hovercraft capacity.

23: Chemical Warfare

23.1 Executive Summary

- There are three types of chemical agents—nerve agents, non-nerve agents and irritant agents.
- Chemical weapons are delivered by artillery, missiles, wind or air strikes in the Area Fire Phase.
- Chemical weapons create a *chemical zone*. Stands that contact a chemical zone suffer a chemical attack in the next Area Fire Phase.
- A stand that suffers a chemical attack must take an *area fire* quality check at -2.
- *Protected stands* ignore chemical attacks.
- Chemical zones created by contamination with nerve agents and non-nerve agents last for the entire game. Chemical zones created by contamination with irritant agents last until the start of the player's next Area Fire Phase.

23.2 General

In our experience, most wargamers avoid chemical warfare in their games. Yet chemical weapons have been used extensively since 1914 and could well have been used far more extensively had a few things been different.

As most wargamers know, chemical weapons were used by Germany and the Allies throughout World War I, starting in August, 1914 (a French tear gas attack).

In the 1920s and 1930s, warfare theorists, including B.H. Lidell Hart, speculated that poison gas would be used in strategic bombing attacks against enemy cities. The military and popular literature of the time strongly suggests that no one seriously expected otherwise.⁸⁷ Indeed, these theorists often

⁸⁷ For instance, the French Maginot Line, built in the 1930s, incorporated overpressure systems to protect occupants from chemical attacks.

prefigured 1960s-era nuclear warfare theorists, with talk of deterrence, massive retaliation, etc.

In 1920, the Arab and Kurdish people of Mesopotamia revolted against the British occupation. As the British resorted to increasingly vigorous response, a lot of speculation was made about chemical bombardment of major Mesopotamian cities. This was supported by Secretary of State Winston Churchill, although the British ultimately declined to do so.

In 1925 sixteen major nations signed the Geneva Protocol, pledging never to use gas in warfare again. Several signatories ignored this pledge later.

The Bolsheviks used poison gas in 1921 during the Tambov Rebellion.

Combined Spanish and French forces used mustard gas in an attempt to put down the Berber rebellion during the Rif War in Spanish Morocco in 1921-1927.

Japan used chemical weapons against the Chinese in the 1930s and into World War II, prompting a US threat to retaliate in kind if such attacks continued.

Italy used mustard gas during its invasion of Ethiopia in the Second Italo-Abyssinian War in 1935. Despite the fact that it was a signatory to the Geneva Protocol, the Italians used mustard gas in bombs, sprayed it from airplanes, and spread it in powdered form on the ground. 150,000 chemical casualties were reported, mostly from mustard gas.

Germany developed nerve agents and could have used them as early as 1942. Indeed, Hitler is reported to have threatened Italy with chemical retaliation if it changed sides. German commanders also urged the use of poison gas on the Eastern Front.⁸⁸ It is unclear why the Germans refrained from using nerve agents. The two most promising theories are that Hitler had been gassed in World War I and was emotionally opposed to chemical weapons, and a German fear of Allied retaliation. It appears from captured German documents that German intelligence incorrectly thought that the Allies also had nerve agents. The decision to refrain from their use was perhaps due to German fear of a devastating Allied retaliation with nerve agents. If the second theory is accurate, Germany might well have used chemical weapons if they'd had slightly better intelligence.

Although US President Franklin Roosevelt declared in 1943 that the US would not use chemical weapons first, the US military maintained large stockpiles of non-nerve agents. In addition, some US newspapers argued for the use of chemical weapons against Japanese held islands and Japan itself.

In May 1942, Winston Churchill publicly stated that Britain would attack German cities with poison gas if Germany used chemical weapons against the Soviets. Churchill also reportedly intended to use poison gas against the Germans if they invaded the British Isles. Finally, Churchill considered using poison gas against German cities in retaliation for V-weapon attacks on British cities.⁸⁹

⁸⁸ For instance, Colonel-General Franz Halder, military planner of the German staff, recorded in his diary on January 7, 1943 that "Colonel Ochsner [tried] to talk me into beginning gas warfare against the Russians". William Shirer, *The Rise and Fall of the Third Reich*, pg. 869.

⁸⁹ A lot of this information comes from Barton J. Bernstein, "Why We Didn't Use Poison Gas in World War II," http://www.americanheritage.com/articles/magazine/ah/1985/5/1985_5_40.shtml.

In Harry Turtledove's popular *Worldwar* alternative history series, the British use mustard gas against aliens who invade the British Isles during World War II.

After the surrender of Nazi Germany, Soviet and Western Allied forces captured large stockpiles of nerve agents and quickly learned how to make it. The Soviets, in particular, trained seriously for chemical warfare, with NATO finally catching up in the 1980s. Declassified Soviet battle plans indicate that they fully intended to use chemical weapons at the outset of hostilities.

Chemical weapons have been used several times in the postwar period in the Middle East. Egypt used poison gas against insurgents and civilians in the North Yemen Civil War (1963-1967).

During the Iran-Iraq War, Iraq used nerve gas and mustard gas against the Iranians, killing about 20,000 Iranian soldiers and injuring over 80,000. In 1988, the Iraqis attacked the Iraqi Kurdish village of Halabja with mustard gas and nerve gas.

So at the very least, chemical warfare is a regular feature of modern warfare.

23.3 Types of Chemical Agents

23.3.1 General

There are three types of chemical agents—nerve agents, non-nerve agents and irritant agents. Chemical weapons are delivered by artillery or air strikes. In addition, the referee can rule that the battlefield has already been contaminated by persistent chemicals. Any area affected by chemicals is referred to as *contaminated* in this section.

In the Real World, chemicals are also classified as *persistent* or *non-persistent*. Persistent agents last days or even weeks and can contaminate an area for a very long time. Non-persistent agents last a far shorter time, about four hours being typical. FFT3 makes no distinction because even non-persistent chemicals will last longer than a typical FFT3 game represents.

23.3.2 Nerve Agents

As their name suggests, nerve agents attack the nervous system of the human body and can be absorbed by breathing them in or through the skin. For a stand to be *protected* from nerve gas, it must have full protective gear or NBC systems. Limited protective gear is ineffective against nerve agents. Nerve agents are available to Germany from about 1942 on. Historically, it was available to the Soviet Union and NATO from about 1949 on (although they held considerable stocks of captured German nerve agents that could have been used). Had nerve agents been used in World War II by the Germans, the Allies could probably have developed deliverable nerve agents about four months later.

23.3.3 Non-Nerve Agents

Non-nerve agents, such as mustard gas, phosgene or chlorine, are most absorbed through breathing (although some can cause painful burns on

exposed skin). For a stand to be *protected* from non-nerve agents, it must have limited protective gear, full protective gear or NBC systems. Non-nerve agents are available to the Germans (in both artillery and wind-delivered form) from January 1, 1915 and available to everyone else within a few months.⁹⁰

23.3.4 Irritant Agents

Irritant agents, such as tear gas, temporarily incapacitate targets by irritating mucous membranes in the eyes, nose, mouth and lungs, and cause tearing, sneezing, coughing, etc. For a stand to be *protected* from non-nerve agents, it must have limited protective gear, protective gear or NBC systems. Irritant agents wear off very quickly. The French first used irritant agents (in gas grenades) in August, 1914.

23.4 Chemical Attacks

23.4.1 Chemical Zones of Contamination

Chemical attacks produce a *Chemical Contamination Zone* (called “Chemical Zones” in the rules). Chemical zones created by irritant agents last until the start of the player’s next Area Fire Phase. Chemical zones created by all other agents last for the rest of the game. The size and shape of a chemical zone depends on the delivery system (the “type” of chemical attack).

23.4.2 Types of Chemical Attacks

Chemical attacks are delivered by artillery, wind, missile or aircraft. All chemical attacks occur in the Area Fire Phase.

Wind attacks are carried out by gas cylinder stands, which represent about 16 gas cylinders in two sections. They create a rectangular chemical zone 3" wide and 10" long which extends along the direction of the wind. Gas cylinder stands must be emplaced at the beginning of a scenario; they cannot be placed in-game. Referees may wish to allow players to designate them on a map and not place them on the table.

Artillery chemical attacks are made by artillery units that list a “c” in their indirect fire ammo type. The chemical zone they create is placed exactly like a smoke screen (see Rule 15.9). Artillery chemical attacks can only be made by MRLs and 150mm+ tube artillery pieces.

Missile chemical attacks (attacks by tactical ballistic missiles like the Scud) are treated as artillery chemical attacks, with each attack having a 5" Fire Zone Radius for purposes of determining chemical zone sizes.

Aircraft chemical attacks are treated like artillery chemical attacks, with a 2" Fire Zone Radius if delivered by bomb. Alternatively, aircraft stands after 1930

90 This is a very rough guideline, as these agents were theoretically available much earlier. For instance, John Doughty, a New York City school teacher, proposed that the Union use chlorine gas (delivered by 10 inch artillery shells) during the American Civil War. The Union army passed, primarily because Brig. Gen. James Wolfe Ripley, Chief of Ordnance was extremely conservative.

can deliver chemical weapons by spray tank. Spray tank attacks place a chemical zone 4" long and 2" wide.

23.4.3 Chemical Attack Resolution

Any *unprotected stand* that contacts a chemical zone (either from movement or as the result of enemy fire) will suffer a chemical attack in Step 6 of the Area Fire Phase of the current turn. A stand that suffers a chemical attack takes a quality check at -2.

A *protected stand* is unaffected by chemical zones.

23.5 Protected Stands

23.5.1 General

Protected stands are stands that have the following systems or gear:

- Soft stands with *full protective gear* against any chemical agent.
- Vehicles with NBC systems against any chemical agent.
- Vehicles without NBC systems but whose crew and passengers are wearing full protective gear against any chemical agent.
- Soft stands with *limited protective gear* against non-nerve agents or irritant agents.
- Vehicles without NBC systems but whose crews are wearing *limited protective gear* against non-nerve agents or irritant agents.

Unprotected stands are stands that are not on the list above.

Note that a stand can be *protected* against non-nerve agents and irritant agents, while being *unprotected* against nerve gas (the stand only has gas masks, which are ineffective against nerve agents).

23.5.2 Full Protective Gear

Full protective gear comprises gas masks and NBC suits worn by individuals to fight in a nuclear, biological or chemical environment. This gear is cumbersome and degrades troop performance. It can be worn by troops and vehicle/weapon crews and costs 1 point extra per stand. Most modern armies have some form of protective gear available.

Non-vehicle stands that are in protective gear have their Move reduced to 2". All weapons fire is at -1 to hit. Most armies have full protective gear available to their troops by 1950.

Vehicle stands without NBC systems but whose crew is in full protective gear, suffer a -1 to hit for all weapons fire.

Infantry may start the game in full protective gear or they may don it during the game. A stand may don full protective gear at the start of its Movement

Phase with no movement penalty. Scenario designers may require that all stands wear full protective gear at all times.⁹¹ This is the most logical course of action, especially during conflicts involving persistent chemicals. Stands may not remove full protective gear during a scenario.⁹²

23.5.3 Limited Protective Gear

Limited protective gear comprises gas masks or expedient gas masks, plus clothing designed to resist non-nerve agents and irritation agents. All stands with limited protective gear are assumed to be able to put it on whenever attacked.

23.5.4 NBC Systems

NBC systems are vehicle systems that allow crews to operate without protective gear in a nuclear, biological or chemical environment. There are no penalties for vehicles with NBC gear.

23.5.5 Point Values of Chemical Weapons

The impact of chemical weapons on the game is sufficiently severe, variable, and context sensitive that no *meaningful* generic point values can be assigned. We don't recommend using them in competitive games. To limit the imbalance that potentially results when they are used in a scenario, we suggest giving each side a small and equal capability.

91 This is actually a good way to get the feel of chemical warfare, without all the hassle. Just require all stands to have protective gear at all times.

92 Troops will be contaminated after chemical attacks and in any case, it's highly unlikely that troops would obey orders to remove protective gear in a situation where chemical weapons have been used.

24: Nuclear Weapons

24.1 General

This option chapter deals with the use of very small tactical nuclear weapons. While most wargamers avoid nuclear weapons because they tend to dominate the game, tactical nuclear combat was a distinct possibility, especially in NATO's Central Region.⁹³ When combined with the chemical warfare rules, these rules create a very different game experience. We suggest that players initially limit themselves to small tactical nuclear weapons (say, 0.1 kiloton or smaller). Even "tiny" weapons like this can affect a 6½" diameter circle. Larger weapons affect a much greater area. For instance, a 20 kt nuclear weapon will affect a 38" diameter circle! If you're going to use larger nukes, we suggest increasing the ground scale to 1" = 200 meters or 1 cm = 100 meters. Tactical nuclear weapons dramatically change the battlefield. Units must operate in dispersed formations; even a "small" 1 kiloton (1 kt) nuclear weapon can rip a terrible hole in a defensive line or annihilate most of a regiment if it masses for an attack.⁹⁴

24.2 Nuclear Contamination

24.2.1 General

Nuclear weapons create radioactive contamination, called *fallout*. Fallout is the radioactive dust created by nuclear explosion. During the game, tactical nuclear weapons do not generate fallout (for the most part, the fallout will start arriving after the game is over). However, ground bursts create contaminated areas and air bursts create temporary contaminated areas. In addition, a scenario designer may state that part or all of a battlefield is already contaminated by fallout at the

⁹³ Despite the fact that most fiction authors portrayed both sides as eschewing tactical nuclear weapons, recently declassified Soviet battle plans make it clear that they intended to launch a massive nuclear strike at the outset of hostilities. We also think that it is possible (maybe even likely) that NATO would have used tactical nuclear weapons to avoid a conventional collapse. And it's certainly possible that nuclear weapons would have been used on the battlefield in World War II had Germany held out until late 1945 or into 1946 or if the conventional invasion of Japan had occurred. The US Army even reorganized itself in the late 1950s explicitly to fight a tactical nuclear war (the Pentomic organization). For that matter, nuclear power might use nuclear weapons if their forces were attacked with chemical weapons—it was widely reported that the United States threatened the Iraqis with nuclear retaliation if Coalition forces were attacked with chemical weapons during Operation Desert Storm.

⁹⁴ This is especially true if these formations are highly concentrated for an attack. One of the major challenges in FFT3 (whether nukes are in use or not) is to concentrate sufficient firepower while avoiding devastating counter-attacks from area fire weapons and nuclear weapons.

start of the game. Typically, the entire battlefield will be contaminated in such scenarios.

24.2.2 Contaminated Areas

Contaminated areas are established by the scenario designer or by nuclear attacks. The “A” radius of a ground burst is a contaminated area for the rest of the game. The “A” radius of an air burst is a contaminated area until the beginning of the next Area Fire Phase of the player making the attack.

24.2.3 Effects of Contamination

Personel stands that either begin or end their Movement Phase in a contaminated area must take a quality check, unless they are in full protective gear (see Rule 23.5.2).⁹⁵

Vehicle stands that either begin or end their Movement Phase in a contaminated area must take a quality check, unless they have nbc systems or unless the crew is in full protective gear (see Rule 23.5.2).

24.3 Nuclear Strikes

24.3.1 General

There are two types of nuclear strike—air burst and gound burst. Ground bursts leave a crater and a permanent contamination zone. Airbursts do not leave craters and produce only a temporarily contaminated area.

There are three delivery methods for nuclear strikes—missiles, artillery and airstrikes. In these rules, they are treated the same.⁹⁶

Unless the scenario designer states otherwise, each formation can buy up to four nuclear strikes.

Off-table nuclear strikes are placed in the Area Fire Phase and resolved immediately. They hit automatically and have no chance of scattering.⁹⁷

24.3.2 Nuclear Strike Scattering (Optional)

Players who want a more “exciting” tactical nuclear environment may agree to make nukes susceptible to scattering. In general, nuclear weapon accuracy has dramatically improved since 1945, so a weapon’s accuracy and scatter distance

⁹⁵ Note that while fallout is potentially lethal, in most cases the effects will come long after the game is over. The in-game quality check is a morale check—even the most dedicated troops are unlikely to move through contaminated areas unprotected. Of course, few armies would send their troops into known contaminated areas without protective equipment. If the entire battlefield is contaminated (the most probable condition), this rule pretty much requires forces to put their troops in protective gear.

⁹⁶ It can get very fiddly to introduce separate rules for each delivery system and at the end of the day, the game table differences will be minimal. Nuclear attacks are not undertaken lightly, and nuclear weapons crews are some of the higher-quality troops in nuclear capable armies. And while delivery systems can affect accuracy, the differences are probably not big enough (or well-documented enough) to warrant separate rules for each.

⁹⁷ Given the importance of nuclear assets and the fact that they can dramatically affect the game, we elected to make them very predictable.

will vary with the time period. This is obviously an abstraction; feel free to tweak it.

To resolve nuclear strikes:

1. Place nuclear strikes per the normal rules.
2. After all strikes are placed, roll to see if they hit (no quality modifiers apply) per the Nuclear Strikes Chart.
3. If a strike hit, resolve it normally.
4. If a strike misses, it will scatter in a random direction the indicated distance.

On-table nuclear weapons hit automatically, unless the weapon description states otherwise.

The numbers on the Nuclear Strikes Chart represent US, NATO, South African and Israeli delivered weapons. Soviet/Russian weapons are treated as ten years older. Chinese/third world systems are treated as 30 years older. So in a 1987 scenario, US nukes would hit on a 2+ and scatter 1d3 inches, while Soviet nukes would hit on a 3+ and scatter 1d6 inches.

Nuclear Strikes Chart

Date	To Hit	Scatter
Before 1950:	5+	4d6-3 inches
1950-1959:	5+	3d6-2 inches
1960-1969:	4+	2d6-1 inches
1970-1985:	3+	1d6 inches
1986+:	2+	1d3 inches

24.4 Effects

Nukes have a circular template and an A, B, and C radius. The number on the chart is the radius in inches. Ground burst nukes also have a crater with the indicated radius.

The A zone (the area inside the A radius) is the 20+ psi blast zone. Everything in this zone is destroyed.

The B zone (the area inside the B radius and outside the A radius) is the 10-19 psi blast, heat and shockwave zone. Stands in the B zone take a “Nuc-B” area fire attack on the Area Fire Resolution Chart.

The C zone (the area inside the C radius and outside the B radius) is the 5-9 psi zone and the fallout/radiation zone. Stands in the C zone take a “Nuc-C” area fire attack on the Area Fire Resolution Chart. If the attack result is a quality check then soft stands in full protective gear, vehicles with crews in full protective gear (see Rule 23.5.2), and vehicles with NBC gear get a +1 modifier to the die roll.

Yield (kt)	Airburst			Ground Burst			
	A	B	C	Crater (diameter)	A	B	C
0.01	0.5	1	1.5	0	0.5	0.75	1.25
0.05	1	1.75	2.75	0.25	0.75	1.25	2
0.1	1.25	2	3.25	0.25	1	1.75	2.75
0.5	2.25	3.5	5.75	0.25	1.75	2.75	4.5
1	2.75	4.5	7	0.5	2.25	3.5	5.75
2	3.5	5.75	9	0.5	2.75	4.5	7.25
3	4	6.5	10.25	0.75	3.25	5.25	8.25
4	4.5	7	11.25	0.75	3.5	5.75	9
5	4.75	7.75	12	0.75	3.75	6	9.75
6	5	8.25	12.75	0.75	4	6.5	10.25
7	5.25	8.5	13.5	0.75	4.25	6.75	10.75
8	5.5	9	14	0.75	4.5	7.25	11.25
9	5.75	9.25	14.75	1	4.75	7.5	11.75
10	6	9.5	15.25	1	4.75	7.75	12.25
15	6.75	11	17.25	1	5.5	8.75	14
20	7.5	12	19	1	6	9.75	15.25
25	8	13	20.5	1.25	6.5	10.5	16.5
30	8.5	13.75	21.75	1.25	7	11	17.5
35	9	14.5	23	1.25	7.25	11.75	18.25
40	9.5	15.25	24	1.5	7.5	12.25	19.25
50	10.25	16.25	25.75	1.5	8.25	13	20.75
100	12.75	20.5	32.5	1.75	10.25	16.5	26
150	14.75	23.5	37	2	11.75	18.75	29.75
200	16	25.75	40.75	2.25	12.75	20.75	32.75
250	17.25	27.75	44	2.5	13.75	22.25	35.25
300	18.5	29.5	46.75	2.5	14.75	23.75	37.25
350	19.25	31	49	2.75	15.5	25	39.25
500	21.75	35	55.25	3	17.5	28	44.25

Craters are impassable (highly radioactive) and are 1 level high.⁹⁸ Any stand that contacts a crater must take a quality check. Hint—pennies, dimes and quarters make serviceable craters in a pinch. Use dimes to represent $\frac{1}{2}$ " craters (they're a little big, but that's okay), pennies to represent $\frac{3}{4}$ " craters and quarters to represent 1" craters. $\frac{1}{4}$ " craters can be represented by paper chads from a typical hole punch (perhaps punched from index cards). Larger craters can be represented with appropriately sized washers.

Infantry riding in non-soft APCs or IFV will suffer the same consequences as the APC/IFV. Infantry in soft vehicles test separately from their vehicles.

⁹⁸ Technically the crater rim is 1 level high.

A stand is affected by the highest burst radius that touches it. So if you place a 0.05 kt template in the center of a stand and it's touched by the A, B and C radii, you will treat the stand as being hit by the A radius only.

Neutron weapons may be bought by post-1978 Western forces and post-1990 Russian/CIS/Soviet. They're identical to normal nukes except that the C zone radius is 50% larger.

For example, a Russian player in a 1981 scenario makes an airburst attack with a 10 kt warhead in his Area Fire Phase, in unrestricted use conditions and using the optional scattering rules. A US M1 tank stand is the target. There is another M1 stand 8" from the target in the open, an M113 stand carrying an infantry stand at 12" from the target in some woods, and a dismounted infantry stand in a town at 14" from the target. The Russian player needs a 3+ to land on target (treating the attack as if it was 1971 on the Nuclear Strikes Chart since this is a Russian weapon), and rolls a '5' so the attack hits the target. The target is in the A radius, and is automatically destroyed. The M1 stand at 8" is in the B radius, so it takes a Nuc-B attack as an AFV in the open. The attacker rolls a '2', so the M1 is marked to take a quality check for the phase. The M113 is in the C-radius so the attacker uses the AFV in cover portion of the Nuc-C line of the Area Fire Resolution Chart. He rolls a '6' and the M113 is destroyed; the infantry stand in the M113 is lost with it. The infantry stand in the town is inside the C radius and takes a Nuc-C attack as infantry in heavy cover. The attacker rolls a '1' so the infantry stand is marked to take a quality check.

24.5 Targeting Restrictions

In a "normal" tactical nuclear weapons environment, nuclear weapons would not be used on towns or cities. In game terms, this means that a nuclear strike may not be placed within its "danger length" of a town or city. A weapon's danger length is its C radius + 3 inches. In an "unrestricted" tactical nuclear environment, this restriction does not apply.

24.6 Effects on Terrain

In most cases, nuclear weapons will not change the nature of terrain on the game board. Woods or towns may be devastated, but they'll still provide the same level of protection as before. Exceptions are noted below (the area affected is the weapon's B zone):

- Ice is converted to water. If the terrain is an ice shelf covering a lake or ocean, the area becomes a lake and all stands in the affected area are destroyed.
- Frozen tundra becomes swamp.
- Ice covered terrain becomes mud covered terrain.

24.7 Nuclear Cohesion Changes

In tactical nuclear scenarios, all cohesion distances are tripled.

24.8 Widespread Tactical Nuclear Weapon Availability (Double Secret Optional)

Tactical nuclear warfare theorists originally envisioned that tactical nuclear weapons would be integrated at the smallest level. The Davy Crockett is the only actual example of such a system, but many other such weapons were possible. Players wishing to explore the implications of such a policy can use the following rule.

Any stand with heavy weapons can be secretly designated to be armed with nuclear weapons. Each such stand can make a single nuclear strike in the game. The scenario designer should determine how many such strikes are available. For purposes of this rule, “heavy weapons” includes all MBT mounted guns, all artillery or mortars 100mm or larger, and all antitank guided missiles with a range of 10” or more. Stands are assumed to use variable fuzed nuclear warheads, which allow the player to choose any yield of 0.5 kt or less when he makes the attack.

Stands making direct fire nuclear attacks do so in the Fire Phase (or on overwatch if applicable). The firing player identifies the target point of the strike and makes a normal “to hit” roll (with all applicable modifiers). If the roll succeeds the nuclear attack is placed where indicated. If the roll fails, the strike will scatter 1d6”. Note that nuclear weapons are *very* expensive. Warheads for the Davy Crockett reportedly cost \$3 million each in 1959. Therefore, even in this environment, they would be limited to a maximum of one per unit.

24.9 Nuclear Warhead Availability

24.9.1 The United States

The United States had a variety of tactical nuclear weapons available starting in the late 1940s. From 1945 to 1955, these were mostly bombs with yields in the 1 to 50 kt range. In the mid-1950s, a variety of missile delivered nuclear warheads in the 1 to 50 kt range became available. In 1952, the first tactical nuclear artillery shell was available with a 15 kt yield, fired from one of the few “Atomic Annie” 208mm howitzers built for the purpose. In 1956, the US Navy fielded a 16” nuclear shell to be fired from its battleships (selectable yield of 15 or 20 kt). In 1958, the Mk-28 bomb appeared with a selectable yield of 50 kt or 350 kt (and much larger yields not used in FFT3). By the 1960s, the US had tactical nuclear weapons of almost every yield in missile, artillery or bomb configuration.

24.9.1.1 The Davy Crockett

The Davy Crockett nuclear recoilless rifle was manportable (or jeep mounted) and had a range of 1.24 miles (20” in FFT3). The 155mm version was towed and had a range of 2.49 miles (40” in FFT3). The weapons fired a W54 nuclear warhead, which could be set for a yield between 0.01 kt and 1 kt. Your options are:

- Davy Crockett Team or Platoon (see Army Lists).

- Davy Crockett Towed Stand
- When a Davy Crockett fires, the firing stand can choose any yield from 0.01 to 1 kt. The firing stand must make a quality check to hit the desired target point. If it misses, the shot scatters 1d3 inches.

24.9.2 The Soviet Union⁹⁹

The Soviet Union had mass produced nuclear bombs available starting around 1951 in the 40-50 kt range. In 1957 and through the 1960s the FROG series of surface-to-surface rockets came into service with warheads ranging from 10 to 25 kt. During the late 1960s or early 1970s the S-23 180mm artillery received a 0.2 kt round. Nuclear rounds were produced at some point for the 240mm mortar (1 kt) and the 152mm artillery pieces (~0.5 KT and ~4 KT). The 2S7 203mm self-propelled gun introduced in the mid-1970s is reportedly nuclear-capable as well (~10 kt).

24.9.3 NATO

The first British nuclear weapon to enter service was Blue Danube, in 1954. A gravity bomb, it had a yield of 10-12 kt. Its successor was the 1750 lb Red Beard in service from 1962 to 1971, also a bomb, which had a yield of 15 kt in the Mk 1 variant and 25 kt in the Mk 2.

France produced its first operational nuclear weapon in 1964, the AN-11 bomb. Its yield was 60 kt. The AN-22 followed in 1967 with similar characteristics. In 1972 the AN-52 bomb arrived, with a selectable yield of either 6-8 kt or 25 kt. The AN-51 was the same physics package as the AN-52 mounted on a Pluton missile. Their arsenal being intended as a nuclear deterrent rather than tactical warfighting instrument, the French do not appear to have produced smaller yield warheads for use in rockets and artillery shells.

24.9.4 Other Nations

Israel built its first nuclear weapon in the late 1960s. Due to the secrecy and official policy of ambiguity around the Israeli nuclear program and its products, the stockpile size and nature of their weapons is uncertain. Weapons are rumored to include bombs, artillery shells, and ICBM warheads.

China acquired nuclear capability in the late 1960s. Little is known about the warheads of its weapons, but the primary means of delivery appears to be ballistic missiles and cruise missiles.

India exploded its first nuclear weapon in 1974. Warhead yields of its weapons are unknown. Delivery appears to be focused around ballistic missiles, cruise missiles, and possibly aircraft bombs.

Pakistan tested its first nuclear weapons in 1998. It is estimated to have a number of 20-25 kt weapons available, and probably some larger ones in the 100-300 kt range.

⁹⁹ Much of this information comes from Wm Robert Johnston, "Union of Soviet Socialist Republics/Russia Nuclear Warheads and Applications," <http://www.johnstonsarchive.net/nuclear/wrjp159r.html>

24.9.5 Point Values of Nuclear Weapons

Like chemical weapons, the impact of nuclear weapons on the game is sufficiently severe, variable, and context sensitive that no *meaningful* generic point values can be assigned to aid in balancing a game. We don't recommend using them in competitive games. To limit the imbalance that potentially results when they are used in a scenario, we suggest giving each side a small and equal capability.

25: Scenario Design & Campaigns

25.1 General

This chapter provides guidance and assistance for scenario design and campaign creation. These are necessarily suggestions and players should consider them as non-binding suggestions. It also presents a set of scenario templates and a system of generating consecutive battles in a campaign format.

25.2 Making Your Own Scenarios and Campaigns

25.2.1 General Scenario Design Guidance

This section provides guidance for people who design their own scenarios.

25.2.1.1 Pre-game Artillery Fire

There are several ways one could carry out large pre-game artillery bombardments as part of a scenario, but we don't recommend them because they can unbalance the game right from the start if they do too much damage (or too little). A better approach is to create the order of battle for each side with losses from preparatory bombardment already reflected. That way, the bombardment won't unbalance the scenario from the start and the players can get right to playing without a lengthy pregame bombardment adjudication exercise.

25.2.1.2 Balancing Scenarios

Use the point value system as a starting point. The FFT3 point value system assumes a combined arms scenario, with moderately terrain density (i.e., an average distance between covering features of about 2000m [20"]). The point value system also assumes that forces will be reasonably balanced as reflected in the Army Lists. Don't expect the point value system to work well if you field an army comprised solely of 100 M1A2s, or if three quarters of one force is attack helicopters... As a rough guide, the attacker will probably need at least 1.3 times the points of the defender. Scenario conditions (terrain, mission, weather, length) can affect this number dramatically. An attacker needing to break through under time pressure (i.e., having to move quickly with little opportunity to take

advantage of cover and coordination) may need twice the points of the defender, or more, and an attacker with the luxury of time may be able to overcome a static defense with equal points. Gross technological differences between sides can also alter the needed ratio. Gross capability differences can impact the ratio needed as well. For example, if one side has few antiarmor weapons and the other has mostly tanks, the side with little anti-tank firepower will need a lot more troops.

Don't forget to use the correct point value for artillery: the on-table value or off-table value, depending on how it is appearing in the scenario.

Keep in mind that point value systems suffer from severe limitations. First, deviation from the assumptions listed above will alter the effectiveness of stands. For instance, tanks will be disproportionately effective if the other side has little anti-armor capability. The setting of the scenario (terrain, weather, time of day) can make a difference, too. In the wide open desert, an ATGM with a 4000m range is more effective, and worth more, than one with the same warhead but only a 1000m range. In close terrain with average sight lines of 500m, they would be equally effective and equally valuable. Further, the mission can alter the relative value. A lightly armored tank destroyer may be very effective on defense, where it can take full advantage of protective terrain. The same vehicle attacking may be less effective because of the reduced opportunity to fight from cover, and thus may be less valuable.

Some points to remember:

- Open terrain favors the side with longer ranged weapons.
- Close terrain negates the extra value of long-ranged weapons.
- Close terrain tends to channel attackers, making defense easier.
- Open terrain favors vehicles with armor, especially heavy armor.
- Light armored fighting vehicles are more effective on defense and with lots of cover.
- Night favors stands with thermal sights.
- Artillery has the biggest impact (pardon the pun) in open terrain with good visibility.

25.2.1.3 Space and Time

The relationships between the size of the battlefield, the number of units, the number of turns, the locations of objectives, and the movement ratings of the stands all affect a scenario's playability.

When selecting the number of units, try to size the forces to the playing area (or playing area to the forces) so that the unit density or unit frontage doesn't deviate grossly from the historical norm for that army and situation. If you have a regiment attacking on the frontage normally assigned a battalion, the game will feel crowded and there will be little opportunity for maneuver. If you have

a battalion defending the frontage of a brigade, open flanks and holes will be everywhere.

Usually, at least one side in a scenario is required to advance some distance as part of satisfying its objective. Make sure that the distance it must traverse can be covered using its movement allowance within the number of turns scheduled for the scenario. As a rough guideline, stands fighting their way forward will average roughly half their nominal cross-country movement rate, so for example, if tanks with a move rating of 10 must advance 40 inches to their objective, then you'll probably want at least 8 turns in the scenario. Inclusion of roads along the line of advance can reduce the time needed somewhat, and the inclusion of dense terrain (woods, towns, etc.) will lengthen the time needed.

Another consideration is the spatial distribution of objectives on the table. Something to avoid is having all or most victory points concentrated in a single spot on the table. This tends to result in all forces converging on the one location in a slugfest where maneuver is unnecessary. Spread the victory points around the table, to motivate players to maneuver, and to screen, and protect flanks of their formations in a more realistic fashion. A battalion's objective may be in the middle of the table, and it may not care what happens at the table edges, but the division commander is going to care if the battalion lets the enemy travel freely around both its flanks into the brigade or division rear! Use objectives and victory point locations as tools to reward good military tactics and realistic behaviors.

25.2.1.4 Scenario Types

Some suggested general scenario types are the following, or you can use the scenario templates provided later:

- Breakthrough attack. The attacker must exit as many combat units (not stands) as possible off the defender's table edge. How many constitute a draw and a victory depend on the relative strengths of the attacking and defending forces (and on the terrain, etc.)
- Meeting engagement. Both sides must exit as many combat units as possible off the opponent's table edge. Generally, the one who exits the most combat units wins, but for unequal forces this may need to be modified. For instance, the side exiting a higher *proportion* of its combat units wins.
- Penetration attack. Attacker must advance as far as possible into defender's territory. Defender starts occupying roughly two thirds of the depth of the table. Many objectives, each worth victory points, should be scattered throughout the depth of the table, with the value rising in proportion to how deep into the defender's area the objective is. The attacker should have a choice of at least two and preferably three or four routes of advance (usually roads). Generally, objectives should be any covering terrain features from which direct fire can hit one or more of the routes of advance.

25.2.2 General Campaign Design Guidance

This section is intended to provide some guidance and assistance for people who create their own campaigns.

25.2.2.1 Design Principles

Here are some basic design principles for producing a campaign that will have higher odds of being fun. These are based on our own analyses of the many, many campaigns and monster games we've participated in and experienced through the years. Look at the Battle Generator Campaign for examples of how these maybe be implemented.

Rule number one: avoid positive feedback mechanisms. In other words, avoid campaign mechanics that reward a side for a victory by making the next battle easier for that side to win (for example, the winner gets more reinforcements or replacements). This tends to make the first battle or two much more important than any other battle, and tends to quickly generate conditions where one side can no longer win the campaign even though there are many battles yet to be fought. While positive feedback mechanisms are realistic and occur in real life, they suck the fun out of a campaign. If you get everything else right but fail at this, your campaign will probably not be fun.

Rule number two: there should be multiple ways for the campaign to end. These should depend on different, independent factors (e.g., successful battles, casualties, distance advance, logistics, etc.). And if possible the timing of the campaign end should not be predictable until the last battle. One way to achieve this is to include a random component to each end condition.

Rule number three: there should be multiple sets of conditions for victory. These should depend on different, independent factors too (e.g., victory, casualties, distance advanced, logistics, etc.). Ideally, you don't want the winner of the campaign to become clear until the final battle is fought. That keeps players on both sides interested and having fun until the end, because nobody is knowingly forced to play for a lost cause.

Rule number four: each battle should be important, but no one battle should be biased to be more important. Each battle should contribute toward each of the campaign victory conditions and/or campaign ending conditions in some way. This keeps players engaged in prosecuting each game in the campaign by preventing games where one or both sides have nothing at stake.

Rule number five: Incorporate resource management in a way that gives players a chance to influence (but not conclusively determine) the victory or campaign termination timing (for example, choosing between reinforcements or supplies, or choosing which units to commit to which scenarios, or choosing which scenario type comes next). This gives the players important decisions to make. Important decisions and their effects are what make the campaign interesting as compared to playing a series of unconnected scenarios.

Implementation of all the above rules, and harmonizing them in a campaign system, is both an art and a science. Used well, they will maximize the chances

that the campaign will be interesting and engaging for players through its entire duration.

25.2.2.2 Recovery from Losses

Some of the losses taken during battle in FFT3 are temporary in nature. While the stand remains combat ineffective for the duration of the battle, afterward repairs can be affected, troops rallied, leaders replaced, etc.

As a rule of thumb, roughly one hour after an FFT3 battle is concluded, half of the stands eliminated by failed individual quality checks from fire are available to fight again, and all the stands eliminated by combat units failing 2/3 losses quality checks are available. One fourth of the destroyed stands are also available again at that time. Then 8-24 hours after the battle, three-fourths of the original stands lost to fire quality checks are available, and half the original destroyed stands are available again. If the number of stands lost doesn't divide evenly into fourths or halves, round the fractional stand off: half a stand or higher up, and less than half a stand down.

In effect, this means the permanent losses suffered by a stand that fails a quality check from fire are about 25% on average, while the permanent losses in a stand that suffers a destroyed result are approximately 50%.

So for example, a 6-stand Russian tank battalion that lost 4 stands to fire QCs and the remaining two stands to a 2/3 losses quality check, would have 4 stands available an hour after the battle (2 from losses QC plus $\frac{1}{2} \times 4$ from fire equals 4 available), and 5 stands available after 8-24 hours (2 from losses QC plus $\frac{3}{4} \times 4$ from fire equals 5). A 3-stand US tank company that lost 2 stands destroyed, would have two stands available an hour after the battle (1 survivor plus $\frac{1}{4} \times 2 = 1\frac{1}{2}$ which rounds to 2). After 8-24 hours, it would have two stands available (1 survivor plus $\frac{1}{2} \times 2 = 2$).

This may be modified by the campaign designer or referee to account for specific factors. For instance, if one side controls the battlefield at the end of a scenario, the other side's recovery of lost vehicles may be limited or non-existent, and recovery of lost infantry may be similarly reduced due to prisoners having been taken.

25.3 Scenario Templates for the Battle Generator Campaign

This section lists and explains various scenario types that are used in the battle generator campaign system that follows.

25.3.1 Forces and Field Defenses

The scenarios are generally designed for a 4' x 6' table. For realistic unit frontages, force sizes should be roughly one to three battalions, plus supporting units. Densities may be higher at main points of attack. Point costs will obviously affect the size of the force a side can deploy. The force deployed for a scenario will usually be a portion of the force being used in the campaign.

In scenarios where field defenses may be purchased, the points spent for them come out of the side's total points for the scenario. Field defenses are classed as hasty, or deliberate. This table lists the classifications of the field defenses:

Field Defense Item	Hasty	Deliberate
Hasty Infantry Entrenchment	Yes	Yes
Hasty Vehicle Entrenchment	Yes	Yes
Deliberate Infantry Entrenchment	No	Yes
Deliberate Vehicle Entrenchment	No	Yes
Minefield (AV, AP, or Mixed)	No	Yes
Road Crater	Yes	Yes
Abatis	No	Yes
Antitank Ditch	No	Yes
Barbed Wire	No	Yes
Fortifications	No	Yes

25.3.2 Deployments, Game Length, & Table Setup

Deployment locations are usually given in relation to a side's baseline. A baseline can be the long edge of the table or the short edge, depending on the scenario. The enemy baseline will always be the opposite edge from the friendly baseline. A flank edge is a table edge connecting the friendly baseline edge to the enemy baseline edge.

Two game lengths are given for each scenario type. The first is for scenarios prior to 1960, the second for scenarios after 1960. The difference reflects the increasing introduction of stabilization on tanks, as well as the increasing mechanization of infantry.¹⁰⁰ If using a table larger than 4' x 6', add 1 turn to the game length for each additional 6 inches the distance between opposing baselines increases.

Table setup can be done using any agreed-upon method. There should usually be at least one road connecting the two baselines, preferably two or three. Terrain density depends upon the theater. For western and central Europe, we suggest average spacing between features should be around 10", with individual spacings ranging from 5" to 20".

Different deployment types are given in the scenarios. On-table deployment means the stands of the force are placed on the table in their starting locations prior to the start of play. Moving deployment means the force starts off table and enters from the specified edge during its Movement Phase. Flank deployment is a special form of moving deployment detailed below.

For flank deployment, a player designates a flank force from the troops he is using in the battle. The flank force may include no more than 25% of the player's

¹⁰⁰ If an attacking force is composed primarily of leg infantry, you may need to add an extra turn or two if the distance it's required to advance exceeds its possible movement in the allotted number of turns. For instance, in an encounter battle, figure the first two turns will be strategic movement, the remaining turns will be tactical, so to cross the 48" of table will take at least 10 turns (8" x 2 turns + 4" x 8 turns = 48") if no movement lost to suppression.

combat units, and no more than 25% of his total stands. A combat unit must be fully assigned either to the flank force or to the main force; its stands may not be split between the flank force and the main force. At the start of the game, prior to deployment by either side, the player designates which flank edge his force will enter on, and which quarter of the edge it will do so in. Number the quarters 1, 2, 3, 4 starting from the friendly baseline. During the game, at the start of any friendly player turn in which the player desires his flank force to enter the table, he must roll a die. If the roll exceeds the number of the quarter, during the friendly Movement Phase his flank force enters. Each stand in the flank force may make up to a full move from the center of that quarter's edge. If the center of that quarter's edge contains terrain impassable to a stand in the flank force, the stands must enter the edge at the closest point containing passable terrain within that quarter edge. If there is no passable terrain anywhere within that quarter edge for the flank stand to enter on, then that stand is eliminated, and the owning player should be given much good-natured grief about selecting that area for entry.

25.3.3 Objectives and Victory Points

Frequently the scenario objective will be a terrain feature. The objective should be designated before any troops are deployed. It should be located in the area specified by the scenario, at least 12" from any flank edge and at least 6" from any baseline edge. An objective is considered captured, held, or controlled when no enemy forces are present on the feature and at least one friendly infantry combat unit is located on the feature.

Where exiting combat units is an objective, all the surviving stands of the combat unit must exit for the unit to count toward the victory conditions.

Sides receive victory points in a scenario for completing objectives. At the game end, total the victory points. If one side has more victory points, a difference of one victory point is a minor victory for that side (and a minor defeat for the opponent), a difference of two or more victory points is a major victory (and a major defeat for the opponent). Equal victory points for both sides is a draw.

Exhaustion points are used in the battle generator campaign system and are explained there.

25.3.4 Scenario Types

25.3.4.1 Encounter Scenario

Length: 10 turns pre-1960 / 8 turns 1960+

Table Orientation: Baselines are the long edges

Table Layout: There should be at least two roads connecting the baselines, and they should get no closer to each other than 18". Optionally, within 12" of each side's baseline place a lateral road connecting the two roads, and if desired extend the lateral roads to the flank edges.

Setup: Both sides use moving deployment. No flank deployment is permitted.

Forces: Both sides have equal points. Neither side may use airstrikes or preplanned artillery fire. Neither side will have any field defenses.

Objectives: Both sides are attempting to exit combat units (not individual stands) off the opposing side's baseline edge. Each side gets one victory point for each entire combat unit exited.

Exhaustion Points: +3 for both sides

25.3.4.2 Hasty Attack Scenario

Length: 10 turns pre-1960 / 8 turns 1960+

Table Orientation: Baselines are the long edges

Table Layout: There should be at least two roads connecting the baselines, and they should get no closer to each other than 18". Optionally, within 12" of each side's baseline place a lateral road connecting the two axial roads, and if desired extend the lateral roads to the flank edges.

Setup: Defender deploys in the closest third of the table. Attacker uses moving deployment, may use flank deployment.

Forces: Defender gets two-thirds of attacker's points. Defender can spend up to 20% of his points on hasty field defenses. Attacker may use airstrikes and preplanned artillery fire.

Objectives: Prior to setup, designate one terrain feature in the defender's deployment area as the objective. The objective must be at least 12" from any flank edge and 6" from his baseline. Attacker gets one victory point for capturing the objective by the end of turn 7, and one victory point for holding the objective at the end of the game. Defender gets one victory point for holding the objective at the end of the game, and one victory point for eliminating at least half the attacker's combat units.

Exhaustion Points: +4 points for attacker, +3 points for defender

25.3.4.3 Deliberate Attack Scenario

Length: 12 turns pre-1960 / 10 turns 1960+

Table Orientation: Baselines are the long edges

Table Layout: There should be at least two roads connecting the baselines, and they should get no closer to each other than 18". Optionally, within 12" of each side's baseline place a lateral road connecting the two roads, and if desired extend the lateral roads to the flank edges.

Setup: Defender deploys in the closest half of the table to his baseline. Attacker deploys within closest quarter of the table to his baseline, and may use flank deployment.

Forces: Defender gets half of attacker's points. Defender can spend up to 40% of his points on deliberate field defenses. Attacker can use airstrikes and preplanned artillery fire.

Objectives: Prior to setup, designate one terrain feature in the defender's deployment area as the objective. The objective must be at least 12" from any flank edge and 6" from his baseline. Attacker gets one victory point for capturing the objective by the end of turn 9, and one victory point for holding the objective at the end of the game. Defender gets one victory point for holding the objective at the end of the game, and one victory point for eliminating at least half the attacker's combat units.

Exhaustion Points: +5 points for attacker, +4 points for defender

25.3.4.4 Counterattack Scenario

Length: 10 turns pre-1960 / 8 turns 1960+

Table Orientation: Baselines are the long edges

Table Layout: There should be at least two roads connecting the baselines, and they should get no closer to each other than 18". Optionally, within 12" of each side's baseline place a lateral road connecting the two roads, and if desired extend the lateral roads to the flank edges.

Setup: Defender deploys in the closest third of the table to his baseline. Attacker (the side making the counterattack) deploys using moving deployment, and may use flank deployment.

Forces: Defender gets two-thirds of attacker's points. No field defenses may be purchased by either side. Attacker may use airstrikes and preplanned artillery fire.

Objectives: Attacker gets one victory point for eliminating at least one-third of the defender's combat units, and another victory point for eliminating at least two-thirds of the defender's combat units. Defender gets one victory point for eliminating at least one-third of the attacker's combat units, and another victory point for eliminating at least two-thirds of the attacker's combat units.

Exhaustion Points: +4 points for both sides

25.3.4.5 Breakthrough Attack Scenario

Length: 12 turns pre-1960 / 10 turns 1960+

Table Orientation: Baselines are the long edges.

Table Layout: There should be at least two roads connecting the baselines, and they should get no closer to each other than 18". Optionally, within 12" of each side's baseline place a lateral road connecting the two roads, and if desired extend the lateral roads to the flank edges.

Setup: Defender deploys in the closest half of the table to his baseline. Attacker deploys in the closest quarter of the table to his baseline, and may use flank deployment.

Forces: Defender gets half of attacker's points. Defender can spend up to 40% of his points on deliberate field defenses. Attacker can use airstrikes and preplanned artillery fire.

Objectives: Attacker gets one victory point for clearing the quarter of the table closest to the defender's baseline of enemy units, and gets one victory point for exiting at least one quarter of his combat units off the defender's baseline. Defender gets one victory point for holding the quarter of the table closest to his baseline, and one victory point for eliminating at least one-third of the attacker's combat units.

Exhaustion Points: +6 points for attacker, +5 points for defender

25.3.4.6 Exploitation Scenario

Length: 10 turns pre-1960 / 8 turns 1960+

Table Orientation: Baselines are the long edges.

Table Layout: There should be at least two roads connecting the baselines, and they should get no closer to each other than 18". Optionally, within 12" of each side's baseline place a lateral road connecting the two roads, and if desired extend the lateral roads to the flank edges.

Setup: Defender deploys in the closest half of the table to baseline, and all defender artillery must be on-table. Attacker deploys using moving deployment and may use flank deployment.

Forces: Defender gets two-thirds of attacker's points. Defender may not purchase field defenses. Attacker may not use preplanned artillery fire or airstrikes.

Objectives: Each side gets one victory point for controlling the center third of the table (treat entire third as an objective), and one victory point for controlling the third of the table closest to the defender's baseline.

Exhaustion Points: +3 points for attacker, +4 points for defender

25.3.4.7 Pursuit Scenario

Length: 10 turns pre-1960 / 8 turns 1960+

Table Orientation: Baselines are the short edges.

Table Layout: There should be at least one road connecting the baselines. Optionally, within 24" of each side's baseline, place a lateral road connecting the two flank edges.

Setup: Defender deploys first, anywhere on the table, then attacker chooses which baseline will be his, and deploys using moving deployment. Attacker may use flank deployment.

Forces: Defender gets half of attacker's points. Defender may use up to 20% of his points for hasty field defenses only. Attacker may use airstrikes, but not preplanned artillery fire.

Objectives: Attacker receives one victory point for each quarter of the defender's combat units eliminated. Defender receives one victory point for each quarter of his combat units exited off the defender's baseline.

Exhaustion Points: +2 points for attacker, +3 points for defender

25.3.4.8 Encirclement Scenario

Length: 12 turns pre-1960 / 10 turns 1960+

Table Orientation: Baselines are the short edges.

Table Layout: There should be at least one road connecting the baselines. Optionally, within 24" of each side's baseline, place a lateral road connecting the two flank edges.

Setup: Defender deploys first in the third of the table closest to his own baseline. Attacker uses mobile deployment along either or both flank edges.

Forces: Defender gets half the attacker's points. Defender may not purchase field defenses. Attacker and defender may not use preplanned artillery fire or airstrikes.

Objectives: Attacker receives one victory point for eliminating at least one third of the defender's combat units, and one victory point for eliminating at least two thirds of the defender's combat units. Defender gets one victory point for holding the third of the table closest to the attacker's baseline, and one victory point for exiting at least one quarter of his combat units from the attacker's baseline.

Exhaustion Points: +4 points for attacker, +3 points for defender

25.3.4.9 Breakout Scenario

Length: 12 turns pre-1960 / 10 turns 1960+

Table Orientation: Baselines are the long edges.

Table Layout: There should be at least two roads connecting the baselines, and they should get no closer to each other than 18". Optionally, within 12" of each side's baseline place a lateral road connecting the two roads, and if desired extend the lateral roads to the flank edges.

Setup: Defender deploys in the center third of the table. Attacker deploys the breakout force along the defender's baseline using moving deployment, and deploys the relief force along the attacker's baseline using moving deployment.

Forces: Defender gets two-thirds of total attacker points. Attacker divides force into two forces of equal point cost, and designates one as the breakout force and the other as the relief force. Both sides may use preplanned artillery fire and airstrikes. Attacker may deploy his artillery on-table as part of the breakout force. Neither side may purchase field defenses.

Objectives: Attacker gets one victory point for exiting at least half his breakout force's combat units off his own baseline by the end of the game, and another victory point if he achieves this by the end of turn 8. Defender gets one victory point for eliminating at least half the relief force's combat units, and one victory point for eliminating at least half the breakout force's combat units.

Exhaustion Points: +5 points for attacker, +3 points for defender

25.3.4.10 River Crossing Scenario

Length: 10 turns pre-1960 / 8 turns 1960+

Table Orientation: Baselines are the long edges

Table Layout: At one-third of the table length from the defender's baseline a 2"-wide unfordable river runs from flank to flank edge to flank edge (e.g., on a 4'x6' table it will be 16" from the defender's baseline). The river may meander a bit but must stay within 3" of this distance from the defender's baseline. There should be two roads connecting the baselines, each crossing the river at a bridge or at a ford, and they should get no closer to each other than 18". Optionally, within 12" of each side's baseline place a lateral road connecting the two roads, and if desired extend the lateral roads to the flank edges.

Setup: Defender deploys in the closest half of the table. Attacker uses moving deployment, may use flank deployment but only up to the river (no flank force may enter on the defender's side of the river).

Forces: Defender gets half of attacker's points. Defender can spend up to 20% of his points on hasty field defenses. Attacker may use airstrikes and preplanned artillery fire.

Special Rule: If the defender has an engineer or pioneer infantry stand present in his force, starting on turn 7 it may attempt to blow up a bridge if it is within 1" of the bridge and it is unsuppressed. To make the attempt the stand may not move during its movement phase. The stand rolls one die at the end of its movement phase, on a 5+ the bridge has been destroyed.

Objectives: Attacker gets one victory point for having at least one combat unit across the river at game end, and another victory point for exiting at least one combat unit off the defender's baseline. Defender gets one point for eliminating one-third of the attacker's combat units, and one victory point for holding his side of the river at game end (i.e., no attacker forces on the table on the defender's side of the river at game end).

Exhaustion Points: +5 points for attacker, +5 points for defender

25.4 Battle Generator Campaign

The Battle Generator Campaign¹⁰¹ is intended to provide a string of several successive battles between two forces in a pseudo-campaign format (typically 3-8 games). To setup, you pick your campaign force, and determine what portion of your force can be used in each scenario. To play, you determine the scenario and then select units to use in the scenario from your campaign force and from the attachments in the army list. Then play the scenario. After the game, you do recovery, spend command points, and assess the effects of scenario results on the campaign. Finally, check to see if the campaign end conditions are met. If not determine the next scenario and repeat. If the campaign ends then determine the campaign victory.

25.4.1 Setup

Select the timeframe and which two armies are going to be fighting. Agree on a point value target for the forces to be used. Ideally this point value target should give enough points for each side to purchase one infantry formation¹⁰² and at least half of one armored formation, or to purchase one entire mixed infantry/armor formation. The target points needed to do this will depend heavily on the timeframe and armies involved, so you'll have to decide after looking at the lists. Each side selects one infantry (or mixed) formation as its core troops. It must take all the stands from this formation. Then with the remaining points select elements of a second formation, up to the entire formation. If there are still remaining points after taking the entire second formation, elements of a third formation may be selected. The total cost of the units selected by a side cannot exceed the point value target. Don't forget to adjust the cost of units for their quality!

For example, the timeframe selected is Soviets vs Germans, mid-1943, and the force point target is 2000 points. The Soviet player selects as his first formation a "Soviet Mechanized Brigade 1943-1945" of fair quality, which totals 806 points. Next is a fair-quality "Soviet Tank Brigade Mar1943-Nov1943" equipped with T-34/76C m.1942, which costs 1431 points. This would be 2237 points, so from the tank brigade the Soviet player omits the ZiS-3 76mm FG, the 3 SMG Infantry stands, the ATR Team stand, and the Brigade Light Tank Battalion. What remains of the tank brigade totals 1195 points, for a total of 2001 points. Close enough.

Next agree on a point value target for artillery. The target should allow one or at most two artillery support groups per full formation purchased (typically 105mm guns for pre-1950 forces or 155mm for 1950-onward forces). A suggested target would be about 60 points per formation pre-1950, or about 250 points per formation from 1950 onward.

For artillery our Soviet player has a point target of 60 points. The Soviet player selects an off-table 152mm Howitzer Battalion support group, and an off-table 122mm Howitzer Battalion support group. Soviet artillery has

¹⁰¹ We called it this to distinguish it from the campaign style where larger forces maneuver and fight on a large map and individual battles between elements of those forces are selected for resolution on the table.

¹⁰² The infantry formation could be mechanized or motorized infantry. The reason we mandate infantry is that some of the scenario objectives require infantry to complete successfully.

a 5+ accuracy number in this timeframe, so the point cost is multiplied by 0.88, giving a cost for the two groups of 53 points.

Select a point value limit for the scenarios of the campaign. This is the maximum amount of points the side with the initiative (the attacker) will be able to use in a scenario, including troops from his campaign force, attachements, field defences, etc. The amount of points the other side gets to use is set by the scenario type as a fraction of the point limit. Good values for the scenario point limit are generally between half the campaign force point target and three quarters of the campaign force point target.¹⁰³

For our Germans vs. Soviets example, since the total point target for the forces is 2060 (force plus artillery) the scenario limit should be between 1030 and 1545 points. The players select 1300 points as the scenario limit.

In addition to using units from its campaign force for a scenario, each side may use some of its scenario points to purchase one attachment unit (from the Attachments portion of the army list) of company size or smaller for western-style armies or battalion size or smaller for Russian-style armies. An attachment unit may not cost more than 25% of the scenario point limit. An attachment may be bought understrength to fit it within the 25% limit and the scenario point limit. Again, the total point cost of the force may not exceed the scenario limit for the attacker or the fraction of that limit for the defender. Eventually, due to casualties one or both sides may no longer be able to field that many points. At that point you may wish to adjust the scenario limit downward to however many points the attacker has left in his force.¹⁰⁴

For the first scenario, it is a Hasty Attack, and it's determined the Soviets will be the attackers. For the scenario the Soviet player chooses to use from the mechanized brigade the three ZiS-3 guns, the three Pioneer stands, the BA-64Bs, the mortars, one motorized infantry battalion, the three MG Plt stands, and enough of its light trucks to carry the selected units. From the tank brigade he chooses to use two of the T-34/76C battalions and one of the 12.7mm AA MG Trucks. He elects to use both artillery support groups for the scenario. Then he purchases an assault gun regiment of SU-76s from the attachments section of the Soviet army list. Full strength for the assault gun regiment is four SU-76s, but he doesn't have enough points to get the full regiment, so he buys it understrength with three SU-76s. Total cost for the scenario force is 1295 points. As per the scenario type, the Germans will get to field 867 points to meet the Soviet attack (867 is two-thirds of 1300).

Each side gets 12 command points for use in the campaign. Command points can be spent to reduce exhaustion, to purchase replacements for lost stands, and to influence the scenario selection die roll.

Agree on one side to start with the initiative (be the attacker), or do a competitive die roll with the winner choosing which side starts with the initiative. The first battle is a Hasty Attack.

¹⁰³ The scenario point limit is less than the total campaign point target to allow players to tailor their scenario forces to the scenario situation to some degree. For example, on the attack in open terrain you may want to use more tanks from your campaign force, while for defense in woods and towns you may want to use more infantry and antitank guns from your force. You may want to save engineers for use in river crossing scenarios.

¹⁰⁴ If this occurs the campaign is probably close to ending due to casualties.

25.4.2 After the Scenario

After playing the scenario, determine the victor according to the scenario objectives. If one side has achieved at least a minor victory, that side has the initiative now. If the battle was a draw, the initiative passes to the other side.

Now determine the ground gained. If the attacker achieved a major victory, he rolls three dice and adds that many kilometers to the total he has advanced. If the attacker achieved a minor victory, he rolls two dice and adds that many kilometers. If the defender achieved a minor victory he rolls one die and adds that distance. If the defender achieved a major victory then he rolls two dice and adds that many kilometers to the total he has advanced.¹⁰⁵

Next conduct recovery and reorganization. Each side recovers all of the stands that were lost due to two-thirds-losses quality checks, and recovers two thirds of the stands lost in the scenario due to failed individual quality checks. Each side recovers one-third of the stands lost in the scenario to destroyed results. Recovered stands may be reorganized by reassigning them to other understrength combat units to bring them up to full strength (but they may not exceed full strength).

Then add to the exhaustion for each side. Each side gets the exhaustion points indicated in that scenario. Then add one exhaustion point to a side if it suffered a minor defeat or two points if it suffered a major defeat.

Now both players spend command points. A maximum of 5 command points may be spent after each completed scenario. Deduct spent command points from the side's remaining command points for the campaign. Command points may be spent to remove exhaustion points, to replace stands, or to modify the die roll for the selection of the next scenario. Each command point spent to reduce exhaustion removes one exhaustion point. Each command point spent to get replacements allows the player to restore to his force one stand of his choice that has been lost.¹⁰⁶ Each command point spent to modify the die roll will add either a +1 or a -1 to the next scenario selection die roll as the player designates. Both sides secretly record what their purchased modifier will be, and reveal it after both sides have indicated they are done spending command points for this scenario cycle. This must be done prior to the next scenario selection die roll.

Finally, check to see if the campaign has met any ending conditions. There is no more spending of command points permitted at this stage, even if you have unspent campaign points you could have spent after the last scenario and doing so would change the campaign end conditions.¹⁰⁷ If it has, the campaign ends. Otherwise, the side which now has the initiative rolls for the next scenario on the Scenario Selection Table below, applying the modifier if the initiative changed hands, and applying any command point modifiers purchased.

¹⁰⁵ Yes, technically if one side advanced the other side should lose the same amount of ground. But that would be more complicated and make it impossible to impose an upper limit on how long the campaign will last. In the end though, the campaign victory condition for advancing measures who ended up gaining ground, and relatively how much.

¹⁰⁶ You can only restore lost stands that were part of your original force. You cannot add new stands or units.

¹⁰⁷ As a force commander, you should have been keeping track of your force's condition and been aware of the campaign end conditions.

25.4.3 Ending the Campaign

The campaign can end either due to exhaustion, casualties, or distance advanced. Whichever following condition is met first ends the campaign. Assess the results for that condition and assign campaign victory points. If multiple end conditions are met simultaneously, assess and assign campaign victory points for each condition that has been met.

One or both side's exhaustion points equal 22 or more. The side with the lower exhaustion point total gets one campaign victory point. If that side's exhaustion points are less than 22, then it gets a second campaign victory point. If both sides have equal exhaustion points, neither gets any campaign victory points.

- One side has advanced a total of at least 32 kilometers. That side gets one campaign victory point. If that side has advanced at least twice as far as the opponent it gets a second campaign victory point.
- After recovery and replacements one or both sides has one-third or less of its original stands remaining. If both sides have one-third or less of their stands left neither side gets a campaign victory point. If one side has more than one-third of its stands left it gets a campaign victory point. If that side has more than half its stands remaining it gets a second campaign victory point.

Once the campaign victory points are awarded, look at the difference in the number for each side. Equal campaign victory points mean the campaign is a draw. If a side has one more point than the opponent it wins a minor victory. If one side has at least two points more than the opponent the campaign is a major victory for that side.

25.4.4 Scenario Selection Table

The side now possessing the initiative (the attacker in the next scenario) rolls a die, applies any modifiers, and consults this table to determine what the next scenario will be.

Scenario Selection Die Roll Modifiers:

+2	If the rolling player just seized the initiative from the opponent in last battle (i.e, his side was the defender in last scenario and achieved a draw or victory).
+? or -?	Modifier(s) purchased by the players using command points.

Last Battle Type	Modified Die Roll							
	1	2	3	4	5	6	7	8
Encntr	Brktr Atk	Delib Atk	Exploit	Hsty Atk	Hsty Atk	Encntr	Hsty Atk	Delib Atk
Hsty Atk	Brktr Atk	Delib Atk	Rivr Crs	Hsty Atk	Hsty Atk	Encntr	Hsty Atk	CntrAtk
Delib Atk	Brktr Atk	Encirc	Rivr Crs	Hsty Atk	Hsty Atk	Encntr	CntrAtk	CntrAtk
Cntr Atk	Brktr Atk	Delib Atk	Rivr Crs	Hsty Atk	Hsty Atk	Encntr	Encntr	CntrAtk
Brktr Atk	Encirc	Exploit	Hsty Atk	Hsty Atk	Encntr	Encntr	CntrAtk	CntrAtk
Exploit	Encirc	Pursuit	Hsty Atk	Hsty Atk	Encntr	Encntr	Encntr	CntrAtk
Pursuit	Encirc	Pursuit	Rivr Crs	Hsty Atk	Hsty Atk	Encntr	Encntr	CntrAtk
Encirc	Rivr Crs	Delib Atk	Delib Atk	Hsty Atk	Hsty Atk	Encntr	Brkout	Brkout
Brkout	Delib Atk	Brkout	Delib Atk	Hsty Atk	Hsty Atk	Encntr	CntrAtk	CntrAtk
Rivr Crs	Brktr Atk	Encntr	Delib Atk	Hsty Atk	Encntr	Encntr	CntrAtk	Rivr Crs

Key:

Brkout	Breakout	Encntr	Encounter
Brktr Atk	Breakthrough Attack	Exploit	Exploitation
CntrAtk	Counterattack	Hsty Atk	Hasty Attack
Delib Atk	Deliberate Attack	Pursuit	Pursuit
Encir	Encirclement	Rivr Crs	River Crossing

26: Gaming at 1:1

Many players prefer playing *FFT3* at 1:1 scale rather than 1:5 scale. Here are some guidelines to convert it into a 1:1 game:

- The scale is 1 stand equals one vehicle or one infantry squad.
- Organize stands into platoons (Western forces) and companies (Soviet/Third World) and artillery batteries (4 to 6 guns).
- If you wish to enforce realistic tactical spacings between stands, halve the cohesion distances. If you wish to avoid a painfully cluttered battlefield, keep cohesion distances the same, or double the ground scale so 1" = 50 meters (and double the move ratings, weapon ranges, and spotting distances).
- For infantry, break each platoon out into 3 squads. If the platoons have a missile for their MAW, then make 1 squad a Missile Team and the give rest LAWs. For simplicity assume that the platoon's heavy weapons are split up among the squads and just use the normal anti-infantry ratings.
- For western armies, keep all platoons of a company within 4" of another platoon of the same company. For Soviet/Third World armies, keep all companies of a battalion within 4" of another company of the same battalion. Use the other normal cohesion rules for this "super-cohesion".
- Pay attention to the ROF on infantry anti-tank guns and rocket launchers (not ATGMs), including vehicle-mounted anti-tank rifles. Sometimes they were issued on a scale of 1 weapon per platoon, in which case their ROF was reduced from 3 to 1 (or from 2 to 1) in the data listing for that stand. If gaming at 1:1, increase the ROF back to the normal value for that weapon, but make sure only 1 stand or team in the platoon has the weapon.
- Have fun. Time your turns. Remember, speed is the ultimate realism!

Appendix A: Designer's / Developer's Notes

A.1 Two Hours; Two Pages of Rules

We like to claim that Ty and Dave designed the original version of this game in about two hours over a few beers. Recalling Steve Jackson's *One Page Bulge*, they originally intended to have only 2 pages of rules. In truth, it took two hours to decide what kind of game they wanted. Ty put the initial version together the next day and they played it a few days later. This was in 1994. Since then, FFT has been in continuous playtest and development. Tens of thousands of man-hours have gone into this game. The reason is that FFT is the game that *we* want to play.

And this version is much more than 2 pages long.

But before we go any farther, we want to give credit where credit is due. First, Dave Burnett, whose participation in that 2 hour brainstorming session defined the kind of game we wanted. In particular, we think that Dave designed the anti-tank combat system. Thanks to Chris Harvey for encouraging Ty to publish the rules. And of course, the dozens of friends who downloaded the free versions of these rules and commented on them, wrote additional orders of battle and made numerous suggestions to improve the game. And finally, Ty's buddies at the East Texas Wargame Club, which should have been called the East Texas FFT Club during the late 1990s.

The result of our work is a tactical miniatures game that we're very proud of—though we freely admit it has limitations. We have worked very hard getting the systems right and have engaged in countless hours of research, trying to get hard data on modern weapon systems. We have polished most of the rough areas, and will continue to develop the game as needed. However, FFT will allow you to simulate any combined arms battle from 1915 to 2015.

A.2 Designing FFT3

A.2.1 Why?

Because we *love* modern warfare. Ty read Sir John Hackett's *The Third World War* the same year he began wargaming, and Paul read it a couple of years later (long before he met Ty). SPI's modern wargames populated Ty's shelves; Avalon Hill's populated Paul's. Books on The Next War flooded the bookstores after Ronald Reagan's election and subsequent military buildup. The 1980s were a modern wargamer's heaven.

But then the Berlin Wall came down.

While undoubtedly beneficial to mankind, it left our wargaming in a shambles. And we were quite bitter about it. But in 1992, Ty had a great idea. Why not pretend like it never happened? Or pretend that it did happen in 1985 and wargame the battles? Or do like the Ancients wargamers and just pick a couple of armies and fight a battle? Anyhow, Ty jumped back into modern wargaming in a big way. And found no game to his liking.

A.2.2 Goal-Based Game Design

We have always respected game designers who have a clear idea of what they want to simulate before they design a game. Designers that clearly establish what they want to simulate, and how they want to simulate it usually produce coherent, elegant games. A good example is the *Third World War* series by Frank Chadwick. Chadwick decided he wanted a fast playing, and sophisticated simulation that could simulate a Third World War at division level, anywhere from Norway to the Persian Gulf. Chadwick also wanted players to use appropriate tactics because they made sense, not because the rules said so. So he designed an unprecedented asymmetrical sequence of play that required the Soviet player to echelon his forces to get optimum use out of them. NATO's sequence of play rewarded the use of AirLand Battle tactics. The Soviets would lose if all they did was barrel forward. Similarly, NATO would lose if all it did was dig in. As far as we know, this is the only strategic level boardgame with an asymmetrical sequence of play. A less impressive (but still excellent) example is his *Assault* series. He uses different rules to simulate the difference in Soviet and NATO command/control.

We always got the idea that Chadwick and the other good designers knew what kind of game they wanted before designing it. So, when Ty started designing games he began every design with a list of goals.

A.2.3 Our Goals for FFT

Here are some excerpts from Ty's notes of the first brainstorming session:

- FAST! 10-15 minute turns.
- All data on one line of notebook paper. No separate weapons charts.

- No pre-plotted artillery. Somehow keep delay in. Dummy barrages? Fire in my turn land at end of your turn.
- Stands are either live or dead; no hits.
- Six-sided dice. Lots of them.
- Fastest tanks move about 12" on board.
- Troop quality very important. Higher quality makes it easier to hit target; harder to die.
- 1" = 100m or 200m.
- No command stands; use command points. Or, look at cohesion rules from Warhammer 40K.
- Similar approach to First Battle, but with more texture.
- Very short rules—2 pages? [Ha].
- Different combat system from Assault or Command Decision. Note: look at original Space Marine system. Roll to hit, roll to kill.
- Factor in all but the most important stuff. Ruthlessly exclude complexity.
- Infantry should be very tough in built-up terrain.
- Deterministic spotting system—no die rolls to spot!
- Highest armor rating should be 10 or so. 1 point of armor = 50mm?

These were all of the goals that were left on Ty's list after the session. As you can see, most of them (except for the rather optimistic "2 pages of rules") made the final cut. You can also see that most of these goals resulted from frustration with other rules. In particular, Ty would run out of patience with 2 hour game turns that were common in most other rules. He wanted a game that he could *play*.

A.2.4 Elegance

We love elegant games; and they're far harder to design than "complicated" games. Anyone can write a rule to cover every possible contingency, and weigh a game down to the point that it becomes unplayable. But elegance requires simplicity and sophistication rather than complexity. While these qualities are difficult to attain in a game design, the result is worth it. Players enjoy elegant games because they are easy to learn but hard to master. Of course, they must be fun. And intuitive. So we wanted *FFT3* to be elegant.

But how do you achieve elegance? We believe that you achieve elegance in a wargame by developing simple systems that achieve the same results as much more complex systems. Good examples in *FFT3* are the command/cohesion system, the artillery system and the vehicle data system.

A.2.5 The Command System

Command systems exist to prevent players from maneuvering every individual stand independently. They also simulate the differences between armies at controlling and directing forces. The 1941 Germans and the 1941 Russians illustrate the extremes of the “command continuum.” Few armies will be as well-commanded as the 1941 German army, and few will be as poorly commanded as the 1941 Russian army. An army’s ability to command and direct its forces on the battlefield is a primary indicia of its ability to win battles. The Russian army was terrible until its commanders learned to control their forces. And when Russian commanders got better (or just good enough), the Red Army defeated the Wehrmacht.

Due to the importance that we placed on command, *FFT3* had to have a command system. After considering a variety of systems based on command points, Ty decided to use coherency rules modeled after the rules in Warhammer 40K. This allowed him to eliminate the clutter of command stands—a pet peeve of ours—and a page of rules. Stands maneuver in company or battalion sized units just like their real life counterparts. And you don’t have a bunch of leader stands mucking up your battlefield.

A.2.6 The Artillery System

The *FFT3* artillery system, is our personal favorite for elegance. It works. Simply. Quickly. And realistically. Players in *FFT3* use artillery much more effectively than in other game we have played. The essence of the system is that it dispenses with the notion of pre-plotting artillery fire. Strange as it may seem, game designers have yet to realize that few miniature games are so well-planned that the players have a perfect map of the battlefield. The *FFT3* artillery system simulates the effects of an artillery barrage, without cumbersome rules for plotting strikes. It’s a system that novices can understand and use in their first game, as playtesting has shown. And simplicity begets speed.

A.2.7 Troop Quality

The better troops consistently win battles. Most military historians agree with this truism, but most wargames don’t reflect it. We’ve always suspected that this is because it is much harder to quantify what the effect of troop quality really is. Therefore, games have tended to emphasize hardware over quality, because you can objectively determine the range of a TOW, for instance. But we decided to take a stand and reflect our opinions in *FFT3*.

Quite simply, we believe that though materiel is important, throughout history it’s the better trained, better motivated and better led soldiers who win battles. Though not necessarily the wars. Think of the Germans in 1940 or 1941. The Israelis. The Army of Northern Virginia. There are countless additional examples.

To reflect this bias, in the original design Ty decided that troop quality would affect every aspect of the game. He hung as many game mechanics on troop quality as he could. The result is that better troops perform *much* better. Unlike many games, you can replicate the Bekaa Valley or the Gulf War in *FFT3*. Of course, *FFT3* has a points system to build balanced scenarios. But if you fight a

historical scenario, like the Battle of the Golan Heights in 1973, or 73 Easting in 1991, the results will likely be the same.

A.2.8 Vehicle Data

Ty also required that all vehicle data fit on one line of a sheet of notebook paper. The reason (again) is speed. Players should be commanding their units, not leafing through data charts for the .50 cal machinegun anti-armor effects data chart. The slight increase in the line length of data in *FFT3* made that a challenge, but we succeeded in meeting the one-line-per-vehicle mandate.

We derived the data from assorted open sources, too numerous to mention here, but the main ones are included in the bibliography. A special acknowledgement must go to Paul Lakowski for the information and armor evaluations he provided.

Appendix B gives the details on how we determined weapon and vehicle data.

A.2.9 Speed, Speed and More Speed

The primary motivation for designing *FFT3* arose out of dissatisfaction with the time required to play other modern games. Ty wanted to play a modern miniatures game, but couldn't stand the thought of spending an hour (or more) to play a single game turn.

He wanted something fast. *Real fast*. He wanted a game that he *really could* play in 10 minutes per game turn. We regularly attain that level of speed in our games and even our slowest games do not average more than about 20 minutes per turn. We think that the essence of modern mechanized warfare is speed. The great commanders like Rommel, Guderian or Patton, had the ability to react quickly and get things done quickly. The incompetents didn't. We don't think that a game that requires an hour to play a single turn is "realistic" in any sense of the word. Nor is it much fun.

Our obsession with speed provided us with a useful litmus test for rules. We examined every rule by asking the questions "how much time will this add to the game?" and "is it worth it?" We ruthlessly excluded rules that cut into our precious speed.

A.2.10 Low Complexity

We and our cohorts are old hands at wargaming. We've played our share of complex games. Dave, for example, loves (cringe) *Air War*, possibly the most complex wargame ever designed. Ty has played numerous games of *The Next War* and (shudder) *Nato Division Commander*. Paul spent a year with various games of *The Third Reich* adorning his floor. We've played full games of *Scorched Earth*. These credentials demonstrate that we do not fear complexity. But we despise needless complexity.

Complexity is "needless" when it causes more aggravation than it's worth. An example of needless complexity is a particular type of spotting system used in certain other games. Basically, you roll to see something. With appropriate

modifiers for spotting stand type, terrain, target type, etc. Ick! While it's doubtlessly "realistic," whatever that means, it slows games to an absolute crawl. And it's so cumbersome that many experienced players have heavily modified it (usually to no avail). Systems like this just suck. And it slows the game to a crawl—I know I said that before, but it bears repeating. Anyway, the point of this diatribe is to warn players that complexity does not equate to realism. What you gain in realism is often offset by the cost that the "realistic" rule exacts. And anyhow, are we trying to simulate combat or spotting?

A.2.11 FFT3 Genesis

FFT3 arose from a complaint—a justified complaint—by Bob Mackenzie that mortars in *FFT2* caused excessive losses against heavy armored vehicles. That set off a study of the game mechanics and artillery effects, and we concluded that a new system was needed, which retained the elegance of *FFT2*'s system, but included suppressive effects in addition to casualties. A year was spent poring over WW2 British artillery studies, and analyzing modern U.S. and Russian artillery norms, to calibrate the system. With the adoption of some unconventional mechanics to enable the speed and results we desired, the *FFT3* artillery system was born.

Evaluating the *FFT2* artillery system for improvements led us to scrutinizing the other systems as well. The vehicle combat mechanics remained unchanged. But it was clear a new, non-linear armor and penetration scale was needed to give more realistic results for very heavy armored vehicles, and more differentiation for very light armor. The pseudo-logarithmic approach used by WRG in their WW2 and modern rules provided inspiration, and the result was the new *FFT3* armor scale. We had always wanted to do a World War II version of FFT, and the new scale suddenly made possible an integrated game using a single ratings system covering the entire period of mechanized warfare. We didn't realize that it would take an additional three years(!) to research and generate data and army lists for WW2, but the result was worth it.

With the spectre looming of infantry-heavy combat in WW2, Korea, and maybe WW1, we wanted close combat between infantry stands in cover to resolve more quickly. We concluded that more distinction was required between ranged firepower and close combat firepower, and this produced the new dual ROF ratings for infantry ranged and close combat fire. Since infantry weapons for clearing trenches and bunkers were now better represented, we reworked the effects of entrenchments and fortifications to better portray their effects.

A.2.12 Conclusion

This is the game that we want to play. Hopefully, you'll want to play it too. Although a number of people have contributed rules and ideas to the game (especially Dave Burnett), the final call on them was ours. So if you like a particular rule, it may be that someone else came up with it. But if you dislike a particular rule, we're to blame since we made the final determination as to whether it made the cut. In any case, we hope you enjoy playing *FFT3* as much as we enjoyed writing it. And if you like it, tell Bob Mackenzie thanks!

Appendix B: Designing Vehicles, Helicopters, Infantry, Etc.

This appendix is mainly for gamers who are rating a vehicle, towed weapon, or infantry stand that does not already appear in the data.

B.1 Designing Vehicles & Towed Guns

How come the Merkava's armor is so low? Don't you know it's the best-protected tank in the world? And what about that crummy gun rating, huh? You got something against the Israelis??

If you don't like the ratings given for ground vehicles, you can change them. Or if a vehicle is missing, now you can rate it and determine its points value. Here's how you do it:

1. Determine the Vehicle's Armor Rating
2. Determine the Vehicle's Movement Rating
3. Determine the Vehicle's Gun Rating
4. Determine the Vehicle's Missile Rating
5. Calculate the Vehicle's Basic Point Value
6. Add Additional Gear and Features, and Calculate the Unadjusted Point Value
7. Calculate the Final Adjusted Point Value

The new point system for this version of the game was created (using computer simulations and statistical evaluations of the game's mechanics) specifically to reflect the combat effectiveness of vehicles in an armored or combined arms fight as portrayed by the game. We did this in order to make it easier to balance armored/combined arms scenarios. Therefore, it may not work as well for infantry battles—but *FFT3* wasn't intended to be a pure infantry game. And

it may not agree in all cases with your opinions of what reality is. But please remember that it's an assessment of vehicle effectiveness in the game's mechanics, not a commentary on the vehicle.

This points system is also not an assessment of the actual real-world value of assets. A transport helicopter, for instance, is a high value asset, but its direct contribution to destruction of the enemy on the tactical battlefield is small, so its game point value is small (the payload the helicopter delivers is what does the damage, so that's where the points are). Because of this, you may want to assign alternative point values to some units (such as trucks) for victory conditions in some scenarios.

B.2 Determine the Vehicle or Towed Gun's Armor Rating

Towed guns are always soft.

The armor rating analysis for vehicles is much more sophisticated than it was in FFT2. We took advantage of updated information on tank armors to get much more detailed and accurate protection estimates. In addition to armor slope, many other factors are considered: the materials, the metallurgy, array geometries, penetration mechanics, and contemporary types of armor piercing rounds. To rate KE protection and HEAT protection, we take a weighted average of two-thirds the average effective RHAe (rolled homogenous armor equivalent) protection of the turret plus one-third of the RHAe average effective protection of the hull (glacis for the front). Occasionally we use a different weighting for unusual vehicle shapes. Also, the protection of the turret may need to be a weighted average across the front if it varies from gun mantle to edge, and the hull may sometimes need a weighted average, especially for some of the odd armor configurations and vehicle shapes that have been used. The resistance is the average of the RHAe resistance to different types of contemporary armor piercing projectiles (e.g., APCBC, APCR, APDS, early APFSDS, middle APFSDS, advanced APFSDS, etc.) The details are simply too extensive and complex to reproduce here, best either to identify a similar vehicle and use it as a guide or to contact us to get a vehicle rated.

Once you have the effective protection for the front KE and front HEAT and the side KE, use the following scale to get the game armor rating for each. Then subtract the front KE rating from the front HEAT rating and use the table below to get the h-class modifier.

Armor (mm)	FFT3 Armor Rating
From:	To:
0	5
5.1	12
12.1	18
18.1	25
25.1	40
40.1	60
60.1	85
85.1	120
120.1	160
160.1	210
210.1	280
280.1	350
350.1	430
430.1	520

Armor (mm)	FFT3 Armor Rating
From:	To:
520.1	610
610.1	710
710.1	820
820.1	950
950.1	1100
1100.1	1270
1270.1	1470
1470.1	1700
1700.1	1980
1980.1	2290
2290.1	2650
2650.1	3070
3070.1	3550
3550.1	4100

If (KE minus HEAT) is:	h-class modifier is
0 or less	-
1	A
2	B
3	C
4	D
5	E
6	F

Calculate the Armor Point Value using the following equation, but treat a vehicle or gun with a front armor rating of "s" (soft) as having an Armor Point Value of 0.

$$\text{ArmorPV} = (2 \times \text{Front KE Armor}) + \text{Front HEAT Armor} + 3$$

For an example, consider an M1A1 Abrams in 1986. The average turret front KE protection is ~460mm, and the glacis KE is ~540mm, so the weighted average is $(2/3 \times 460) + (1/3 \times 540) = 487$ mm, so its front KE rating is 12. Turret front HEAT protection is ~960mm and glacis is ~1000mm, so $(2/3 \times 960) + (1/3 \times 1000) = 973$ mm, so front HEAT rating is 17. $17 - 12 = 5$, so h-class modifier is E. Similarly, for the side, KE protection on turret is ~230mm and on hull is ~100mm, giving $(2/3 \times 230) + (1/3 \times 100) = 187$ mm, so side KE is 8. Therefore, the M1A1's armor rating is '12 E 8'.

Thus the Armor Point Value for the M1A1 is $(2 \times 12 + 17 + 3) = 44.0$

B.3 Determine the Vehicle or Towed Gun's Movement Rating

The determining factor here for vehicles is the horsepower (in bhp) to combat weight (in metric tons) ratio, and for guns it's the weight (in action) of the gun. Also included here is the Cap rating for the gun, again depending on its weight in action.

Tracked Vehicles		Wheeled Vehicles	
<u>HP:Wt Ratio</u>	<u>FFT3 Movement</u>	<u>HP:Wt Ratio</u>	<u>FFT3 Movement</u>
0-5.99	2	0-9.9	5
6-7.99	3	10-14.9	6
8-9.99	4	15-22.9	7
10-11.9	5	23-24.9	8
12-13.9	6	25+	9
14-15.9	7		
16-17.9	8	6 wheeled: +1	
18-19.9	9	8 wheeled: +2	
20-21.9	10		
22-23.9	11		
24-25.9	12		
26+	14		
 Field/AT/AA Gun & Mortar movement			
<u>Weight in action</u>	<u>FFT3 move</u>	Towed Weapon Size	
up to 150kg	4x	<u>Weight in action</u>	<u>Cap</u>
up to 500 kg	2x	up to 500kg	½
up to 1000kg	1x	500+ kg	1
1000+ kg	0x		

Use the charts to determine the movement allowance of the vehicle or gun.

The M1A1 is tracked and has a HP:Wt ratio of greater than 26, so its Movement is '14t'.

B.4 Determine the Gun Ratings

Like armor, the gun ratings have changed from FFT2 to FFT3.

Look up the gun's characteristics in the Guns Charts in Rule B.16 and B.17, making sure to get the right nationality and time period. In the event that the weapon isn't listed, it's best to use the values of a similar weapon in the table. If that isn't possible, use Rule B.14. A machinegun (Pen of "-", ROF 1 and Range of 6) costs nothing. Treat a weapon whose range is "C" as having a range of 1.

Once you have the gun's Pen, Rng, and ROF ratings, its point value is the following equation:

$$\text{Gun PV} = 2.1 \times ((\text{Pen}+1) \times \text{Range} \times \text{ROF modifier})^{0.55}$$

In Microsoft Excel, this formula would be typed like this:

$$=2.1*((\text{Pen}+1)*\text{Range}*\text{ROF modifier})^0.55$$

where the ROF modifier is also given in the table below.¹⁰⁸

¹⁰⁸ ROF values above 10 are included only for getting point values of anti-aircraft guns. Their ROF against ground targets can be staggering.

<u>ROF</u>	<u>ROF Modifier</u>	<u>ROF</u>	<u>ROF Modifier</u>
1	0.2	11	1.94
2	0.7	12	2.0
3	1.0	13	2.06
4	1.2	14	2.12
5	1.37	15	2.17
6	1.5	16	2.21
7	1.61	17	2.26
8	1.71	18	2.3
9	1.8	19	2.34
10	1.87	20	2.38

Some guns prior to 1950 have a special ammunition type listed in addition to the normal gun ratings. Also compute the PV for the special ammunition type using its ratings.

The M1A1's main gun has a Pen of 15, an ROF of 3, and a Range of 24.
The point value of its gun is $2.1 \times ((15+1) \times 24 \times 1.0)^{0.55} = 55.4$ points.

B.5 Determine the Missile Ratings

If the stand's missile is a surface-to-air missile (SAM), see Rule B.10 covering infantry for how to compute its point value. For anti-tank guided missiles, determine the Penetration, ROF and Range of the vehicle's missile. First check the High Explosive Armor Piercing & Infantry AT Weapons Chart in Rule B.18 for the weapon. If it isn't listed there, see Rule B.15. Use very conservative penetration numbers. Determine if it has limited or unlimited missile ammunition (typically needs about 8 or more rounds to have unlimited ammo). If it is a light top-attack weapon and no penetration is known, give it a Pen rating of 12†. If it's a heavy top-attack weapon and penetration is unknown, give it a Pen of 14†.

The point value for a missile is:

$$MslPV = 2.1 \times ((Pen+1) \times (Max\ Range - Min\ Range) \times Gen\ Mod \times ROF\ Mod)^{0.55}$$

The ROF Mod is the same as for guns above, and the Gen Mod (generation modifier) is given below for stands with Limited missile ammo and Unlimited missile ammo:

<u>Generation</u>	<u>Limited Ammo Gen Mod</u>	<u>Unlimited Ammo Gen Mod</u>
1	0.33	0.67
2	1.00	1.33
3	1.33	1.67

Double the point value of NLOS missiles.

No missiles are carried by the M1A1, so its Missle Point Value is 0.

B.6 Calculate the Basic Vehicle Point Value

The vehicle's Basic Point Value is determined by the following formulas. For vehicles and towed guns prior to 1950, it is:

$$\text{BasicPV} = \text{ArmorPV} + \text{WeaponPV} + (0.05 \times \text{SpecialPV})$$

SpecialPV is the point value of the gun calculated using the special ammunition ratings if such are listed.

For vehicles and towed guns from 1950 on, it is:

$$\text{BasicPV} = \text{ArmorPV} + \text{WeaponPV}$$

WeaponPV is whichever is higher of a vehicle's gun or missile point values.¹⁰⁹

The M1A1's basic vehicle point value is $(55.4+44.0) = 99.4$.

B.7 Add Additional Gear and Features, and Calculate the Unadjusted Point Value

The vehicle's move rating determines the initial point cost modifier using this equation.

$$\text{Point Cost Mod} = 0.1 * (\text{move rating}) / 14$$

The M1A1's move rating is 14t so its Point Cost Modifier starts as $0.1 * 14 / 14 = 0.10$

Adding the following types of equipment or capabilities will affect the vehicle's point value by changing the point cost modifier:

System	Point Cost Modifier
Stabilization (s)	0.05
Advanced Stabilization (ss)	0.06
First-Generation Thermal Sights (t)	0.06
Second-Generation Thermal Sights (2)	0.10
Image Amplification/Infrared Sensors (i)	0.03
NBC systems (n)	0.0
Commanders Independent Thermal Viewer (c)	0.02
IVIS (v)	0.01
Open-Topped vehicle	-0.01
Limited Traverse weapon [front (f) or rear (r)]	-0.01

The total point cost modifier is the sum of all the modifiers for the equipment and features the vehicle has.

The M1A1 has advanced stabilization, first-generation thermal sights, and nbc systems. The total point cost modifier is $0.10 + 0.06 + 0.06 + 0.0 = 0.22$

¹⁰⁹ We don't add both the gun and missile point values because a vehicle can only fire one or the other each turn, but not both. So we add only the one which would generally do the most damage if used exclusively in the game (the one with the higher point value).

The vehicle's Capacity Point Value is determined by its capacity to carry/tow other stands:

$$\text{CapacityPV} = 2 \times \text{vehicle's capacity}$$

So a capacity "½" vehicle has a CapacityPV of 1, and a capacity "1" vehicle has a CapacityPV of 2.

The M1A1 cannot carry anything, so its CapacityPV is 0.

To calculate the Unadjusted Point Value, use the following equation:

$$\text{UnadjPV} = (\text{BasicPV} \times (1 + \text{total point cost modifier})) + \text{CapacityPV}$$

For the M1A1, the Unadjusted Point Value is $(99.4 \times (1+0.22)) + 0 = 121.3$

B.8 Determine Final Vehicle Adjusted Point Value

To determine the Final Vehicle Point Cost, we have another pair of equations, but this was necessary to fit the results of the equations so far to the simulation results and statistical calculations. The Final Adjusted Point Value uses the following equations. If the Unadjusted Point Value is less than 17.0, use this:

$$\text{FinAdjPV} = 1.2064 \times \text{UnadjPV}$$

If the Unadjusted Point Value is 17.0 or more, use this instead:

$$\text{FinAdjPV} = (3.5749 \times \text{UnadjPV}) - 60.23$$

The Final Adjusted Vehicle Point Value of the M1A1 is $(3.5749 \times 121.3) - 60.23 = 373.4$, rounded off to 373 points.

B.9 Helicopters

For helicopters, thankfully the process is fairly simple. First, select the helicopter you want from the Helicopter Data Chart and note its Base Point Value. If the helicopter you want isn't there, you will need to estimate its characteristics by comparing it to the helicopters that are there (including any integral gun, but excluding weapon hardpoints). Compute the helo's NOE move rating by dividing its maximum speed in knots by 6.5 and round to the nearest even number. A helicopter's Base Point Value is computed from its move rating and the point value of its integral gun from Rule B.4.

$$\text{Helicopter BasePV} = 7 \times (\text{Move Rating} + \text{GunPV})$$

Now look at the number of pods the helicopter can carry (this is often the same as the number of weapon hardpoints it has) and the listed options for weapons pod types that it can carry, and select up to that many weapons pods of those types from the Helicopter Weapons Systems Chart to arm the helicopter. To get the final point value of the helicopter with that armament package, add the Base Point Value of the helicopter and the Point Values of the weapon pods it is carrying.

FinalPV = Base Point Value + sum of Weapons Pod Point Values

For example, if we take an Mi-24 Hind stand, which can carry up to 4 pods, and arm it with one HE rocket pod, one 30mm cannon pod, and two AT-6 Spiral-M1 pods, the Final Point Value of the stand is $246+4+154+407=811$ points.

In the event that you need to compute the value of missiles, the value is 10.5 times the missile point value (Rule B.5) for the unlimited ammo case and the limited ammo case. For the very limited ammo case (one pod) use the limited ammo point value of the missile divided by 2.5.

B.10 Infantry Stand AI Ratings

Like the vehicles, if you don't like the ratings given for infantry in the game, you can change them. Or if you want to create an infantry stand with different weapons than those listed in the data charts, you can. The infantry stands listed in the data charts are meant to be representative, rather than comprehensive or definitive. The process for rating infantry is more complex but much more flexible and realistic than earlier editions of the rules.

A summary of the process for rating an infantry stand is:

- Determine the stand size, the predominant personal weapon type for the stand, and what other weapons are included in the stand.
- Add up the firepower values of the weapons to get the stand's close combat firepower value and ranged combat firepower value.
- Cross-grid the close combat firepower value and the ranged firepower value to get the stand's anti-infantry (AI) rating and its rates of fire (ROF) for ranged combat and close combat.
- Determine the stand's range rating.
- Determine if the stand gets an AI ROF reduction if firing after moving.

Definitions of the other weapons a stand might possess are listed below. Note that some definitions are specific to this game, and may include distinctions not explicit in or differing slightly from military use of the terms.

Hand grenades—more than half of the men are carrying or have access to hand grenades

LAWs—The stand has at least two light anti-tank weapons, either disposable like the U.S. M72 LAW or reusable like the Russian RPG-7. Do not count AT grenade launchers as LAWs, count as GLs below.

Satchel charges—the stand has at least three satchel charges or demolition charges available. Usually these occur only in assault situations, and were somewhat rare outside some WWII situations.

Note: some machineguns are versatile weapons, capable of being configured for use in many roles. The category to which they should be assigned depends on

the actual usage practiced in the unit being rated, and is affected by mounting, ammunition feed, ammunition availability, and tactical practice.

Light Automatic Rifle (LAR)—These are automatic rifles or light machineguns used as squad weapons with bipods and box magazines of usually 30 rounds or so. Caliber is usually 5.56mm, 7.62mm, or 0.30-cal. The key distinguishing features between light and heavy automatic rifles in this game is that light automatic rifles lack quick-change barrels, and usually have limited ammunition supplies, which results in lower practical rates of fire. Examples of LARs are the U.S. BAR, the Russian 7.62-mm RPK, and the British 5.56-mm L86 LSW.

Heavy Automatic Rifle (HAR)—These are automatic rifles or light machineguns used as squad weapons with box magazines of around 30 rounds. They have quick change barrels, but often a limited ammunition supply. Examples are the U.S. M249 Squad Automatic Weapon (a.k.a. the M249 SAW), and the British 0.303-cal Bren Gun.

Light Machinegun (LMG)—These are belt-fed or large-drum-fed, bipod-mounted machineguns around 5.56mm, 7.62mm, or 0.30-cal, used as platoon weapons with substantial ammunition available. Examples are the U.S. M60 and the M240B, the Russian PKM, the German MG34 on a bipod or MG42 on a bipod.

Medium Machinegun (MMG)—These are belt-fed or large-drum-fed, tripod or wheeled carriage mounted machineguns around 7.62mm caliber or 0.30-cal, used in the sustained fire machinegun role as platoon or company weapons with substantial ammunition on hand.

Heavy Machinegun (HMG)—These are belt-fed or large-drum-fed machineguns around 12.5mm caliber or 0.50-cal. They are tripod-mounted or on a wheeled carriage, and used in the sustained fire role at platoon or company level.

Grenade Launcher (GL)—Can be either dedicated launcher like the U.S. M79, or attached to a rifle like the U.S. M7 or M203.

Automatic Grenade Launcher (AGL)—Automatic grenade launchers, such as the US Mk 19 or the Russian AGS-17.

Sniper Rifle—Any high accuracy rifle used in the sniper role for long-range engagement of individual targets

Light Infantry Mortar—These are small, man-portable mortars, and are usually 50mm-70mm in caliber.

Medium Infantry Mortar—These are medium mortars, typically man-portable, and are usually 71-90mm in caliber.

Flamethrower—One-man or two-man flamethrower. Flamethrower availability is usually limited to assault situations, and there is almost never more than one in an infantry stand.

The rating process for a stand is as follows:

- Determine the size of the stand: is it a half stand or a full stand? Most infantry platoons are full stands, while support platoons or sections are usually half stands, although some large ones may qualify as full stands. A stand with a TO&E dismounted combat strength of 20 or more infantrymen is usually a whole stand.
- Determine the main type of personal weapon used in the stand. Personal weapons may be one of: pistols, bolt-rifles, semi-automatic rifles, or submachineguns. If more than one type is present, use the most numerous type.
- On Chart 1, find the column for the personal weapon type for the stand, and get its basic ranged combat firepower value and close combat firepower value according to its size.
- On Chart 2, for each supplementary weapon type listed that the stand possesses in sufficient quantity (see the weapon definitions above for minimum quantities, if any), add the listed firepower values to the base firepower values for ranged combat. Only add the listed values to the basic value one time, regardless of how many weapons of that type the stand has beyond the minimum required.
- On Chart 3, for each weapon of each type listed that the stand has, add the listed firepower values for that weapon to the ranged combat and close combat firepower values of the stand.
- At this point you should have a total ranged firepower value and a total close combat firepower value for the stand. Cross-grid the two firepower values on Chart 4 to get the stand's AI modifier, ranged combat ROF, and close combat ROF.
- On Chart 5 read down the left-hand column until you come to the first condition that the stand meet or exceeds. The range listed is the stand's range in the game.
- Finally, if the combined total of MMGs, HMGs, AGLs, Light Infantry Mortars, and Medium Infantry Mortars in the stand is three or more, the stand's ROF is reduced by 1 if it fires in the same player turn that it moved. List its AI ROF in parentheses to show this.

Infantry AI Rating Example: A stand is a 27-man dismounted mech platoon, has assault rifles, hand grenades, LAWs, six heavy automatic rifles, three light machineguns, and six grenade launchers. Its basic ranged firepower value is 15. The hand grenades and LAWs add 0 to this. The HARs add 24 ($6 \times 4 = 24$), the LMGs add 18 ($3 \times 6 = 18$), and the GLs add 0. Total ranged combat firepower value is 57 ($15 + 0 + 24 + 18 + 0 = 57$). The stand's basic close combat firepower value is 45. The grenades add 20, and the LAWs add 3. The HARs add 30 ($6 \times 5 = 30$), and the LMGs add 18 ($3 \times 6 = 18$). The GLs add 18 ($6 \times 3 = 18$). Total close combat firepower value is 134 ($45 + 20 + 3 + 30 + 18 + 18 = 134$). Cross-gridding the 134 close combat firepower value and the 57 ranged firepower value on Chart 4 gives an AI modifier of +1, a ranged combat ROF of 2, and a close combat ROF of 5

(written as: +1 2/5). On Chart 5, the stand has no HMGs or MMGs, but has LMGs and HARs, so its range is 4.

Chart 1 — FS = full stand; HS = half stand. Get the stand's basic ranged and close combat firepower values according to its size and main personal weapon type.

	Personal Weapon Type				
	Pistols	Bolt Rifles	Semi-automatic Rifles	Assault Rifles	SMGs
Ranged Combat	0 FS 0 HS	27 FS 13 HS	33 FS 16 HS	15 FS 7 HS	0 FS 0 HS
Close Combat	15 FS 7 HS	27 FS 13 HS	33 FS 16 HS	45 FS 22 HS	45 FS 22 HS

Chart 2 — FS = full stand; HS = half stand. If the stand has at least the minimum required of any of the supplementary weapon types, add the listed firepower value for that weapon **once** to the basic firepower values of the stand.

	Supplementary Weapon Type			
	Hand Grenades	LAWs	ATGM	Satchel Charges
Ranged Combat	+0 FS +0 HS	+0 FS +0 HS	+3 FS +1 HS	+0 FS +0 HS
Close Combat	+20 FS +10 HS	+3 FS +1 HS	+0 FS +0 HS	+8 FS +4 HS

Chart 3 — For each instance the stand has of each type of support weapon, add the listed values to its firepower values.

	Support Weapon Type										
	Each Light Automatic Rifle	Each Heavy Automatic Rifle	Each LMG	Each MMG (tripod or wheeled ~7.62mm)	Each HMG (tripod or wheeled ~12.5mm)	Each Grenade Launcher	Each Automatic Grenade Launcher	Each Sniper Rifle	Each 50mm-70mm Mortar	Each 71mm-90mm Mortar	Each Flame-thrower
Ranged Combat	+3	+4	+6	+9	+10	+0	+10	+3	+4	+6	+0
Close Combat	+4	+5	+6	+6	+6	+3	+2	+2	+0	+0	+15

Chart 4—Use the stand's totaled close combat and ranged combat firepower values to find the AI modifier, ranged ROF, and close combat ROF

Total Close Combat Firepower Value	Total Ranged Combat Firepower Value											
	0–2		3–29		30–39		40–49		50–64		65+	
	AI	Ranged ROF / Close ROF	AI	Ranged ROF / Close ROF	AI	Ranged ROF / Close ROF	AI	Ranged ROF / Close ROF	AI	Ranged ROF / Close ROF	AI	Ranged ROF / Close ROF
0–9	+0	0/0	+0	1/0	-1	2/0	+0	2/0	+1	2/0	+1	3/0
10–29	+0	0/1	+0	1/1	-1	2/1	+0	2/1	+1	2/1	+1	3/1
30–39	+0	0/2	+0	1/2	-1	2/2	+0	2/2	+1	2/1	+1	3/1
40–49	+0	0/2	+0	1/2	-1	2/3	+0	2/2	+1	2/2	+1	3/2
50–64	+0	0/3	+0	1/3	-1	2/4	+0	2/3	+1	2/2	+1	3/2
65–79	+0	0/4	+0	1/4	-1	2/5	+0	2/4	+1	2/3	+1	3/3
80–99	+0	0/5	+0	1/5	-1	2/6	+0	2/5	+1	2/4	+1	3/4
100–119	+0	0/6	+0	1/6	-1	2/7	+0	2/6	+1	2/4	+1	3/4
120–144	+0	0/7	+0	1/7	-1	2/8	+0	2/7	+1	2/5	+1	3/5
145+	+0	0/8	+0	1/8	-1	2/9	+0	2/8	+1	2/6	+1	3/6

Chart 5—read down the chart until the first instance where the stand being rated meets the condition listed. The range on that line is the stand's range in the game.

If the stand has:	Then its range is:	Notes
At least three Heavy Machineguns or at least two AGLs	8	Rare, usually only heavy weapons platoons or machinegun platoons will qualify for this range.
At least three Medium Machineguns or one AGL	6	Rare, usually only heavy weapons platoons or machinegun platoons will qualify for this range.
Any Light Machineguns, Light Automatic Rifles, Heavy Automatic Rifles, Bolt Rifles, Semiautomatic Rifles, or Sniper Rifles	4	Most infantry stands will have this range.
Assault Rifles 2		Rare, may occur for third-world militias lacking machineguns or support weapons.
SMGs, or Pistols 1		Very rare, may occur for third-world militias or irregular infantry lacking machineguns or support weapons.

The Infantry stand's Base Point Value is the sum of its Ranged AI Point Value and Close Combat AI Point Value. To get each, cross-grid the stand's AI modifier with the ROF for that case on the applicable chart below.

Chart 6—Ranged AI Point Value				
AI Modifier	Ranged ROF			
	0	1	2	3
+1	n/a	n/a	5.3	6.1
+0	0	2.7	4.3	n/a
-1	n/a	n/a	3.1	n/a

Chart 7—Close Combat AI Point Value										
AI Modifier	Close Combat ROF									
	0	1	2	3	4	5	6	7	8	9
+1	0	4.4	7.5	9.6	10.9	11.8	12.4	n/a	n/a	n/a
+0	0	3.6	6.2	8.2	9.6	10.7	11.5	12.0	12.4	n/a
-1	0	2.7	4.8	6.6	8.0	9.1	10.0	10.7	11.3	11.7

Continuing with our infantry platoon example, its rating was +1 2/5, so that's 5.3 points for ranged rating and 11.8 points for close combat rating. Base value is $(5.3+11.8)= 17.1$ points.

B.11 Infantry LAWs, MAWs, and Manportable SAMs

After getting the AI ratings, you need to determine the ratings for the stand's main light anti-tank weapon (LAW), if it has one, and main medium anti-tank weapon (MAW) if it has one, and then calculate their point values. LAW and MAW are arbitrary distinctions in this game, and there is no difference between them in game play—a weapon may be listed as a LAW in one place and as a MAW in another, with no change in how it is used. Generally the longer-ranged weapon is listed as the MAW. Look up the weapon's ratings in the High Explosive Armor Piercing & Infantry AT Weapons Chart in Rule B.18. Generally a stand (usually a platoon, except for teams) must have at least 3 to 5 of a given type of weapon to have that listed as a LAW or MAW. If it has less than 3, you have several options. We list them here in order of decreasing preference:

- If the weapon has a ROF of 3 or 4, and there are enough weapons to distribute at least one to each of the stands of the combat unit, then give each stand the weapon with ROF 1.
- Combine the weapons from multiple platoons into a separate stand or team stand at company level.
- Create two versions of the stand, one with the weapon and one without, and mix them in a given combat unit.

For example, Russian infantry companies have three AT-7 anti-tank missile launchers per company. Since a Russian infantry company has three stands (the nine-stand infantry battalion is composed of three companies of three stands each), each company gets one stand that has the missile,

and two stands that don't, for a total of three missile-carrying stands and six non-missile carrying stands per battalion.

The point value of non-missile LAWs and MAWs is calculated using the gun rating equation in Rule B.4. For missiles, calculate the missile point value using the equations for missiles in Rule B.5.

Next comes any man-portable surface-to-air missiles (SAM) a stand has. Same rule applies as for LAWs and MAWs: the stand needs to have at least 3 to 5 launchers to have the weapon listed, otherwise do as above and cut the ROF, make a team that combines the launchers from multiple stands, or make two versions of the stand.

Infantry SAMs have a Pen of 2, or rarely a Pen of 1 if the warhead is known to be weak or ineffectual.¹¹⁰ For the range, if different minimum and maximum ranges are listed against helicopters and against fast aircraft, use the ranges for helicopters, since individual attacks on helicopters are modeled in the game but individual attacks on aircraft are not. The SAM's minimum range is the listed minimum range, while the SAM's effective range is two-thirds of the listed maximum range. All-aspect missiles have an aspect of 'A', while rear-aspect missiles have an aspect of 'R'. The point value of the SAM is calculated as follows:

$$\text{SAM PV} = \text{Pen} \times 32 \times (\text{Effective Range}/40) \times \text{Aspect Modifier}$$

where the Aspect Modifier equals 0.5 if the SAM is rear aspect, and 1.0 if the SAM is all-aspect.

Our example infantry platoon is armed with the M136 (ratings 11h 1 2), and the Dragon ATGM (ratings 12h² 1* 1-10). It has no SAM. The stand has limited ammo for the Dragon. The M136's point value is $(2.1 \times ((11+1) \times 2 \times 0.2)^{0.55}) = 5.0$. The Dragon's point value is $(2.1 \times ((12+1) \times (10-1) \times 1.00 \times 0.2)^{0.55}) = 11.9$.

B.12 Infantry Stands' Final Point Value

The final point value of an infantry stand is its Base point value, plus twice the sum of its LAW and MAW point values, plus its SAM point value:

$$\text{InfantryPV} = \text{Base PV} + 2 \times (\text{LAW PV} + \text{MAW PV}) + \text{SAM PV}$$

Finishing off our infantry platoon example, it's final point value is $(17.1 + 2 \times (5.0 + 11.9) + 0) = 50.9$ which rounds off to 51 points.

B.13 Artillery

Artillery has two point values, one for direct fire and one for indirect fire. Select which one to use based on how it is being employed in the scenario. Towed artillery used for indirect fire does not pay additional points to get its prime movers, but its prime movers cannot be used to transport other stands.

¹¹⁰ For example, the early version of the SA-7 had a weak warhead that often failed to bring down an aircraft it hit.

B.13.1 Guns and Howitzers

For guns and howitzers, compute the direct fire point value just like for any other towed weapon as we described previously. For the indirect fire point value, use the following tables to get the base point value.

Prior to 1950:

Caliber	Artillery Type		
	Self-propelled Support Group	Towed Support Group	Battalion Mortar Stand
30-69mm	7	5	4
70-89mm	13	10	7
90-119mm	16	12	8
120-139mm	36	28	20
140-169mm	42	32	21
170+ mm	72	57	45

1950 onward:

Caliber	Artillery Type		
	Self-propelled Support Group	Towed Support Group	Battalion Mortar Stand
30-69mm	18	14	11
70-89mm	34	27	18
90-119mm	42	32	20
120-139mm	98	78	52
140-169mm HE only	120	89	55
170+ mm HE only	212	168	129
140-169mm HE + ICM	178	143	129
170+ mm HE + ICM	216	171	137

When you have the base point value, use the following equation to get the final point value.

$$\text{Final PV} = \text{Base PV} \times \text{Hit Num Mod} \times \text{Avail Mod}$$

where the Hit Number Modifier is:

- 1.22 for a 2+ artillery to-hit number
- 1.11 for a 3+ artillery to-hit number
- 1.00 for a 4+ artillery to-hit number
- 0.88 for a 5+ artillery to-hit number
- 0.77 for a 6+ artillery to-hit number

and the Availability Modifier is:

- 1.33 for a +1 availability modifier
- 1.00 for a 0 availability modifier (the normal case)

- 0.67 for a -1 availability modifier
- 0.33 for a -2 availability modifier

B.13.2 Mortars

For mortars, if on-table, compute their on-table point value (i.e., the vehicle value for SP mortars, zero for towed mortars) and add their indirect fire point values (as computed above). For off-table, simply use their indirect fire point value.

B.13.3 Multiple Rocket Launchers

For multiple rocket launchers (MRLs), you need to get the classification of the system according to its characteristics. Use this table:

MRL game classification and fire units <i>per stand</i> (each stand is a 4-launcher-vehicle platoon or 6-launcher-vehicle battery)				
Warhead weight	# of tubes per launcher			
	1-9	10-19	20-29	30+
0-11 kg	light, 1 fire unit	light, 2 fire units	light, 3 fire units	light, 4 fire units
12-39 kg	medium, 1 fire unit	medium, 2 fire units	medium, 3 fire units	medium, 4 fire units
40-109 kg	heavy, 1 fire unit	heavy, 2 fire units	heavy, 3 fire units	heavy, 4 fire units
110+ kg	very heavy, 1 fire unit	very heavy, 2 fire units	very heavy, 3 fire units	very heavy, 4 fire units

Once you have the classification, these tables give the point cost for 1 fire unit from 1 stand. You'll need to total the cost of the fire units for each stand.

Prior to 1950:

Point Cost	Lt HE	Med HE	Hvy HE	Vry Hvy HE
1 Fire Unit	1	2	8	12

1950 and beyond:

Point Cost	Lt HE	Med HE	Hvy HE	Vry Hvy HE	Hvy ICM	Vry Hvy ICM	Mines
1 Fire Unit	2	4	23	35	28	103	AP: 156 AT: 380 Mixed: 496

B.14 Anti-Aircraft Vehicles and Weapons

The anti-aircraft ratings for an AA gun in the game are determined by starting with the anti-vehicle fire ratings (the fire ratings against ground targets) for that type of gun from the Guns Chart, if given (some dedicated AA guns are already given with their AA ratings). The Pen value doesn't change. Multiply the ROF by the number of that type of gun present and then divide by 2 and round down. Double the listed range. The result should equal about two-thirds of the published effective range of the weapon against aircraft. If it doesn't, adjust it so it does, remembering to keep the number even so that short and long range can be easily calculated during gameplay.

For SAMs, all SAMs have a ROF of 1 in the game (due to the fleeting nature of their targets), and a Pen of 1 or 2 (this is artificial, to produce appropriate kill probabilities in the game mechanics. Pen is normally 2; Pen 1 is only used for weapons with known weak or ineffectual warheads¹¹¹). The SAM's minimum range should be the published minimum range against helicopters; effective range should be two-thirds of the published minimum range against helicopters (rounding down to the closest even number of inches).

To determine the point value of an anti-aircraft vehicle, first calculate the vehicle's final adjusted point value using the procedure at the start of the chapter, except ignore any SAM it carries. If it carries an AA gun, use the gun's ratings versus ground targets to compute its point value (i.e., take the AA ratings and double the ROF and halve the range). Then compute the value of any SAM it carries. To compute the value of the SAM, see Rule B.11 above on infantry SAMs. The AA vehicle's point value is then:

$$\text{AA Vehicle PV} = \text{FinAdjPV} + \text{SAM PV}$$

For example, for the twin 35mm guns on the Gepard, multiply the listed 35mm ROF 4 by 2, then divide by 2, which gives an anti-aircraft ROF of 4. The listed range is 14, so doubling it gives an anti-aircraft range of 28. The listed Pen value is 7, so its game anti-aircraft ratings are 7 4@ 28@ (Pen, ROF, Rng).

B.15 How To Get A Gun's Ratings

In the rare case the gun your vehicle is armed with isn't listed in the Guns Charts in Rule B.16 and B.17, and you have information on its characteristics and ammunition, here is how to rate it.

First, decide the effective range of the gun in meters, which when divided by 100 will give its Rng rating. The effective range of the gun is the approximate range at which the gun has a 50% hit probability (including adjustments, sights, ranging systems, and primary ammo type), and is the same as the effective range you will give the gun in the game. So a 2400-meter effective range, for example, yields a Rng of 24 in the game. For guns up to 1950, the following reference tables can be used to give the Rng rating.

¹¹¹ The early version of the SA-7 qualified for a Pen 1, for example.

Pre-1950 Gun Effective Ranges for AP / APHE / APC / APCBC / HE			
Caliber in mm	Length in calibers		
	0 – 27	28	29
0 – 57	4	8	8
58 – 85	6	6	10
86 – 99	6	8	12
100 – 130	6	10	10
131+	6	8	8

Pre-1950 Gun Effective Ranges for APCR / HVAP / APDS / HEAT			
Ammo Type	Caliber in mm		
	0-39	40-57	58+
APCR	4	6	8
HVAP	4	6	8
APDS	6	8	8
HEAT	6	6	6
STGR (German steingranate)	4	4	4

B.15.1 Penetration Rating

The Pen for a gun is determined by taking the real world penetration of that gun against angled RHA at effective range and referencing the subsequent tables: one for KE rounds and the other for h-class (HEAT, HESH) ammo. HEAT warheads on missiles and rockets use the h-class table as well.

Up until 1950, use the real-world LOS penetration of the gun/warhead at effective range against RHA angled at 30 degrees to get the game rating from the table. After 1950, use the real-world LOS penetration against RHA angled at 60 degrees.

For missile and rocket HEAT warheads, if the warhead is a tandem warhead, for missiles of 125mm diameter or less add 100mm to its stated behind-ERA performance (e.g., “penetrates 600mm plus ERA”), and if larger than 125mm diameter add 300mm to its stated behind-ERA penetration.

KE Round Line-of-sight RHA Armor Penetration at Effective Range vs. Armor @ Angle (in mm)		FFT3 Pen Rating
From:	To:	
0	6	-
6.1	13	0
13.1	19	1
19.1	26	2
26.1	34	3
34.1	41	4
41.1	48	5
48.1	60	6
60.1	85	7
85.1	120	8
120.1	160	9
160.1	210	10
210.1	280	11
280.1	350	12
350.1	430	13

KE Round Line-of-sight RHA Armor Penetration at Effective Range vs. Armor @ Angle (in mm)		FFT3 Pen Rating
From:	To:	
430.1	520	14
520.1	610	15
610.1	710	16
710.1	820	17
820.1	950	18
950.1	1100	19
1100.1	1270	20
1270.1	1470	21
1470.1	1700	22
1700.1	1980	23
1980.1	2290	24
2290.1	2650	25
2650.1	3070	26
3070.1	3550	27
3550.1	4100	28

H-class Line-of-sight RHA Armor Penetration at Effective Range vs. Armor @ 60° Angle (in mm)		FFT3 Pen Rating
From:	To:	
0	6	-
6.1	13	-
13.1	19	-
19.1	26	0
26.1	34	1
34.1	41	2
41.1	48	3
48.1	60	4
60.1	85	5
85.1	120	6
120.1	160	7
160.1	210	8
210.1	280	9
280.1	350	10
350.1	430	11

H-class Line-of-sight RHA Armor Penetration at Effective Range vs. Armor @ 60° Angle (in mm)		FFT3 Pen Rating
From:	To:	
430.1	520	12
520.1	610	13
610.1	710	14
710.1	820	15
820.1	950	16
950.1	1100	17
1100.1	1270	18
1270.1	1470	19
1470.1	1700	20
1700.1	1980	21
1980.1	2290	22
2290.1	2650	23
2650.1	3070	24
3070.1	3550	25
3550.1	4100	26

B.15.2 AI and ROF Ratings

The AI rating and default rate of fire for guns is generally determined from the following table. ROF is usually reduced by 1 if the commander doubles as loader, or if the gun uses an autoloader.

Gun	AI rating	default ROF	Default Rng
MG	-1	1	6
HMG	-1	1	8
20-40mm autocannon	-1 if clip fed / drum fed +0 if belt fed	3	varies
0-36mm cannon/gun/ATR	-3	3	varies
37-60mm cannon	-2	3	varies
65-135mm cannon	-1	3	varies
136mm+	0	2	varies

B.15.3 Estimating Ammo Performance

Getting real-world penetration estimates of KE projectiles is very complex and beyond what can be reproduced here. Fortunately estimates are usually available in open-source literature for these. Just pay attention to the range and angle of the target plate (and metallurgy of the target plate if given) when using these estimates, as they may be different than those you use to get the game rating, necessitating some conversion or interpolation/extrapolation. The same is true of HEAT warheads on missiles and rockets. Warning: we have found that open source penetration estimates can vary tremendously between sources. Worse, many authors are inconsistent in their use of terms, omit critical qualifying information (like range or plate angle) and parrot erroneous data from other sources.

Rating h-class gun ammunition in the game is somewhat simpler, but more subject to guess-work. Note that this procedure is only for guns, not missiles. Surprisingly little detailed information is available on the performance of most HEAT and HESH gun rounds. The table below is based on an analysis of the rounds for which we had information available on penetration performance, technology, liner material, and introduction date.

To rate the gun's h-class ammunition, look up the gun caliber in the table below (or look up the closest caliber to your gun, if the actual caliber isn't listed), and find the warhead type and year the gun was introduced. The Pen value for the starting h-class ammunition when the gun was introduced is given in the table at the intersection of the caliber column and year/warhead row. If you have specific information on when updated or new h-class rounds became available, look up the new year on the table and change the Pen value at that year to the new value from the table. If you don't have any information on when ammunition changed, assume that as long as the gun is in front line service the manufacturer improved the ammunition to perform according to the table's Pen values, with the exception that you should only include tandem warhead or DU-lined rounds if you have specific information that they exist and are in service.

For example, the Russian 125mm/L48 smoothbore was first introduced in about 1969, and it has a single warhead, so its initial rating for h-class ammunition is 10h.

H-CLASS AMMUNITION RATINGS TABLE

Ammo Type	Ammo Introduction Dates	GUN CALIBER (mm)																
		165	155	152	130	125	122	120	115	105	100	90	85	83	76	75	73	57
Single warhead	1942-45	8	8	8	7	7	7	7	7	6	6	6	6	6	6	6	5	5
Single warhead	1946-49	10	10	10	9	9	9	9	8	8	8	7	7	7	7	7	6	5
Single warhead	50-59	13	12	12	11	11	11	11	10	10	10	9	9	9	8	8	8	7
single warhead	60-79	14	14	14	13	12	12	12	12	11	11	10	10	10	10	9	9	8
single warhead	80-10	15	15	15	13	13	13	13	12	12	12	11	11	10	10	10	10	8
tandem or DU-lined	90-15	17	17	16	15	15	15	14	14	13	13	12	12	12	11	11	11	9

B.15.3.1 High Explosive Ammunition (he-Class Ammo)

He-class ammunition is a new class of ammunition for FFT3. It encompasses basic high explosive rounds, (not shaped charge or squash head rounds) when used in direct fire against armored vehicles in the game. Consult the table below to obtain the armor penetration rating for HE rounds.¹¹²

Gun Caliber (in mm)	HE Penetration Rating
30-69	3he
70-89	4he
90-119	5he
120-139	6he
140-169	7he
170-199	12he
200+	20he

¹¹² The numbers may seem rather large for the higher calibers, but they reflect the fact that beyond a certain point, the amount of high explosive renders the question of actually penetrating the armor moot. The shock, blast, and fragmentation damage will incapacitate or kill the crew and disable the vehicle's running gear, sights, electronics, engine, etc. It can spall the interior of monolithic armor plates and in some cases it will even crack the welds between heavy plates.

B.16 Guns Chart – Pre-1950

Weapon	Period	1st	1st	1st	Anti-	2nd	2nd	2nd	Ind	Ind	Notes	Some Systems That Use the Weapon
		Pen	ROF	Rng	Inf	Pen	ROF	Rng	Fire Rng	Ammo		
Generic												
Flamethrower	15-50	4he	3	1	+1	-	-	-	-	-		
6.5mm LMG	15-50	-	1	4	-1	-	-	-	-	-	basic AP ammo	
7.5mm MG	15-50	-	1	6	-1	-	-	-	-	-	basic AP ammo	FT-17
7.62mm MG	-45	-	1	6	-1	-	-	-	-	-	basic ammo	Russian PK MG
7.62mm MG AA	-45	-	1@	12@	-1	-	-	-	-	-	basic ammo	Russian PK MG
7.62mm MG AAx4	-45	-	2@	12@	-1	-	-	-	-	-	basic ammo	Russian Maxim MG
7.7mm MG	-45	-	1	6	-1	-	-	-	-	-	basic ammo	
7.7mm MG AA	-45	-	1@	12@	-1	-	-	-	-	-	basic ammo	
7.7mm MG AAx2	-45	-	1@	12@	-1	-	-	-	-	-	basic ammo	
7.92mm MG	-45	-	1	6	-1	-	-	-	-	-	basic ammo	
7.92mm MG AA	-45	-	1@	12@	-1	-	-	-	-	-	basic ammo	
7.92mm MG AAx2	-45	-	1@	12@	-1	-	-	-	-	-	basic ammo	
7.92mm MG AAx4	-45	-	2@	12@	-1	-	-	-	-	-	basic ammo	
8mm MG	-45	-	1	6	-1	-	-	-	-	-	basic AP ammo	
12.7mm HMG	-45	0	1	6	-1	-	-	-	-	-	basic AP ammo	Russian DShKM MG
12.7mm HMG AA	-45	0	1@	12@	-1	-	-	-	-	-	basic AP ammo	Russian DShKM MG
12.7mm HMG AAx2	-45	0	1@	12@	-1	-	-	-	-	-	basic AP ammo	Russian DShKM MG
12.7mm HMG AAx4	-45	0	2@	12@	-1	-	-	-	-	-	basic AP ammo	Russian DShKM MG
14.5mm HMG	-45	1	1	8	-1	-	-	-	-	-	basic AP ammo	Russian KPV MG
15mm HMG	-45	1	1	8	-1	-	-	-	-	-	basic AP ammo	
France												
13.2mm/L75 R (France)	30-50	0	1	6	-1	-	-	-	-	-	basic AP ammo	
25mm/L60 R AA (France)	34-50	2	2@	16@	-1	-	-	-	-	-		25mm Hotchkiss AAG
25mm/L72 R SA34 (France)	34-50	2	3	8	-3	-	-	-	-	-	SA 1934	AMR 35 ZT, Panhard AMD
25mm/L47 R (France)	35-50	2	3	8	-3	-	-	-	-	-	SA 1935	
25mm/L72 R SA37 (France)	37-50	2	3	8	-3	-	-	-	-	-	SA 1937	
37mm/L21 R (France)	17-34	0	3	4	-2	-	-	-	-	-	AP, SA 1917, SA 1918	Renault FT, R 35
	35-50	1	3	6	-2	-	-	-	-	-	APC/APCBC, SA 1918 m.1937	
37mm/L33 R (France)	38?-50	2	3	8	-2	-	-	-	-	-	SA 1938	R 40
47mm/L21 R (France)	34-50	1	3	4	-2	-	-	-	-	-	SA 1934	Char D1
47mm/L32 R (France)	35-50	4	3	8	-2	-	-	-	-	-	SA 1935	Char B1 Bis, AMC 35 ACG
47mm/L53 R (France)	37-50	5	3	8	-2	-	-	-	-	-	SA 1937	
75mm/L17 R (France)	35-50	4	3	6	-1	-	-	-	-	-	SA 1935	Renault BS, Char B1 Bis
75mm/L36 R (France)	5	3	6	-1	-	-	-	-	68	h		Char 2C
75mm/L54 R AA (France)	33-50	4he	2@	20@	-1	-	-	-	-	-		
81mm Mtr (France)	31-42	-	-	-	-	-	-	-	28	hs		
90mm/L? R (France)	45-50	8	3	10	-1	10	3	8	-	-	90mm DCA naval AA gun	ARL 44
105mm/L18 R (France)	13-50	5he	3	6	-1	-	-	-	103	h		105 ct.'35B 105mm How
105mm/L28 R (France)	13-50	5he	3	6	-1	-	-	-	120	h		L13S 105mm FG
155mm/L14 R (France)	17-50	7he	2	6	+0	-	-	-	108	h		155 C mle 1917 How
Germany												
7.92mm R (Germany)	-45	0	3	6	-3	-	-	-	-	-	EW141	Pz.IIC
15mm/L83 R AA (Germany)	-40	1	1@	16@	-1	-	-	-	-	-	MG151/15	SdKfz. 251/21
20mm/L55 R AA (Germany)	-40	1	2@	16@	-1	-	-	-	-	-	MG151/20	SdKfz. 251/21

20mm/L55 R (Germany)	-40	1	3	8	-1	-	-	-	-	KwK 38	Pz.II
	41-43	1	3	8	-1	2	3	4	-	APCR	
	44-50	1	3	8	-1	-	-	-	-		
20mm/L55 R AA (Germany)	all	1	2@	16@	-1	-	-	-	-	SdKfz. 251/17	
20mm/L65 R AA (Germany)	all	1	1@	16@	-1	-	-	-	-	Flak 30	
20mm/L65 R AA (Germany)	all	1	2@	16@	-1	-	-	-	-	Flak 38	
20mm/L65 R AAx4 (Germany)	all	1	6@	16@	+0	-	-	-	-	Wirbelwind	
28mm/L61 TB (Germany)	40-45	4	3	4	-3	-	-	-	-	APCR	2.8cm sPzB 41
37mm/L40 R (Germany)	-40	2	3	8	-2	-	-	-	-		Pz.35(t)
	41-43	2	3	8	-2	4	3	4	-	APCR	
	44-50	2	3	8	-2	-	-	-	-		
37mm/L45 R (Germany)	-40	2	3	8	-2	-	-	-	-		PaK35/36
	41-43	2	3	8	-2	4	3	4	-	APCR	
	44-50	2	3	8	-2	-	-	-	-		
37mm/L47 R (Germany)	-40	2	3	8	-2	-	-	-	-		Pz.III A-F
	41-43	2	3	8	-2	4	3	4	-	APCR	
	44-50	2	3	8	-2	-	-	-	-		
37mm/L48 R (Germany)	-40	3	3	8	-2	-	-	-	-		Pz.38(t)
	41-43	3	3	8	-2	4	3	4	-	APCR	
	44-50	3	3	8	-2	-	-	-	-		
37mm/L60 R AA (Germany)	all	2	2@	16@	-2	-	-	-	-		Möbelwagen, Flak 36, Flak 37
37mm/L60 R AA (Germany)	all	2	2@	16@	-2	-	-	-	-		Flak 43
37mm/L60 R AAx2 (Germany)	all	2	3@	16@	-2	-	-	-	-		Flakzwilling 43
42mm/L54 TB (Germany)	40-43	7	3	6	-3	-	-	-	-	APCR	4.2cm lePaK 41
47mm/L43 R (Germany)	40	4	3	8	-2	-	-	-	-		PzJg.I, PaK 36(t)
	41-43	4	3	8	-2	5	3	6	-	APCR	
	44-50	4	3	8	-2	-	-	-	-		
50mm/L42 R (Germany)	-40	4	3	8	-2	-	-	-	-		Pz.III G-J
	41-43	4	3	8	-2	5	3	6	-	APCR	
	44-50	4	3	8	-2	-	-	-	-		
50mm/L60 R (Germany)	-40	5	3	8	-2	-	-	-	-		Pz.III J-M
	41-43	5	3	8	-2	7	3	6	-	APCR	
	44-50	5	3	8	-2	-	-	-	-		
75mm/L10 R (Germany)	-41	4he	3	4	-1	-	-	68	hs		7.5cm LG 40 RR
	42-45	4he	3	4	-1	6h	3	4	68	hs	
75mm/L12 R (Germany)	-41	4he	3	4	-1	-	-	35	hs	very low velocity	7.5-cm leIG 18
	42-50	4he	3	4	-1	6h	3	4	35	hs	
75mm/L22 R (Germany)	-41	4	3	4	-1	-	-	51	hs	very low velocity	7.5cm leIG 37, 7.5cm leIG 42
	42-50	4	3	4	-1	6h	3	4	51	hs	
75mm/L24 R (Germany)	-41	4	3	6	-1	-	-	-	-	very low velocity	Pz.IV A-F1, StuG.IIIA-E
	42-50	4	3	6	-1	6h	3	4	-	STGR	
75mm/L36 R (Germany)	-41	4he	3	4	-1	-	-	128	hs		PaK 97/38
	42-50	6h	3	4	-1	-	-	128	hs	HEAT	
75mm/L43 R (Germany)	-40	7	3	10	-1	-	-	-	-		Pz.IV F2-G, StuG. III F
	41-43	7	3	10	-1	8	3	8	-	APCR	
	44-50	7	3	10	-1	-	-	-	-		
75mm/L46 R (Germany)	-40	7	3	10	-1	-	-	-	-		Marder II, Marder III, PaK40/38(t)
	41-43	7	3	10	-1	8	3	8	-	APCR	
	44-50	7	3	10	-1	-	-	-	-		
75mm/L48 R (Germany)	-40	7	3	10	-1	-	-	-	-		Pz.IV G-J, StuG.III G, JgdPz.IV, Hetzer

	41-43	7	3	10	-1	8	3	8	-	-	APCR	
	44-50	7	3	10	-1	-	-	-	-	-		
75mm/L58 TB (Germany)	all	8	3	10	-1	-	-	-	-	-		7.5cm Pak41
75mm/L70 R (Germany)	-40	8	3	10	-1	-	-	-	-	-	Panther, JgdPz.IV/70	
	41-43	8	3	10	-1	9	3	8	-	-	APCR	
	44-50	8	3	10	-1	-	-	-	-	-		
76mm/L46 R (Germany)	-40	7	3	10	-1	-	-	-	-	-		PaK39(r) (captured USSR F-22 USV)
	41-43	7	3	10	-1	8	3	8	-	-	APCR	
	44-50	7	3	10	-1	-	-	-	-	-		
76mm/L52 R (Germany)	-40	7	3	10	-1	-	-	-	-	-	captured USSR F-22	LaS.762, Marder III, PaK36(r)
	41-43	7	3	10	-1	8	3	8	-	-	APCR	
	44-50	7	3	10	-1	-	-	-	-	-		
81mm Mtr (Germany)	34-45	-	-	-	-	-	-	-	24	hs		SdKfz 250/7, SdKfz 251/9
81mm Lt Mtr (Germany)	42-45	-	-	-	-	-	-	-	11	hs		
81mm/L36 SB (Germany)	-40	7h	3	6	-1	-	-	-	-	-		8-cm PAW 600
88mm/L18 RG (Germany)	-40	7h	3	2	-1	-	-	-	-	-		8.8-cm Puppchen
88mm/L56 R (Germany)	-40	7	3	12	-1	-	-	-	-	-	Pzgr. (Flak only)	Tiger E
	41	7	3	12	-1	9	3	8	-	-	Pzgr. (Flak only); APCR	
	42-43	8	3	12	-1	9	3	8	-	-	Pzgr.39; APCR	
	44-50	8	3	12	-1	-	-	-	-	-	Pzgr.39	
88mm/L56 R AA (Germany)	all	7	2@	24@	-1	-	-	-	-	-		Flak 18, 36, 37
88mm/L71 R (Germany)	-40	9	3	12	-1	-	-	-	-	-		Tiger B, Ferdinand, Jagdpanther, Nashorn
	41-43	9	3	12	-1	10	3	6	-	-	APCR	
	44-50	9	3	12	-1	-	-	-	-	-		
100mm/L24 R (Germany)	39-50	5he	3	6	-1	-	-	-	99	hs		10-cm leFH 14/19(t)
105mm/L28 R (Germany)	-41	5	3	6	-1	-	-	-	123	hs	AP	StuH42
	42-50	6	3	6	-1	6h	3	4	123	hs	APCBC; STGR	
105mm/L52 R (Germany)	all	9	3	10	-1	-	-	-	190	hs		10.5cm K18
120mm Mtr (Germany)	41-45	-	-	-	-	-	-	-	60	hs		
128mm/L55 R (Germany)	all	9	3	12	-1	-	-	-	-	-	APCBC	Jagdtiger, Maus, PaK44
150mm Rckt (Germany)	41-45	-	-	-	-	-	-	-	17-69	hs	Medium	15cm Nebelwerfer 41, 15cm Panzerwerfer 42
150mm/L11 R (Germany)	-41	7he	2	6	+0	-	-	-	46	hs		Brummbar, sIG33/B
	42-50	7he	2	6	+0	7h	2	4	46	hs	STGR	
150mm/L12 R (Germany)	-41	7he	2	6	+0	-	-	-	46	hs		Brummbar, sIG33/B
	42-50	7he	2	6	+0	7h	2	4	46	hs	STGR	
150mm/L17 R (Germany)	-41	7he	2	6	+0	-	-	-	68	hs		15cm sFH 13/1 auf Lorraine
	42-50	7he	2	6	+0	7h	2	4	68	hs	STGR	
150mm/L30 R (Germany)	-41	7he	2	8	+0	-	-	-	132	hs		Hummel
	42-50	7he	2	8	+0	7h	2	4	132	hs	STGR	
210mm Rckt (Germany)	43-45	-	-	-	-	-	-	-	20-78	h	Heavy	21cm Nebelwerfer 42
280mm Rckt (Germany)	40-45	-	-	-	-	-	-	-	5-21	h	Very Heavy	28cm Nebelwerfer 41
300mm Rckt (Germany)	42-45	-	-	-	-	-	-	-	11-45	h	Very Heavy	30cm Nebelwerfer 42
320mm Rckt (Germany)	40-45	-	-	-	-	-	-	-	5-20	h	Very Heavy	32cm Nebelwerfer 41
380mm/L5 SB (Germany)	all	18he	2	6	+0	-	-	-	-	-		Sturmtiger
Italy												
20mm/L65 R (Italy)	1	3	8	-1	-	-	-	-	-	-	Breda 35 20/65	L6/40
20mm/L65 R AA (Italy)	1	2@	16@	-1	-	-	-	-	-	-	Breda 35 20/65	L6/40
20mm/L72 R (Italy)	1	3	8	-3	-	-	-	-	-	-	AP, Solothurn S18/1000	L3 cc
20mm/L77 R AA (Italy)	1	2@	16@	-1	-	-	-	-	-	-	Scotti	20/77 Scotti AAG
37mm/L40 R (Italy)	2	3	8	-2	-	-	-	-	-	-		M 11/39, L5/30

37mm/L45 R (Italy)		2	3	8	-2	-	-	-	-	-	37/45 37mm ATG
47mm/L32 R (Italy)	-41	3	3	8	-2	-	-	-	-	-	M 13/40, Semovente 47/32
	42-50	3	3	8	-2	5	3	6	-	-	
47mm/L40 R (Italy)		4	3	8	-2	5	3	6	-	-	M 15/42
65mm/L17 R (Italy)		3he	3	6	-2	5	3	6	68	h	65/17 M13 65mm IG
75mm/L18 R (Italy)	-41	4he	3	6	-1	-	-	-	95	h	Semovente 75/18
	42-50	4he	3	6	-1	6	3	6	95	h	
75mm/L27 R (Italy)	-41	5	3	8	-1	-	-	-	102	h	Cannone da 75/27
	42-50	5	3	8	-1	6	3	6	102	h	
75mm/L27 R AA (Italy)		5	2@	16@	-1	-	-	-	-	-	Cannone da 75/27
75mm/L32 R (Italy)	-41	5	3	8	-1	-	-	-	125	h	Cannone da 75/32
	42-50	5	3	8	-1	6	3	6	125	h	
75mm/L34 R (Italy)		5	3	8	-1	-	-	-	-	-	Semovente 75/34, Cannone da 75/34
75mm/L46 R (Italy)		7	3	10	-1	-	-	-	-	-	Semovente 75/46
75mm/L46 R AA (Italy)		4he	2@	16@	-1	-	-	-	-	-	75/46 M34 AAG
81mm Mtr (Italy)	35-45	-	-	-	-	-	-	-	38	h	
90mm/L53 R (Italy)	42-50	7	3	12	-1	6	3	6	-	-	Semovente 90/53
90mm/L53 R AA (Italy)		7	2@	24@	-1	6	3	6	-	-	AC 90/53 SP AAG
100mm/L17 R (Italy)	-41	5he	3	6	-1	-	-	-	89	h	Obice da 100/17
	42-50	5he	3	6	-1	6	3	6	89	h	
100mm/L24 R (Italy)		5he	3	6	-1	-	-	-	99	h	
102mm/L35 R (Italy)		5he	3	8	-1	-	-	-	-	-	Semovente 105/25
105mm/L11 R (Italy)		5he	3	6	-1	-	-	-	72	h	105/11 Mountain How
105mm/L25 R (Italy)		5he	3	6	-1	-	-	-	-	-	Semovente 105/25
105mm/L28 R (Italy)	19-41	5he	3	6	-1	-	-	-	120	h	105/28 M12 FG
	42-50	5he	3	6	-1	6	3	6	120	h	
149mm/L13 R (Italy)		7he	2	6	+0	-	-	-	80	h	
149mm/L19 R (Italy)		7he	2	6	+0	-	-	-	150	h	
149mm/L28 R (Italy)		7he	2	8	+0	-	-	-	132	hs	
149mm/L35 R (Italy)		7he	2	8	+0	-	-	-	180	h	
149mm/L40 R (Italy)		7he	2	8	+0	-	-	-	240	h	
Poland											
7.92mm ATR (Poland)	14-50	1	3	4	-3	-	-	-	-	-	AP
20mm/L73 R (Poland)	38+	2	3	8	-1	-	-	-	-	-	AP
Minor Countries											
20mm/L70 R AA (Switzerland)	14-50	2	2@	20@	-1	-	-	-	-	-	Oerlikon AA gun
37mm/L45 R (Sweden)	all	2	3	8	-2	-	-	-	-	-	37mm Bofors ATG
40mm/L56 R AA (Sweden)	34-50	4	2@	28@	-1	-	-	-	-	-	M1 40mm AAG
40mm/L56 R AAx2 (Sweden)	34-50	4	4@	28@	-1	-	-	-	-	-	M19 GMC
Russia / Soviet Union											
14.5mm PTRD/PTRS (Russia)	41+	2	3	4	-3	-	-	-	-	-	AP
20mm/L82 R (Russia)	all	1	3	8	-1	-	-	-	-	-	Morris LRC
25mm/L64 R AA (Russia)	all	1	2@	16@	-1	-	-	-	-	-	T-40 (T-30), T-60S
37mm/L21 R (Russia)	all	1	3	4	-2	-	-	-	-	-	T-18, T-26
37mm/L42 R (Russia)	all	2	3	8	-2	-	-	-	-	-	BT-2, 1-K M1930 ATG
37mm/L70 R AA (Russia)	all	3	2@	16@	-2	-	-	-	-	-	37mm AA, ZSU-37
45mm/L46 R (Russia)	-41	3	3	8	-2	-	-	-	-	-	T-26S, BT-5, BT-7, BT-8, AT Guns 1932, 1937
	42-50	3	3	8	-2	5	3	4	-	-	APCR
45mm/L66 R (Russia)	-41	5	3	8	-2	-	-	-	-	-	ATG 1942
	42-50	5	3	8	-2	6	3	4	-	-	APCR

57mm/L73 R (Russia)	-40	7	3	8	-2	-	-	-	-	BR-271	ZiS-2 ATG
	41	7	3	8	-2	8	3	6	-	BR-271 (APCR BR-271P)	
	42-50	8	3	8	-2	9	3	6	-	BR-271M (APCR BR-271N)	
76mm/L17 R (Russia)	27-42	4he	3	6	-1	2	3	6	42	h	AP
	43-50	4he	3	6	-1	6h	3	6	42	h	HEAT
76mm/L24 R (Russia)	all	5	3	6	-1	-	-	-	-	-	
76mm/L30 R (Russia)	02-50	4he	3	10	-1	-	-	-	85	hsc	no AP
76mm/L31 R (Russia)	all	5	3	10	-1	-	-	-	-	-	M1900/02 FG
76mm/L42 R (Russia)	39-jul42	6	3	10	-1	-	-	-	132	hsc	T-28, T-28E, T-34 m.1940, KV-1 m.1939
	aug42-50	6	3	10	-1	7	3	6	132	hsc	USV m.1939 FG
76mm/L40 R (Russia)	30-34	4he	3	10	-1	-	-	-	132	hsc	HE only
	35-50	6	3	10	-1	-	-	-	132	hsc	AP
76mm/L43 R (Russia)	-jul42	6	3	10	-1	-	-	-	-	-	T-34/76, KV-1 m.1940
	aug42-45	6	3	10	-1	7	3	6	-	-	APCR
	46-15	6/7h	3	10	-1	7	3	6	-	-	APCR
76mm/L52 R (Russia)	feb42-jul42	6	3	10	-1	-	-	-	138	hsc	APCR
	aug42-50	6	3	10	-1	7	3	6	138	hsc	APCR
76mm/L53 R AA (Russia)	38-41	6	2@	20@	-1	-	-	-	-	-	APCR
	42-50	6	2@	20@	-1	7	3	6	-	-	APCR
82mm Mtr (Russia)	37-50	-	-	-	-	-	-	-	30	hs	
82mm Rckt (Russia)	39-50	-	-	-	-	-	-	-	15-59	h	Light
85mm/L55 R (Russia)	-41	7	3	10	-1	-	-	-	-	-	T-34/85, T-44, KV-85, SU-85
	42-50	7	3	10	-1	8	3	8	-	-	APCR
85mm/L55 R AA (Russia)	-41	7	2@	20@	-1	-	-	-	-	-	T-34/85, T-44, KV-85, SU-85
	42-50	7	2@	20@	-1	8	3	8	-	-	APCR
100mm/L56 R (Russia)	-45	8	3	10	-1	-	-	-	-	-	BR-412, BR-412B
	46-50	9	3	10	-1	-	-	-	-	-	BR-412D
100mm/L60 R (Russia)	-45	8	3	10	-1	-	-	-	200	hs	BR-412, BR-412B
	46-50	9	3	10	-1	-	-	-	200	hs	BR-412D
107mm/L37 R (Russia)	30-50	8	3	10	-1	-	-	-	161	hsc	
120mm Mtr (Russia)	38-50	-	-	-	-	-	-	-	57	hs	M1910/30 107mm FG
122mm/L13 R (Russia)	all	6he	3	6	-1	-	-	-	89	hsc	HE
122mm/L14 R (Russia)	-43	6he	3	6	-1	-	-	-	89	hsc	M1909/37 122mm How
122mm/L23 R (Russia)	-42	6he	3	6	-1	-	-	-	118	hsc	SU-122
	43-50	6he	3	6	-1	7h	3	6	118	hsc	HEAT
122mm/L43 R (Russia)	-42	9	2	10	-1	-	-	-	-	-	BR-471, D25T gun
	43-50	9	2	10	-1	7h	2	6	-	-	BR-471, BR-471A; HEAT
122mm/L46 R (Russia)	-42	9	1	10	-1	-	-	-	204	h	BR-471, D25 (A19) gun
	43-50	9	1	10	-1	7h	1	6	204	h	BR-471, BR-471A; HEAT
130mm Rckt (Russia)	39-50	-	-	-	-	-	-	-	20-85	h	Medium
130mm Rckt (Russia)	44?-50	-	-	-	-	-	-	-	30-118	h	Medium
152mm/L12 R (Russia)	all	7he	2	6	+0	-	-	-	89	hc	BM-13-16
152mm/L13 R (Russia)	all	7he	2	6	+0	-	-	-	89	hc	BM-13 w/M-13-DD
152mm/L23 R (Russia)	-45	7he	2	6	+0	-	-	-	124	hc	M1910/37 152mm How
	46-50	7he	2	6	+0	9h	2	6	124	hc	M1909/30 152mm How
152mm/L22 R (Russia)	all	7	2	6	+0	-	-	-	-	-	D-1 how
152mm/L24 R (Russia)	39-45	7he	2	6	+0	-	-	-	124	hc	KV-2
	46-50	7he	2	6	+0	9h	2	6	124	hc	M-10 M1938 152mm How
152mm/L28 R (Russia)	-45	8	2	8	+0	-	-	-	168	hc	Su-152, ISU-152
	46-50	8	2	8	+0	9h	2	6	168	hc	BR-540

160mm Mtr (Russia)	43-50	-	-	-	-	-	-	-	52	hs		
300mm Rckt (Russia)	42-50	-	-	-	-	-	-	-	7-28	h	Very Heavy	M-30 w/Rama
300mm Rckt (Russia)	43-50	-	-	-	-	-	-	-	11-43	h	Very Heavy	BM-31-12
United Kingdom												
14mm/L65 R Boys ATR (UK)		0	3	4	-3	-	-	-	-	-	AP	Morris LRC
20mm/L72 R AA (UK)	14-50	2	2@	16@	-1	-	-	-	-	-	Polsten AA gun	
40mm/L52 R 2-pdr (UK)	-aug42	4	3	8	-2	-	-	-	-	-	AP	Crusader 1-2, Matilda 2, Valentine 1+3, Tetrarch
	sep42-50	5	3	8	-2	-	-	-	-	-	APCBC	
40mm/L52 R 2-pdr LJ (UK)	44-50	7	3	8	-2	-	-	-	-	-	APCNR	Marmon-Harrington IV, Daimler
47mm/L18 R QF (UK)	all	3	3	4	-2	-	-	-	-	-	AP	Vickers Mk E
47mm/L60 R 3-pdr (UK)	all	5	3	8	-2	-	-	-	-	-		Medium 2, Vickers Mk I & Mk II
57mm/L50 R 6-pdr (UK)	-may44	7	3	8	-2	-	-	-	-	-	APCBC	Crusader 3, Valentine 8, Churchill 3
	jun44-50	7	3	8	-2	9	3	8	-	-	APDS	
75mm/L37 R (UK)	all	6	3	10	-1	-	-	-	-	-		Cromwell, Valentine 11
76mm (3") Mtr (UK)	32-42	-	-	-	-	-	-	-	15	hs		
	43-50	-	-	-	-	-	-	-	25	hs		
76mm/L23 R 13-pdr (UK)	18354	4he	3	6	-1	-	-	-	54	h		13-pdr FG
76mm/L25 R 3" How (UK)	all	4he	3	6	-1	-	-	-	-	-		Tetrarch CS
76mm/L46 R 3" AA (UK)	14-45	4he	2@	20@	-1	-	-	-	-	-		3" 20-cwt AAG
76mm/L55 R 17-pdr (UK)	-jul44	9	3	10	-1	-	-	-	-	-		Challenger, Firefly, Centurion 2, Achilles, Archer, Avenger
	aug44-50	9	3	10	-1	10	3	8	-	-	APDS	
77mm/L50 R (UK)	-jul44	8	3	10	-1	-	-	-	-	-		Comet
	aug44-50	8	3	10	-1	9	3	8	-	-	APDS	
84mm/L30 R 18-pdr (UK)	all	4he	4	10	-1	-	-	-	99	hsc		18-pdr FG Mk IV
88mm/L14 R 25-pdr (UK)	all	4he	3	6	-1	5	3	6	90	hsc		25-pdr pack how
88mm/L27 R 18/25-pdr (UK)	all	4he	3	8	-1	6	3	8	108	hsc		18/25-pdr
88mm/L28 R 25-pdr (UK)	40-jun42	4he	3	8	-1	6	3	8	122	hsc		Bishop, Sexton, 25-pdr Mk II, Mk III
	jul42-45	4he	3	8	-1	7	3	8	122	hsc		
94mm/L12 R 3.7" How (UK)	5he	3	6	-1	-	-	-	-	54	hs	HE	3.7" Howitzer
94mm/L50 R 3.7" AA (UK)	5he	2@	24@	-1	-	-	-	-	-	-		3.7" AAG
95mm/L16 R 3.7" Mrtr (UK)	-42	smk	1	6	n/a	-	-	-	-	-		only fired smoke
95mm/L23 R 3.7" How (UK)	-42	5he	3	6	-1	-	-	-	-	-	HE	close support variant of 2-pdr armed tanks
	43-50	5he	3	6	-1	6h	3	6	-	-	HEAT	close support variant of 6-pdr armed tanks
107mm (4.2") Mtr (UK)	42	-	-	-	-	-	-	-	30	hs		
	43-53?	-	-	-	-	-	-	-	36	hs		
114mm/L16 R 4.5" How (UK)	09-65	5he	3	6	-1	-	-	-	66	hs		4.5" Howitzer
114mm/L41 R 4.5" Gun (UK)	40-59	5he	3	10	-1	-	-	-	180	h	HE	4.5" FG
127mm Rckt (UK)	44-45	-	-	-	-	-	-	-	35-72	h		Land Mattress
140mm/L30 R 60-pdr (UK)	05-44	7he	2	8	+0	-	-	-	142	h		60-pdr FG
140mm/L30 R 5.5" Gun (UK)	42-50	7he	2	8	+0	-	-	-	140	h		5.5" FG
152mm/L13 R 6" How (UK)	15-45	7he	2	6	+0	-	-	-	104	hs		6" Howitzer
209mm Petard (UK)	44-54	20he	2	C	+0	-	-	-	-	-		Churchill AVRE
United States												
37mm/L50 R (US)	all	5	3	8	-2	-	-	-	-	-		M3 Lee/Grant
37mm/L53 R (US)	all	5	3	8	-2	-	-	-	-	-		M3 Stuart, M5 Stuart, M3 37mm ATG
37mm/L54 R AA (US)	all	5	2@	16@	-2	-	-	-	-	-		M1 37mm AA
57mm/L50 R (US)	42-aug44	7	3	8	-4	-	-	-	-	-	no HE available	M1 ATG
	sep44-50	7	3	8	-2	-	-	-	-	-	HE	
75mm/L16 R (US)	all	4he	3	6	-1	-	-	-	88	hsc	HE	M8 HMC
75mm/L31 R (US)	all	6	3	10	-1	-	-	-	-	-		M3 Lee/Grant, M3 TD

75mm/L37 R (US)	all	6	3	10	-1	-	-	-	-	-		M24 Chaffee
75mm/L40 R (US)	all	6	3	10	-1	-	-	-	-	-		M4 Sherman series
76mm/L50 R (US)	-aug44	7	3	10	-1	-	-	-	-	-		M5 ATG, M10 Wolverine
	sep44-50	7	3	10	-1	9	3	8	-	-	HVAP	
76mm/L50 R AA (US)	-aug44	4he	2@	20@	-1	-	-	-	-	-		M3 76mm AA
76mm/L55 R (US)	-aug44	7	3	10	-1	-	-	-	-	-		M4 Sherman series, M18 Hellcat
	sep44-50	7	3	10	-1	9	3	8	-	-	HVAP	
81mm Mtr (US)	all	-	-	-	-	-	-	-	30	hs		M21
90mm/L50 R (US)	-aug44	8	3	12	-1	-	-	-	-	-		M82, M82 (late)
	sep44-50	8	3	12	-1	10	3	8	-	-	HVAP	M26 Pershing
90mm/L50 R AA (US)	-aug44	8	2@	20@	-1	-	-	-	-	-		M82, M82 (late)
	sep44-50	8	2@	20@	-1	10	3	8	-	-	HVAP	M26 Pershing
105mm/L16 R (US)	-42	5he	3	6	-1	-	-	-	76	hs		M3 Pack howitzer
	43-50	5he	3	6	-1	6h	3	6	76	hs	HEAT	
105mm/L23 R (US)	-42	5he	3	6	-1	-	-	-	112	hsc		M7 Priest, M37
	43-50	5he	3	6	-1	6h	3	6	112	hsc	HEAT	
107mm Mtr (US)	all	-	-	-	-	-	-	-	40	hsc		4.2" Mortar
114mm Rckt (US)	43-45	-	-	-	-	-	-	-	10-42	h	Light, M8 rckt	T34 Calliope
114mm Rckt (US)	45-50	-	-	-	-	-	-	-	12-48	h	Light, M16 rckt	T66 Honeycomb
155mm/L23 R (US)	all	7he	2	6	+0	-	-	-	146	hsc		M41
155mm/L36 R (US)	all	9	2	8	+0	-	-	-	163	hsc		M12
155mm/L45 R (US)	all	9	2	8	+0	-	-	-	232	hsc		M40
182mm Rckt (US)	44-45	12he	2	6	+0	-	-	-	-	-		M17 Whiz-bang
203mm/L25 R (US)	all	18he	2	6	+0	-	-	-	168	h		M43

B.17 Guns Chart – 1950 Onward

Weapon	Period	Pen	ROF	Rng	Anti-	Ind	Ind	Notes	Some Systems That Use the Weapon
						Fire	Fire		
Flamethrower	all	4he	3	1	+1	-	-		
Heavy Demolition Charge	all	11he	1	C	+2	-	-		Pz.IB Demolition Layer
7.62mm MG		-	1	6	-1	-	-	basic ammo	Russian PK MG
		0	1	6	-1	-	-	advanced AP ammo, 1990s+	US M240 Squad Automatic Weapon
12.7mm HMG		0	1	6	-1	-	-	basic AP ammo	US M2 API
		1	1	6	-1	-	-	intermediate AP ammo	US M8 API
		3	1	6	-1	-	-	advanced AP ammo 1990s+	US SLAP
12.7mm HMG AA	0	1@	12@	-1	-	-	-	basic AP ammo	
12.7mm HMG AAx2	0	1@	12@	-1	-	-	-	basic AP ammo	
12.7mm HMG AAx4	0	2@	12@	-1	-	-	-	basic AP ammo	
14.5mm HMG	1	1	8	-1	-	-	-	basic AP ammo	Russian KPV MG
20mm		2	4	10	+0	-	-	HVAP	
		3	4	10	+0	-	-	APDS	
20mm R (Germany)	58-81	2	4	10	+0	-	-	+2 GLF	
	82-87	3	4	10	+0	-	-	+2 GLF	Marder IFV series
	88-15	4	4	10	+0	-	-	+2 GLF	
23mm		2	4	10	+0	-	-	+2 GLF	
23mm R (Russia)	2	4	10	+0	-	-	-	AP	ZSU-23/4, ZU-23/2
25mm		3	4	12	+0	-	-	+2 GLF	
	82?	6	4	12	+0	-	-	+2 GLF	
	94-15	7	4	12	+0	-	-	APDS	
25mm R (US)	82-94	6	4	12	+0	-	-	+2 GLF	M2 Bradley series
	95-15	7	4	14	+0	-	-	+2 GLF	
25mm/L80 R (Switzerland)	76-93	6	4	12	+0	-	-	APDS	AIFV-B 25mm, LAV III 25mm
	94-15	7	4	12	+0	-	-	+2 GLF	
30mm		3	4	12	+0	-	-	+2 GLF	
		5	4	12	+0	-	-	AP	
		8	4	12	+0	-	-	APDS	
30mm R (China)	96-15	5	4	12	+0	-	-	+2 GLF	Type 97 IFV
30mm R (Russia)	79-84?	3	4	12	+0	-	-	+2 GLF	BMP-2 series, BMP-3
	85?-90?	5	4	12	+0	-	-	+2 GLF	
	91?-15	6	4	12	+0	-	-	+2 GLF	
30mm AGS-17 (Russia)	67-15	3he	3	8	+0	-	-		BMPT, AGS-17 AGL
30mm AGS-30 (Russia)	91-15	3he	3	12	+0	-	-		AGS-30 AGL
30mm R (UK)	pre-72	4	4	12	+0	-	-	+2 GLF	Warrior, Scimitar
	72-15	6	4	12	+0	-	-	+2 GLF	
30mm R (US)		8	4	14	+0	-	-	+2 GLF	APFSDS Bushmaster II
35mm/L63 R (Germany)	06-15	9	4	14	+0	-	-	+2 DU; +2 GLF	EFV
35mm/L63 R (US)	06-15	9	4	14	+0	-	-	+2 DU; +2 GLF	APFSDS Rh-503
35mm/L90 R (Switzerland)	60-15	7	4	14	+0	-	-	+2 DU; +2 GLF	CV9035
37mm/L70 R AA (Russia)	39-15	3	2@	16@	+0	-	-	+2 DU; +2 GLF	Gepard, Type 89
37mm/L53 R (US)	40-15	5	3	8	-2	-	-	+2 GLF	M1939 37mm AA Gun
40mm AGL	67-15	3he	3	8	+0	-	-		M3 Stuart
40mm/L60 R (Sweden)	50-15	4	4	14	+0	-	-	+2 DU; +2 GLF	
40mm/L70 R (Sweden)	50-00	6	4	14	+0	-	-	+2 DU; +2 GLF	CV9040

	01-15	9	4	14	+0	-	-	+2 DU; +2 GLF	APFSDS	
	08-15	10	4	16	+0	-	-	+2 GLF	APFSDSDU	
57mm/L71 R (Russia)	50-15	6	3	14	-2	-	-			ZSU-57/2, S-60
57mm/L50 R 6-pdr (UK)	44-15	9	3	8	-2	-	-	+2 LRF	APDS	6-pdr AT Gun
57mm/L73 R (Russia)	50-15	9	3	8	-2	-	-	+2 LRF	BR-271N	ASU-57, ZIS-2 AT Gun
60mm Mtr (S.Africa)	08?-15	-	-	-	-	62	hs			Hoefyster Sp Mtr
60mm/L70 SB (Israel)	83-15	11	3	10	-2	-	-	+2 LRF		M24 Chaffee Mod.
73mm/L32 Rckt Gun (China)	80-15	10h	2	6	-1	-	-			YW-309
73mm/L32 Rckt Gun (Russia)	70-79	9h	2	6	-1	-	-			BMP-1 series, SPG-9 AT Gun
	80-89	10h	2	6	-1	-	-	PG-15V HEAT		
	90-15	11h	2	6	-1	-	-	PG-15VN HEAT		
	90-15	11h	2	6	-1	-	-	PG-15VNT HEAT		
75mm/L16 R (US)	42?-15	4he	3	6	-1	88	hsc			LVT(A)5
75mm/L40 R (US)	42-15	6	3	10	-1	-	-			M4A1 Sherman
75mm/L37 R (US)	44-15	6	3	10	-1	-	-			M24 Chaffee
75mm/L48 R (Germany)	44-15	7	3	10	-1	-	-			Panzer IV
75mm/L50 R (Sweden)	43-15	8	3	10	-1	-	-			PvKv m/43
75mm/L62 R (France)	50-15	8	3	10	-1	-	-	POT-51A, PCOT-51P AP		early AMX-13s, M50 Sherman Mk1/Mk2
75mm/L70 R (Germany)	50-15	8	3	10	-1	-	-	KwK-42		Panther G
75mm RR (US)	50-75	8h	2	2	-1	-	-	M20 recoilless rifle		Jeep w/75mm RR
76mm Mtr (UK)	59-15	-	-	-	-	25	hs			
76mm/L14 R (Russia)	69-15	9h	3	6	-1	110	hs			M1969
76mm/L28 R (UK)	59-15	9h	3	6	-1	-	-			Saladin, Scorpion
76mm/L43 R (Russia)	50-59	6/8h	3	10	-1	-	-	BR-350B AP, BK-350M HEAT		T-34/76B+C, PT-76 series
	60-15	6/9h	3	10	-1	-	-			
76mm/L46? R (S.Africa)	89-15	9	3	8	-1	-	-	+4 LRF	APFSDS	Rooikat
76mm/L55 R 17-pdr (UK)	45-15	10	3	8	-1	-	-	+4 LRF	APDS	first Centurions, 17-pdr AT gun
76mm/L55 R (US)	44-69?	9	3	8	-1	-	-	+4 LRF	HVAP	M4A3/A4 Sherman, M1 Super Sherman, M41 Walker
Bulldog										
	70?-86	10	3	8	-1	-	-	+4 LRF	APDS?	
	87-15	12	3	8	-1	-	-	+4 LRF	APFSDS	
77mm/L50 R (UK)	45-15	9	3	8	-1	-	-	+4 LRF	APDS	Comet
81mm Mtr	-	-	-	-	-	45	hs			
81mm Mtr (UK)	65-15	-	-	-	-	56	hs			
81mm Mtr (France)	50-61	-	-	-	-	28	hs			
	62-15	-	-	-	-	52	hs			
81mm Mtr (US)	50-56	-	-	-	-	30	hs			
	57-86	-	-	-	-	45	hs			
	87-15	-	-	-	-	56	hs			
82mm Mtr (China)	50-83	-	-	-	-	30	hs			
	84-15	-	-	-	-	47	hs			
82mm AutoMtr (China)	99-15	-	-	-	-	42	hs			
82mm Mtr (Russia)	50-15	-	-	-	-	30	hs			
82mm AutoMtr (Russia)	70-15	-	-	-	-	42	hs			
82mm RR (Russia)	50	9h	3	4	-1	-	-	+4 LRF	APDS	
83.4mm/L64 R 20-pdr (UK)	47-15	9	3	12	-1	-	-	+4 LRF	APDS	middle Centurions
85mm/L55 R (China)	60-69	9	3	8	-1	-	-	+2 LRF		Type 63 Lt. Tank, Type 62 Lt. Tank
	70-15	9/10h	3	8	-1	-	-	+2 LRF		
85mm/L55 R ZIS-S53(Russia)	50-59	8	3	10	-1	-	-	+2 LRF	BR-367	T-34/85, D-44 AT Gun, SD-44 AT Gun
	60-69	9	3	10	-1	-	-	+2 LRF	BR-367P HVAP	
	70-15	9/10h	3	10	-1	-	-	+2 LRF	BR-367P HVAP, BK-2M HEAT	

85mm/L74 R (Russia)	53-15	9	2	10	-1	-	-	+2 LRF		ASU-85, D-48 AT Gun
90mm/L25? R (US)	80-15	11h	3	10	-1	-	-	+4 LRF		Dragoon 90
90mm/L28-36 R (Belgium)	51-59	9h	3	10	-1	-	-	+4 LRF	Low-pressure gun series	SIBMAS AFSV-90, FN 4RM
	60-79	10h	3	10	-1	-	-	+4 LRF		
	80-15	11h	3	10	-1	-	-	+4 LRF		
90mm/L33 SB (France)	60-79	10h	3	10	-1	-	-	+4 LRF		AML-90, EBR, EE-9, X1A Stuart, X1A2
	80-15	11h	3	10	-1	-	-	+4 LRF		Stuart, M41C Walker, M3 Halftrack w/90mm
90mm/L? SB (Switzerland)	50-83	9h	3	10	-1	-	-	+4 LRF		Pak 50 / Pak 57
	84-15	11h	3	10	-1	-	-	+4 LRF		
90mm/L40 R (Germany)	65-15	9/10h	3	12	-1	-	-	+4 LRF	HVAP/HEAT/HESH	Rheinmetall BK90/L40 JPz Kanone
90mm/L? R (France)	50-53	9	3	12	-1	-	-	+4 LRF	HVAP	ARL 44
90mm/L50 R (US)	50-54	9	3	12	-1	-	-	+4 LRF	HVAP	M47 series, M48A1-A4
	55-15	9/10h	3	12	-1	-	-	+4 LRF	HVAP/HEAT	
90mm/L50-52 SB (France)	67-79	10h	3	12	-1	-	-	+4 LRF		VBC-90, ERC-90, AMX-13 90mm, AMX-10 PAC 90
	80-84	11h	3	12	-1	-	-	+4 LRF		
	85-15	11/11h	3	12	-1	-	-	+4 LRF	OFL-90 F1 APFSDS	
90mm/L54 SB (Sweden)	75-79	10h	3	10	-1	-	-	+2 LRF		Ikv-91
	80-15	11h	3	10	-1	-	-	+2 LRF		
90mm RR (Sweden)	62-76	11h	2	5	-	-	-	+2 LRF	PV-1110	Jeep w/90mm RR
	77-83	12h	2	5	-	-	-	+2 LRF		
	84-15	15h	2	5	-	-	-	+2 LRF		
90mm RR (US)	60-95	11h	1	3	-1	-	-	+2 LRF	M67 90mm RR	Jeep w/90mm RR
100mm Mtr (China)	71-88	-	-	-	-	47	hs	+2 LRF		
	89-15	-	-	-	-	64	hs	+2 LRF		
100mm/L22? R (China)	96-15	5he	2	10	-1	-	-	+4 LRF	HE	Type 97 IFV
100mm/L22? R (Russia)	90-15	5he	2	10	-1	-	-	+4 LRF	HE	BMP-3
100mm/L56 R (China)	60-67	9/11h	2	10	-1	-	-	+2 LRF	BR-412D APCBC, BK-5 HEAT	Type 59 MBT, Type 59-I MBT,
	68-79	10/11h	2	10	-1	-	-	+2 LRF	3BM-8 HVAPDS, BK-5, BK-5M HEAT	Type 69-II MBT
	80-15	12/11h	2	10	-1	-	-	+2 LRF	3BM-20 APFSDS, BK-5M HEAT	
100mm/L56? SB (China)	80-82	11/11h	2	10	-1	-	-	+2 LRF	AP-1 APFSDS	Type 69-I MBT
	83-15	13	2	10	-1	-	-	+2 LRF	83-85 AP-2 APFSDS; 86-15 AP-100-2 APFSDS	
100mm/L56 R (Russia)	44-45	8	2	10	-1	-	-	+2 LRF	BR-412B APC	T-54 series, T-55 series, SU-100
	46-59	9	2	10	-1	-	-	+2 LRF	BR-412D APCBC	
	60-67	9/11h	2	10	-1	-	-	+2 LRF	BR-412D APCBC, BK-5 HEAT	
	68-79	10/11h	2	10	-1	-	-	+2 LRF	3BM-6, 3BM-8 HVAPDS, BK-5, BK-5M HEAT	
	80-15	12/11h	2	10	-1	-	-	+2 LRF	3BM-20 APFSDS, BK-5M HEAT	
100mm/L60 R (Russia)	44-45	8	2	10	-1	-	-	+2 LRF	BR-412B APC	BS-3 Field Gun
	46-59	9	2	10	-1	-	-	+2 LRF	BR-412D APCBC	
	60-67	9/11h	2	10	-1	-	-	+2 LRF	BR-412D APCBC, BK-5 HEAT	
	68-79	10/11h	2	10	-1	-	-	+2 LRF	3BM-8 HVAPDS, BK-5, BK-5M HEAT	
	80-15	12/11h	2	10	-1	-	-	+2 LRF	3BM-20 APFSDS, BK-5M HEAT	
100mm/L85 SB (Russia)	55-58	11	3	12	-1	-	-	+2 LRF	3BM-2 APFSDS	T-12 AT Gun, MT-12 AT Gun
	59-79	11/11h	3	12	-1	-	-	+2 LRF	3BM-2 APFSDS W	
	80-15	12/11h	3	12	-1	-	-	+2 LRF	3BM-20, 3BM-25 APFSDS W	
105mm/L? (France)	55-15	10h	3	6	-1	150	hs			Mk 61
105mm/L14 R (Italy)	57-15	8h	3	6	-1	105	hs			m56 105mm Pack How
105mm/L? R (S.Korea)	80?-15	8h	3	8	-1	147	hs			KH-178
105mm/L22 R (Sweden)	50-15	8h	3	6	-1	109	hs			Sav m/43
105mm/L23 R (US)	65-15	6h	3	6	-1	112	hsc			M4(105) Sherman
105mm/L? R (US)	50-15	8h	3	6	-1	112	hsc			M1/M101

105mm/L? R (US)	64-15	8h	3	6	-1	115	hs		M102, M108
105mm/L30 R (Japan)	74-99	8h	3	10	-1	145	hs		Type 74 SP How
105mm/L? R (US)	90-15	8h	3	10	-1	145	hs		M119
105mm/L? R (Sweden)	50?-15	5he	3	10	-1	156	hs		Type 4140
105mm/L37 R (UK)	74-15	11h	3	10	-1	172	hs	howitzer	Abbot, L118 Light Gun
105mm/L44 R (France)	65-15	11h	3	14	-1	-	-	+4 LRF	OCC 105 F1 HEAT
105mm/L48 SB (France)	65-86	11h	3	14	-1	-	-	+4 LRF	OCC 105 F1 HEAT
	87-15	12/11h	3	14	-1	-	-	+4 LRF	APFSDS OFL 105 F1; OCC 105 F1 to F3 HEAT
105mm/L51 R (China)	83-94	14	3	14	-1	-	-	+2 LRF	Type 59 APFSDS, Type 83A APFSDS
	95-15	15	3	14	-1	-	-	+2 LRF	Type 93 APFSDS
105mm/L51 R (Germany)	65-79	11/11h	3	16	-1	-	-	+4 LRF	RO L52A1 APDS?
	80-93	13	3	16	-1	-	-	+4 LRF	80-82 DM23 (Israeli M111); 83-93 DM33 (Israeli M413)
	94-15	14	3	16	-1	-	-	+4 LRF	DM63 (Israeli M426)
105mm/L51 R (India)	60-90	11/11h	3	16	-1	-	-	+4 LRF	RO L28A1, RO L52A1 APDS
	91-15	13	3	16	-1	-	-	+4 LRF	Indian L23 penetrator copy
105mm/L51 R (Israel)	65-78	11/11h	3	16	-1	-	-	+4 LRF	M728 APDS
	79-92	13	3	16	-1	-	-	+4 LRF	79-82 M111 APFSDS W; 83-92 M413 APFSDS W
	93-15	14	3	16	-1	-	-	+4 LRF	M426 APFSDS W
105mm/L51 R (Japan)	70-83	11/11h	3	16	-1	-	-	+4 LRF	RO L28A1, RO L52A1 APDS
	84-15	13/12h	3	16	-1	-	-	+4 LRF	M735 APFSDS, L64 APFSDS
105mm/L51 R (S. Korea)	86-15	13/12h	3	16	-1	-	-	+4 LRF	M735 APFSDS W
105mm/L51 R (Switzerland)	60-79	11/11h	3	16	-1	-	-	+4 LRF	M728 APDS
	80-93	13	3	16	-1	-	-	+4 LRF	M111/M413 APFSDS W
	94-15	14	3	16	-1	-	-	+4 LRF	M426 APFSDS W?
105mm/L51 R (Taiwan)	60-79	11/11h	3	16	-1	-	-	+4 LRF	M728 APDS
	80-15	13/12h	3	16	-1	-	-	+4 LRF	M735 APFSDS W
105mm/L51 R (US)	60-78	11/11h	3	16	-1	-	-	+4 LRF	M392A2, M728 APDS
	79-82	13/12h	3	16	-1	-	-	+4 LRF	M735 APFSDS W
	83-15	14	3	16	-1	-	-	+4 LRF	83-85 M774 APFSDSDU, 86-15 M833 APFSDSDU
	90-15	15	3	16	-1	-	-	+4 LRF	M900 APFSDSDU
105mm/L51 R (UK)	60-82	11/11h	3	16	-1	-	-	+4 LRF	RO L28A1, RO L52A1 APDS
	83-15	13/12h	3	16	-1	-	-	+4 LRF	83-92 L64 APFSDS; 93-15 H6/62 APFSDS
105mm/L52 R (Italy)	77-84	11/11h	3	16	-1	-	-	+4 LRF	RO L28A1, RO L52A1 APDS?
	85-93	13	3	16	-1	-	-	+4 LRF	M111/M413 APFSDS?
	94-15	14	3	16	-1	-	-	+4 LRF	M426 APFSDS?
105mm/L56 R (France)	65-80	11h	3	16	-1	-	-	+4 LRF	OCC 105 F1 HEAT
	81-88	12	3	16	-1	-	-	+4 LRF	OFL 105 G1 APFSDS W
	89-95	14	3	16	-1	-	-	+4 LRF	OFL 105 G2 APFSDS W
	96-15	15	3	16	-1	-	-	+4 LRF	OFL 105 E2 APFSDS W
105mm/L58 R (China)	94-15	16	3	16	-1	-	-	+2 LRF	Type 93 APFSDS
105mm/L62 R (Sweden)	60-82	11	2	16	-1	-	-	+4 LRF	RO L28A1, RO L52A1 APDS
	83-15	13	2	16	-1	-	-	+4 LRF	L64 APFSDS
105mm RR (US)	52-65?	11h	3	4	-1	-	-		M27 105mm RR
106mm RR (US)	55-94	11h	3	8	-1	-	-		Jeep w/106mm RR, HS.30 w/106mm RR
	95-15	14h	3	8	-1	-	-		
107mm Mtr (Japan)	52-15	-	-	-	-	68	hs		SB 4.2-inch Mtr
107mm Mtr (UK)	50-55?	-	-	-	-	36	hs		M106, K281A1
107mm Mtr (US)	50-51	-	-	-	-	40	hsc		
	52-15	-	-	-	-	68	hsc		
107mm Rckt (China)	63-15	-	-	-	-	21-85	hs	Light	Type 63 MRL

107mm RR (Russia)	55-94	10h	3	4	-1	-	-		B-11 RR
115mm/L55 SB (Russia)	59-79	11/12h	2	12	-1	-	-	+2 LRF	3BM-3, 3BM-4, 3BM-6 APFSDS T-62 series
	80-84	13/12h	2	12	-1	-	-	+2 LRF	3BM-21 APFSDS W
	85-15	14	2	12	-1	-	-	+2 LRF	3BM-28 APFSDS W
110mm Rckt (Germany)	69-79	-	-	-	-	35-140	hs	Medium	LARS / LARS II
	80-15	-	-	-	-	35-140	hsim		
114mm Rckt (US)	50-55?	-	-	-	-	12-48	h	Light, M16 rckt	T66 Honeycomb
117mm Rckt (Taiwan)	50-55?	-	-	-	-	38-150	h	Light	Kung Feng 4, Kung Feng 6
120mm Mtr	50-15	-	-	-	-	57	hs		
120mm Mtr (China)	50-86	-	-	-	-	57	hs		
	87-15	-	-	-	-	77	hs		
120mm Mtr (Finland)	40-15	-	-	-	-	65	hs	Tampella M1940	
120mm/L30 GMtr (Finland)	06-15	13h	3	10	-	100	hs	AMOS	AMV AMOS
120mm Mtr (France)	612-15	-	-	-	-	81	hs		
120mm Lt Mtr (Israel)	?-15	-	-	-	-	50	hs		K-5
120mm Lt Mtr (Israel)	2-15	-	-	-	-	72	hs		K-6
120mm Mtr (Israel)	?-15	-	-	-	-	65	hs		M-65
120mm Hvy Mtr (Israel)	?-15	-	-	-	-	95	hs		A-7
120mm Mtr (Japan)	92-15	-	-	-	-	81	hs		Type 96 SP Mtr
120mm Mtr (Russia)	50-15	-	-	-	-	57	hs		M-43
120mm Mtr (Russia)	60-15	-	-	-	-	71	hs		2B11
120mm Mtr (US)	91-15	-	-	-	-	72	hs		
120mm RR (UK)		12h	2	6	-1	-	-	HESH, no spotting rifle/gun	BAT
120mm RR (UK)		12h	2	8	-1	-	-	HESH, has spotting rifle/gun	L6 Wombat, Combat, Mobot
120mm Gun-Mtr (China)	01-15	13h	2	8	+0	88	hs	HEAT,HE	PLL05
120mm Gun-Mtr (Russia)	81-15	13h	2	8	+0	87	hs	HEAT,HE, & Flechette direct fire	2S9, 2S23
120mm Gun-Mtr (Russia)	90-15	13h	3	8	+0	87	hs	HEAT,HE, & Flechette direct fire	2S9, 2S23
120mm/L44 SB (Germany)	80-85	14	3	20	-1	-	+4 Good LRF	80-82 DM-13; 83-85 DM-23	Leopard 2 series, Type 90 MBT
	86-95	15	3	20	-1	-	+4 Good LRF	DM-33	
	96-15	17	3	20	-1	-	+4 Good LRF	DM-53	
	95-15	15	3	20	-1	-	+4 Good LRF	DM-43A1	(round not bought by German Army)
120mm/L44 SB (Israel)	87	14	3	20	-1	-	+4 Good LRF	DM-23?	Merkava 3, Sabra, Sabra II
	88-98	15	3	20	-1	-	+4 Good LRF	DM-33?	
	99-15	17	3	20	-1	-	+4 Good LRF	DM-53?	
120mm/L44 SB (S. Korea)	95-15	15	3	20	-1	-	+4 Good LRF	DM-33 or DM-43A1?	K1A MBT
120mm/L44 SB (US)	85-89	15	3	20	-1	-	+4 Good LRF	M829 APFSDSDU	M1A1 series, M1A2 series
	90-94	16	3	20	-1	-	+4 Good LRF	M829A1 APFSDSDU	
	95-00	17	3	20	-1	-	+4 Good LRF	M829A2 APFSDSDU	
	01-15	18	3	20	-1	-	+4 Good LRF	M829A3 APFSDSDU	
120mm/L52 SB (France)	90-94	15	2	20	-1	-	+4 Good LRF	GIAT OFL 120 F1	Leclerc
	95-15	16	2	20	-1	-	+4 Good LRF	GIAT OFL 120 F2	
120mm/L55 SB (Germany)	96-15	17	3	20	-1	-	+4 Good LRF	DM-53	Leopard 2A6
120mm/L55 R (India)	90-15	14	3	16	-1	-	+4 LRF; +8 Good LRF	Indian copy of Russian 125mm penetrator	Arjun
120mm/L55 R (Jordan)	68-83	12/12h	3	16	-1	-	+4 LRF; +8 Good LRF		Khalid
	84-15	14	3	16	-1	-	+4 LRF; +8 Good LRF		
120mm/L55 R L11 (UK)	60-83	12/12h	3	16	-1	-	+4 Adv. RMG; +8 LRF	APDS L15A4	Chieftan series, Challenger 1
	84-90	14	3	16	-1	-	+4 Adv. RMG; +8 LRF	APFSDS L23A1	
	91-99	15	3	16	-1	-	+4 Adv. RMG; +8 LRF	APFSDSDU Charm1 L26	
	00-15	16	3	16	-1	-	+4 Adv. RMG; +8 LRF	APFSDSDU L28 penetrator?	
120mm/L55 R L30 (UK)	90-95	16	3	16	-1	-	+4 LRF; +8 Good LRF	APFSDSDU Charm1 L26A1	Challenger 2

	96-15	17	3	16	-1	-	-	+4 LRF; +8 Good LRF	APFSDSDU Charm 3 L-27, L28	
120mm/L60 R (US)	54-59	10/11h	3	16	-1	-	-	M??		M103
	60-75	10/12h	3	16	-1	-	-			
120mm/L60 R (UK)	54-59	10/11h	3	16	-1	-	-	RO ?? APDS		Conqueror
	60-75	10/12h	3	16	-1	-	-	RO ?? APDS		
122mm Rckt (China)	82-15	-	-	-	-	50-200	hsc	Medium		Type 81 MRL
122mm Rckt (China)	85-15	-	-	-	-	50-300	hscim	Medium		Type 89 MRL
122mm Rckt (Czech)	72-79	-	-	-	-	50-200	hsc	Medium		RM-70 MRL
	80-15	-	-	-	-	50-200	hscim			
122mm Rckt (Russia)	62-94	-	-	-	-	50-200	hsc	Medium		BM-21 MRL
	95-15	-	-	-	-	50-350	hsci	multiple rocket ranges		
122mm/L23 R (Russia)	50-15	7h	3	6	-1	118	hsc			M-30
122mm/L35 R (China)	86-15	12h	3	8	-1	153	hs			W86/Type 86
122mm/L35 R (Russia)	67-15	12h	3	8	-1	153	hsc			D-30
122mm/L43 R D-25 (Russia)	40-42	9	2	10	-1	-	-	+2 LRF	BR-471, BR-471B APC	IS-3, IS-4, IS-122, T-10, T-10A/B
	43-67	9/10h	2	10	-1	-	-	+2 LRF	BR-472 APCBC; BP-460 HEAT	
	68-15	10/10h	2	10	-1	-	-	+2 LRF	BM-11 APDS; BP-460 HEAT	
122mm/L46 R (Russia)	58-67	10/10h	2	12	-1	-	-	+2 LRF	BR-472 APCBC; BP-460A HEAT	T-10M
	68-15	11/10h	2	12	-1	-	-	+2 LRF	BM-11 APDS; BP-460A HEAT	
122mm/L46 A-19 R (Russia)	50-15	9	1	10	-1	208	hsc	+2 LRF	BR-472 APCBC	M1931/37
122mm/L46 D-74 R (Russia)	57-15	10	2	10	-1	240	hsc	+2 LRF	BR-472 APCBC	D-74
125mm/L48 SB (China)	83-96	15	2	12	-1	-	-	+2 LRF	Type 1	Type 90 MBT, Type 85-II MBT,
	97-15	16	2	12	-1	-	-	+2 LRF	Type 2	Type 85-III MBT
125mm/L48m SB (China)	98-15	17	2	12	-1	-	-	+2 LRF	Type 3	Type 98 MBT
125mm/L48 SB (Russia)	69	11/12h	2	12	-1	-	-	+2 LRF	3BM-9 APFSDS, 3BK-12 HEAT	T-64 series, T-72 series, T-80 series, T-90
	70-71	12/12h	2	12	-1	-	-	+2 LRF	3BM-12 APFSDS; 3BK-12, 3BK-14 HEAT	
	72-78	13/12h	2	12	-1	-	-	+2 LRF	3BM-15,-17 APFSDS; 3BK-12, 3BK-14 HEAT	
	79-82	14/13h	2	12	-1	-	-	+2 LRF	3BM-22,-26 APFSDS, 3BK-18 HEAT	
	83-85	15	2	12	-1	-	-	+2 LRF	3BM-29 APFSDS, 3BK-18 HEAT	
	86-96	15	2	14	-1	-	-	+2 LRF	3BM-32,-42 APFSDS, 3BK-18 HEAT	
	97-15	16/15h	2	14	-1	-	-	+2 LRF	3BM-42M APFSDS, 3BK-29 HEAT?	
125mm/L48 SB Export (Russia)	72-78	12/12h	2	12	-1	-	-	+2 LRF	3BM-12 APFSDS; 3BK-12, 3BK-14 HEAT	T-72 Export, T-80 Export series
	79-85	13/12h	2	12	-1	-	-	+2 LRF	3BM-15,-17 APFSDS; 3BK-12, 3BK-14 HEAT	
	86-96	14/13h	2	14	-1	-	-	+2 LRF	3BM-22,-26 APFSDS, 3BK-18 HEAT	
	97-15	15	2	14	-1	-	-	+2 LRF	3BM-29 APFSDS, 3BK-18 HEAT	
127mm Rckt (Brazil)	83-15	-	-	-	-	90-300	h	Medium		SS-30 ASTROS II
127mm Rckt (S. Africa)	81-94?	-	-	-	-	75-227	h	Medium		Valkiri-22, Bataleur
	95?-15	-	-	-	-	75-360	h			
128mm Rckt (Yugoslavia)	63?-15	-	-	-	-	22-87	h	Light		M-63 Plamen
128mm Rckt (Yugoslavia)	75-15	-	-	-	-	50-206	h	Medium		M-77 Oganj
130mm Rckt (China)	71?-15	-	-	-	-	25-100	h	Medium		Type 70 MRL
130mm Rckt (Japan)	75-15	-	-	-	-	36-145	h	Heavy		Type 75 MRL
130mm Rckt (S.Korea)	85?-95?	-	-	-	-	55-220	h	Medium		Kooryong MRL
	96?-15	-	-	-	-	90-360	h			
130mm/L52 R (China)	54-84	11	3	10	-1	270	hs	APC		Type 59 130mm FG
	85-15	11	3	10	-1	270	hs			
130mm/L52 R (Russia)	54-15	11	3	10	-1	275	hs	APC		M-46
132mm Rckt (Russia)	50-15	-	-	-	-	20-90	hsc	Medium		BM-13
140mm Rckt (Russia)	59-15	-	-	-	-	25-98	hsc	Medium		BM-14, RPU-14
140mm Rckt (Spain)	80-15	-	-	-	-	60-280	hm	Medium		Teruel

140mm/L30 R 5.5" Gun (UK)	50-15	7he	2	8	+0	140	h		5.5" Gun
152mm/L20 Launcher (US)	67-15	14h	2	10	+0	-	-	+2 LRF	Sheridan series
152mm/L? R (Russia)	43-15	7he	2	6	+0	150	hs		2A61
152mm/L23 R (Russia)	43-15	9h	2	6	+0	124	hc		D-1
152mm/L28 R (Russia)	43-15	8	2	8	+0	168	hsc		ISU-152, ML-20
152mm/L29 R (China)	66-94	8	2	8	+0	172	h		Type 66, Type 83
	95-15	8	2	8	+0	172	hl		
152mm/L34 R (Russia)	55-79	8	2	8	+0	185	hsc		D-20
	80-84	8	2	8	+0	185	hsci		
	85-15	8	2	8	+0	185	hscil		
152mm/L? R (Czech)	81-15	15h	2	8	+0	185	hs		DANA
152mm/L49 R (Russia)	76-79	7he	2	8	+0	270	hsc		2A36
	80-84	7he	2	8	+0	270	hsci		
	85-15	7he	2	8	+0	270	hscil		
152mm/L52 R (China)	07?-15	7he	2	8	+0	247	hl		PLZ05
152mm/L52 R (Russia)	85-15	7he	2	8	+0	247	hscil		2A65, 2S19
152mm/L56 R (China)	86-15	7he	2	8	+0	300	hs		Type 83 152mm Gun
155mm/L22 R (France)	50-15	7he	2	6	+0	180	hs		OB-155-50 BF
155mm/L39 R (UK)	93-15	7he	2	8	+0	240	hsim		AS-90
155mm/L23 R (US)	50-15	7he	2	6	+0	145	hsc		M109, M41 HMC
155mm/L30 R (Japan)	75-15	7he	2	8	+0	190	hs		Type 75
155mm/L39 R (US)	73-79	7he	2	8	+0	180	hsc		M109A1-A4
	80-84	7he	2	8	+0	180	hscim		
	85-15	7he	2	8	+0	180	hsciml		
155mm/L33 R (France)	65?-15	7he	2	8	+0	200	hs		Mk F3
155mm/L33 R (Israel)	70-15	7he	2	8	+0	210	hs		M-68, L-33
155mm/L36 R (US)	50-55	9	2	8	+0	163	hsc		M12 GMC
155mm/L38 R (Interntl.)	78-15	7he	2	8	+0	247	hs		FH-70
155mm/L? R (S.Korea)	78-15	7he	2	8	+0	220	hs		KH-179
155mm/L38 R (Sweden)	78-15	7he	2	8	+0	220	h		FH-77
155mm/L39 R (Israel)	70-15	7he	2	8	+0	235	hs		M-71
155mm/L39 R (Singapore)	03-15	7he	2	8	+0	235	hs		SPPH 1 Primus
155mm/L39 R (Singapore)		7he	2	8	+0	190	hs		SLWH Pegasus
155mm/L39 R (US)	92-15	7he	2	8	+0	235	hsciml		M109A6
155mm Excalibur (US)	07-09	7he	2	8	+0	350	gh		M109A6, M777
	10-15	7he	2	8	+0	350	ghi		
155mm/L40 R (France)	77-79	7he	2	8	+0	235	hs		GCT 155mm
	80-15	7he	2	8	+0	235	hsim		
155mm/L? R (Sweden)	67-03	7he	4	8	+0	256	h		Bandkanon 1
155mm/L45 R (Austria)	82-15	7he	2	8	+0	300	hs		GHN-45
155mm/L45 R (China)	88?-15	7he	2	8	+0	300	hs		PLZ45
155mm/L45 R (S.Africa)	82-15	7he	2	8	+0	300	hs		G5
155mm/L45 R (US)	50-55	9	2	8	+0	232	hsc		M40 GMC
155mm/L52 R (France)		7he	3	8	+0	300	hsim		
155mm/L52 R (Germany)		7he	3	8	+0	300	hsim		PzH 2000
155mm/L52 R (Israel)	06-15	7he	3	8	+0	300	hsim		ATMOS 2000
155mm/L52 R (Japan)	99-15	7he	2	8	+0	300	hs		Type 99 SP How
155mm/L52 R (Singapore)	93-15	7he	2	8	+0	300	hs		FH2000
155mm/L52 R (S.Korea)	99-15	7he	2	8	+0	300	hs		K-9
160mm Mtr (Israel)	?-15	-	-	-	-	96	hs		M-66

160mm Mtr (Russia)	50-15	-	-	-	-	52	hs		M-43
160mm Mtr (Russia)	55-15	-	-	-	-	80	hs		M-160
165mm DG (UK)	54-15	7he	2	12	+0	-	-		Centurion AVRE, M728
170mm/L? R (N.Korea)	78?-15	12he	2	8	+0	400	h		M-1978 KOKSAN
175mm/L? R (US)	62-15	12he	2	8	+0	327	h		M107
180mm Rckt (Brazil)	83-15	-	-	-	-	150-350	him	Heavy	SS-40 ASTROS II
180mm/L? R (Russia)	54-15	12he	2	8	+0	304	h		S-23
203mm/L25 R (US)	50-15	18he	2	6	+0	168	h		M43 GMC, M110
203mm/L? R (US)	77	18he	2	6	+0	213	hci		M110A1
	78-15	18he	2	6	+0	229	hci		M110A2
203mm/L? R (Russia)	75-15	18he	2	8	+0	375	hci		2S7
209mm Petard (UK)	50-54	20he	2	C	+0	-	-		Churchill AVRE
220mm Rckt (Russia)	75-15	-	-	-	-	100-350	hcim	Heavy	9K57 Uragan
220mm TB Rckt (Russia)	80-15	-	-	-	-	5-50	h	Fuel air explosive	TOS-1
227mm Rckt (US)	83-15	-	-	-	-	75-300	i		MLRS
227mm GMLRS Rckt (US)	05-15	-	-	-	-	150-600	hi	Heavy	HIMARS, LIMAWS(R)
240mm Mtr (Russia)	52	-	-	-	-	97	h		2S4
240mm Rckt (N.Korea)	85-15	-	-	-	-	110-430	h	Heavy	M-1985 MRL
240mm Rckt (Russia)	52?-15	-	-	-	-	25-110	hsc	Heavy	BM-24
273mm Rckt (China)	83-15	-	-	-	-	200-400	h	Very Heavy	Type 83 MRL
290mm Rckt (Israel)	?-15	-	-	-	-	100-400	hi	Very Heavy	IMI MRL
300mm Rckt (Brazil)	83-15	-	-	-	-	200-600	him	Very Heavy	SS-60 ASTROS II
300mm Rckt (Brazil)	83-15	-	-	-	-	220-900	him	Very Heavy	SS-80 ASTROS II
300mm Rckt (China)	00-15	-	-	-	-	400-850	i		PHL03
300mm Rckt (China)	04-15	-	-	-	-	220-900	hi		PHL03
300mm Rckt (Russia)	87-15	-	-	-	-	200-700	hi		9A52 Smerch
307mm Rckt (Japan)	67-15	-	-	-	-	70-280	h		Type 75

B.18 High Explosive Armor Piercing & Infantry AT Weapons Chart

Weapon	Period	Pen	ROF	Rng	Notes
Generic					
Improvised (Grenades, etc.)	all	2he	1	C	generic
Early AT Hand Grenade (Thrown)	all	4he	1	C	generic
AT Hand Grenade (Thrown)	all	6h	1	C	generic
AT Hand Grenade (Placed)	all	7h	1	C	generic
AT Rifle Grenade	all	4h	1	C	generic
Flamethrower	all	4he	3	1	generic
105mm RR	50+	10h	2	6	105mm RR; towed
106mm RR	55-94	10h	2	8	106mm RR; towed or vehicle-
	95-10	14h	2	8	mounted
Bazooka	50+	9h	1	2	RR; LAW
Argentina					
Mathogo	75+	11h1	1	4-20	mp
Mathogo 2	78+	11h1	1	4-30	mp
Cibel -2K	85+	13h2	1	1-10	mp
M1968 105mm RR	68+?	8h	2	8	RR; towed
M1974 FMK1 Mod 1	74+	10h	2	10	RR; towed
Belgium					
RL-100	50+?	10h	1	3	LAW; mp
NR-415	55+	8h	1	1	LAW; mp
MECAR Light Gun	60+?	10h	2	6	ATG; towed
RL-83 Blindicide	?	10h	1	4	RL; LAW; same as RLC-83
China					
Red Arrow 8A	85+?	12h2	1	1-30	HJ-8/A; mp
Red Arrow 8C	90+?	13h2	1	1-30	HJ-8/C; mp; tandem warhead
Red Arrow 8E	95+?	13h2	1	1-40	HJ-8/E; mp; tandem warhead
Red Arrow 8L	01+?	14h2	1	1-40	HJ-8/L; mp; tandem warhead
Red Arrow 9	98+?	16h2	1	1-50	HJ-9; TI; tandem warhead; may be copy of MAPATS
Red Arrow 73	79+?	11h1	1	5-30	mp; copy of Russian AT-3
Red Arrow 73C	85+?	12h2	1	5-30	mp; copy of Russian AT-3
Type 51	51+?	9h	1	1	RL; LAW; copy US M20 bazooka
Type 52	51+?	9h	2	6	RR; towed; copy US M20 RR
Type 56	56+?	9h	1	1	RL; LAW; copy of RPG-2
Type 65	65+?	9h	2	3	RR; towed; copy of B-10
Type 69	69+?	10h	1	2	RL; LAW; copy of RPG-7
Czechoslovakia					
M59/M59A	59+?	9h	1	8	RR; towed
Egypt					
Cobra	93+?	14h	1	2	LAW; tandem warhead
Finland					
M55 55mm	55+?	8h	1	2	LAW
SM58-61 ATG	58+?	10h	2	6	RR; mp
France					
DARD 120	00+?	14h	1	4	RL; LAW
ENTAC	57+	14h1	1	4-20	
Eryx	94+	18h2	1	1-6	
Apilas	84+	14h	1	2	RL; LAW
LRAC-89	69+?	11h	1	4	RL; LAW
SS-10	55+?	12h1	1	6-16	can be jeep-mounted
SS-11	56+?	13h1	1	5-30	
SS-12	75+?	13h1	1	4-60	
HOT 1	77+?	15h2	1	1-40	
HOT 2	83+?	16h2	1	1-40	
HOT 2T	90+?	18h2	1	1-40	tandem warhead
HOT 3	97+?	19h2	1	1-40	tandem warhead
LRAC F1	85+?	11h	1	3	RL; LAW
Germany					
Faustpatrone	aug43-45	7h	1	C	RL; LAW
Panzerfaust	aug43-45	8h	1	C	RL; LAW
Panzerschrek	43-45	8h	1	2	RL; MAW
Panzerfaust 3	90+?	14h	1	2	RL; LAW
Panzerfaust 3T	96+?	15h	1	2	RL; LAW
Panzerfaust 3IT	07+?	16h	1	4	RL; LAW
PzF 44	63-75	10h	1	2	RL; LAW

	76-10	11h	1	2	RL; LAW
Armbrust	80-88	10h	1	2	RL; LAW
Mamba	75+	12h1	1	3-20	
Cobra 1600	60+	12h1	1	4-16	
Cobra 2000	62+?	12h1	1	4-20	
Greece					
EM67 RR	67+?	10h	1	6	RR; MAW
International					
Milan	75+	14h2	1	1-20	mp
Milan 2/3	85+	17h2	1	1-20	mp; TI; tandem warhead
Trigat-LR / PARS 3 LR	05+?	18h3	1	2-40	tandem warhead
Trigat-MR	05+?	18h3	1	2-20	mp; tandem warhead
Israel					
MAPATS	85+	16h2	1	1-50	mp; TI; can be fired NLOS, but treat as 2nd gen then
Spike-SR	99+	14h3†	1	2-8	mp; TI; can be fired NLOS, but treat as 2nd gen then; tandem warhead
Spike-MR (Gil)	99+	14h3†	1	2-25	mp; TI; can be fired NLOS, but treat as 2nd gen then; tandem warhead
Spike-LR (Gil)	99+	14h3†	1	2-40	TI; can be fired NLOS, but treat as 2nd gen then; tandem warhead
Spike-ER (NTD)	99+	14h3†	1	2-80	TI; can be fired NLOS, but treat as 2nd gen then; tandem warhead
B-300 Mk 1	00+?	11h	1	3	RL; LAW
B-300 Mk 2	00+?	11h†	1	3	RL; LAW
RPG-7	90+?	10h	1	2	RL; LAW
LAHAT	04+?	16h2†	1	1-80	laser homing
Italy					
Folgore	75+?	11h	1	6	RR; mp
Mosquito	??	14h1	1	4-23	
Japan					
Type 64	64+	12h1	1	3-18	mp
Type 79	72+	13h2	1	1-40	mp
Type 87	87+	12h2	1	1-20	mp
Type 96 NLOS	96+	17h2	1	5-90n	
Type 01 LMAT	01+	16h3†	1	1-20	mp
Poland					
AT Rifle (wz.35)	36+	1	3	4	7.92mm
Russia					
AT Rifle (PTRD/PTRS)	41+	2	3	4	
AT-1 Snapper	58+	10h1	1	6-20	
3M7 Drakon	64+	12h1	1	3-33	
AT-2a Swatter	64+	14h1	1	10-25	Fleyta missile
AT-2b Swatter	67+	14h1	1	10-35	Skorpion missile
AT-2c Swatter	77+	14h2	1	10-40	Skorpion-P missile
AT-3b Sagger	61+	11h1	1	5-30	9M14 Malyutka; mp
AT-3c Sagger	72+	12h2	1	5-30	9M14P1 Malyutka-P; mp
AT-3d Sagger	90+	15h2	1	1-30	9M12-2 Malyutka-2; mp; TI optional 93+
AT-4 Spigot	73+	11h2	1	1-20	9h111 Fagot; mp
AT-4b Spigot	85+	12h2	1	1-25	9M111-2; mp
AT-4c Spigot	91+	13h2	1	1-25	9h111-M Faktoria; mp; TI available 93+; tandem warhead
AT-5 Spandrel	77+	13h2	1	1-40	9M113
AT-5 Spandrel-M	95+?	16h2	1	1-40	9M113-M; tandem warhead; TI optional 93+
AT-6 Spiral	78+	13h2	1	1-50	9M114M Kokon
AT-6 Spiral-M1	89+	16h2	1	1-60	9M114M1; tandem warhead
AT-6 Spiral-M2	90+	16h2	1	1-70	9M114M2; tandem warhead; TI optional 93+
AT-7a Saxhorn	79+	12h2	1	1-10	9h115 Metis; mp
AT-8 Songster	75+?	12h2	1	1-40	
AT-9 Kokon	90+	17h2	1	1-70	9M114 Kokon; See AT-6; tandem warhead
AT-10 Stabber	85+	13h2	1	1-40	9M117 Bastion/Kastet
AT-10b Stabber	96+?	14h2	1	1-40	9M117M Bastion/Kastet
AT-10c Stabber	99+	14h2	1	1-55	9M117M1 Bastion/Kastet
AT-11 Sniper	87+	15h2	1	1-40	Svir (for T-72B); tandem warhead
AT-11 Sniper	87+	15h2	1	1-50	Refleks (for T-80U); tandem warhead
AT-12 Swinger	85+	13h2	1	1-40	9M117 Sheksna
AT-12b Swinger	96+?	14h2	1	1-40	9M117M Sheksna; TI
AT-12c Swinger	99+	14h2	1	1-55	9M117M1 Sheksna; TI
AT-13 Metis-M	90+	16h2	1	1-15	9h115-2 Metis-M; mp; tandem warhead; TI optional 93+
AT-14 Kornet	94+	19h2	1	1-55	TI; tandem warhead
AT-15 Krizantema	96+	19h3	1	1-50	tandem warhead; TI optional
AT-16 Vikhr	92+	17h3	1	1-80	tandem warhead; TI optional
SPG-9	76-79	9h	2	8	Rckt Gun; PG-9V; mp
	80-89	10h	2	8	PG-9VN

B-11	90-10	11h	2	8	PG-9VNT; tandem warhead
B-10	55+	10h	3	4	107mm RR; towed
RPG-2	55+?	9h	3	4	82mm RR; towed
RPG-7	49-70	8h	1	1	RL; LAW
	62-76	9h	1	3	RL; LAW, PG-7VL
	78-87	12h	1	3	RL; LAW, PG-7VL
	89-10	14h	1	2	RL; LAW; PG-7VR tandem warhead
RPG-16	71-15	10h	1	4	RL; MAW
RPG-29	90-15	14h	1	3	RL; MAW; tandem warhead
RPG-18	73-15	10h	1	1	RL; LAW
RPG-22	81-15	11h	1	1	RL; LAW
RPG-26	86-15	12h	1	1	RL; LAW
RPG-27	90-15	14h	1	1	RL; LAW; tandem warhead
RPG-28	07-15	17h	1	1	RL; LAW; tandem warhead
South Africa					
ZT-3 Swift	87+	14h2	1	1-40	
ZT-3B Ingwe	98+	19h3	1	2-50	tandem warhead
FT-5		14h	1	4	RL; LAW or MAW
Spain					
M-65	65+?	10h	1	3	RL; LAW or MAW
C-90	85+?	12h	1	2	LAW
Alcotan	05+?	13h	1	4	RL; LAW or MAW
Aries	05+?	18h2	1	1-20	mp; tandem warhead
MACAM-3	08+?	18h3	1	1-50	tandem warhead
Sweden					
Pskott m/46	46-68	8h	1	C	RL; LAW
AT-4	86-94	11h	1	2	RR; LAW
	95+	13h	1	2	RR; LAW
Bantam	63+	12h1	1	3-20	mp
BILL	88+	13h2†	1	2-20	mp; TI from 1990 or 1991
BILL 2	99+	14h2†	1	2-22	mp; TI
Carl Gustaf	48-64	8h	2	3	RR; LAW
	65-93	11h	2	5	RR; LAW
	94-10	13h	2	3	RR; LAW; tandem warhead
Miniman	68+	10h	1	1	LAW
Strix	94+	14h2†	1	5-75	mp; 120mm AT guided mortar round
PV-1110	62-76	11h	2	5	RR; towed
	77-83	12h	2	5	RR; towed
	84-15	15h	2	5	RR; towed; tandem warhead
MBT LAW	09-15	14h3†	1	0-6	top attack, fire and forget
Switzerland					
ADATS	89+	16h2	1	5-80	also a SAM
RL 58/80		10h	1	2	RL; LAW
PAK 50	50+?	11h	2	4	ATG; towed
PAK 57	57+?	11h	2	6	ATG; towed
United Kingdom					
Boys AT Rifle	jul43-50	0	3	4	14mm ATR
PIAT	jul43-50	6h	1	1	RL; LAW
LAW-80	83+	14h	1	4	RL; LAW
Swingfire	69+	14h1	1	2-40	
Swingfire 4	92+	14h2	1	2-40	
Vigilant	63+	12h1	1	2-14	mp
Wombat	63+	11h	2	6	RR; towed
Malkara	55+	14h1	1	3-40	
United States					
M18 57mm RR	45+	7h	2	3	RR; mp
M20 75mm RR	46+	8h	2	2	RR; mp
M72 LAW	65-90	8h	1	1	
	91-10	10h	1	2	
SMAW (B-300, USMC only)	84+	11h	1	3	RL; LAW
M136 (AT-4)	86-00	11h	1	2	LAW
	01+	13h	1	2	LAW
2.36 Bazooka	nov42-50	6h	1	2	LAW/MAW
3.5 Bazooka	50+	9h	1	2	LAW/MAW
M27 105mm RR	50+	10h	2	6	105mm RR; towed
M40 106mm RR	55-94	10h	2	8	106mm RR; towed or vehicle-mounted
	95-10	14h	2	8	
M67 90mm RR	60-95	11h	1	3	MAW, mp

MGM-21A	60-63	12h1	1	6-16	can be jeep-mounted, is the French SS.10
AGM-22	66-76	13h1	1	5-30	is the French SS.11
MGM-32	63-70	14h1	1	4-20	is the French ENTAC
Dragon	75+	12h2	1	1-10	mp
Dragon II (USMC only)	88+	15h2	1	1-15	mp; TI
Javelin	96+	16h3†	1	1-20	mp; TI; tandem warhead
Predator	03+	7h†	1	4	mp
Maverick A-B	72+	22h1	1	6-168	TV guided (day, fair weather)
Maverick D	86+	22h2	1	6-168	IIR guided (night, bad weather)
Maverick E	85+	20he	1	6-168	Laser Guided, 300 lb. penetrating blast-frag warhead
Maverick F	85+	20he	1	6-168	IIR guided, anti-ship, same warhead as -E version
Maverick G	89+	20he	1	6-168	IIR guided, anti-hard target, same warhead as -E version
EFOG-M	05+?	18h3	1	1-100	NLOS missile; tandem warhead
Shillelagh	67+	14h2	1	10-30	
TOW	70+	13h2	1	1-30	mp; BGM-71A
TOW-ER	76+	13h2	1	1-38	mp; BGM-71B
TOW-ER	80+	13h2	1	1-38	mp; TI; BGM-71B
ITOW	82+	14h2	1	1-38	mp; TI; BGM-71C
TOW-2	84+	15h2	1	1-38	mp; TI; BGM-71D
TOW-2A	87+	19h2	1	1-38	mp; TI; tandem warhead; BGM-71E
TOW-2B	92+	15h2†	1	1-38	mp; TI; BGM-71F
Hellfire-A,B,C	85+	19h3	1	15-80	
Hellfire-F	92+	20h3	1	15-70	tandem warhead
Hellfire-K (Hellfire II)	95+	20h3	1	1-90	tandem warhead
Longbow Hellfire-L	98+	20h3	2	1-90	tandem warhead
Hellfire-M	01+	12he3	1	1-90	HE blast-frag warhd, used in Iraq
Hellfire-N	02+?	QC3	1	1-90	Thermobaric warhd, used in Iraq

Appendix C: Army Lists

Pre-1950

These Army Lists are intended to be representative, and to act as a starting point to allow gamers to quickly assemble orders of battle for scenarios. Although we tried to be fairly comprehensive, they are not definitive. In reality most armies have at least two generations of equipment in service at any given time. There are usually variations on the standard organizational scheme, even in peacetime, and war tends to increase that variation. If an army is in a period of organizational transition, there may be wholly different organizations of the same type of unit in service simultaneously. For example, in late 1942, Soviet infantry divisions had no less than three different sets of tables of organization and equipment (TO&Es) in effect simultaneously. Indeed, some armies have never fully settled on standard organizations for tactical and operational units.

Support units are also problematic; such information can be difficult to pin down, and sometimes armies lack the equipment that they list in their TO&Es. Referees are encouraged to add air defense and engineering assets as they deem appropriate.

In the Army Lists, the troop qualities of various organizations of the army are listed, the Artillery Accuracy and Friction Response number or numbers for the army are listed, and Combat Formations available for the army and period are presented. After the combat formations section of each army list comes the Attachments section, followed by the Artillery Support Groups section, and finally the Equipment Notes section.

Combat Formations are composed of Base supporting stands and Combat Units. For western-style armies Combat Formations are usually battalions, and for Russian-style and Third World armies they are usually regiments or brigades. Base stands and stands listed in parentheses are not subject to cohesion. At the end of each combat formation entry is a stand inventory totalling the number of each type of stand needed to field that combat formation as listed. The army lists are generally based on tables of organization and equipment (TO&E), so it should be noted that units in the field could have fewer stands than given in the lists. For instance, during World War II, German and Soviet units sometimes got as low as 30% of their TO&E strength before being pulled out of combat.

As stated in Rule 6.4, stands and Combat Units listed as “recon” on the Army lists are not subject to cohesion.

Notes and optional items are included in footnotes or enclosed in square brackets. For example, [optional +3 Light Trucks].

For cases where a unit varied in the types of equipment it has, an enumerative term is used in the list, to represent the different possible equipments. The enumerative term is printed in small caps, such as SCOUT VEHICLE. The Equipment Notes section of the army list gives the definitions of the enumerative term, listing what types of equipment it represents, as well as date ranges of availability in some instances. MBT is the most commonly used enumerative term.

For example, in the British Army 1939-1945 army list, ARMORED AA VEHICLE is defined as: Light Tank AA, Crusader III AA Mk I, Crusader III AA Mk II.

Combat formations are generally grouped in a list by type. First armor, then mechanized infantry, infantry, and miscellaneous. Within a type, formations are listed chronologically with variations over time in one formation being listed sequentially.

British (U.K.) Army 1939–1945

Quality

1939-1942: 40% Fair; 45% Average; 10% Good; 5% Excellent
1943-1945: 30% Fair; 55% Average; 10% Good; 5% Excellent
1946-1949: 5% Poor; 5% Marginal; 40% Fair; 45% Average; 5% Good
Parachute Infantry: 40% Average; 40% Good; 20% Excellent
Army Commando: 40% Good; 40% Excellent; 20% Superb

Artillery Accuracy & Friction Response

1939-1949: Artillery Accuracy 4+; Response 3+

Combat Formations

British Tank Regiment 1939 [in Army Tank Brigade]

- 3 Infantry Tank Companies
 - 4 INFANTRY TANKS
- Stand Inventory
 - 12 INFANTRY TANKS

British Tank Regiment 1940 – 1945 [in Army Tank Brigade]

- Base
 - 1 CLOSE SUPPORT INFANTRY TANK
- 3 Infantry Tank Companies
 - 4 INFANTRY TANKS
- Stand Inventory
 - 1 CLOSE SUPPORT INFANTRY TANK
 - 12 INFANTRY TANKS

British Armored Regiment 1939 – 1940

- 3 Tank Squadrons [pick one type]
 - '39 Option A
 - 4 Mk VI series
 - '39 Option B
 - 2 Mk VI series
 - 2 CRUISER TANKS
 - '40
 - 4 CRUISER TANKS
- Stand Inventory
 - If '39 Option A:
 - 12 Mk VI series
 - If '39 Option B:
 - 6 Mk VI series
 - 6 CRUISER TANKS
 - If '40:
 - 12 CRUISER TANKS

British Armored Regiment [North Africa] Oct1940 – Jun1943

- 3 Cruiser Squadrons [pick one type]¹
 - '39-'41
 - 4 CRUISER TANKS
 - '42
 - 4 CRUISER TANKS if not M3 Grant/Lee series, or 3 M3 Grant/Lee series Tanks

¹ In North Africa, squadrons were not always all the same type of tank. In particular, the Grant/Lee tanks were allocated at 1 or 2 squadrons per regiment. Some examples would be 1 Stuart squadron and 2 Grant/Lee squadrons, or 1 Grant/Lee squadron and 2 Crusader squadrons. Starting in 1943, all squadrons of a regiment were equipped with the same type of tank.

- '43
 - 4 CRUISER TANKS

Stand Inventory

- If '39-'41:
 - 12 CRUISER TANKS
- If '42:
 - 12 CRUISER TANKS if not M3 Grant/Lee series, or 9 M3 Grant/Lee series Tanks
- If '43:
 - 12 CRUISER TANKS

British Armored Regiment [Italy] Jul1943 – 1945

- Base
 - 2 recon SCOUT VEHICLES
 - 1 ARMORED AA VEHICLE
- 3 Cruiser Squadrons [pick one type]
 - '43
 - 4 CRUISER TANKS
 - '44
 - 3 CRUISER TANKS
 - 1 HIGH VELOCITY GUN TANK
 - '45
 - 2 CRUISER TANKS
 - 2 HIGH VELOCITY GUN TANKS

Stand Inventory

- 2 recon SCOUT VEHICLES
- 1 ARMORED AA VEHICLE
- If '43:
 - 12 CRUISER TANKS
- If '44:
 - 9 CRUISER TANKS
 - 3 HIGH VELOCITY GUN TANK
- If '45:
 - 6 CRUISER TANKS
 - 6 HIGH VELOCITY GUN TANKS

British Armored Regiment [NW Europe] Jun1944 – Jul1944

- Base
 - 2 recon SCOUT VEHICLES
 - 2 ARMORED AA VEHICLES
 - If regiment is Cromwell-equipped then 1 Cromwell VI
- 3 Cruiser Squadrons
 - 3 CRUISER TANKS
 - 1 HIGH VELOCITY GUN TANK
- Stand Inventory
 - 2 recon SCOUT VEHICLES
 - 2 ARMORED AA VEHICLES
 - If regiment is Cromwell-equipped then 1 Cromwell VI
 - 9 CRUISER TANKS
 - 3 HIGH VELOCITY GUN TANKS

British Armored Regiment [NW Europe] Aug1944 – 1945

- Base
 - 2 recon SCOUT VEHICLES
 - If regiment is Cromwell-equipped then 1 Cromwell VI
- 3 Cruiser Squadrons [pick one type]
 - '44
 - 3 CRUISER TANKS
 - 1 HIGH VELOCITY GUN TANK
 - '45
 - 2 CRUISER TANKS
 - 2 HIGH VELOCITY GUN TANKS
- Stand Inventory
 - 2 recon SCOUT VEHICLES
 - If regiment is Cromwell-equipped then 1 Cromwell VI

- If '44:
 - 3 CRUISER TANKS
 - 1 HIGH VELOCITY GUN TANK
- If '45:
 - 2 CRUISER TANKS
 - 2 HIGH VELOCITY GUN TANKS

British Infantry Battalion 1939 – 1940

- **Base**
 - AA LMG + 1 ATR Team + 1 Light Truck
 - 1 3-in. ML Mortar (availability modifier -2) + 1 Light Truck
 - 2 Recce Teams + 2 Bren Carrier w/ATR
- **4 Rifle Companies**
 - 3 Infantry stands
- **Stand Inventory**
 - AA LMG
 - 1 ATR Team
 - 1 3-in. ML Mortar
 - 2 Light Trucks
 - 2 Recce Teams
 - 2 Bren Carrier w/ATR
 - 12 Infantry stands

British Infantry Battalion 1941 – 1942

- **Base**
 - AA LMG + 1 ATR Team + 1 Light Truck
 - 1 3-in. ML Mortar + 1 Universal Carrier
 - 3 Bren Carrier w/ATR
- **4 Rifle Companies**
 - 3 Infantry stands
- **Stand Inventory**
 - AA LMG
 - 1 ATR Team
 - 1 Light Truck
 - 1 3-in. ML Mortar
 - 1 Universal Carrier
 - 3 Bren Carrier w/ATR
 - 12 Infantry stands

British Infantry Battalion [North Africa] 1942 – Sep1942

- **Base**
 - Twin AA LMG + 1 ATR Team + 1 Light Truck
 - 1 3-in. ML Mortar + 1 Universal Carrier
 - 3 Recce Teams + 3 Bren Carrier w/ATR
 - 2 2-pdr ATG portee
- **4 Rifle Companies**
 - 3 Infantry stands
- **Stand Inventory**
 - Twin AA LMG
 - 1 ATR Team
 - 1 Light Truck
 - 1 3-in. ML Mortar
 - 1 Universal Carrier
 - 3 Recce Teams
 - 3 Bren Carrier w/ATR
 - 2 2-pdr ATG portee
 - 12 Infantry stands

British Infantry Battalion [North Africa] Oct1942 – 1943

- **Base**
 - Twin AA LMG + 1 ATR Team + 1 Light Truck
 - 1 3-in. ML Mortar Mk II + 1 Universal Carrier
 - 3 Recce Teams + 3 Bren Carrier w/ATR
 - 2 2-pdr ATG portee
- **4 Rifle Companies**
 - 3 Infantry stands

- **Stand Inventory**
 - Twin AA LMG
 - 1 ATR Team
 - 1 Light Truck
 - 1 3-in. ML Mortar
 - 1 Universal Carrier
 - 3 Recce Teams
 - 3 Bren Carrier w/ATR
 - 2 2-pdr ATG portee
 - 12 Infantry stands

British Infantry Battalion 1943 – 1945

- **Base**
 - 1 3-in. ML Mortar + 1 Universal Carrier
 - 3 Recce Teams + 3 Bren Carrier
 - 1 6-pdr ATG + 1 Lloyd Carrier + 1 Bren Carrier
- **4 Rifle Companies**
 - 3 Infantry stands
 - After Sep 1944, 0 or 3 Ram Kangaroos
- **Stand Inventory**
 - 1 3-in. ML Mortar
 - 1 Universal Carrier
 - 3 Recce Teams
 - 3 Bren Carriers
 - 1 6-pdr ATG
 - 1 Lloyd Carrier
 - 1 Bren Carrier
 - 12 Infantry stands
 - 0 or 12 Ram Kangaroos

British Lorried Infantry Battalion [North Africa] 1942 – Sep1942

- **Base**
 - Twin AA LMG + 1 ATR Team + 1 Light Truck
 - 1 3-in. ML Mortar + 1 Universal Carrier
 - 3 Recce Teams + 3 Bren Carrier w/ATR
 - 2 2-pdr ATG portee
- **4 Lorried Rifle Companies**
 - 3 Infantry stands + 3 Light Trucks
- **Stand Inventory**
 - Twin AA LMG
 - 1 ATR Team
 - 13 Light Trucks
 - 1 3-in. ML Mortar
 - 1 Universal Carrier
 - 3 Recce Teams
 - 3 Bren Carrier w/ATR
 - 2 2-pdr ATG portee
 - 12 Infantry stands

British Lorried Infantry Battalion [North Africa] Oct1942 – 1943

- **Base**
 - Twin AA LMG + 1 ATR Team + 1 Light Truck
 - 1 3-in. ML Mortar Mk II + 1 Universal Carrier
 - 3 Recce Teams + 3 Bren Carrier w/ATR
 - 2 2-pdr ATG portee
- **4 Lorried Rifle Companies**
 - 3 Infantry stands + 3 Light Trucks
- **Stand Inventory**
 - Twin AA LMG
 - 1 ATR Team
 - 13 Light Trucks
 - 1 3-in. ML Mortar
 - 1 Universal Carrier
 - 3 Recce Teams
 - 3 Bren Carrier w/ATR
 - 2 2-pdr ATG portee
 - 12 Infantry stands

British Lorried Infantry Battalion 1943 – 1945

- **Base**
 - 1 3-in. ML Mortar + 1 Universal Carrier
 - 3 Recce Teams + 3 Bren Carrier
- **Option A**
 - 1 Bren Carrier + 1 6-pdr ATG portee
- **Option B**
 - 1 Bren Carrier + 1 6-pdr ATG + 1 Light Truck
- **4 Lorried Rifle Companies**
 - 3 Infantry stands + 3 Light Trucks
- **Stand Inventory**
 - 1 3-in. ML Mortar
 - 1 Universal Carrier
 - 3 Recce Teams
 - 4 Bren Carriers
 - 12 Infantry stands
 - If Option A:
 - 12 Light Trucks
 - 1 6-pdr ATG portee
 - If Option B:
 - 13 Light Trucks
 - 1 6-pdr ATG

British Motor Battalion 1940 – 1942

- **4 Motor Companies [pick one type]**
 - **'40-Mar'42**
 - 3 Motor Infantry stands + 3 Light Trucks
 - 2 recon Scout Carriers
 - **Apr'42-Sep'42**
 - 1 Motor Infantry stand + 1 Light Truck
 - 2 recon Scout Carriers
 - 1 MG Plt stand + 1 MMG Carrier
 - 1 2-pdr ATG portee
 - **Oct'42-'42**
 - 1 Motor Infantry stand + 1 Light Truck
 - 2 recon Scout Carriers
 - 1 MG Plt stand + 1 MMG Carrier
 - 1 Bren Carrier, + 1 2-pdr ATG portee or 1 6-pdr ATG portee
 - Stand Inventory
 - If '40-Mar'42:
 - 12 Motor Infantry stands
 - 12 Light Trucks
 - 8 recon Scout Carriers
 - If Apr'42-Sep'42:
 - 4 Motor Infantry stands
 - 4 Light Trucks
 - 8 recon Scout Carriers
 - 4 MG Plt stands
 - 4 MMG Carriers
 - 4 2-pdr ATG portee
 - If Oct'42-'42:
 - 4 Motor Infantry stands + 4 Light Truck
 - 8 recon Scout Carriers
 - 4 MG Plt stands
 - 4 MMG Carriers
 - 4 2-pdr ATG portee or 4 6-pdr ATG portee
 - 1 Bren Carrier

British Motor Battalion [North Africa] Apr1942 – Sep1942

- **4 Motor Companies**
 - 1 Motor Infantry stand + 1 Light Truck
 - 2 recon Scout Carriers
 - 1 MG Plt stand + 1 MMG Carrier
 - 1 2-pdr ATG portee
- **Stand Inventory**
 - 4 Motor Infantry stands

- 4 Light Trucks
- 8 recon Scout Carriers
- 4 MG Plt stands
- 4 MMG Carriers
- 4 2-pdr ATG portee

British Motor Battalion [North Africa] Oct1942 – 1942

- **Base**
 - **Option A**
 - 3 2-pdr ATG portee
 - **Option B**
 - 3 6-pdr ATG + 3 Light Trucks
 - **Option C**
 - 3 6-pdr ATG portee
- **3 Motor Companies**
 - 1 Motor Infantry stand + 1 Light Truck
 - 2 recon Scout Carriers
 - 1 MG Plt stand + 1 MMG Carrier
 - 1 Bren Carrier, + 1 2-pdr ATG portee or 1 6-pdr ATG portee
- **Stand Inventory**
 - 3 Motor Infantry stands
 - 3 Light Trucks
 - 6 recon Scout Carriers
 - 3 MG Plt stands
 - 3 MMG Carriers
 - 3 2-pdr ATG portee, or 3 6-pdr ATG portee
 - 3 Bren Carriers
 - If Option A:
 - 3 2-pdr ATG portee
 - If Option B:
 - 3 6-pdr ATG + 3 Light Trucks
 - If Option C:
 - 3 6-pdr ATG portee

British Motor Battalion 1943 – 1945

- **Base**
 - 1 3-in. ML Mortar + 1 Universal Carrier
 - 3 6-pdr ATG + 3 Lloyd Carriers
 - 2 MG Plt stands + 2 Universal Carriers
- **3 Motor Companies**
 - 3 Motor Infantry stands + 3 M3 Halftrack
 - 2 recon Scout Carriers
- **Stand Inventory**
 - 1 3-in. ML Mortar
 - 1 Universal Carrier
 - 3 6-pdr ATG
 - 3 Lloyd Carriers
 - 2 MG Plt stands
 - 2 Universal Carriers
 - 9 Motor Infantry stands
 - 9 M3 Halftracks
 - 6 recon Scout Carriers

British Parachute Battalion 1942 – 1943

- **Base**
 - 1 3-in. ML Mortar
- **3 Parachute Companies**
 - 3 Parachute Infantry stands
- **Stand Inventory**
 - 1 3-in. ML Mortar
 - 9 Parachute Infantry stands

British Parachute Battalion 1944 – 1945

- **Base**
 - **Option A**
 - 2 3-in. ML Mortar
 - **Option B**
 - 1 3-in. ML Mortar
 - 1 MG Plt stand
- **3 Parachute Companies**
 - 3 Parachute Infantry stands
- **Stand Inventory**
 - 3 Parachute Infantry stands
 - If Option A:
 - 2 3-in. ML Mortar
 - If Option B:
 - 1 3-in. ML Mortar
 - 1 MG Plt stand

British Air Landing Battalion 1943 – Jun1944

- **Base**
 - 1 3-in. ML Mortar
 - 1 recon Jeep w/MG
 - 2 MG Plt stands
 - 2 6-pdr ATG + 2 Light Trucks
- **4 Glider Companies**
 - 4 Glider Infantry stands
 - 1 Glider Weapons stand
- **Stand Inventory**
 - 1 3-in. ML Mortar
 - 1 recon Jeep w/MG
 - 2 MG Plt stands
 - 2 6-pdr ATG + 2 Light Truck
 - 16 Glider Infantry stands
 - 4 Glider Weapons stand

British Air Landing Battalion Jul1944 – 1945

- **Base**
 - 1 3-in. ML Mortar + 1 Light Truck
 - 1 3-in. ML Mortar [no truck]
 - 1 recon Jeep w/MG
 - 2 MG Plt stands
 - 2 6-pdr ATG + 2 Light Trucks
- **4 Glider Companies**
 - 4 Glider Infantry stands
- **Stand Inventory**
 - 2 3-in. ML Mortar
 - 3 Light Trucks
 - 1 recon Jeep w/MG
 - 2 MG Plt stands
 - 2 6-pdr ATG
 - 16 Glider Infantry stands

British Army Commando

- **Base**
 - 1 Commando Weapons stand
- **5 Commando Assault Troops**
 - 2 Commando Assault stands
- **Stand Inventory**
 - 1 Commando Weapons stand
 - 10 Commando Assault stands

Trucks

- **AT Battery [Inf. Division]²**
 - '39-May'40: 3 2-pdr ATG + 3 Light Trucks, or 2 25mm Hotchkiss ATG + 2 Light Trucks
 - Jun'40-Apr'42: 3 2-pdr ATG portee
 - May'42-Jan'43: 3 6-pdr ATG + 3 Lloyd Carriers, or 3 2-pdr ATG portee
 - Feb'43-May'44: 2 6-pdr ATG + 2 Lloyd Carriers; 1 17-pdr ATG + 1 Light Truck
 - Jun'44-Jul'44: 3 M10 Wolverine³
 - Jun'44-'45: 1 6-pdr ATG + 1 Lloyd Carrier; 2 17-pdr ATG + 2 Light Trucks
 - Oct'44-'45: 1 6-pdr ATG + 1 Lloyd Carrier; 1 17-pdr ATG + 1 Light Truck; 1 Archer
 - '45: 1 Valentine IX; 3 Archer or 3 17-pdr + 3 Light Trucks
- **AT Battery [Armd. Division]**
 - '39-May'40: 3 2-pdr ATG + 3 Light Trucks, or 2 25mm Hotchkiss ATG + 2 Light Trucks
 - Jun'40-Apr'42: 3 2-pdr ATG portee
 - May'42-Jan'43: 3 6-pdr ATG + 3 Lloyd Carriers, or 3 2-pdr ATG portee
 - Feb'43-May'44: 2 6-pdr ATG + 2 Lloyd Carriers; 1 17-pdr + 1 Light Trucks
 - Jun'44-'45: 3 17-pdr + 3 Light Trucks or 3 Crusader Gun Tractors or 3 M5 Halftracks
- **SP AT Battery [Armd. Division] '43-'45: 3 SELF-PROPELLED AT GUNS**
- **AT Battery [from Corps]**
 - [Italy] Jul'43-'45: 3 17-pdr ATG + 3 Medium Trucks or 3 Ram Kangaroo
 - [NW Europe] Jun'44-'45: 3 17-pdr ATG + 3 Crusader Gun Tractor
 - [NW Europe] Jun'44-'45: 0-1 Valentine series tank; 3 M10 Wolverine
- **MG Company [Inf. Division]: 3 MG Plt stands [plus if formation is motorized then 3 Light Trucks]**
- **Recce Armored Car Squadron [many variations possible, these are just a few]**
 - '39-'40: 2 LIGHT ARMORED CARS; 2 HEAVY ARMORED CARS
 - '40-'41: 3 HEAVY ARMORED CARS
 - '41-'42: 3 LIGHT ARMORED CARS; 1 HEAVY ARMORED CAR
 - '42 [alternate]: 2 SCOUT CARS; 2 HEAVY ARMORED CARS
 - '42 [alternate]: 3 SCOUT CARS; 1 HEAVY ARMORED CAR
 - '42-'43: 2 SCOUT CARS; 2 HEAVY ARMORED CARS; 1 VERY HEAVY ARMORED CAR
 - '44-'45: 1 SCOUT CAR; 2 HEAVY ARMORED CARS; 1 Recce Team + 1 Universal Carrier
- **Armored Recce Squadron**
 - '44-'45: 1 M3 Stuart series tank; 2 Cromwell; 1 Challenger
- **MG Company [Armd. Division]**
 - '44-'45: 3 MG Plt + 3 Light Trucks
 - Transport Company [Infantry battalions only] Sep'44-'45
 - 3 Ram Kangaroo [attached to a single rifle company]
- **Engineering Support Element**
 - '44-'45
 - 1-3 Churchill AVRE
 - '44-'45
 - 1-3 Churchill Crocodile
 - '44-'45
 - 1-3 Sherman Flail

2 Note that many of these organizations overlap in time.

3 Some infantry divisions had this arrangement, apparently temporarily.

- Flamethrower Support [Infantry battalions only] 1945
 - '1 Wasp

Artillery Support Groups

- 84mm Battery '39-'40
 - 3 18-pdr FG Mk IV + 3 Quad
- 88mm Battery '39-'40
 - 3 25-pdr Mk I FG + 3 Quad
- 88mm Battery '41-'45 [availability modifier -1]
 - 2 25-pdr Mk II, Mk III FG + 2 Quad
- 114mm Battery '39-'40
 - 2 4.5" Howitzer + 2 Quad
- 114mm Battery '41-'43 [availability modifier -2]
 - 1 4.5" FG + 1 Quad
- 114mm Battery '44-'45 [availability modifier -1]
 - 2 4.5" FG + 2 Quad
- 140mm Battery '41-'43 [availability modifier -2]
 - 1 60-pdr FG or 1 5.5" FG, + 1 Quad
- 140mm Battery '44-'45 [availability modifier -1]
 - 2 60-pdr FG or 2 5.5" FG, + 1 Quad
- 152mm Battery '39-'45: [availability modifier -2]
 - 1 6" Howitzer + 1 Quad

Equipment Notes

- ARMORED AA VEHICLE:
- Light Tank AA, Crusader III AA Mk I, Crusader III AA Mk II
- CLOSE SUPPORT INFANTRY TANK:
 - Matilda II CS, Valentine III CS, Sherman, Churchill II CS, Churchill V, Churchill VIII [rare]
- CRUISER TANK: [listed in rough order of decreasing prevalence where known]
 - '39: Cruiser Mk.I A9, Cruiser Mk.II A10, Cruiser Mk.III A13, Cruiser Mk.IV A13 MkII
 - '40: Cruiser Mk.I A9, Cruiser Mk.II A10, Cruiser Mk.III A13, Cruiser Mk.IV A13 MkII, Medium Mk.II⁴
 - '41-Jun'41: Cruiser Mk.IV A13 MkII, Crusader series, Cruiser Mk.I A9, Cruiser Mk.II A10, Cruiser Mk.III A13, Medium Mk.II⁵
 - Jul'41-'41: Crusader series, M3 Stuart series, Cruiser Mk.IV A13 MkII, Cruiser Mk.I A9, Cruiser Mk.II A10, Cruiser Mk.III A13
 - '42-Sep'42: Crusader series, M3 Grant/Lee series, M3 Stuart series, Valentine series
 - Oct'42-'42: M4A1 Sherman II, Crusader, M3 Grant/Lee series, M3 Stuart, Valentine series
 - '43-Jun'43: M4A4 Sherman V, M4A2 Sherman III, M4 Sherman I, M4A1 Sherman II, Crusader III, Valentine series
 - Jul'43-'43: M4A4 Sherman V, M4A2 Sherman III, M4 Sherman I, M4A1 Sherman II, Crusader III
 - '44: Cromwell, M4A4 Sherman V, M4A2 Sherman III, M4 Sherman I, M4A1 Sherman II
 - '45: Cromwell, M4A4 Sherman V, M4A2 Sherman III, M4 Sherman I, M4A1 Sherman II, Comet
- HEAVY ARMORED CAR: [listed in rough order of decreasing prevalence where known]
 - '39-May'41: Morris LRC I

4 Obsolete training tanks from Egypt pressed into service at Mersa Matruh and Tobruk

5 Obsolete training tanks from Egypt pressed into service at Mersa Matruh and Tobruk

- Jun'41-'41: Daimler AC, Humber AC, Morris LRC I
- '42: Daimler AC, Humber AC, AEC I
- '43-'45: Daimler AC, Humber IV, Humber AC, Staghound I-II

HIGH VELOCITY GUN TANK: [listed in rough order of decreasing prevalence where known]

- '44: Sherman Firefly VC, Challenger⁶, Sherman Firefly IIC
- '45: Sherman Firefly VC, Challenger⁷, Sherman Firefly IIC, M4A1(76) Sherman IIA, M4A2(76) Sherman IIIA

INFANTRY TANK: [listed in rough order of decreasing prevalence where known]

- '39-May'40: Matilda I, Matilda II
- Jun'40-Jun'41: Matilda II
- Jul'41-'41: Matilda II, Valentine series
- '42-Jan'43: Valentine series, Matilda II
- Feb'43-Apr'43: Valentine series, Churchill series
- May'43-'43: Churchill series
- '44-'45: Churchill series, M4A4 Sherman V, M4A2 Sherman III, M4 Sherman I

LIGHT ARMORED CAR: [listed in rough order of decreasing prevalence where known]

- '39: Rolls Royce 1924
- '40: Rolls Royce (mod)
- '41: Marmon-Herrington I-III, Humber LRC I-III, Rolls Royce (mod)
- '42-'43: Marmon-Herrington I-III, Humber LRC I-III

SCOUT CAR: [listed in rough order of decreasing prevalence where known]

- '38-'41: Daimler Dingo Scout Car
- '42: Daimler Dingo Scout Car; Lynx I Scout Car
- '43-'45: Humber Scout Car, Daimler Dingo Scout Car, M3A1 Scout Car, Lynx I-II Scout Car

SCOUT VEHICLE:

- M3 Stuart series

SELF-PROPELLED AT GUN:

- '43: Deacon, M10 Wolverine
- '44-May'44: M10 Wolverine
- Jun'44-Sep'44: M10 Wolverine, Achilles
- Oct'44-'44: M10 Wolverine, Achilles, Archer
- '45: Achilles, Archer

VERY HEAVY ARMORED CAR: [listed in rough order of decreasing prevalence where known]

- '42: AEC I
- '43: AEC II, M3GMC Autocar
- '44-'45: Staghound III, AEC III

6 Challenger was issued only to Cromwell-armed regiments later in 1944 after D-day.

7 Challenger was issued mainly to Cromwell-armed regiments.

French Army 1939–1940

Quality and Response

1939-1949: 20% Marginal; 30% Fair; 25% Average; 20% Good; 5% Excellent

Artillery Accuracy & Friction Response

1939-1949: Artillery Accuracy 5+; Response 3+

Combat Formations

French Heavy Tank Battalion

▪ 3 Heavy Tank Companies

- 2 Char B1bis

▪ Stand Inventory

- 6 Char B1bis

French Light Tank Battalion

▪ 3 Light Tank Companies [pick one type]

▪ May'40-Jun'40

- 2 H35
- 1 H35 w/long 37mm

▪ May'40-Jun'40

- 2 H39
- 1 H39 w/long 37mm

▪ May'40-Jun'40

- 1 R35
- 2 R40

▪ Jun'40 rebuilt unit

- 2 H35 or 2 H39 or 2 R35 or 2 R40

▪ Jun'40 rebuilt unit

- 1 H35
- 1 H35 w/long 37mm

▪ Jun'40 rebuilt unit

- 1 H39
- 1 H39 w/long 37mm

▪ Stand Inventory

• If May'40-Jun'40 Light Tank Battalion:

- 6 H35
- 3 H35 w/long 37mm

• If May'40-Jun'40 Light Tank Battalion:

- 6 H39
- 3 H39 w/long 37mm

• If May'40-Jun'40 Light Tank Battalion:

- 3 R35
- 6 R40

• If Jun'40 rebuilt unit Light Tank Battalion:

- 6 H35 or 6 H39 or 6 R35 or 6 R40

• If Jun'40 rebuilt unit Light Tank Battalion:

- 3 H35
- 3 H35 w/long 37mm

• If Jun'40 rebuilt unit Light Tank Battalion:

- 3 H39
- 3 H39 w/long 37mm

French Independent Light Tank Battalion

▪ 3 Independent Light Tank Companies [all same composition; pick one of the following lines, listed in descending order of prevalence]

- 1 R35; 2 R40
- 2 FT-17 m.1931; 1 FT-17 w/37mm
- 3 FCM 36
- 2 H35; 1 H35 w/long 37mm

- 2 H39; 1 H39 w/long 37mm
- 2 Char D2 w/SA35; 1 Char D2 w/SA34
- 1 Char D1

▪ Stand Inventory

- One of the following lines:
 - 3 R35; 6 R40
 - 6 FT-17 m.1931; 3 FT-17 w/37mm
 - 9 FCM 36
 - 6 H35; 3 H35 w/long 37mm
 - 6 H39; 3 H39 w/long 37mm
 - 6 Char D2 w/SA35; 3 Char D2 w/SA34
 - 9 Char D1

French Mechanized Chasseurs Battalion

▪ Base

- 1 recon Motorcycle Infantry #1 stand
- 3 LIGHT AT GUNS + 3 Light Trucks

▪ 3 Chasseur Rifle Companies

▪ 4 Chasseur Infantry stands + 4 APC

▪ Stand Inventory

- 1 recon Motorcycle Infantry #1 stand
- 3 LIGHT AT GUNS
- 3 Light Trucks
- 12 Chasseur Infantry stands
- 12 APC

French Tank Regiment May1940 – Jun1940

▪ 2 Light Tank Squadrons [choose one type]

▪ Option A

- 3 H39
- 1 H39 w/long 37mm

▪ Option B

- 3 H35
- 1 H35 w/long 37mm

▪ 2 Medium Tank Squadrons

- 4 Somua S35

▪ Stand Inventory

- 8 Somua S35
- If Option A:
 - 6 H39
 - 2 H39 w/long 37mm
- If Option B:
 - 6 H35
 - 2 H35 w/long 37mm

French Tank Regiment [Rebuilt] Jun1940

▪ 2 Light Tank Squadrons [choose one type]

▪ Option A

- 2 H35 or 2 H39 or 2 R35 or 2 R40

▪ Option B

- 1 H35
- 1 H35 w/long 37mm

▪ Option C

- 1 H39
- 1 H39 w/long 37mm

▪ 2 Medium Tank Squadrons

- 2 Somua S35

▪ Stand Inventory

- 4 Somua S35
- If Option A:
 - 4 H35 or 4 H39 or 4 R35 or 4 R40
- If Option B:
 - 2 H35
 - 2 H35 w/long 37mm

- If Option C:
 - 2 H39
 - 2 H39 w/long 37mm

French Motorized Dragoons Battalion [Light Mech Division]

- **Base**
 - 1 LIGHT AT GUN + 1 Light Truck
 - 2 MG Plt stands + 2 Light Trucks
 - 1 81mm mle 27/31 + 1 Light Truck
- **1 AMR Squadron**
 - 4 AMR 33 VM
- **1 Motorcycle Recon Squadron**
 - 4 Motorcycle Infantry #1 stands
 - 2 Dragoon Motorized Squadrons
 - 3 Dragoon Infantry stands + 3 Light Trucks
 - 1 MG Plt stand + 1 Light Truck
- **Stand Inventory**
 - 1 LIGHT AT GUN
 - 12 Light Trucks
 - 4 MG Plt stands
 - 1 81mm mle 27/31
 - 4 AMR 33 VM
 - 4 Motorcycle Infantry #1 stands
 - 6 Dragoon Infantry stands

French Motorized Dragoons Battalion [Light Cavalry Division 1st Battalion]

- **Base**
 - 1 LIGHT AT GUN + 1 Light Halftrack
 - 2 MG Plt stands + 2 Light Halftracks
 - 1 81mm mle 27/31 + 1 Light Halftrack
- **1 Dragoon Recon Squadron**
 - 2 AMR 33 VM
 - 2 Motorcycle Infantry #2 stands
- **1 Dragoon Mechanized Squadron**
 - 3 Dragoon Infantry stands + 3 Light Halftracks
 - 1 MG Plt stand + 1 Light Halftrack
- **Stand Inventory**
 - 1 LIGHT AT GUN
 - 8 Light Halftracks
 - 3 MG Plt stands
 - 1 81mm mle 27/31
 - 2 AMR 33 VM
 - 2 Motorcycle Infantry #2 stands
 - 3 Dragoon Infantry stands

French Motorized Dragoons Battalion [Light Cavalry Division 2nd Battalion]

- **Base**
 - 1 LIGHT AT GUN + 1 Light Truck
 - 2 MG Plt stands + 2 Light Trucks
 - 1 81mm mle 27/31 + 1 Light Truck
- **1 Dragoon Recon Squadron**
 - 2 AMR 33 VM
 - 2 Motorcycle Infantry #2 stands
- **1 Dragoon Motorized Squadron**
 - 3 Dragoon Infantry stands + 3 Light Trucks
 - 1 MG Plt stand + 1 Light Truck
- **Stand Inventory**
 - 1 LIGHT AT GUN
 - 8 Light Trucks
 - 3 MG Plt stands
 - 1 81mm mle 27/31
 - 2 AMR 33 VM
 - 2 Motorcycle Infantry #2 stands

- 3 Dragoon Infantry stands

French Cavalry Regiment

- **Base**
 - 2 MG Plt stands + 2 Light Trucks or Wagons
 - 1 LIGHT AT GUN + 1 Light Truck or Light Horse Limber
- **4 Cavalry Squadrons**
 - 4 Cavalry #2 stands
- **Stand Inventory**
 - 2 MG Plt stands
 - 2 Light Trucks or Wagons
 - 1 Light Truck or Light Horse Limber
 - 1 LIGHT AT GUN
 - 16 Cavalry #2 stands

French Infantry Battalion

- **Base**
 - 4 MG Plt stands
 - 1 LIGHT AT SECTION + 1 Light Horse Limber
- **3 Rifle Companies**
 - 4 Infantry stands
- **Stand Inventory**
 - 4 MG Plt stands
 - 1 LIGHT AT SECTION
 - 1 Light Horse Limber
 - 12 Infantry stands

French Motorized Battalion

- **Base**
 - 3 MG Plt stands + 3 Light Trucks
 - 1 LIGHT AT SECTION + 1 Chenillette (Renault UE)
- **3 Motorized Companies**
 - 4 Infantry stands + 4 Light Truck
- **Stand Inventory**
 - 3 MG Plt stands
 - 1 LIGHT AT SECTION
 - 1 Chenillette (Renault UE)
 - 12 Infantry stands
 - 15 Light Trucks

Attachments

- **Independent Light Tank Company** [one of the following lines, listed in descending order of prevalence]
 - 1 R35; 2 R40
 - 2 FT-17 m.1931; 1 FT-17 w/37mm
 - 3 FCM 36
 - 2 H35; 1 H35 w/long 37mm
 - 2 H39; 1 H39 w/long 37mm
 - 2 Char D2 w/SA35; 1 Char D2 w/SA34
 - 3 Char D1
- **Independent AT Battery**
 - 1 Laffly W15 TCC
- **Artillery Regiment AA Platoon**
 - 1 25mm Hotchkiss '38 AAG + 1 Light Halftrack or Light Truck
- **Infantry Regiment AA Platoon**
 - 1 20mm CA Oerlikon + 1 Light Halftrack
- **Divisional AT Platoon**
 - 1 LIGHT AT GUN + 1 Light Horse Limber
 - Regimental AT Platoon
 - [Infantry Division] 1 LIGHT AT GUN + 1 Light Horse Limber
 - [Motorized Division] 1 LIGHT AT GUN + 1 Chenillette (Renault UE)

- **Artillery Regiment AT Platoon**
 - 1 47 SA '37 47mm ATG + 1 Light Halftrack
- **Cavalry Recon Squadron [Infantry Division]**
 - 4 Cavalry #1 stands; 1 MG Plt stand + 1 Light Truck or Wagon; 0-1 CAVALRY AT SECTION
- **Mortar Platoon [Infantry & Motorized Divisions]**
 - 1 81mm mle 27/31
- **Motorcycle Recon Squadron**
 - [Infantry Division] 3 Motorcycle Infantry #1 stands; 1 MG Plt stand +1 Light Truck
 - [Motorized Division] 3 Motorcycle Infantry #1 stands; 0-1 MG Plt stand +1 Light Truck; 0-1 LIGHT AT SECTION + 1 Chenillette (Renault UE)
 - [Light Mech or Light Cavalry Division] 4 Motorcycle Infantry #1 stands
- **Armored Car Recon Squadron**
 - [Motorized or Light Cavalry Division] 3 AMD 35 Panhard 178
 - [Motorized Division] 3 AMC P16
 - [Light Mech Division] 4 AMD 35 Panhard 178
- **AMR Squadron**
 - [Light Cavalry Division] 3 AMR 33 VM
 - [Light Mech or Light Cavalry Division] 2 AMR 35 VT; 2 AMR 35 w/HMG
 - [Motorized, Light Mech, or Light Cavalry Division] 3 H39; 1 H39 w/long 37mm
- **Field Gun Battery**
 - 1 75 mle 1897 75mm FG + 1 Horse Limber

Artillery Support Groups

- **Light Field Artillery Battalion**
- **[Infantry or Light Cavalry Division] 3 75 mle 1897 75mm FG + 3 Horse Limbers**
 - [Motorized, Light Mech, or Armored Division] 3 75 mle 1897 75mm FG + 3 Light Halftracks
- **Heavy Field Artillery Battalion**
- **[Infantry Division] 3 155 C mle 1917 How + 3 Horse Limbers**
 - [Motorized, Light Mech, or Armored Division] 3 155 C mle 1917 How + 3 Medium Halftracks
 - [Light Cavalry Division] 3 105 ct.'35B 105mm How or L13S 105mm FG + 3 Light Halftracks

Equipment Notes

- **APC:**
- **VBCP 38L (Lorraine), Light Halftrack, or Bus⁸**
- **CAVALRY AT SECTION:**
 - 1 25 SA-L '37 ATG Section or 25 SA-L '37 ATG Section, + 1 Light Horse Limber
- **LIGHT AT GUN:**
 - 25 SA-L '37 25mm ATG, or 25 SA-L '37 25mm ATG
- **LIGHT AT SECTION:**
 - 25 SA-L '37 ATG Section or 25 SA-L '37 ATG Section

⁸ It's unclear if all chasseur battalions had been equipped with the 38L by the time they saw combat. Two were known to have been equipped by May, one other was known to be only partially equipped, and the fourth battalion formed used busses. Any of the first three battalions lacking the 38L would still have their pre-war halftracks.

German Army 1939–1945

Quality

1937-1943: 30% Average; 50% Good; 20% Excellent
 1944-1945: 15% Fair; 25% Average; 25% Good; 35% Excellent
 Most Waffen-SS and the Herman Goering Panzer Division will be Good or Excellent

Artillery Accuracy & Friction Response

1939-1945: Artillery Accuracy 5+; Response 3+

Combat Formations

Note: several organizations are in service in some date ranges.

German Medium Panzer Battalion 1939 – 1940

- **Base**
 - 0-1 LIGHT RECCE TANK
 - 0-1 recon Motorcycle Rifle stand
 - 0-1 ENGINEER
 - 0-1 AA PANZER
- **2 Light Panzer Companies [choose one type]**
 - **Option A**
 - 1 Pz. III series tank
 - 2 Pz. II series tanks
 - 1 Pz. I series tank
 - **Option B**
 - 3 Pz. 35(t) or 3 Pz. 38(t) series tanks
 - 1 Pz. II series tank
 - **Option C '39-Feb'40 [only 1 battalion in Poland]**
 - 2 Pz. IID-E
 - 2 Pz. II series tanks
- **1 Medium Panzer Company**
 - 1-2 Pz. IV series tanks
 - 1 Pz. II series tank
- **Stand Inventory**
 - 0-1 LIGHT RECCE TANK
 - 0-1 Motorcycle Rifle stand
 - 0-1 ENGINEER
 - 0-1 AA PANZER
 - 1-2 Pz. IV series tanks
 - If Option A:
 - 2 Pz. III series tank
 - 5 Pz. II series tanks
 - 2 Pz. I series tank
 - If Option B:
 - 6 Pz. 35(t) or 3 Pz. 38(t) series tanks
 - 3 Pz. II series tank
 - If Option C:
 - 4 Pz. IID-E
 - 5 Pz. II series tanks

German Medium Panzer Battalion 1939 – 1940

- **Base**
 - 0-1 LIGHT RECCE TANK
 - 0-1 recon Motorcycle Rifle stand
 - 0-1 ENGINEER
 - 0-1 AA PANZER

- **2 Light Panzer Companies [choose one type]**

- **Option A**
 - 2-3 Pz. III series tanks
 - 1 Pz. II series tank

- **Option B**
 - 3 Pz. 35(t) or 3 Pz. 38(t) series tanks
 - 1 Pz. II series tank

- **1 Light Panzer Company "A"**

- 1 Pz. IV series tank
- 1 Pz. III series tank
- 1 Pz. II series tank
- 1 Pz. I series tank

- **Stand Inventory**

- 0-1 LIGHT RECCE TANK
 - 0-1 Motorcycle Rifle stand
 - 0-1 ENGINEER
 - 0-1 AA PANZER
 - If Option A:
 - 4-6 Pz. III series tanks
 - If Option B:
 - 6 Pz. 35(t) or 6 Pz. 38(t) series tanks
 - 1 Pz. IV series tank
 - 1 Pz. III series tank
 - 3 Pz. II series tank
 - 1 Pz. I series tank
-

German Medium Panzer Battalion 1939 – 1940

- **Base**

- 0-1 LIGHT RECCE TANK
- 0-1 recon Motorcycle Rifle stand
- 0-1 ENGINEER
- 0-1 AA PANZER

- **3 Light Panzer Companies [choose one type]**

- **Option A**
 - 1 Pz. III series tank
 - 2 Pz. II series tanks
 - 1 Pz. I series tank
- **Option B**
 - 3 Pz. 35(t) or 3 Pz. 38(t) series tanks
 - 1 Pz. II series tank

- **Stand Inventory**

- 0-1 LIGHT RECCE TANK
 - 0-1 recon Motorcycle Rifle stand
 - 0-1 ENGINEER
 - 0-1 AA PANZER
 - If Option A:
 - 3 Pz. III series tank
 - 6 Pz. II series tanks
 - 3 Pz. I series tank
 - If Option B:
 - 9 Pz. 35(t) or 3 Pz. 38(t) series tanks
 - 3 Pz. II series tank
-

German Medium Panzer Battalion 1941 – 1942

- **Base**

- 0-1 LIGHT RECCE TANK
- 0-1 recon Motorcycle Rifle stand
- 0-1 ENGINEER
- 0-1 AA PANZER

- **2-3 Light Panzer Companies [choose one type]**

- **Option A**
 - 2-3 Pz. III series tanks
 - 1 Pz. II series tank
- **Option B**
 - 3 Pz. 35(t) or 3 Pz. 38(t) series tanks

- 1 Pz. II series tank

- **1 Medium Panzer Company**

- 1-2 Pz. IV series tanks
- 1 Pz. II series tank

- **Stand Inventory**

- 0-1 LIGHT RECCE TANK
 - 0-1 Motorcycle Rifle stand
 - 0-1 ENGINEER
 - 0-1 AA PANZER
 - 3-4 Pz. II series tank
 - 1-2 Pz. IV series tanks
 - If Option A:
 - 4-6 Pz. III series tanks
 - If Option B:
 - 4-6 Pz. 35(t) or 4-6 Pz. 38(t) series tanks
-

German Medium Panzer Battalion 1943

- **Base**

- 0-1 LIGHT RECCE TANK
- 0-1 ENGINEER
- 0-1 AA PANZER
- 0-1 FLAME TANK

- **2-3 Light Panzer Companies [choose one type]**

- **Option A**
 - 2-3 Pz. III series tanks
 - 1 Pz. II series tank

- **Option B**
 - 3 Pz. 35(t) or 3 Pz. 38(t) series tanks
 - 1 Pz. II series tank

- **1 Medium Panzer Company [choose one type]**

- **Option C**
 - 1-2 Pz. IV series tanks
 - 1 Pz. II series tank

- **Option D**
 - 2-4 MEDIUM TANKS

- **Stand Inventory**

- 0-1 LIGHT RECCE TANK
 - 0-1 ENGINEER
 - 0-1 AA PANZER
 - 0-1 FLAME TANK
 - 3-4 Pz. II series tank
 - If Option A:
 - 4-9 Pz. III series tanks
 - If Option B:
 - 6-9 Pz. 35(t) or 6-9 Pz. 38(t) series tanks
 - If Option C:
 - 1-2 Pz. IV series tanks
 - If Option D:
 - 2-4 MEDIUM TANKS
-

German Medium Panzer Battalion 1943

- **Base**

- 0-1 LIGHT RECCE TANK
- 0-1 ENGINEER
- 0-1 AA PANZER
- 0-1 FLAME TANK

- **3-4 Medium Panzer Companies [choose one type]**

- **Option A**
 - 1-2 Pz. IV series tanks
 - 1 Pz. II series tank

- **Option B**
 - 2-4 MEDIUM TANKS

▪ Stand Inventory

- 0-1 LIGHT RECCE TANK
- 0-1 ENGINEER
- 0-1 AA PANZER
- 0-1 FLAME TANK
- If Option A:
 - 3-8 Pz. IV series tanks
 - 3-4 Pz. II series tank
- If Option B:
 - 6-16 MEDIUM TANKS

German Medium Panzer Battalion 1944**▪ Base**

- 0-1 LIGHT RECCE TANK
- 0-1 ENGINEER
- 0-2 AA PANZER

▪ 3-4 Medium Panzer Companies [companies may be all same tank type, or 2 each of 2 tank types, or 3 companies of Pz. V Panther and 1 company of Pz. IV/70 tank destroyers]

- 2-4 MEDIUM TANKS

▪ Stand Inventory

- 0-1 LIGHT RECCE TANK
- 0-1 ENGINEER
- 0-2 AA PANZER
- 6-16 MEDIUM TANKS

German Medium Panzer Battalion 1945**▪ Base**

- 0-1 LIGHT RECCE TANK
- 0-1 ENGINEER
- 0-2 AA PANZER

▪ 3-4 Medium Panzer Companies [companies may be all same tank type, each different type if 3 companies, or 2 each of 2 tank types if 4 companies]

- 2-4 MEDIUM TANKS

▪ Stand Inventory

- 0-1 LIGHT RECCE TANK
- 0-1 ENGINEER
- 0-2 AA PANZER
- 6-16 MEDIUM TANKS

German Heavy [Tiger] Panzer Battalion Aug 1942 – 1943**▪ Base**

- 0-1 HEAVY RECCE TANK
- 0-1 recon SdKfz 250/1
- 0-1 ENGINEER
- 0-1 AA PANZER

▪ 3 Heavy Panzer Companies

- 2 Pz. VI Tiger I
- 2 Pz. III series tanks

▪ Stand Inventory

- 0-1 HEAVY RECCE TANK
- 0-1 Sdkfz 250/1
- 0-1 ENGINEER
- 0-1 AA PANZER
- 6 Pz. VI Tiger I
- 6 Pz. III series tanks

German Heavy [Tiger] Panzer Battalion 1944 – 1945**▪ Base**

- 0-1 recon SdKfz 250/1
- 0-1 ENGINEER
- 0-1 AA PANZER

▪ 3 Heavy Panzer Companies

- 3 Pz. VI Tiger I or 3 Pz. VIB Tiger II

▪ Stand Inventory

- 0-1 recon SdKfz 250/1
- 0-1 ENGINEER
- 0-1 AA PANZER
- 9 Pz. VI Tiger I or 9 Pz. VIB Tiger II

German Infantry Battalion 1939 – 1940**▪ Base**

- 1 7.5cm leIG 18 Section
- 1 8cm sGrW 34 81mm Mtr
- 2 MG Plt stands

▪ 3 Rifle Companies

- 3 Infantry stands

▪ Stand Inventory

- 1 7.5cm leIG 18 Section
- 1 8cm sGrW 34 81mm Mtr
- 2 MG Plt stands
- 9 Infantry stands

German Infantry Battalion 1941 – 1942

- 1 7.5cm leIG 18 Section
- 1 8cm sGrW 34 81mm Mtr
- 3 MG Plt stands

▪ 3 Rifle Companies

- 3 Infantry stands

▪ Stand Inventory

- 1 7.5cm leIG 18 Section
- 1 8cm sGrW 34 81mm Mtr
- 3 MG Plt stands
- 9 Infantry stands

German Infantry [a.k.a. Grenadier] Battalion 1943 – Jun 1944**▪ Base**

- 0-1 7.5cm leIG 18 Section
- 1 12cm sGrW 42 120mm Mtr
- 3 MG Plt stands

▪ 3 Rifle Companies

- Jan'43-Dec'43
 - 3 Infantry stands
- Jan'44-Jun'44
 - 3 Infantry stands
 - 0-1 Panzerschreck Team

▪ Stand Inventory

- 0-1 7.5cm leIG 18 Section
- 1 12cm sGrW 42 120mm Mtr
- 3 MG Plt stands
- 9 Infantry stands
- If Jan'44-Jun'44:
 - 0-3 Panzerschreck Teams

German Infantry [a.k.a. Grenadier] Battalion Jul 1944 – 1945**▪ Base**

- 0-1 7.5cm leIG 18 Section
- 1 8cm sGrW 34 81mm Mtr
- 1 12cm sGrW 42 120mm Mtr
- 1 Heavy MG Plt stand

▪ 3 Rifle Companies

- 3 Infantry stands
- 0-1 Panzerschreck Team

▪ Stand Inventory

- 0-1 7.5cm leIG 18 Section
- 1 8cm sGrW 34 81mm Mtr
- 1 12cm sGrW 42 120mm Mtr
- 1 Heavy MG Plt stand
- 9 Infantry stands

- 0-3 Panzerschreck Team

German Motorized Panzergrenadier Battalion 1939

- **Base**
 - AT GUN #1 + 1 Light Truck
 - 1 7.5cm leIG 18 Section + 1 Light Truck
 - 1 Motorized Pioneer stand + 1 Light Truck
 - 1 8cm sGrW 34 81mm Mtr + 1 Light Truck
 - 2 MG Plt stands + 2 Light Trucks
- **3 Motorized Panzergrenadier Companies**
 - 3 Motorized PzGr stands
 - 3 Light Trucks
- **Stand Inventory**
 - AT GUN #1
 - 1 7.5cm leIG 18 Section
 - 1 Motorized Pioneer stand
 - 1 8cm sGrW 34 81mm Mtr
 - 2 MG Plt stands
 - 9 Motorized PzGr stands
 - 15 Light Trucks

German Motorized Panzergrenadier Battalion 1940 – 1941

- **Base**
 - 1 AT GUN #1 + 1 GUN TRACTOR
 - 1 7.5cm leIG 18 + 1 Light Truck
 - 1 Motorized Pioneer stand + 1 Light Truck
 - 1 8cm sGrW 34 81mm Mtr + 1 Light Truck
- **3 Motorized Panzergrenadier Companies**
 - 3 Motorized PzGr stands
 - 1 MG Plt stand
 - 4 Light Trucks
- **Stand Inventory**
 - 1 AT GUN #1
 - 1 GUN TRACTOR
 - 1 7.5cm leIG 18
 - 1 Motorized Pioneer stand
 - 1 8cm sGrW 34 81mm Mtr
 - 9 Motorized PzGr stands
 - 3 MG Plt stand
 - 16 Light Trucks

German Motorized Panzergrenadier Battalion 1942 – Sep 1944

- **Base**
 - 1 AT GUN #1 + 1 GUN TRACTOR
 - 1 7.5cm leIG 18 + 1 Light Truck
 - 1 Motorized Pioneer stand + 1 Light Truck
 - 1 8cm sGrW 34 81mm Mtr + 1 Light Truck
- **3 Motorized Panzergrenadier Companies**
 - 3 Motorized PzGr stands
 - 1 MG Plt stand
 - 4 Light Trucks
- **Stand Inventory**
 - 1 AT GUN #1
 - 1 GUN TRACTOR
 - 1 7.5cm leIG 18
 - 1 Motorized Pioneer stand
 - 1 8cm sGrW 34 81mm Mtr
 - 9 Motorized PzGr stands
 - 3 MG Plt stand
 - 15 Light Trucks

German Motorized Panzergrenadier Battalion Oct 1944 – 1945

- **Base**
 - 2 8cm sGrW 34 81mm Mtr + 2 Light Trucks
 - 1 12cm sGrW 42 120mm Mtr + 1 Light Truck
 - 3 MG Plt + 3 Light Trucks

- 1 SdKfz 251/17, or 1 2cm Flak 38 + 1 Light Truck or SdKfz 10 Tractor

▪ 3 Motorized Panzergrenadier Companies

- 2 Motorized PzGr stands
- 1 Motorized PzGr Sturm stand

▪ Stand Inventory

- 2 8cm sGrW 34 81mm Mtr
- 1 12cm sGrW 42 120mm Mtr
- 3 MG Plt
- 1 SdKfz 251/17, or 1 2cm Flak 38
- 6 Motorized PzGr stands
- 3 Motorized PzGr Sturm stand
- 7-8 Light Trucks
- 0-1 SdKfz 10 Tractor

German Armored Panzergrenadier Battalion 1942

- **Base**
 - 1 AT GUN #2 + 1 GUN TRACTOR
 - 1 7.5cm leIG 18 + 1 SdKfz 251/4 Tractor
 - 1 Armored Pioneer stand + 1 SdKfz 251/1
 - 1 2.8cm sPzB 41 ATG + 1 SdKfz 250/1
 - 1 SdKfz 251/2
- **3 Armored Panzergrenadier Companies**
 - 3 Armored PzGr stands + 3 SdKfz 251/1
 - 1 MG Plt stand + 1 SdKfz 251/1
 - 1 SdKfz 251/10
- **Stand Inventory**
 - 1 AT GUN #2
 - 1 GUN TRACTOR
 - 1 7.5cm leIG 18
 - 1 Armored Pioneer stand
 - 1 2.8cm sPzB 41 ATG
 - 9 Armored PzGr stands
 - 3 MG Plt stand
 - 13 SdKfz 251/1
 - 1 SdKfz 250/1
 - 1 SdKfz 251/2
 - 1 SdKfz 251/4 Tractor
 - 3 SdKfz 251/10

German Armored Panzergrenadier Battalion 1943 – Sep 1943

- **Base**
 - 1 AT GUN #2 + 1 GUN TRACTOR
 - 1 7.5cm leIG 18 Section + 1 SdKfz 251/4 Tractor
 - 1 Armored Pioneer stand + 1 SdKfz 251/1
 - 1 SdKfz 251/2
- **3 Armored Panzergrenadier Companies**
 - 3 Armored PzGr stands + 3 SdKfz 251/1
 - 1 MG Plt stand + 1 SdKfz 251/10
 - 1 SdKfz 251/10
 - 1 SdKfz 251/9 Section
- **Stand Inventory**
 - 1 AT GUN #2
 - 1 GUN TRACTOR
 - 1 7.5cm leIG 18 Section
 - 1 Armored Pioneer stand
 - 9 Armored PzGr stands
 - 3 MG Plt stand
 - 13 SdKfz 251/1
 - 1 SdKfz 251/2
 - 1 SdKfz 251/4 Tractor
 - 3 SdKfz 251/9
 - 3 SdKfz 251/10

German Armored Panzergrenadier Battalion Oct 1943 – Jun 1944

▪ Base

- 1 AT GUN #2 + 1 SdKfz 251/17 or GUN TRACTOR
- 1 7.5cm leIG 18 Section + 1SdKfz 251/4 Tractor
- 1 SdKfz 251/2

▪ 3 Armored Panzergrenadier Companies

- 3 Armored PzGr stands + 3 SdKfz 251/1
- 1 MG Plt stand + 1 SdKfz 251/17
- 1 SdKfz 251/10
- 1 SdKfz 251/9 Section

▪ Stand Inventory

- 1 AT GUN #2
- 1 SdKfz 251/17 or 1 GUN TRACTOR
- 1SdKfz 251/4 Tractor
- 1 SdKfz 251/2
- 9 SdKfz 251/1
- 3 SdKfz 251/17
- 3 SdKfz 251/10
- 3 SdKfz 251/9 Section
- 1 7.5cm leIG 18 Section
- 9 Armored PzGr stands
- 3 MG Plt stand

German Armored Panzergrenadier Battalion Jul1944 – May1945

▪ Base

- 12cm sGrW 42 120mm Mtr + 1 SdKfz 251/1

▪ 3 Armored Panzergrenadier Companies

- 3 Armored PzGr stands + 3 SdKfz 251/1
- 1 MG Plt stand + 1 SdKfz 251/17
- 1 SdKfz 251/10
- 1 SdKfz 251/9 Section

▪ Stand Inventory

- 12cm sGrW 42 120mm Mtr
- 9 Armored PzGr stands
- 3 MG Plt stand
- 10 SdKfz 251/1
- 3 SdKfz 251/17
- 3 SdKfz 251/10
- 3 SdKfz 251/9 Section

German Armored Panzergrenadier Battalion Jun1945+

▪ Base

- 1 SdKfz 251/22

▪ 3 Armored Panzergrenadier Companies

- 3 Armored PzGr stands + 3 SdKfz 251/1
- 1 SdKfz 251/21

▪ Stand Inventory

- 1 SdKfz 251/22
- 9 Armored PzGr stands
- 9 SdKfz 251/1
- 3 SdKfz 251/21

German Volksgrenadier Battalion 1944 – 1945

▪ Base

- 1 sGrW 34 81mm Mtr
- 1 7.5cm leIG 18 or 7.5cm leIG 37 + 1 Light Horse Limber
- 2 MG Plt

▪ 3 Volksgrenadier Companies

- 1 Volksgrenadier stand
- 2 VolksGr Sturm SMG stands or 2 VolksGr Sturm AR stands
- 0-1 Panzerschreck Team stand

▪ Stand Inventory

- 1 sGrW 34 81mm Mtr

- 1 7.5cm leIG 18 or 7.5cm leIG 37
- 1 Light Horse Limber
- 2 MG Plt
- 3 Volksgrenadier stand
- 6 VolksGr Sturm SMG stands or 6 VolksGr Sturm AR stands
- 0-3 Panzerschreck Team stand

German Volksgrenadier Battalion [Bicycle] 1944 – 1945

▪ Base

- 1 sGrW 34 81mm Mtr
- 1 7.5cm leIG 18 or 7.5cm leIG 37 + 1 Light Horse Limber
- 2 MG Plt

▪ 3 Bicycle Volksgrenadier Companies

- 1 Bicycle VolksGr stand
- 2 Bicycle VGr Sturm SMG stands or 2 Bicycle VGr Sturm AR stands

▪ Stand Inventory

- 1 sGrW 34 81mm Mtr
- 1 7.5cm leIG 18 or 7.5cm leIG 37
- 1 Light Horse Limber
- 2 MG Plt
- 3 Bicycle VolksGr stand
- 6 Bicycle VGr Sturm SMG stands or 6 Bicycle VGr Sturm AR stands

German Motorcycle Rifle [Kradschutzen] Battalion 1939 – 1940

▪ Base

- 1 PaK 35/36 37mm ATG + 1 Light Truck
- 1 7.5cm leIG 18 Section + 1 Light Truck
- 1 Motorized Pioneer stand + 1 Light Truck
- 1 8cm sGrW 34 81mm Mtr + 1 Light Truck
- 2 MG Plt stands + 2 Light Trucks

▪ 3 Motorcycle Rifle Companies

- 1939:
 - 3 Motorcycle Rifle stands
- 1940:
 - 3 Motorcycle Rifle stands
 - 1 Motorcycle MG Plt stand

▪ Stand Inventory

- 1 PaK 35/36 37mm ATG
- 6 Light Trucks
- 1 7.5cm leIG 18 Section
- 1 Motorized Pioneer stand
- 1 8cm sGrW 34 81mm Mtr
- 2 MG Plt stands
- 9 Motorcycle Rifle stands
- If 1940:
 - 3 Motorcycle MG Plt stand

German Motorcycle Rifle [Kradschutzen] Battalion 1940

▪ Base

- 1 PaK 35/36 37mm ATG + 1 Light Truck
- 1 7.5cm leIG 18 + 1 Light Truck
- 1 Motorized Pioneer stand + 1 Light Truck
- 1 8cm sGrW 34 81mm Mtr + 1 Light Truck

▪ 2 Motorcycle Rifle Companies

- 3 Motorcycle Rifle stands
- 1 Motorcycle MG Plt stand

▪ Stand Inventory

- 1 PaK 35/36 37mm ATG
- 4 Light Trucks
- 1 7.5cm leIG 18
- 1 Motorized Pioneer stand
- 1 8cm sGrW 34 81mm Mtr
- 6 Motorcycle Rifle stands
- 3 Motorcycle MG Plt stand

German Motorcycle Rifle [Kradschutzen] Battalion 1941 – 1945

- **Base**
 - 1 PaK 35/36 37mm ATG + 1 Light Truck
 - 1 7.5cm leIG 18 Section + 1 Light Truck
 - 1 Motorized Pioneer stand + 1 Light Truck
 - 1 8cm sGrW 34 81mm Mtr + 1 Light Truck
 - 2 Motorcycle MG Plt
- **3 Motorcycle Rifle Companies**
 - 3 Motorcycle Rifle stands
- **Stand Inventory**
 - 1 PaK 35/36 37mm ATG
 - 4 Light Trucks
 - 1 7.5cm leIG 18 Section
 - 1 Motorized Pioneer stand
 - 1 8cm sGrW 34 81mm Mtr
 - 2 Motorcycle MG Plt
 - 9 Motorcycle Rifle stands

Attachments⁹

- **Panzerjäger [Tank Hunter] Company**
 - '39-'45: 2-3 AT GUN #3 + 2-3 GUN TRACTORS
 - '42-'45: 2-3 PANZERJÄGER/JAGDPANZER
 - Jun'44-'45: 2-3 StuG III series or 2-3 StuG IV or 2-3 Hetzer; 1 Escort Infantry stand [rides on the armored vehicles]
- **StuG [Assault Gun] Company**
 - '40: 1 ASSAULT GUN
 - '41-'42: 2 ASSAULT GUNS
 - '43-'45: 2-3 ASSAULT GUNS, 0-1 StuH42 [max 3 vehicle stands total]
 - Jun'44-'45: 1 Escort Infantry stand, 2-3 ASSAULT GUNS, 0-1 StuH42 [max 3 vehicle stands total, infantry stand rides on a vehicle stand]
 - '45: 2-3 ASSAULT GUNS, 0-1 StuH42 or Pz. IV/70(A) [max 3 vehicle stands total]
 - '45: 1 Escort Infantry stand, 2-3 ASSAULT GUNS, 0-1 StuH42 or Pz. IV/70(A) [max 3 vehicle stands total, infantry stand rides on a vehicle stand]
- **Sturm Panzer Company**
 - '43-'45: 2-3 Brummbär
 - '45: 1 Sturmtiger [very rare]
- **Armored Car Company [Panzer or Panzergrenadier Division]**
 - '39: 2 SdKfz 221; 1 SdKfz 222; 1 SdKfz 223; 1 SdKfz 231/232 6-rad
 - '40: 2 SdKfz 221; 1 SdKfz 222; 1 SdKfz 223; 1 SdKfz 231/232 8-rad or SdKfz 231/232 6-rad
 - '41: 2 SdKfz 221; 1 SdKfz 222; 1 SdKfz 223; 1 SdKfz 231/232 8-rad
 - '41: 5-6 AMD 35 Panhard 178
 - '42-'45*: 3 SdKfz 222; 1 SdKfz 223; 1 SdKfz 231/232 8-rad
 - '43-'45**: 1 SdKfz 250/1; 3 SdKfz 250/9
 - Oct'43-'45: 5 Pz. III Luchs
 - Apr'44-44: 5 SdKfz 140/1 AufKPz. 38(t)
 - Oct'44-'45***: 5 SdKfz 234/2
- **Armored Car HQ Company¹⁰ [Panzer or Panzergrenadier Division]**
 - Jul'44-'45: 3 SdKfz 234/1 or 3 SdKfz 234/2; 1 SdKfz 234/3
 - Jul'44-'45: 2 SdKfz 231/232 8 rad; 1 SdKfz 223
 - '45: 3 SdKfz 234/1 or 3 SdKfz 234/2; 1 SdKfz 234/4

⁹ Note that multiple organizations are listed for some date ranges.

¹⁰ HQ company can be deployed with any armored car company except the one marked with *. SdKfz 234/2 is only fielded in HQ for the company org marked with **. SdKfz 231 is not fielded with company org marked with ***.

▪ **Light Recon Company [Panzer or Panzergrenadier Division]**

- '42-'45: 6 Recon Team stands + 6 Kubelwagen or Schwimmwagen; 1 MG Plt stand + 1 Kubelwagen or Schwimmwagen
- '43-'45: 1 SdKfz 250/7; 6 Recon Team stands + 6 SdKfz 250/1; 1 SdKfz 250/10 or SdKfz 250/8

▪ **Medium Recon Company [Panzer or Panzergrenadier Division]**

- '43-'45: 3 Armored PzGr stands + 3 SdKfz 251/1; 1 MG Plt stand + 1 SdKfz 251/17 or SdKfz 251/1; 1 SdKfz 251/9 or [1945 only] SdKfz 251/22

▪ **Recon Platoon or Company [Infantry or Volksgrenadier Division]**

- '39: 1 Kfz 13
- '39-'45: 1 Bicycle Infantry stand or 3 Bicycle Infantry stands
- '40-'42: 1 SdKfz 221
- [In Italy & the Balkans the following Italian vehicles were also available]
- Sep'43-'45: 1-3 AB41
- Oct'43-'45: 1 AB41/43
- Sep'43-'45: 1-2 AB Lince
- Sep'43-'45: 1-2 L6/40; 0-1 Semovente 47/32

▪ **Heavy Infantry Gun Section [Infantry/Grenadiers]**

- '39-'45: 1 15cm sIG 33 Section + 1 Light Truck or 1 Horse Limber

▪ **Heavy Infantry Gun Section [Motorized Panzergrenadiers]**

- '40-'41: 1 sIG 33(Sf) Pz. IB, or 1 15cm sIG 33 Section + 1 Light Truck
- '42-Feb'43: 1 sIG 33(Sf) Pz. IB, or 1 sIG 33(Sf) Pz. II, or 1 15cm sIG 33 Section + 1 Light Truck
- Mar'43-'43: 1 Grille, 1 sIG 33(Sf) Pz. IB, or 1 sIG 33(Sf) Pz. II, or 1 15cm sIG 33 Section + 1 Light Truck
- '44: 1 Grille, or 1 15cm sIG 33 Section + 1 Light Truck
- '45: 1 Grille, or 1 sIG 33(2/Sf) Jpz. 38(t) Hetzer, or 1 15cm sIG 33 Section + 1 Light Truck

▪ **Heavy Infantry Gun Section [Armored Panzergrenadiers]**

- '42-Feb'43: 1 sIG 33(Sf) Pz. IB, or 1 sIG 33(Sf) Pz. II, or 1 15cm sIG 33 Section + 1SdKfz 251/4 Tractor
- Mar'43-'43: 1 Grille, 1 sIG 33(Sf) Pz. IB, or 1 sIG 33(Sf) Pz. II, or 1 15cm sIG 33 Section + 1SdKfz 251/4 Tractor
- '44: 1 Grille, or 1 15cm sIG 33 Section + 1 Light Truck
- '45: 1 Grille, or 1 sIG 33(2/Sf) Jpz. 38(t) Hetzer, or 1 15cm sIG 33 Section + 1 Light Truck
- '42-'43: 1 sIG 33(Sf) Pz. IB, or 1 sIG 33(Sf) Pz. II, or 1 15cm sIG 33 Section + 1 SdKfz 251/4

▪ **Flak Kampftruppe**

- '39-45: 1 8.8cm Flak 18, 36, 37 + 1 SdKfz 7; 1 2cm Flak 30 or 2cm Flak 38 + 1 Light Truck

▪ **Flak Battery**

- '39-'45: 2-3 LIGHT ANTI-AIRCRAFT GUNS + 2-3 Light Trucks
- '39-'45: 2-3 SdKfz 10/4 or SdKfz 6/2 or SdKfz 7/1 or SdKfz 7/2
- '41-'43: 2-3 FlakPz. I
- '41-'45: 2 LIGHT ANTI-AIRCRAFT GUNS + 2 Light Trucks; 1 2cm Flakvierling 38 + 1 Light Truck

▪ **Flak Platoon**

- '39-'45: 1 LIGHT ANTI-AIRCRAFT GUN + 1 Light Truck
- '39-'45: 1 SdKfz 10/4 or SdKfz 6/2 or SdKfz 7/1 or SdKfz 7/2
- '41-'43: 1 FlakPz. I
- '41-'45: 1 2cm Flakvierling 38 + 1 Light Truck

▪ **Panzer Flak Platoon**

- '44-'45: 1 FlakPz. 38(t) or Möbelwagen or Wirbelwind or [very rare] Ostwind

▪ **Engineer Company [max 2]**

- '39-'45: 3 Motorized Pioneer stands + 3 Light Trucks

▪ **Armored Engineer Company [max 1]**

- '41-Mar'42: 2 Pz.IB Demolition Layers, 1 28cm Wurfahmen 40 or 32cm Wurfahmen 40, 1 Motorized Pioneer stand + 1 Light Truck
- Apr'42-Mar'43: 2 Motorized Pioneer stands + 2 Light Trucks, 1 Armored Pioneer stand + 1 SdKfz 251/5 Pioneer Pzw.
- Apr'43-'45: 3 Armored Pioneer stands + 3 SdKfz 251/7 Pioneer Pzw.

Artillery Support Groups

▪ **10.5cm Battalion '38-'45**

- 3 10.5cm leFH 18 + 3 Horse Limbers or Light Trucks

▪ **10.5cm SP Battalion Jul'43-'45**

- 3 Wespe

▪ **15cm Battalion '38-'45**

- 3 15cm sFH 18 + 3 Horse Limbers or Light Trucks

▪ **15cm SP Battalion Jul'43-'45**

- 3 Hummel

▪ **15cm Towed MRL Battery '41-'45**

- 1 Nebelwerfer 41 + 1 SdKfz 10 Tractor

▪ **15cm SP MRL Battery '42-'45**

- 1 Nebelwerfer 42

Equipment Notes

▪ **AA PANZER:**

- '39: Truck w/AAMG
- '40-'41: SdKfz 10/4, SdKfz 7/1, or Truck w/AAMG
- '42-'43: SdKfz 10/5, SdKfz 10/4, SdKfz 7/1, or Truck w/AAMG
- '44-'45: FlakPz. 38(t), Möbelwagen, Wirbelwind (FlaKPz.IV), SdKfz 10/5, or SdKfz 7/1

▪ **ASSAULT GUN:**

▪ **Stug III series, [rarely] StuG 33B, or [Italy only] Semovente 105/25**

▪ **AT GUN #1:**

▪ **'39-'41: PaK 35/36 37mm ATG; 47mm PaK 141(f) ATG, or 47mm PaK 36(t) ATG**

- '42-'45: Pak 38 50mm ATG, PaK 35/36 37mm ATG; 47mm PaK 141(f) ATG, or 47mm PaK 36(t) ATG

▪ **AT GUN #2:**

▪ **'42: PaK 38 50mm ATG; 47mm PaK 141(f) ATG, or 47mm PaK 36(t) ATG**

- '43-Jun'44: PaK 40 75mm ATG, PaK 38 50mm ATG, PaK 36(r) 76mm ATG, or PaK 39(r) 76mm ATG

▪ **AT GUN #3: [in rough order of decreasing prevalence where known]**

- '39-'Jun'40: PaK 35/36 37mm ATG, 47mm PaK 141(f) ATG, or 47mm PaK 36(t) ATG
- '41: PaK 35/36 37mm ATG, PaK 38 50mm ATG, 47mm PaK 141(f) ATG, 47mm PaK 36(t) ATG, or 7.5cm PaK 41 ATG [rare]
- '42-May'42: PaK 38 50mm ATG, PaK 40 75mm ATG, 47mm PaK 141(f) ATG, 47mm PaK 36(t) ATG, or 7.5cm PaK 41 ATG [rare]
- Jun'42-'42: PaK 38 50mm ATG, PaK 97/38 75mm ATG, PaK 40 75mm ATG, 47mm PaK 141(f) ATG, 47mm PaK 36(t) ATG, or 7.5cm PaK 41 ATG [rare]
- '43-'45: PaK 40 75mm ATG, PaK 38 50mm ATG, PaK 43 88mm ATG, PaK 43/41 88mm ATG, PaK 97/38 75mm ATG, or 47mm PaK 141(f) ATG

▪ **ENGINEER:**

▪ **'39-'41: 1 Motorized Pioneer stand + 1 Light Truck**

- '41-'43: 1 Motorized Pioneer stand + 1 Light Truck, or 1 Armored Pioneer stand + 1 SdKfz 251/5 Pioneer Pzw.

- '43-'45: 1 Motorized Pioneer stand + 1 Light Truck, or 1 Armored Pioneer stand + 1 SdKfz 251/7 Pioneer Pzw.

▪ **FLAME TANK:**

- Jul'43-Dec'43: Pz.III (Fl)

▪ **GUN TRACTOR:**

- For 37mm AT guns: Light Truck, or SdKfz 10 Tractor. In 1941-42 also used captured French Chenillette (Renault UE), or captured British Cavalry Carrier or Bren Carrier
- For 50mm AT guns: Light Truck, SdKfz 10 Tractor, or SdKfz 251/4 Tractor. In 1941-42 also used captured French Chenillette (Renault UE), or captured British Cavalry Carrier or Bren Carrier
- For 75mm-76mm AT guns: Light Truck, RSO, SdKfz 3 Maultier, SdKfz 11 Tractor, or SdKfz 251/4 Tractor.
- For 88mm and up AT Guns: SdKfz 7 Tractor, or sWS

▪ **HEAVY RECCE TANK:**

- '42-'43: Pz. III series or Pz. IV series

▪ **LIGHT ANTI-AIRCRAFT GUN:**

▪ **'39-'45: 2cm Flak 30, 2cm Flak 38, or 3.7cm Flak 36/37**

▪ **LIGHT RECCE TANK:**

- '39-'40: Pz. I series or Pz. II series
- '41-'43: Pz. II series
- '44-'45: Pz. IV series or Pz. V series

▪ **MEDIUM TANK:**

▪ **'43: Pz. III series, Pz. IV series, Pz. V series, or StuG III series**

- '44: Pz. III series, Pz. IV series, Pz. V series, StuG III series, or Pz. IV/70(V) & (A)
- '45: Pz. IV series, Pz. V series¹¹, StuG III series, or Pz. IV/70(V) & (A)

▪ **PANZERJÄGER/JAGDPANZER:¹² [in rough order of decreasing prevalence where known]**

- '39-Feb'40: 8.8cm auf Zgkw 12t
- Mar'40-'40: Pzjg. I, or 8.8cm auf Zgkw 12t
- '41-May'41: Pzjg. I
- Jun'41-Mar'42: Pzjg. I, or 4.7cm PaK(t) auf Pz.35R(f)
- Apr'42-Jun'42: PaK 36(r) auf Pz. II Marder II, Pzjg. I, 4.7cm PaK(t) auf Pz. 35R(f)
- Jul'42-Nov'42: Marder III w/76mm, Marder II, PaK 36(r) auf Pz.II Marder II, Marder I
- Dec'42-Feb'43: Marder III w/76mm, Marder II, PaK 36(r) auf Pz.II Marder II, Marder I, or Marder III w/75mm
- Mar'43-May'43: Marder III w/75mm, Marder II, Marder III w/76mm, PaK 36(r) auf Pz.II Marder II, Marder I, Ferdinand / Elefant
- Jun'43-Sep'43: Marder III w/75mm, Marder III w/76mm, Marder II, StuG IIIG, StuG IV, Nashorn / Hornisse, Ferdinand / Elefant
- Oct'43-Feb'44: Marder III w/75mm, Marder III w/76mm, Marder II, StuG IIIG, StuG IV, Nashorn / Hornisse, Ferdinand / Elefant
- Mar'44-May'44: Marder III w/75mm, Marder III w/76mm, Marder II, StuG IIIG, StuG IV, JgdPz. IV, Nashorn / Hornisse, Ferdinand / Elefant
- Jun'44-Jun'44: Marder III w/75mm, Marder III w/76mm, Marder II, StuG IIIG, StuG IV, JgdPz. IV, Nashorn / Hornisse, Jagdpanther, Ferdinand / Elefant
- Jul'44-Nov'44: Marder III w/75mm, Marder III w/76mm, Marder II, StuG IIIG, StuG IV, Hetzer, JagPz. IV, Nashorn / Hornisse, Jagdpanther, Ferdinand / Elefant

¹¹ A Jagdpanther may be substituted for one Pz.V Panther stand in Panther companies.

¹² Not all vehicles available across entire listed date range. Check the dates in vehicle data for first/last availability.

- Dec'44-'45: Marder III w/75mm, Marder III w/76mm, Marder II, StuG IIIG, StuG IV, Hetzer, JagPz. IV, Pz. IV/70(V), Nashorn / Hornisse, Jagdpanther, Jagdtiger
- [In Italy & the Balkans starting in Sep '43, these Italian vehicles were also available]: Semovente 75/18, Semovente 75/34, Semovente M43 75/34, Semovente 105/25, Semovente M43 75/46, or Semovente M43 105/25

Polish Army 1939

Quality

1920-1945: 20% Marginal; 45% Fair; 25% Average; 10% Good

Artillery Accuracy & Friction Response

Artillery Accuracy 5+; Response 3+

Combat Formations

Polish Infantry Battalion

- **3 Rifle Companies**
 - 3 Infantry stands
- **1 Infantry MG Company**
 - 3 MG Plt stands [may attach one to each rifle company]

Polish Cavalry Regiment

- **Base**
 - 1 recon Cavalry stand
 - 1 recon Bicycle Infantry stand
 - 1 wz. 36 37mm ATG + 1 Light Horse Limber
- **4 Sabre Companies**
 - 3 Cavalry stands
- **1 Cavalry MG Company**
 - 3 MG Tachanka stands [stands may be attached to Sabre Companies]

Polish Cavalry Brigade Armored Battalion

- **1 Tankette Company**
 - 3 TK (TK-3) or 3 TKS w/MG stands
- **1 Armored Car Company**
 - 3 wz. 29 or 3 wz. 34 w/MG or 3 wz. 34 w/37mm

Polish Motorized Cavalry Regiment

- **Base**
 - 1 recon Motorcycle Infantry stand
 - 1 wz. 36 37mm ATG + 1 Light Truck
- **4 Motorized Cavalry Companies**
 - 3 Motorized Cavalry stands + 3 Light Trucks
 - 1 MG Plt + 1 Light Truck
- **1 Motorized MG Company**
 - 3 MG Plt + 3 Light Trucks

Polish Motorized Armored Recon Battalion

- **Base**
 - 1 recon Motorcycle Infantry stand
 - 1 MG Plt + 1 Light Truck
 - 1 wz. 36 37mm ATG + 1 Light Truck
- **1 Reconnaissance Tank Company**
 - 2 TKS w/MG
 - 1 TKS w/20mm
- **1 Motorized Cavalry Company**
 - 3 Motorized Cavalry stands + 3 Light Trucks
 - 1 MG Plt + 1 Light Truck

Polish Light Tank Battalion

- **Base**
 - 1 AA MG + 1 Light Truck

-
- 3 Tank Companies
 - 3 7TP or 3 R-35 or 3 FT-17
-

Attachments

- Cavalry Brigade's Recon Bicycle Infantry Company
 - 3 Bicycle Infantry stands; 1 MG Tachanka stand
 - Motorized Cavalry Brigade's Light Tank Company
 - 2 Vickers Mk E w/47mm; 1 Vickers Mk E w/MG
 - Motorized Cavalry Brigade's Recon Tank Company
 - 2 TKS w/MG; 1 TKS w/20mm
-

Artillery Support Groups

- 75mm Battalion
 - 3 wz. 97/17 75mm FG + 3 Horse Limbers or 3 Light Trucks
 - 75mm Battery [availability modifier -2]
 - 1 wz. 97/17 75mm FG + 1 Horse Limber or 1 Light Truck
 - 100mm Battalion
 - 3 wz. 14/19 100mm FG + 3 Horse Limbers or 3 Light Trucks
 - 100mm Battery [availability modifier -2]
 - 1 wz. 14/19 100mm FG + 1 Horse Limber or 1 Light Truck
 - 105mm Battery [availability modifier -2]
 - 1 wz. 29 105mm FG + 1 Horse Limber or 1 Light Truck
 - 150mm Battery [availability modifier -2]
 - 1 wz. 17 150mm How + 1 Horse Limber or 1 Light Truck
-

Equipment Notes

- None

Soviet Army 1939–1945

Quality

1939-1941: 65% Poor; 25% Marginal; 10% Fair
 1942: 55% Poor; 35% Marginal; 10% Fair
 1943: 40% Poor; 30% Marginal; 20% Fair; 10% Average
 1944-1948: 25% Poor; 15% Marginal; 30% Fair; 20% Average; 10% Good
 1949: 35% Poor; 20% Marginal; 20% Fair; 15% Average; 10% Good

Artillery Accuracy & Friction Response

1939-1949: Artillery Accuracy 5+; Response 3+

Combat Formations

Soviet Light Tank Brigade Nov 1939 – Jul 1940

- Base
 - 1 recon Rifle Infantry stand
 - 3 recon LIGHT ARMORED CARS
 - 3 recon SCOUT TANKS
 - 1 12.7mm AA MG Truck
 - 1 Pioneer stand + 1 Light Truck
 - 3-5 Brigade Light Tank Battalions
 - 9 LIGHT TANKS
 - 1 Motor Rifle Battalion #1
 - 9 Motorized Infantry #1 stands + 9 Light Trucks
 - 1 45MM AT GUN + 1 LIGHT GUN TRACTOR
 - 1 12.7mm AA MG Truck
 - Stand Inventory
 - 1 recon Rifle Infantry stand
 - 3 recon LIGHT ARMORED CARS
 - 3 recon SCOUT TANKS
 - 2 12.7mm AA MG Truck
 - 1 Pioneer stand
 - 9 Motorized Infantry #1 stands
 - 10 Light Trucks
 - 1 45MM AT GUN
 - 1 LIGHT GUN TRACTOR
 - 27, 36 or 45 LIGHT TANKS
-

Soviet Heavy Tank Brigade Nov 1939 – Jul 1940

- Base
 - 2 recon LIGHT ARMORED CARS
 - 1 recon BT-7 series or BT-5 series
 - 1 12.7mm AA MG Truck
 - 3 Heavy Tank Battalions
 - (1 recon LIGHT ARMORED CAR)
 - 6 HEAVY TANKS
 - Stand Inventory
 - 3 recon LIGHT ARMORED CARS
 - 1 recon BT-7 series or BT-5 series
 - 1 12.7mm AA MG Truck
 - 18 HEAVY TANKS
-

Soviet Light Tank Regiment [Motorized Division] Jul 1940 – Jul 1941

- 5 Regimental Light Tank Battalions
 - 9 LIGHT TANKS
- Stand Inventory
 - 45 LIGHT TANKS

Soviet Tank Regiment [Tank Division] Jul 1940 – Jul 1941

- **Base**
 - 3 recon LIGHT ARMORED CARS
 - **1 Heavy Tank Battalion**
 - 6 HEAVY TANKS
 - **2 Medium Tank Battalions**
 - 9 MEDIUM TANKS
 - **1 Flamethrower Tank Battalion**
 - 2 T-26 series; 6 FLAME TANKS
 - **Stand Inventory**
 - 3 recon LIGHT ARMORED CARS
 - 2 T-26 series; 6 FLAME TANKS
 - 18 MEDIUM TANKS
 - 6 Heavy Tanks
-

Soviet Tank Regiment [Tank Division] Jul 1941 – Sep 1941

- **Base**
 - 1 Quad 7.62mm AA MG Truck
 - **1 Medium Tank Battalion**
 - 2 HEAVY TANKS
 - 4 MEDIUM TANKS
 - **2 Regimental Light Tank Battalions**
 - 6 LIGHT TANKS
 - **Stand Inventory**
 - 1 Quad 7.62mm AA MG Truck
 - 2 HEAVY TANKS
 - 4 MEDIUM TANKS
 - 6 LIGHT TANKS
-

Soviet Tank Brigade Aug 1941 – Sep 1941

- **Base**
 - 1 recon LIGHT ARMORED CAR
 - 1 recon HEAVY ARMORED CAR
 - 1 recon Motorcycle Infantry #1 stand
 - 1 12.7mm AA MG Truck
 - 2 37mm AAG M1939 61-K + 2 Light Trucks
 - **1 Medium Tank Battalion**
 - 2 HEAVY TANKS
 - 4 MEDIUM TANKS
 - **2 Brigade Light Tank Battalions**
 - 6 LIGHT TANKS
 - **1 Motor Rifle Battalion #1**
 - (1 82mm Mtr + 1 Light Truck)
 - 9 Motorized Infantry #1 stands + 9 Light Trucks
 - 2 45MM AT GUNS + 2 Light Gun Tractors
 - 3 Motorized AT Team stands + 3 Light Trucks
 - **Stand Inventory**
 - 1 recon LIGHT ARMORED CAR
 - 1 recon HEAVY ARMORED CAR
 - 1 recon Motorcycle Infantry #1 stand
 - 1 12.7mm AA MG Truck
 - 2 37mm AAG M1939 61-K
 - 14 Light Trucks
 - 2 HEAVY TANKS
 - 4 MEDIUM TANKS
 - 12 LIGHT TANKS
 - 1 82mm Mtr
 - 9 Motorized Infantry #1 stands
 - 2 45MM AT GUNS
 - 2 LIGHT GUN TRACTORS
 - 3 Motorized AT Team stands
-

Soviet Tank Brigade Sep 1941 – Dec 1941

- **Base**
 - 1 recon LIGHT ARMORED CAR
 - 1 recon HEAVY ARMORED CAR
 - 1 recon LIGHT TANK
 - 1 recon Motorcycle Infantry #1 stand
 - 1 12.7mm AA MG Truck
 - 2 37mm AAG M1939 61-K + 2 Light Trucks
 - **1 Medium Tank Battalion**
 - 2 HEAVY TANKS
 - 4 MEDIUM TANKS
 - **1 Brigade Light Tank Battalion**
 - 6 LIGHT TANKS
 - **1 Motor Rifle Battalion #1**
 - (1 82mm Mtr + 1 Light Truck)
 - 9 Motorized Infantry #1 stands + 9 Light Trucks
 - 2 45MM AT GUNS + 2 Light Gun Tractors
 - 3 Motorized AT Team stands + 3 Light Trucks
 - **Stand Inventory**
 - 1 recon LIGHT ARMORED CAR
 - 1 recon HEAVY ARMORED CAR
 - 1 recon LIGHT TANK
 - 1 recon Motorcycle Infantry #1 stand
 - 1 12.7mm AA MG Truck
 - 2 37mm AAG M1939 61-K
 - 16 Light Trucks
 - 2 HEAVY TANKS
 - 4 MEDIUM TANKS
 - 6 LIGHT TANKS
 - 1 82mm Mtr
 - 9 Motorized Infantry #1 stands
 - 2 45MM AT GUNS
 - 2 LIGHT GUN TRACTORS
 - 3 Motorized AT Team stands
-

Soviet Tank Brigade Dec 1941 – Jul 1942

- **Base**
 - 1 12.7mm AA MG Truck
 - **2 Medium Tank Battalions**
 - 2 LIGHT TANKS
 - 2 MEDIUM TANKS
 - 1 HEAVY TANK
 - **1 Motor Rifle Battalion #1**
 - (1 82mm Mtr + 1 Light Truck)
 - 6 Motorized Infantry #1 stands + 6 Light Trucks
 - 1 ATR Team stand + 1 Light Truck
 - 3 SMG Infantry stands [tank riders]
 - **Stand Inventory**
 - 1 12.7mm AA MG Truck
 - 4 LIGHT TANKS
 - 4 MEDIUM TANKS
 - 2 HEAVY TANKS
 - 1 82mm Mtr
 - 8 Light Trucks
 - 6 Motorized Infantry #1 stands
 - 1 ATR Team stand
 - 3 SMG Infantry stands
-

Soviet Tank Brigade Aug 1942 – Dec 1942

- **Base**
 - 1 76MM FIELD GUN + 1 Light Truck
 - **3 Medium Tank Battalions**
 - 6 MEDIUM TANKS
 - **1 Brigade Light Tank Battalion**
 - 4 LIGHT TANKS
-

- **1 Motorized Rifle Battalion #1**
 - (1 82mm Mtr + 1 Light Truck)
 - 6 Motorized Infantry #1 stands + 6 Light Trucks
 - 1 ATR Team stand + 1 Light Truck
 - 3 SMG Infantry stands [tank riders]

- **Stand Inventory**

- 1 76MM FIELD GUN
- 18 MEDIUM TANKS
- 4 LIGHT TANKS
- 1 82mm Mtr
- 6 Motorized Infantry #1 stands
- 9 Light Trucks
- 1 ATR Team stand
- 3 SMG Infantry stands

Soviet Tank Brigade Jan 1943 – Feb 1943

- **Base**
 - 1 76MM FIELD GUN + 1 Light Truck
 - 1 37mm AAG M1939 61-K + 1 Light Truck
- **3 Medium Tank Battalions**
 - 6 MEDIUM TANKS
- **1 Brigade Light Tank Battalion**
 - 4 LIGHT TANKS
- **1 Motor Rifle Battalion #1**
 - (1 82mm Mtr + 1 Light Truck)
 - 6 Motorized Infantry #1 stands + 6 Light Trucks
 - 1 ATR Team stand + 1 Light Truck
 - 3 SMG Infantry stands [tank riders]

- **Stand Inventory**

- 1 76MM FIELD GUN
- 1 Light Truck
- 1 37mm AAG M1939 61-K
- 1 Light Truck
- 3 MEDIUM TANK Battalions
- 6 MEDIUM TANKS
- 1 Brigade Light Tank Battalion
- 4 LIGHT TANKS
- 1 Motor Rifle Battalion #1
- 1 82mm Mtr + 1 Light Truck
- 6 Motorized Infantry #1 stands + 6 Light Trucks
- 1 ATR Team stand + 1 Light Truck
- 3 SMG Infantry stands [tank riders]

Soviet Tank Brigade Mar 1943 – Nov 1943

- **Base**
 - 1 76MM FIELD GUN + 1 Light Truck
 - 2 12.7mm AA MG Trucks
- **3 Medium Tank Battalions**
 - 6 MEDIUM TANKS
- **1 Brigade Light Tank Battalion**
 - 4 LIGHT TANKS
- **1 Motor Rifle Battalion #1**
 - (1 82mm Mtr + 1 Light Truck)
 - 6 Motorized Infantry #1 stands + 6 Light Trucks
 - 1 ATR Team stand + 1 Light Truck
 - 3 SMG Infantry stands [tank riders]

- **Stand Inventory**

- 1 76MM FIELD GUN
- 9 Light Trucks
- 2 12.7mm AA MG Trucks
- 18 MEDIUM TANKS
- 4 LIGHT TANKS
- 1 82mm Mtr
- 1 Light Truck
- 6 Motorized Infantry #1 stands
- 1 ATR Team stand

- 3 SMG Infantry stands

Soviet Tank Brigade Nov 1943 – 1945

- **Base**
 - 1 76MM FIELD GUN + 1 Light Truck
 - 2 12.7mm AA MG Trucks
- **3 Medium Tank Battalions**
 - 4 MEDIUM TANKS
- **1 Motor SMG Battalion**
 - 6 Motorized SMG stands + 6 Light Trucks
 - 3 SMG Infantry stands [tank riders]
 - 3 ATR Team stands + 2 Light Trucks
 - 1 45MM AT GUN + 1 LIGHT GUN TRACTOR

- **Stand Inventory**

- 1 76MM FIELD GUN
- 9 Light Trucks
- 2 12.7mm AA MG Trucks
- 12 MEDIUM TANKS
- 6 Motorized SMG stands
- 3 SMG Infantry stand
- 3 ATR Team stands
- 1 45MM AT GUN
- 1 LIGHT GUN TRACTOR

Soviet Motorized Infantry Regiment Jul 1940 – Jul 1941

- **Base**
 - 1 recon LIGHT ARMORED CAR
 - 1 recon HEAVY ARMORED CAR
 - 1 recon Motorcycle Team
 - 1 45MM AT GUN + 1 LIGHT GUN TRACTOR
 - 1 76MM INFANTRY GUN + 1 Light Truck
 - 1 82mm Mtr + 1 Light Truck
 - 1 Pioneer stand
- **3 Motor Rifle Battalion #2s**
 - 9 Motorized Infantry #2 stands + 9 Light Trucks
 - 2 MG Plt stands + 2 Light Trucks

- **Stand Inventory**

- 1 recon LIGHT ARMORED CAR
- 1 recon HEAVY ARMORED CAR
- 1 recon Motorcycle Team
- 1 45MM AT GUN
- 1 Light Gun Tractor
- 1 76MM INFANTRY GUN
- 1 82mm Mtr
- 1 Pioneer stand
- 27 Motorized Infantry #2 stands
- 35 Light Trucks
- 6 MG Plt stands

Soviet Motorized Infantry Regiment Jul 1941 – Sep 1941

- **Base**
 - (1 45MM AT GUN + 1 Light Gun Tractor)
 - 1 76MM INFANTRY GUN + 1 Light Truck
 - 1 120mm Mtr + 1 Light Truck
- **3 Motor Rifle Battalion #2**
 - (1 82mm Mtr + 1 Light Truck)
 - 9 Motorized Infantry #2 stands + 9 Light Trucks
 - 3 MG Plt stands + 3 Light Trucks

- **Stand Inventory**

- 1 45MM AT GUN
- 1 Light Gun Tractor
- 1 76MM INFANTRY GUN
- 1 120mm Mtr
- 3 82mm Mtr
- 27 Motorized Infantry #2 stands
- 9 MG Plt stands

- 41 Light Trucks

Soviet Motor Rifle Brigade Apr 1942 – 1945

▪ Base

- 2 recon LIGHT ARMORED CARS
- 3 76MM FIELD GUNS + 3 Light Trucks
- 2 82mm Mtr + 2 Light Trucks
- 1 120mm Mtr + 1 Light Truck
- 1 12.7mm AA MG Truck
- 3 37mm AAG M1939 61-K + 3 Light Trucks

▪ 3 Motor Rifle Battalion #3

▪ Apr'42-Jul'42

- 9 Motorized Infantry #3 stands + 9 Light Trucks
- 3 ATR Team stands + 3 Light Trucks

▪ Jul'42-'45

- 9 Motorized Infantry #3 stands + 9 Light Trucks
- 3 MG Plt stands + 3 Light Trucks
- 3 ATR Team stands + 3 Light Trucks

▪ Stand Inventory

- 2 recon LIGHT ARMORED CARS
- 3 76MM FIELD GUNS
- 9 Light Trucks
- 2 82mm Mtr
- 1 120mm Mtr
- 1 12.7mm AA MG Truck
- 3 37mm AAG M1939 61-K
- If Apr'42-Jul'42 MR Bn:
 - 27 Motorized Infantry #3 stands
 - 9 ATR Team stands
 - 45 Light Trucks
- If Jul'42-'45 MR Bn:
 - 27 Motorized Infantry #3 stands
 - 9 MG Plt stands
 - 9 ATR Team stands
 - 54 Light Trucks

Soviet Mechanized Brigade Sep 1942 – May 1944

▪ Base

- 2 recon LIGHT ARMORED CARS
- 6 ATR Team stands + 3 Light Trucks
- 3 76MM FIELD GUNS + 3 Light Trucks
- 2 82mm Mtr + 2 Light Trucks
- 1 120mm Mtr + 1 Light Truck
- 3 12.7mm AA MG Trucks
- 2 37mm AAG M1939 61-K + 2 Light Trucks

▪ 3 Motor Rifle Battalion #3

- 9 Motorized Infantry #3 stands + 9 Light Trucks
- 3 MG Plt stands + 3 Light Trucks
- 3 ATR Team stands + 3 Light Trucks

▪ 1 Mech Tank Regiment #1

- 3 LIGHT TANKS
- 4 MEDIUM TANKS

▪ 1 SMG Company [tank riders]

- 3 SMG Infantry stands

▪ Stand Inventory

- 2 recon LIGHT ARMORED CARS
- 6 ATR Team stands
- 3 76MM FIELD GUNS
- 2 82mm Mtr
- 1 120mm Mtr
- 3 12.7mm AA MG Trucks
- 2 37mm AAG M1939 61-K
- 3 Motor Rifle Battalion #3
- 27 Motorized Infantry #3 stands
- 9 MG Plt stands
- 9 ATR Team stands

- 3 LIGHT TANKS

- 4 MEDIUM TANKS

- 3 SMG Infantry stands

- 56 Light Trucks

Soviet Mechanized Brigade Jan 1943 – Feb 1943

▪ Base

- 2 recon LIGHT ARMORED CARS
- 6 ATR Team stands + 3 Light Trucks
- 3 76MM FIELD GUNS + 3 Light Trucks
- 2 82mm Mtr + 2 Light Trucks
- 1 120mm Mtr + 1 Light Truck
- 3 12.7mm AA MG Trucks
- 2 37mm AAG M1939 61-K + 2 Light Trucks

▪ 3 Motor Rifle Battalion #3

- 9 Motorized Infantry #3 stands + 9 Light Trucks
- 3 MG Plt stands + 3 Light Trucks
- 3 ATR Team stands + 3 Light Trucks

▪ 1 Mech Tank Regiment #2

- 2 LIGHT TANKS
- 6 MEDIUM TANKS

▪ 1 SMG Company [tank riders]

▪ 3 SMG Infantry stands

▪ Stand Inventory

- 2 recon LIGHT ARMORED CARS
- 6 ATR Team stands
- 3 76MM FIELD GUNS
- 2 82mm Mtr
- 1 120mm Mtr
- 3 12.7mm AA MG Trucks
- 2 37mm AAG M1939 61-K
- 27 Motorized Infantry #3 stands
- 9 MG Plt stands
- 9 ATR Team stands
- 2 LIGHT TANKS
- 6 MEDIUM TANKS
- 3 SMG Infantry stands
- 56 Light Trucks

Soviet Mechanized Brigade Feb 1943 – Oct 1943

▪ Base

- 2 recon LIGHT ARMORED CARS
- 6 ATR Team stands + 3 Light Trucks
- 3 76MM FIELD GUNS + 3 Light Trucks
- 2 82mm Mtr + 2 Light Trucks
- 1 120mm Mtr + 1 Light Truck
- 3 12.7mm AA MG Trucks
- 3 Pioneer stands + 3 Light Trucks

▪ 3 Motor Rifle Battalion #3

- 9 Motorized Infantry #3 stands + 9 Light Trucks
- 3 MG Plt stands + 3 Light Trucks
- 3 ATR Team stands + 3 Light Trucks

▪ 1 Mech Tank Regiment #2

- 2 LIGHT TANKS
- 6 MEDIUM TANKS

▪ 1 SMG Company [tank riders]

- 3 SMG Infantry stands

▪ Stand Inventory

- 2 recon LIGHT ARMORED CARS
- 6 ATR Team stands
- 3 76MM FIELD GUNS
- 2 82mm Mtr
- 1 120mm Mtr
- 3 12.7mm AA MG Truck
- 3 Pioneer stands
- 27 Motorized Infantry #3 stands

- 9 MG Plt stands
- 9 ATR Team stands
- 2 LIGHT TANKS
- 6 MEDIUM TANKS
- 3 SMG Infantry stands
- 57 Light Trucks

Soviet Mechanized Brigade Apr 1943 – 1945

■ Base

- 2 recon LIGHT ARMORED CARS
- 3 76MM FIELD GUNS + 3 Light Trucks
- 2 82mm Mtr + 2 Light Trucks
- 1 120mm Mtr + 1 Light Truck
- 3 12.7mm AA MG Trucks
- 3 Pioneer stands + 3 Light Trucks

■ 3 Motor Rifle Battalion #3

- 9 Motorized Infantry #3 stands + 9 Light Trucks
- 3 MG Plt stands + 3 Light Trucks
- 3 ATR Team stands + 3 Light Trucks

■ Stand Inventory

- 2 recon LIGHT ARMORED CARS
- 3 76MM FIELD GUNS
- 2 82mm Mtr
- 1 120mm Mtr
- 3 12.7mm AA MG Trucks
- 3 Pioneer stands
- 27 Motorized Infantry #3 stands
- 3 MG Plt stands
- 3 ATR Team stands
- 54 Light Trucks

Soviet Infantry and Guards Infantry Regiment 1939 – Apr 1941

■ Base

- 2 45MM AT GUNS + 2 Horse Limbers
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 1 120mm Mtr + 1 Wagon
- 1 Quad 7.62mm AA MG Truck, 1 37mm AAG M1939 61-K + 1 Light Truck
- 3 Pioneer stands

■ 3 Rifle Battalions

- (1 82mm Mtr)
- 9 Rifle Infantry stands
- 3 MG Plt stands

■ Stand Inventory

- 2 45MM AT GUNS
- 3 Horse Limbers
- 1 76MM INFANTRY GUN
- 1 120mm Mtr
- 1 Wagon
- 1 Quad 7.62mm AA MG Truck
- 1 37mm AAG M1939 61-K
- 3 Pioneer stands
- 1 Light Truck
- 3 82mm Mtr
- 27 Rifle Infantry stands
- 9 MG Plt stands

Soviet Infantry and Guards Infantry Regiment Apr 1941 – Jul 1941

■ Base

- 1 recon Mounted Infantry stand
- 1 recon Rifle Infantry stand
- 2 45MM AT GUNS + 2 Horse Limbers
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 1 120mm Mtr + 1 Wagon
- 1 Quad 7.62mm AA MG Truck
- 1 12.7mm AA MG Truck
- 2 Pioneer stands

■ 3 Rifle Battalions

- (1 82mm Mtr)
- 9 Rifle Infantry stands
- 3 MG Plt stands

■ Stand Inventory

- 1 recon Mounted Infantry stand
- 1 recon Rifle Infantry stand
- 2 45MM AT GUNS
- 3 Horse Limbers
- 1 76MM INFANTRY GUN
- 1 120mm Mtr
- 1 Wagon
- 1 Quad 7.62mm AA MG Truck
- 1 12.7mm AA MG Truck
- 2 Pioneer stands
- 3 82mm Mtr
- 27 Rifle Infantry stands
- 9 MG Plt stands

Soviet Infantry and Guards Infantry Regiment Aug 1941 – Oct 1941

■ Base

- 1 recon Mounted Infantry stand
- 1 recon Rifle Infantry stand
- 2 45MM AT GUNS + 2 Horse Limbers
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 1 82mm Mtr + 1 Wagon
- 0-1 120mm Mtr + 0-1 Wagon
- 1 Quad 7.62mm AA MG Truck
- 1 12.7mm AA MG Truck
- 2 Pioneer stands

■ 3 Rifle Battalions

- 9 Rifle Infantry stands
- 3 MG Plt stands

■ Stand Inventory

- 1 recon Mounted Infantry stand
- 1 recon Rifle Infantry stand
- 2 45MM AT GUNS
- 3 Horse Limbers
- 1 76MM INFANTRY GUN
- 1 82mm Mtr
- 0-1 120mm Mtr
- 0-1 Wagon
- 1 Quad 7.62mm AA MG Truck
- 1 12.7mm AA MG Truck
- 2 Pioneer stands
- 27 Rifle Infantry stands
- 9 MG Plt stands

Soviet Infantry and Guards Infantry Regiment Oct 1941 – 1941

■ Base

- 1 recon Mounted Infantry stand
- 1 recon Rifle Infantry stand
- 2 45MM AT GUNS + 2 Horse Limbers
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 6 82mm Mtr + 6 Wagons
- 0-1 120mm Mtr + 0-1 Wagon
- 1 Quad 7.62mm AA MG Truck
- 1 12.7mm AA MG Truck
- 2 Pioneer stands

■ 3 Rifle Battalions

- 9 Rifle Infantry stands
- 3 MG Plt stands

■ 1 SMG Company

- 3 SMG Infantry stands

■ Stand Inventory

- 1 recon Mounted Infantry stand

- 1 recon Rifle Infantry stand
- 2 45MM AT GUNS
- 3 Horse Limbers
- 1 76MM INFANTRY GUN
- 6 82mm Mtr
- 0-1 120mm Mtr
- 6-7 Wagons
- 1 Quad 7.62mm AA MG Truck
- 1 12.7mm AA MG Truck
- 2 Pioneer stands
- 27 Rifle Infantry stands
- 9 MG Plt stands
- 3 SMG Infantry stands

Soviet Infantry Regiment [Dec 1941 Organization] Jan – Dec 1942
and

Guards Infantry Regiment [Dec 1941 Organization] Jan – Mar 1942

▪ **Base**

- 1 recon Mounted Infantry stand
- 1 Recon Infantry stand
- 1 45MM AT GUN + 1 Horse Limber
- 6 ATR Team stands
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 6 82mm Mtr + 6 Wagons
- 1 12.7mm AA MG Truck
- 1 Pioneer stand
- 4 Flamethrower Teams + 2 Wagons

▪ **3 Rifle Battalions**

- 9 Rifle Infantry stands
- 3 MG Plt stands

▪ **1 SMG Company**

- 3 SMG Infantry stands

▪ **Stand Inventory**

- 1 recon Mounted Infantry stand
- 1 Recon Infantry stand
- 1 45MM AT GUN
- 2 Horse Limbers
- 6 ATR Team stands
- 1 76MM INFANTRY GUN
- 6 82mm Mtr
- 8 Wagons
- 1 12.7mm AA MG Truck
- 1 Pioneer stand
- 4 Flamethrower Teams
- 27 Rifle Infantry stands
- 9 MG Plt stands
- 3 SMG Infantry stands

Soviet Infantry Regiment [Mar 1942 Organization] Apr – Jun 1942

▪ **Base**

- 1 recon Mounted Infantry stand
- 1 Recon Infantry stand
- 1 45MM AT GUN + 1 Horse Limber
- 6 ATR Team stands
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 6 82mm Mtr + 6 Wagons
- 1 12.7mm AA MG Truck
- 1 Pioneer stand
- 4 Flamethrower Teams + 2 Wagons

▪ **3 Rifle Battalions**

- 9 Rifle Infantry stands
- 3 MG Plt stands
- 3 Infantry ATR Team stands

▪ **Stand Inventory**

- 1 recon Mounted Infantry stand
- 1 Recon Infantry stand

- 1 45MM AT GUN
- 2 Horse Limbers
- 6 ATR Team stands
- 1 76MM INFANTRY GUN
- 6 82mm Mtr
- 8 Wagons
- 1 12.7mm AA MG Truck
- 1 Pioneer stand
- 4 Flamethrower Teams
- 27 Rifle Infantry stands
- 9 MG Plt stands
- 9 Infantry ATR Team stands

Soviet Infantry Regiment [Mar 1942 Organization] Jul – Dec 1942

▪ **Base**

- 1 recon Mounted Infantry stand
- 1 Recon Infantry stand
- 1 45MM AT GUN + 1 Horse Limber
- 6 ATR Team stands
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 2 82mm Mtr + 2 Wagons
- 1 120mm Mtr + 1 Light Truck
- 1 12.7mm AA MG Truck
- 1 Pioneer stand

▪ **3 Rifle Battalions**

- (2 82mm Mtr + 2 Wagons)
- 9 Rifle Infantry stands
- 3 Infantry ATR Team stands
- 3 MG Plt stands or 3 LMG Plt stands

▪ **1 SMG Company**

- 3 SMG Infantry stands

▪ **Stand Inventory**

- 1 recon Mounted Infantry stand
- 1 Recon Infantry stand
- 1 45MM AT GUN
- 2 Horse Limbers
- 6 ATR Team stands
- 1 76MM INFANTRY GUN
- 8 82mm Mtr
- 8 Wagons
- 1 120mm Mtr
- 1 Light Truck
- 1 12.7mm AA MG Truck
- 1 Pioneer stand
- 27 Rifle Infantry stands
- 9 Infantry ATR Team stands
- 9 MG Plt stands or 3 LMG Plt stands
- 3 SMG Infantry stands

Soviet Infantry Regiment [Jul 1942 Organization] Aug – Dec 1942

▪ **Base**

- 1 recon Mounted Infantry Team stand
- 1 Recon Infantry stand
- 1 45MM AT GUN + 1 Horse Limber
- 6 ATR Team stands
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 1 120mm Mtr + 1 Light Truck
- 1 12.7mm AA MG Truck
- 1 Pioneer stand

▪ **3 Rifle Battalions**

- (2 82mm Mtr + 2 Wagons)
- 9 Rifle Infantry Stands
- 2 Infantry ATR Team stands
- 3 MG Plt stands or 3 LMG Plt stands

▪ **1 SMG Company**

- 3 SMG Infantry stands

<ul style="list-style-type: none"> ▪ Stand Inventory <ul style="list-style-type: none"> • 1 recon Mounted Infantry Team stand • 1 Recon Infantry stand • 1 45MM AT GUN • 2 Horse Limbers • 6 ATR Team stands • 1 76MM INFANTRY GUN • 1 120mm Mtr • 1 Light Truck • 1 12.7mm AA MG Truck • 1 Pioneer stand • 6 82mm Mtr • 6 Wagons • 27 Rifle Infantry Stands • 6 Infantry ATR Team stands • 9 MG Plt stands or 9 LMG Plt stands • 3 SMG Infantry stands 	<ul style="list-style-type: none"> • 1 76MM INFANTRY GUN + 1 Horse Limber • 2 82mm Mtr + 2 Wagons • 2 120mm Mtr + 2 Light Trucks • 1 Pioneer stand ▪ 3 Reduced Rifle Battalions <ul style="list-style-type: none"> • (1 82mm Mtr) • 6 Rifle Infantry stands • 1-2 Infantry ATR Teams • 1 MG Plt stand or 1 LMG Plt stand ▪ 1 SMG Company <ul style="list-style-type: none"> • 3 SMG Infantry stands ▪ Stand Inventory <ul style="list-style-type: none"> • 1 recon Rifle Infantry stand • 2 45MM AT GUNS • 3 Horse Limbers • 1 76MM INFANTRY GUN • 5 82mm Mtr • 2 Wagons • 2 120mm Mtr • 2 Light Trucks • 1 Pioneer stand • 18 Rifle Infantry stands • 3-6 Infantry ATR Teams • 1 MG Plt stand or 1 LMG Plt stand • 3 SMG Infantry stands
<p>Soviet Infantry Regiment Jan 1943 – 1945</p> <ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 recon Mounted Infantry Team stand • 1 Recon Infantry stand • 2 45MM AT GUNS + 2 Horse Limbers • 6 ATR Team stands • 1 76MM INFANTRY GUN + 1 Horse Limber • 2 120mm Mtr + 2 Light Trucks • 1 Pioneer stand 	<ul style="list-style-type: none"> ▪ 3 Rifle Battalions <ul style="list-style-type: none"> ▪ Jan'43-Aug'43 <ul style="list-style-type: none"> • (2 82mm Mtr + 2 Wagons) • 9 Rifle Infantry stands • 2 Infantry ATR Team stands • 3 MG Plt stands or 3 LMG Plt stands ▪ Sep'43-'45 <ul style="list-style-type: none"> • (1 82mm Mtr) • 9 Rifle Infantry stands • 2 Infantry ATR Teams • 2 MG Plt stands or 2 LMG Plt stands
<ul style="list-style-type: none"> ▪ 1 SMG Company <ul style="list-style-type: none"> • 3 SMG Infantry stands ▪ Stand Inventory <ul style="list-style-type: none"> • 1 recon Mounted Infantry Team stand • 1 Recon Infantry stand • 2 45MM AT GUNS • 3 Horse Limbers • 6 ATR Team stands • 1 76MM INFANTRY GUN • 2 120mm Mtr • 2 Light Trucks • 1 Pioneer stand • 27 Rifle Infantry stands • 6 Infantry ATR Team stands • If Jan'43-Aug'43 Rfl Bns: <ul style="list-style-type: none"> • 2 82mm Mtr • 2 Wagons • 3 MG Plt stands or 3 LMG Plt stands • If Sep'43-'45 Rfl Bns: <ul style="list-style-type: none"> • 1 82mm Mtr • 2 MG Plt stands or 2 LMG Plt stands • 3 SMG Infantry stands 	<ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 recon Mounted Infantry Team stand • 1 recon Rifle Infantry stand • 2 45MM AT GUNS + 2 Horse Limbers • 1 76MM INFANTRY GUN + 1 Horse Limber • 2 82mm Mtr + 2 Wagons • 2 120mm Mtr + 2 Light Trucks • 1 12.7mm AA MG Truck • 1 Pioneer stand
<ul style="list-style-type: none"> ▪ 2 SMG Companies <ul style="list-style-type: none"> • 3 SMG Infantry stands ▪ Stand Inventory <ul style="list-style-type: none"> • 1 recon Mounted Infantry Team stand • 1 recon Rifle Infantry stand • 2 45MM AT GUNS • 3 Horse Limbers • 1 76MM INFANTRY GUN • 5 82mm Mtr • 2 Wagons • 2 120mm Mtr • 2 Light Trucks • 1 12.7mm AA MG Truck • 1 Pioneer stand • 3 Rifle Battalions • 27 Rifle Infantry Stands • 6 Infantry ATR Teams • 6 MG Plt stands or 6 LMG Plt stands • 6 SMG Infantry stands 	<ul style="list-style-type: none"> ▪ 3 Rifle Battalions <ul style="list-style-type: none"> • (1 82mm Mtr) • 9 Rifle Infantry Stands • 2 Infantry ATR Teams • 2 MG Plt stands or 2 LMG Plt stands
<p>Soviet Reduced Infantry Regiment Jul 1944 – 1945</p> <ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 recon Rifle Infantry stand • 2 45MM AT GUNS + 2 Horse Limbers 	<p>Soviet Guards Infantry Regiment Apr 1942 – Jun 1942</p> <ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 recon Mounted Infantry stand • 1 Recon Infantry stand • 1 45MM AT GUN + 1 Horse Limber • 6 ATR Team stands

- 1 76MM INFANTRY GUN + 1 Horse Limber
- 2 82mm Mtr + 2 Wagons
- 1 12.7mm AA MG Truck
- 1 Pioneer stand
- 4 Flamethrower Teams + 2 Wagons
- **3 Rifle Battalions**
 - 9 Rifle Infantry stands
 - 3 MG Plt stands
 - 3 Infantry ATR Team stands
- **2 SMG Companies**
 - 3 SMG Infantry Stands
- **Stand Inventory**
 - 1 recon Mounted Infantry stand
 - 1 Recon Infantry stand
 - 1 45MM AT GUN
 - 2 Horse Limbers
 - 6 ATR Team stands
 - 1 76MM INFANTRY GUN
 - 2 82mm Mtr
 - 4 Wagons
 - 1 12.7mm AA MG Truck
 - 1 Pioneer stand
 - 4 Flamethrower Teams
 - 27 Rifle Infantry stands
 - 9 MG Plt stands
 - 9 Infantry ATR Team stands
 - 3 SMG Infantry Stands

Soviet Guards Infantry Regiment #1 Jul 1942 – Dec 1942

- **Base**
 - 1 recon Mounted Infantry stand
 - 1 Recon Infantry stand
 - 1 45MM AT GUN + 1 Horse Limber
 - 6 ATR Team stands
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 2 82mm Mtr + 2 Wagons
 - 1 120mm Mtr + 1 Light Truck
 - 1 12.7mm AA MG Truck
 - 1 Pioneer stand
- **3 Rifle Battalions**
 - (2 82mm Mtr + 2 Wagons)
 - 9 Rifle Infantry stands
 - 3 MG Plt stands or 3 LMG Plt stands
 - 3 Infantry ATR Team stands
- **2 SMG Companies**
 - 3 SMG Infantry Stands
- **Stand Inventory**
 - 1 recon Mounted Infantry stand
 - 1 Recon Infantry stand
 - 1 45MM AT GUN
 - 2 Horse Limbers
 - 6 ATR Team stands
 - 1 76MM INFANTRY GUN
 - 8 82mm Mtr
 - 8 Wagons
 - 1 120mm Mtr
 - 1 Light Truck
 - 1 12.7mm AA MG Truck
 - 1 Pioneer stand
 - 3 SMG Infantry stands
 - 6 82mm Mtr
 - 27 Rifle Infantry stands
 - 9 MG Plt stands or 3 LMG Plt stands

Soviet Guards Infantry Regiment #2 Aug 1942 – Dec 1942

- **Base**
 - 1 recon Mounted Infantry stand

- 1 Recon Infantry stand
- 1 45mm AT Gun + 1 Horse Limber
- 6 ATR Team stands
- 1 76mm Infantry Gun + 1 Horse Limber
- 2 82mm Mtr + 2 Wagons
- 1 120mm Mtr + 1 Light Truck
- 1 12.7mm AA MG Truck
- 1 Pioneer stand
- **3 Rifle Battalions**
 - (2 82mm Mtr + 2 Wagons)
 - 9 Rifle Infantry Stands
 - 2 Infantry ATR Team stands
 - 3 MG Plt stands or 3 LMG Plt stands
- **2 SMG Companies**
 - 3 SMG Infantry Stands
- **Stand Inventory**
 - 1 recon Mounted Infantry stand
 - 1 Recon Infantry stand
 - 1 45MM AT GUN
 - 2 Horse Limbers
 - 6 ATR Team stands
 - 1 76MM INFANTRY GUN
 - 8 82mm Mtr
 - 8 Wagons
 - 1 120mm Mtr
 - 1 Light Truck
 - 1 12.7mm AA MG Truck
 - 1 Pioneer stand
 - 3 SMG Infantry stands
 - 6 82mm Mtr
 - 27 Rifle Infantry stands
 - 9 MG Plt stands or 3 LMG Plt stands

Soviet Guards Infantry Regiment Jan 1943 – 1945

- **Base**
 - 1 recon Mounted Infantry Team stand
 - 1 Recon Infantry stand
 - 2 45MM AT GUNS + 2 Horse Limbers
 - 6 ATR Team stands
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 2 82mm Mtr + 2 Wagons
 - 2 120mm Mtr + 2 Light Trucks
 - 1 Pioneer stand
- **3 Guards Rifle Battalions**
 - (2 82mm Mtr + 2 Wagons)
 - 9 Rifle Infantry Stands
 - 3 Infantry ATR Team stands
 - 3 MG Plt stands
- **2 SMG Companies**
 - 3 SMG Infantry Stands
- **Stand Inventory**
 - 1 recon Mounted Infantry Team stand
 - 1 Recon Infantry stand
 - 2 45MM AT GUNS
 - 3 Horse Limbers
 - 6 ATR Team stands
 - 1 76MM INFANTRY GUN
 - 1 Horse Limber
 - 8 82mm Mtr
 - 8 Wagons
 - 2 120mm Mtr
 - 2 Light Trucks
 - 1 Pioneer stand
 - 27 Rifle Infantry Stands
 - 9 Infantry ATR Team stands
 - 9 MG Plt stands
 - 3 SMG Infantry Stands

Soviet Guards Infantry Regiment Dec 1944 – 1945

▪ Base

- 1 recon Mounted Infantry Team stand
- 1 Recon Infantry stand
- 2 45MM AT GUNS + 2 Horse Limbers
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 2 82mm Mtr + 2 Wagons
- 2 120mm Mtr + 2 Light Trucks
- 1 12.7mm AA MG Truck
- 1 Pioneer stand

▪ 3 Guards Rifle Battalions

- (2 82mm Mtr + 2 Wagons)
- 9 Rifle Infantry Stands
- 3 Infantry ATR Team stands
- 3 MG Plt stands

▪ 2 SMG Companies

- 3 SMG Infantry Stands

▪ Stand Inventory

- 1 recon Mounted Infantry Team stand
- 1 Recon Infantry stand
- 2 45MM AT GUNS
- 3 Horse Limbers
- 1 76MM INFANTRY GUN
- 8 82mm Mtr
- 8 Wagons
- 2 120mm Mtr
- 2 Light Trucks
- 1 12.7mm AA MG Truck
- 1 Pioneer stand
- 27 Rifle Infantry Stands
- 9 Infantry ATR Team stands
- 9 MG Plt stands
- 3 SMG Infantry Stands

Soviet Infantry Brigade [Early Organization] Sep 1941 – Apr 1942

▪ Base

- 9 ATR Team stands
- 3 76MM FIELD GUNS + 3 Horse Limbers
- 2 45MM AT GUNS + 2 Light Trucks
- 6 82mm Mtr + 2 Wagons
- 6 120mm Mtr + 6 Wagons
- 1 12.7mm AA MG Truck
- 3 Pioneer stands

▪ 3 Brigade Rifle Battalion #1s

- 9 Brigade Infantry #1 stands
- 3 MG Plt stands

▪ 1 SMG Company

- 3 SMG Infantry stands

▪ Stand Inventory

- 9 ATR Team stands
- 3 76MM FIELD GUNS
- 3 Horse Limbers
- 2 45MM AT GUNS
- 2 Light Trucks
- 6 82mm Mtr
- 8 Wagons
- 6 120mm Mtr
- 1 12.7mm AA MG Truck
- 3 Pioneer stands
- 27 Brigade Infantry #1 stands
- 9 MG Plt stands
- 3 SMG Infantry stands

Soviet Infantry Brigade [Early Organization] May 1942 – 1943

▪ Base

- 9 ATR Team stands

▪ 3 76MM FIELD GUNS + 3 Horse Limbers

- 2 45MM AT GUNS + 2 Light Trucks
- 6 120mm Mtr + 6 Wagons
- 1 12.7mm AA MG Truck
- 3 Pioneer stands

▪ 4 Brigade Rifle Battalion #1s

- (1 82mm Mtr + 1 Wagon)
- 9 Brigade Infantry #1 stands
- 3 MG Plt stands

▪ 1 SMG Company

- 3 SMG Infantry stands

▪ Stand Inventory

- 9 ATR Team stands
- 3 76MM FIELD GUNS
- 3 Horse Limbers
- 2 45MM AT GUNS
- 2 Light Trucks
- 6 120mm Mtr
- 10 Wagons
- 1 12.7mm AA MG Truck
- 3 Pioneer stands
- 4 82mm Mtr
- 36 Brigade Infantry #1 stands
- 12 MG Plt stands
- 3 SMG Infantry stands

Soviet Infantry Brigade [Mid Organization] Oct 1941 – Apr 1942

▪ Base

- 2 Recon Infantry stands
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 9 ATR Team stands
- 2 76MM FIELD GUNS + 2 Horse Limbers
- 3 45MM AT GUNS + 3 Light Trucks
- 6 82mm Mtr + 2 Wagons
- 2 120mm Mtr + 2 Wagons
- 1 12.7mm AA MG Truck
- 3 Pioneer stands

▪ 3 Brigade Rifle Battalion #2s

- (1 Recon Infantry stand)
- 9 Brigade Infantry #2 stands
- 1 SMG Infantry stand
- 3 MG Plt stands

▪ 1 SMG Company

- 3 SMG Infantry stands

▪ Stand Inventory

- 2 Recon Infantry stands
- 1 76MM INFANTRY GUN
- 3 Horse Limbers
- 9 ATR Team stands
- 2 76MM FIELD GUNS
- 3 45MM AT GUNS
- 3 Light Trucks
- 6 82mm Mtr
- 4 Wagons
- 2 120mm Mtr
- 1 12.7mm AA MG Truck
- 3 Pioneer stands
- 3 Recon Infantry stands
- 27 Brigade Infantry #2 stands
- 6 SMG Infantry stands
- 9 MG Plt stands

Soviet Infantry Brigade [Mid Organization] May 1942 – 1943

▪ Base

- 2 Recon Infantry stands
- 1 76MM INFANTRY GUN + 1 Horse Limber
- 9 ATR Team stands

- 2 76MM FIELD GUNS + 2 Horse Limbers
- 3 45MM AT GUNS + 3 Light Truck
- 2 120mm Mtr + 2 Wagons
- 1 12.7mm AA MG Truck
- 3 Pioneer stands
- **4 Brigade Rifle Battalion #2s**
 - (1 Recon Infantry stand)
 - (1 82mm Mtr + 1 Wagon)
 - 9 Brigade Infantry #2 stands
 - 1 SMG Infantry stand
 - 3 MG Plt stands
- **1 SMG Company**
 - 3 SMG Infantry stands
- **Stand Inventory**
 - 2 Recon Infantry stands
 - 1 76MM INFANTRY GUN
 - 3 Horse Limbers
 - 9 ATR Team stands
 - 2 76MM FIELD GUNS
 - 3 45MM AT GUNS
 - 3 Light Trucks
 - 2 120mm Mtr
 - 6 Wagons
 - 1 12.7mm AA MG Truck
 - 3 Pioneer stands
 - 4 Recon Infantry stands
 - 4 82mm Mtr
 - 36 Brigade Infantry #2 stands
 - 7 SMG Infantry stand
 - 12 MG Plt stands

Soviet Infantry Brigade [Late Organization] Apr 1942

- **Base**
 - 2 Recon Infantry stands
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 9 ATR Team stands
 - 2 76MM FIELD GUNS + 2 Horse Limbers
 - 3 45MM AT GUNS + 3 Light Trucks
 - 6 82mm Mtr + 2 Wagons
 - 2 120mm Mtr + 2 Wagons
 - 1 12.7mm AA MG Truck
 - 3 Pioneer stands
- **3 Brigade Rifle Battalion #3s**
 - (1 Recon Infantry stand)
 - 9 Brigade Infantry #3 stands
 - 1 SMG Infantry stand
 - 2 ATR Team stands
 - 3 MG Plt stands
- **1 SMG Company**
 - 3 SMG Infantry stands
- **Stand Inventory**
 - 2 Recon Infantry stands
 - 1 76MM INFANTRY GUN
 - 3 Horse Limbers
 - 9 ATR Team stands
 - 2 76MM FIELD GUNS
 - 3 45MM AT GUNS
 - 3 Light Trucks
 - 6 82mm Mtr
 - 7 Wagons
 - 2 120mm Mtr
 - 1 12.7mm AA MG Truck
 - 3 Pioneer stands
 - 3 Recon Infantry stand
 - 27 Brigade Infantry #3 stands
 - 6 SMG Infantry stand
 - 6 ATR Team stands
 - 9 MG Plt stands

Soviet Infantry Brigade [Late Organization] May 1942 – 1943

- **Base**
 - 2 Recon Infantry stands
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 9 ATR Team stands
 - 2 76MM FIELD GUNS + 2 Horse Limbers
 - 3 45MM AT GUNS + 3 Light Trucks
 - 2 120mm Mtr + 2 Wagons
 - 1 12.7mm AA MG Truck
 - 3 Pioneer stands
- **4 Brigade Rifle Battalion #3s**
 - (1 Recon Infantry stand)
 - (1 82mm Mtr + 1 Wagon)
 - 9 Brigade Infantry #3 stands
 - 1 SMG Infantry stand
 - 2 ATR Team stands
 - 3 MG Plt stands
- **1 SMG Company**
 - 3 SMG Infantry stands
- **Stand Inventory**
 - 2 Recon Infantry stands
 - 1 76MM INFANTRY GUN
 - 3 Horse Limbers
 - 9 ATR Team stands
 - 2 76MM FIELD GUNS
 - 3 45MM AT GUNS
 - 3 Light Truck
 - 2 120mm Mtr
 - 6 Wagons
 - 1 12.7mm AA MG Truck
 - 3 Pioneer stands
 - 4 Recon Infantry stand
 - 4 82mm Mtr
 - 36 Brigade Infantry #3 stands
 - 7 SMG Infantry stand
 - 8 ATR Team stands
 - 12 MG Plt stands

Soviet Infantry Brigade [Very Late Organization] Aug 1942 – 1943

- **Base**
 - 2 Recon Infantry stands
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 9 ATR Team stands
 - 2 76MM FIELD GUNS + 2 Horse Limbers
 - 3 45MM AT GUNS + 3 Light Trucks
 - 2 120mm Mtr + 2 Wagons
 - 1 12.7mm AA MG Truck
 - 3 Pioneer stands
- **4 Brigade Rifle Battalion #4s**
 - (1 Recon Infantry stand)
 - (1 82mm Mtr + 1 Wagon)
 - 9 Brigade Infantry #4 stands
 - 1 SMG Infantry stand
 - 1 Pioneer stand
 - 4 ATR Team stands
 - 3 MG Plt stands
- **1 SMG Company**
 - 3 SMG Infantry stands
- **Stand Inventory**
 - 2 Recon Infantry stands
 - 1 76MM INFANTRY GUN
 - 3 Horse Limbers
 - 9 ATR Team stands
 - 2 76MM FIELD GUNS
 - 3 45MM AT GUNS
 - 3 Light Trucks

- 2 120mm Mtr
- 6 Wagons
- 1 12.7mm AA MG Truck
- 8 Pioneer stands
- 4 Recon Infantry stands
- 4 82mm Mtr
- 36 Brigade Infantry #4 stands
- 7 SMG Infantry stands
- 16 ATR Team stands
- 12 MG Plt stands

Soviet Cavalry Regiment [Cavalry Division] 1939 – Jul 1941

- **Base**
 - 4-5 MG Tachanka stands
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 1 45MM AT GUN + 1 Horse Limber
 - 1 12.7mm AA MG Truck
 - 1 Cavalry Pioneer stand
- **5 Cavalry Squadrons**
 - 4 Cavalry stands
- **Stand Inventory**
 - 4-5 MG Tachanka stands
 - 1 76MM INFANTRY GUN
 - 2 Horse Limbers
 - 1 45MM AT GUN
 - 1 12.7mm AA MG Truck
 - 1 Cavalry Pioneer stand
 - 20 Cavalry stands

Cavalry Regiment [Cavalry Division] Jul 1941 – Jan 1942

- **Base**
 - 4 MG Tachanka stands
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 1 45MM AT GUN + 1 Horse Limber
- **4 Cavalry Squadrons**
 - 4 Cavalry stands
- **Stand Inventory**
 - 4 MG Tachanka stands
 - 1 76MM INFANTRY GUN
 - 2 Horse Limbers
 - 1 45MM AT GUN
 - 16 Cavalry stands

Soviet Cavalry Regiment [Cavalry Division] Jan 1942 – Feb 1943

- **Base**
 - 4 MG Tachanka stands
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 1 45MM AT GUN + 1 Horse Limber
 - 1 82mm Mtr + 1 Wagon
 - 1 12.7mm AA MG Truck
 - 1 Cavalry Pioneer stand
- **4 Cavalry Squadrons**
 - 4 Cavalry stands
- **Stand Inventory**
 - 4 MG Tachanka stands
 - 1 76MM INFANTRY GUN
 - 2 Horse Limbers
 - 1 45MM AT GUN
 - 1 82mm Mtr
 - 1 Wagon
 - 1 12.7mm AA MG Truck
 - 1 Cavalry Pioneer stand
 - 16 Cavalry stands

Soviet Cavalry Regiment [Cavalry Division] Feb 1943 – Jul 1943

- **Base**
 - 1 76MM INFANTRY GUN + 1 Horse Limber

- 1 45MM AT GUN + 1 Horse Limber
- 3 82mm Mtr + 3 Wagons

▪ 4 Cavalry Squadrons

- 3 Cavalry stands
- 1 Cavalry SMG stand
- 1 MG Tachanka stand
- 2 Cavalry ATR Team stands

▪ Stand Inventory

- 1 76MM INFANTRY GUN
- 2 Horse Limbers
- 1 45MM AT GUN
- 3 82mm Mtr
- 3 Wagons
- 12 Cavalry stands
- 4 Cavalry SMG stands
- 4 MG Tachanka stands
- 8 Cavalry ATR Team stands

Soviet Cavalry Regiment [Cavalry Division] Jul 1943 – 1945

- **Base**
 - 1 recon Cavalry stand
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 1 45MM AT GUN + 1 Horse Limber
 - 3 82mm Mtr + 3 Wagons
- **4 Cavalry Squadrons**
 - 3 Cavalry stands
 - 1 Cavalry SMG stand
 - 1 MG Tachanka stand
 - 2 Cavalry ATR Team stands

- **Stand Inventory**
 - 1 recon Cavalry stand
 - 1 76MM INFANTRY GUN
 - 2 Horse Limbers
 - 1 45MM AT GUN
 - 3 82mm Mtr
 - 3 Wagons
 - 12 Cavalry stands
 - 4 Cavalry SMG stands
 - 4 MG Tachanka stands
 - 8 Cavalry ATR Team stands

Soviet Cavalry Mechanized Regiment [Cavalry Division] 1939 – Jul 1941

- **1 Cavalry Tank Battalion A or Cavalry Tank Battalion B**
 - Cavalry Tank Battalion A
 - (1 recon Motorcycle Team stand)
 - 3 T-37 series
 - 4 BT-5 or 4 BT-2
 - Cavalry Tank Battalion B
 - (1 recon Motorcycle Team stand)
 - 6 BT-5 or 6 BT-2

▪ **1 Cavalry Mechanized Battalion**

- 3 HEAVY ARMORED CARS
- 2 Cavalry Motor Rifle stands + 2 Light Trucks
- 1 76MM INFANTRY GUN + 1 Light Truck
- 1 45MM AT GUN + 1 Light Truck
- 1 12.7mm AA MG Truck
- 1 Pioneer stand + 1 Light Truck

▪ **Stand Inventory**

- 3 HEAVY ARMORED CARS
- 2 Cavalry Motor Rifle stands
- 5 Light Trucks
- 1 76MM INFANTRY GUN
- 1 45MM AT GUN
- 1 12.7mm AA MG Truck
- 1 Pioneer stand
- 1 recon Motorcycle Team stand

- If Cavalry Tank Battalion A:
 - 3 T-37 series
 - 4 BT-5 or 4 BT-2
- If Cavalry Tank Battalion B:
 - 6 BT-5 or 6 BT-2

Soviet Light Cavalry Regiment [Light Cavalry Division] Jul 1941 – Nov 1941

- **Base**
 - 1 recon Light Cavalry stand
 - 1 LC MG Tachanka stand
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 0-1 45MM AT GUN + 0-1 Horse Limber
 - 1 82mm Mtr + 1 Wagon
- **4 Light Cavalry Squadrons**
 - 3 Light Cavalry stands
- **Stand Inventory**
 - 1 recon Light Cavalry stand
 - 1 LC MG Tachanka stand
 - 1 76MM INFANTRY GUN
 - 1-2 Horse Limbers
 - 0-1 45MM AT GUN
 - 1 82mm Mtr
 - 1 Wagon
 - 12 Light Cavalry stands

Soviet Light Cavalry Regiment [Light Cavalry Division] Dec 1941

- **Base**
 - (1 recon Light Cavalry stand
 - 1 LC MG Tachanka stand
 - 2 Cavalry ATR Teams
 - 1 76MM INFANTRY GUN + 1 Horse Limber
 - 0-1 45MM AT GUN + 0-1 Horse Limber
 - 1 82mm Mtr + 1 Wagon
- **4 Light Cavalry Squadrons**
 - 3 Light Cavalry stands
- **Stand Inventory**
 - 1 recon Light Cavalry stand
 - 1 LC MG Tachanka stand
 - 2 Cavalry ATR Teams
 - 1 76MM INFANTRY GUN
 - 1-2 Horse Limbers
 - 0-1 45MM AT GUN
 - 1 82mm Mtr
 - 1 Wagon
 - 12 Light Cavalry stands

Soviet Cavalry Tank Regiment [Cavalry Division] Jul 1943 – 1943

- 4 T-34/76 series
 - 3 T-70
- **Stand Inventory**
 - 4 T-34/76 series
 - 3 T-70

Soviet Cavalry Tank Regiment [Cavalry Division] 1944

- 3 T-70
 - 4 T-34/76 series or 4 T-34/85 series
- **Stand Inventory**
 - 3 T-70
 - 4 T-34/76 series or 4 T-34/85 series

Soviet Cavalry Tank Regiment [Cavalry Division] 1945

- 4 T-34/85 series or 4 T-34/76 series
- Stand Inventory
- 4 T-34/85 series or 4 T-34/76 series

Attachments

- **Recon Armored Car Company**
 - [Rifle Division] Apr'41-Jul'41: 2 recon Light Armored Cars
 - [Motor Rifle or Tank Division] Jul'40-Jul'41: 3 recon Light Armored Cars
 - [Tank Division] Jul'41-Sep'41: 5 recon Light Armored Cars
 - [Tank Corp] Jan'43-'45: 4 recon Light Armored Cars
- **Recon Light Tank Company**
 - [Rifle Division] Apr'41-Jul'41: 3 recon T-38 series
 - [Motor Rifle or Tank Division] Jul'40-Jul'41: 3 recon T-40 (T-30B) or 3 recon T-40 (T-30A)
 - [Tank Division] Jul'41-Sep'41: 2 recon T-40 (T-30B) or 2 recon T-40 (T-30A)
- **Recon Company**
 - [Rifle Division] Apr'41-Jul'42: 3 recon Rifle Infantry stands + 3 Light Trucks
 - [Rifle Division] Jul'42-'45: 3 recon Rifle Infantry stands
 - [Motor Rifle or Tank Division] Jul'40-Jul'41: 3 recon Motorcycle Infantry #1 stands
 - [Tank Division] Jul'41-Sep'41: 3 recon Motorcycle Infantry #1 stands
 - [Tank Corp or Mechanized Corp] Jul'42-'45: 3 recon Motorcycle Infantry #1 stands
- **Motorcycle Recon Regiment [Mechanized Corp, Tank Corp, or Independent]**
 - '41: (1 45mm AT Gun + 1 Light Gun Tractor; 1 Light Armored Car or 1 Heavy Armored Car; 1 T-27A); 9 recon Motorcycle Infantry #1 stands
 - '42-Mar'43: (1 45mm AT Gun + 1 Light Gun Tractor; 1 Light Armored Car or 1 Heavy Armored Car; 1 T-60 series); 9 recon Motorcycle Infantry #1 stands
 - Mar'43-'43: (3 45mm AT Guns + 3 Light Gun Tractors; 3 Pioneer stands + 3 M3A1 Scout Cars; 3 T-70); 9 recon Motorcycle Infantry #1 stands
 - '44: (3 45mm AT Guns + 3 Light Gun Tractors; 3 Pioneer stands + 3 M3A1 Scout Cars; 3 T-70 or 2 T-34/76 series or 2 T-34/85 series or 2 Valentine IX); 9 recon Motorcycle Infantry #1 stands
 - '45: (3 45mm AT Guns + 3 Light Gun Tractors; 3 Pioneer stands + 3 M3A1 Scout Cars; 2 T-34/76 series or 2 T-34/85 series or 2 Valentine IX); 9 recon Motorcycle Infantry #1 stands
- **Motorcycle Recon Battalion [Mechanized Corp, Tank Corp, or Independent]**
 - Mar'42-Jul'43: (4 Light Armored Cars); 6 recon Motorcycle Infantry #1 stands
 - Jul'43-'43: (4 Light Armored Cars; 2 T-34/76 series or Valentine IX; 3 M3A1 Scout Cars); 3 recon Motorcycle Infantry #1 stands
 - '44-'45: (4 Light Armored Cars; 2 T-34/76 series or 2 T-34/85 series or Valentine IX; 3 M3A1 Scout Cars); 3 recon Motorcycle Infantry #1 stands
- **Cavalry Recon Squadron [Cavalry Division]**
 - Jul'41-Oct'42: 2 recon T-40 (T-30B) or 2 recon T-40 (T-30A) or 2 recon Light Armored Cars
- **Cavalry Recon Battalion [Cavalry Division]**
 - Oct'42-'44: 4 recon Cavalry stands; 2 recon T-60 series or 2 recon T-70
 - '45: 4 recon Cavalry stands
- **Independent Tank Battalion [for infantry support]**
 - Aug'41-Nov'41: 2 T-34/76 series; 4 T-60 series
 - Nov'41-Dec'44: 1 Heavy Tank; 2 T-34/76 series; 4 T-40 series or 4 T-60 series
- **Independent Tank Regiment [for infantry support]**
 - Sep'42-Jan'43: 3 T-70; 4 T-34/76 series

<ul style="list-style-type: none"> Jan'43-Feb'44: 2 T-70; 6 T-34/76 series; 1 SMG Company [tank riders]; 3 ATR Teams + 3 Light Trucks Feb'44-45: 6 T-34/76 series or 6 T-34/85; 1 SMG Company [tank riders]; 3 ATR Teams + 3 Light Trucks Apr'44-45: 8 T-34/76 series or 8 T-34/85; 1 SMG Company [tank riders] <p>Guards Heavy "Breakthrough" Regiment [for infantry support]</p> <ul style="list-style-type: none"> Sep'42-Feb'44: 4 Heavy Tanks Feb'44-'45: 4 Heavy Tanks; 1 SMG Company [tank riders]; 1 Pioneer stand + 1 Light Truck <p>Heavy Tank Regiment</p> <ul style="list-style-type: none"> [Tank Corp] Aug'43-'45: 4 Heavy Tanks <p>Assault Gun Regiment</p> <ul style="list-style-type: none"> [Mechanized Corp] Jan'43-'45: 5 SU-76 series [Tank Corp or Mechanized Corp] Jan'43-May'43: 4 SU-76 series; 2 SU-122 [Tank Corp or Mechanized Corp] May'43-Feb'44: 3 SU-152 [Tank Corp or Mechanized Corp] Feb'44-'44: 4 SU-152 or 4 SU-76 series or 4 SU-85 [Tank Corp or Mechanized Corp] '45: 4 SU-76 series or 4 SU-85 series or 4 SU-100 or 4 SU-152 or 4 ISU-152 [Tank Army] Apr'43-Feb'44: 2 SU-76 series; 3 SU-122 [Tank Army] Feb'44-'45: 4 SU-76 series or 4 SU-122 [Cavalry Corp] Aug'44-'45: 5 SU-76 series <p>Tank Destroyer Regiment</p> <ul style="list-style-type: none"> [Tank Corp] Apr'43-Aug'43: 5 45mm AT Guns + 5 Light Gun Tractors [Tank Corp] Aug'43-'45: 5 SU-76 series [Tank Corp] Aug'43-'45 : 3 SU-122 [Mechanized Corp] Apr'43-Aug'43: 5 45mm AT Guns + 5 Light Gun Tractors [Mechanized Corp] Aug'43-Jan'44: 5 SU-76 series or 4 SU-85 series or 3 SU-152 [Mechanized Corp] Jan'44-'45: 4 SU-76 series or 4 SU-85 series or 4 SU-152 <p>Tank Destroyer Battalion</p> <ul style="list-style-type: none"> [Tank Brigade] Oct'41-Jun'42: 1-2 ZiS-30 [Tank Corp or Mechanized Corp] May'43-Aug'43: 3 76mm Field Guns or 3 85mm AAG M1939 52-K, + 3 Light Gun Tractors [Tank Corp or Mechanized Corp] Aug'43-Feb'44: 4 SU-76 series or 3 SU-122 [Tank Corp or Mechanized Corp] Feb'44-'44: 4 SU-85 series or 4 SU-76 series or 4 SU-122 [Tank Corp or Mechanized Corp] '45: 4 SU-76 series or 4 SU-85 series or 4 SU-100 series or 4 SU-122 <p>AT Battalion</p> <ul style="list-style-type: none"> [Rifle Division] Apr'41-Dec'41: 3 45mm AT Guns + 3 Light Gun Tractors [Rifle Division] Dec'41-Mar'42: 3 45mm AT Guns or [very rare] 3 57mm AT Guns, + 3 Light Gun Tractors [Rifle Division] Mar'42-Dec'43: 3 45mm AT Guns + 3 Light Gun Tractors [Rifle Division] Dec'43-Dec'44: 3 45mm AT Guns or 3 76mm Field guns, + 3 Light Gun Tractors; 6 ATR Team stands [Rifle Division] Dec'44-'45: 3 76mm Field guns + 3 Light Gun Tractors [Guards Rifle Division] Dec'44-'45: 3 SU-76 series [Motor Rifle Division] Jul'40-Jul'41: 3 45mm AT Guns + 3 Light Gun Tractors [From early AT Regiment] May'41-Aug'41: 3 76mm Field Guns or 3 85mm AAG M1939 52-K, + 3 Light Gun Tractors 	<p>AT ARTILLERY REGIMENT</p> <ul style="list-style-type: none"> Jul'41-Oct'41: 5 85mm AAG M1939 52-K + 5 Light Gun Tractors Aug'41-Oct'41: 2 85mm AAG M1939 52-K + 2 Light Gun Tractors; 2 45mm AT Guns or 2 37mm AAG M1939 61-K, + 2 Light Gun Tractors Oct'41-Apr'42: 5 76mm Field Guns + 5 Light Gun Tractors; 1 37mm AAG M1939 61-K + 1 Light Gun Tractor Apr'42-Sep'43: 5 45mm AT Guns, + 5 Light Gun Tractors Apr'42-Jul'43: 5 76mm Field Guns + 5 Light Gun Tractors Jul'43-'45: 6 76mm Field Guns + 6 Light Gun Tractors Sep'43-'45: 6 57mm AT Guns + 6 Light Gun Tractors '45: 5 SU-85 series '45: 6 BS-3 M1944 100mm FG + 6 Light Gun Tractors <p>Cavalry 76mm Field Gun Battalion</p> <ul style="list-style-type: none"> [Cavalry Corp] Jun'42-Feb'43: 3 76mm Field Guns + 3 Horse Limbers <p>Cavalry AT Regiment</p> <ul style="list-style-type: none"> [Cavalry Corp] Feb'43-'45: 5 76mm Field Guns + 5 Horse Limbers <p>Light Cavalry Horse Artillery Battalion [Light Cavalry Division]</p> <ul style="list-style-type: none"> Jul'41-'41: 1 76mm Infantry Gun + 1 Horse Limber; 1 76mm Field Gun + 1 Horse Limber; 1 82mm Mtr + 1 Wagon <p>AA Battalion or Regiment</p> <ul style="list-style-type: none"> [Rifle Division] Apr'41-Dec'41: 2 37mm AAG M1939 61-K + 2 Light Trucks; 1 76mm AAG M1938 + 1 Light Truck [Rifle Division] Dec'44-'45: 3 37mm AAG M1939 61-K + 3 Light Trucks; 4 12.7mm AA MG Trucks [Motor Rifle or Tank Division] Jul'40-Jul'41: 3 37mm AAG M1939 61-K + 3 Light Trucks [Tank Division] Jul'41-Sep'41: 3 37mm AAG M1939 61-K + 3 Light Trucks [Tank Corp] Feb'43-'45: 4 37mm AAG M1939 61-K + 4 Light Trucks [Mechanized Corp] Sep'42-Feb'43: 3 37mm AAG M1939 61-K + 3 Light Trucks [Mechanized Corp] Mar'43-'45: 4 37mm AAG M1939 61-K + 4 Light Trucks [Tank Army] Apr'43-'45: 4 37mm AAG M1939 61-K + 4 Light Trucks; 4 12.7mm AA MG Trucks <p>AA Battery or Company</p> <ul style="list-style-type: none"> [Rifle Division] Apr'41-Jan'43: 1 37mm AAG M1939 61-K + 1 Light Truck [Rifle Division] Jun'44-Dec'44: 4 12.7mm AA MG Trucks [Mechanized Corp] Mar'43-'45: 4 12.7mm AA MG Trucks <p>Cavalry AA Battery</p> <ul style="list-style-type: none"> [Cavalry Division] Mar'42-'45: 1 37mm AAG M1939 61-K + 1 Light Truck <p>Heavy AA Battery</p> <ul style="list-style-type: none"> [Motor Rifle Division] Jul'40-Jul'41: 1 76mm AAG M1938 + 1 Light Truck <p>120mm Mtr Battalion</p> <ul style="list-style-type: none"> [Rifle Division] Oct'41-Dec'41: 3 120mm Mtr + 3 Wagons [Rifle Division] Aug'41-Mar'42: 3 120mm Mtr + 3 Wagons or 3 Light Trucks [Rifle Division] Mar'42-Jul'42: 3 120mm Mtr + 3 Light Trucks [Tank Corp or Mechanized Corp or Tank Army] Jan'43-'45: 3 120mm Mtr + 3 Light Trucks [Artillery Division or Independent] '39-'41: 6 120mm Mtr + 6 Light Trucks [Artillery Division or Independent] '42-Apr'42: 4 120mm Mtr + 4 Wagons [Artillery Division or Independent] Apr'42-'45: 3 120mm Mtr + 3 Light Trucks or 3 Wagons
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- **160mm Heavy Mortar Battalion**
 - [Independent] '44-'45: 2 160mm Mtr + 2 Light Trucks
- **Cavalry Mortar Regiment**
 - [Cavalry Corp] Jun'42-Feb'43: 5 120mm Mtr + 5 Wagons
- **Cavalry Mortar Battalion**
 - [Cavalry Corp] Fe'43-'45: 3 120mm Mtr + 3 Wagons
- **Cavalry Mortar Battery**
 - [Cavalry Division] Jul'41-'45: 1 120mm Mtr + 1 Wagon
- **Engineer Tank Regiment**
 - [Tank Corp] Sep'42-Jan'43: 3 T-70; 4 T-34/76 series with minerollers attached
 - [Tank Corp] Jan'43-Feb'44: 2 T-70; 6 T-34/76 series with minerollers attached; 1 SMG Company [tank riders]; 3 ATR Teams + 3 Light Trucks
 - [Tank Corp] Feb'44-'45: 6 T-34/76 series with minerollers attached or 6 T-34/85 with minerollers attached; 1 SMG Company [tank riders]; 3 ATR Teams + 3 Light Trucks
 - [Tank Corp] Apr'44-'45: 8 T-34/76 series with minerollers attached or 8 T-34/85 with minerollers attached; 1 SMG Company [tank riders]
- **Flamethrower Tank Battalion**
 - '42-Jun'42: 4 KV-8 series; 3 OT-34
 - Jul'42-'43: 2 KV-8 series; 2 OT-34
 - '44-'45: 4 OT-34
- **Flamethrower Platoon**
 - [Rifle Division] Apr'41-Dec'41: 6 Flamethrower Team stands + 3 Light Trucks
 - [Independent or Assault Engineer Brigade] Jul'42-'45: 6 Flamethrower Team stands + 3 Light Trucks
- **Pioneer Battalion**
 - [Rifle Division] Apr'41-Jul'41: 9 Pioneer stands + 9 Wagons; 1 MG Plt + 1 Wagon
 - [Rifle Division] Jul'41-Dec'41: 9 Pioneer stands + 9 Wagon
 - [Rifle Division] Dec'41-'45: 9 Pioneer stands
 - [Motor Rifle or Tank Division] Jul'40-Jul'41: 6 Pioneer stands + 6 Light Trucks
 - [Mechanized Corp] Sep'42-'45: 6 Pioneer stands + 6 Light Trucks

Artillery Support Groups

- **Light Field Artillery Battalion**
 - [Rifle Division] '39-'44 [availability modifier -1]: 2 76mm FIELD GUNS + 2 Horse Limbers [combined in artillery battalion with 1 122mm Howizer Battery, see entry this section]
 - [Motor Rifle Division] Jul'40-Jul'41: 3 76mm FIELD GUNS + 3 LIGHT GUN TRACTORS
 - [Tank Division] Jul'41-Sep'41 [availability modifier -1]: 2 76mm FIELD GUNS + 2 Horse Limbers [combined in artillery battalion with 1 122mm Howizer Battery, see entry this section]
- **Cavalry Field Artillery Battalion**
 - '39-Jul'41 [availability modifier -1]: 2 76mm FIELD GUNS + 2 Horse Limbers [combined in cavalry artillery battalion with 1 122mm Howizer Battery, see entry this section]
 - Jul'41-Jan'42 [availability modifier -1]: 2 76mm FIELD GUNS + 2 Horse Limbers [combined in cavalry artillery battalion with two Cavalry Mortar Batteries, see entry in Attachments]
 - Jan'42-Jul'43 [availability modifier -2]: 1 76mm FIELD GUN + 1 Horse Limber [combined in cavalry artillery battalion with two Cavalry Mortar Batteries, see entry in Attachments]
 - Jul'43-'45 [availability modifier -2]: 2 76mm FIELD GUNS + 2 Horse Limbers; 2 12.7mm AA MG Trucks [combined in cavalry artillery regiment with three Cavalry Mortar Batteries, see entry in Attachments]

- **76mm Field Gun Battalion**
 - [Rifle Division] Dec'44-'45 [availability modifier +1]: 4 76mm FIELD GUNS + 4 LIGHT GUN TRACTORS
- **122mm Howitzer Battery**
 - [Rifle Division] '39-'44 [availability modifier -2]: 1 122MM HOWITZER + 1 Horse Limber
 - [Tank Division] Jul'41-Sep'41 [availability modifier -2]: 1 122MM HOWITZER + 1 Horse Limber
 - [Cavalry Division] '39-Jul'41 [availability modifier -2]: 1 122MM HOWITZER + 1 Horse Limber
- **122mm Howitzer Battalion**
 - [Rifle or Motor Rifle or Tank Division] '39-Jul'41: 3 122MM HOWITZERS + 3 Horse Limbers
 - [Rifle Division] Dec'44-'45 [availability modifier +1]: 4 122MM HOWITZERS + 4 LIGHT GUN TRACTORS
 - [Artillery Division or Independent] '39-'45: 3 122MM HOWITZER + 3 LIGHT GUN TRACTORS
- **152mm Howitzer Battalion**
 - [Rifle or Motor Rifle or Tank Division] '39-Apr'41: 3 152MM HOWITZERS + 3 MEDIUM GUN TRACTORS
 - [Artillery Division or Independent] '39-'45: 3 152MM HOWITZERS + 3 MEDIUM GUN TRACTORS
- **152mm Field Gun Battalion**
 - [Artillery Division or Independent] '39-'45: 3 152MM FIELD GUNS + 3 HEAVY GUN TRACTORS
- **Multiple Rocket Launcher (MRL) Regiment**
 - [Tank Army] Apr'43-'45: 6 BM-13-16
 - [Cavalry Corp] Jun'43-'45: 6 BM-13-16
- **Multiple Rocket Launcher (MRL) Battalion**
 - [Tank Corp] Jan'43-'45: 2 BM-13-16
 - [Mechanized Corp] Sep'42-'45: 2 BM-13-16
 - [Rocket Launcher Regiment or Independent] Sep'41-Jun'42: 3 BM-13-16
 - [Rocket Launcher Regiment or Independent] Jun'42-'45: 2 BM-13-16
 - [Rocket Launcher Regiment or Independent] Jun'42-'45: 2 BM-8-36
 - [Rocket Launcher Regiment or Independent] '43-'45: 2 BM-8-48
 - [Rocket Launcher Regiment or Independent] '44-'45: 2 BM-8-24
 - [Breakthrough Artillery Division] Sep'44-'45: 3 BM-13-16
- **Heavy Multiple Rocket Launcher (MRL) Battalion**
 - [Independent] Jun'42-'45: 8 M-30 w/Rama

Equipment Notes

- **LIGHT ARMORED CAR:**
 - '39-'42: BA-20, or FAI [somewhat rare]
 - '43-'45: BA-64B
- **HEAVY ARMORED CAR:**
 - '39-'42: BA-10, BA-6, or BA-3
 - '43-'45: BA-10
- **LIGHT TANK:** [listed in rough descending order of prevalence where known]
 - Nov'39-Jul'40: BT-7 series, T-26 series, BT-5 series, or BT-2 series
 - Jul'40-Jul'41: BT-7 series, BT-5 series, BT-2 series, or T-40 (T-30B) [rare]
 - Jul'41-Dec'41: T-26 series, BT-7 series, BT-5 series, BT-2 series, T-40 (T-30B) [rare], or T-50 [extremely rare]
 - Dec'41-Jul'42: T-60 series, T-70
 - Aug'42-'43: T-70, T-60 series
 - '44: T-70, T-80 [rare]

- MEDIUM TANK:** [listed in rough order of decreasing prevalence where known]
 - Jul'40-Sep'41: BT-7 series, T-26 series, T-34/76 series, or BT-5 series
 - Sep'41-'41: T-34/76 series, BT-7 series, T-26 series, or BT-5 series
 - '42-Nov'42: T-34/76 series, BT-7 series [rare], T-26 series [rare]
 - '43: T-34/76 series
 - '44-Jun'44: T-34/76 series, T-34/85
 - Jul'44-'45: T-34/85, T-34/76 series
- HEAVY TANK :** [listed in rough order of decreasing prevalence where known]
 - Nov'38-Feb'40: T-28 series, T-35A [extremely rare]
 - Mar'40-Jul'40: T-28 series, KV-2 [very rare], or T-35A [extremely rare]
 - Jul'40-Jul'41: KV-1 series, T-28 series, KV-2 [rare], or T-35A [extremely rare]
 - Jul'41-'41: KV-1 series, KV-2 [rare], or T-35A [extremely rare]
 - '42: KV-1 series
 - '43-Aug'43: KV-1 series, or KV-85
 - Sep'43-'43: KV-1 series, or KV-85, or IS-1
 - '44: IS-2, KV-1S, or KV-85, or IS-1
 - '45-Mar'45: IS-2, or KV-85
 - Apr'45-'45 : IS-2, or KV-85
- 122MM HOWITZER:** [listed in rough order of decreasing prevalence where known]
 - '39: M1910/30 122mm How, or M1909/37 122mm How
 - '40-'42: M1910/30 122mm How, M-30 M1938 122mm How, or M1909/37 122mm How
 - '43-'45: M-30 M1938 122mm How, or M1910/30 122mm How
- 152MM FIELD GUN:**
 - '39-'42: M1910/30 152mm FG, M1910/34 152mm FG, or ML-20 M1937 152mm FG
 - '43-'45: ML-20 M1937 152mm FG, or M1910/34 152mm FG
- 152MM HOWITZER:**
 - '39: M1909/30 152mm How, or M1910/37 152mm How
 - '40-'41: M1909/30 152mm How, M1910/37 152mm How, or M-10 M1938 152mm How
 - '42-'43: M1909/30 152mm How, or 3 M-10 M1938 152mm How
 - '44-'45: D-1 M1943 152mm How, M-10 M1938 152mm How, or M1909/30 152mm How
- 45MM AT GUN:**
 - '39-'41: M1932 45mm ATG, 53-K M1937 45mm ATG
 - '42: 53-K M1937 45mm ATG, M1932 45mm ATG, M-42 45mm ATG
 - '43-'45: M-42 45mm ATG, 53-K M1937 45mm ATG, M1932 45mm ATG
- 57MM AT GUN:**
 - Jul'41-'42: ZiS-2 m.1941 57mm ATG
 - Jul'43-'45: ZiS-2 m.1943 57mm ATG
- 76MM FIELD GUN:** [listed in rough order of decreasing prevalence where known]
 - '39- Sep'39: 76mm M1900/02 FG, 76mm M1902/30 FG, or F-22 M1936 76mm FG
 - Oct'39-Feb'42: F-22 M1936 76mm FG, USV M1939 76mm FG, 76mm M1902/30 FG, or 76mm M1900/02 FG
 - Mar'42-'42: F-22 M1936 76mm FG, USV M1939 76mm FG, ZiS-3 M1942 76mm FG, 76mm M1902/30 FG, or 76mm M1900/02 FG
 - '43: ZiS-3 M1942 76mm FG, USV M1939 76mm FG, or F-22 M1936 76mm FG
 - '44-'45: ZiS-3 M1942 76mm FG

- 76MM INFANTRY GUN:**
 - '39-'42: M1927 76mm IG
 - '43-'45: M1943 76mm IG, M1927 76mm IG
- FLAME TANK:** [listed in rough order of decreasing prevalence where known]
 - Jul'40-Jul'41: OT-26, OT-130, or OT-133
- LIGHT GUN TRACTOR:**
 - '39-'45: Light Truck, or Light Gun Tractor
- MEDIUM GUN TRACTOR:**
 - '39-'45: Medium Gun Tractor, or Light Truck
- HEAVY GUN TRACTOR:**
 - '39-'45: Heavy Gun Tractor, or Medium Truck
- SCOUT TANK:** [listed in rough order of decreasing prevalence where known]
 - Nov'39-Jul'40: T-37 series, T-38 series
 - Jul'40-Jul'41: T-37 series, T-38 series, T-40 series
- LEND LEASE** [Substitutions start Jul1941, limited by availability dates of equipment. Note: the Russians kept some lend-lease equipment in service well past when the US and UK had withdrawn it from front-line duty.]
 - British Valentine series starting with Valentine III, and US M3 Stuart can be substituted for T-26 series, BT series, T-40, T-60, T-70.
 - British Matilda II, US M3 Grant/Lee, US M4A2 Sherman III, US M4A2(76) Sherman IIIA, US M4A3 Sherman IV, US M4A3(76) Sherman IVA can be substituted for the T-34/76 series, T-26 series, and BT series.
 - British Churchill I, II, and III can be substituted for Heavy Tanks in heavy/breakthrough regiments.
 - British Universal Carrier may be substituted for Light Armored Cars.
 - US M3A1 Scout Car and M3 Halftrack can replace trucks in brigade recon companies and Tank/Mechanized Corp recon battalions.
 - US T48 Tank Destroyer can replace the SU-76 series in Tank Destroyer units.
 - US M17 MGMC can replace the 12.7mm AA MG Truck.
 - Other lend-lease items were incorporated directly into list entries.

U.S. Army 1942–1948

Quality

1939-1942: 10% Poor; 15% Marginal; 35% Fair; 20% Average; 20% Good
1943: 10% Marginal; 15% Fair; 45% Average; 30% Good
1944: 20% Fair; 25% Average; 45% Good; 10% Excellent
1945: 20% Fair; 20% Average; 45% Good; 15% Excellent
Rangers: 40% Good; 40% Excellent; 20% Superb
First Special Service Force: 50% Excellent; 50% Superb
Parachute Infantry: 40% Average; 40% Good; 20% Excellent

Artillery Accuracy & Friction Response

1939-1949: Artillery Accuracy 4+; Response 3+

Combat Formations

US Light Tank Battalion Mar 1942 – Aug 1943

- **Base**
 - 1 recon Jeep w/LMG
 - 1 ASSAULT GUN
 - 1 ARMORED MORTAR
- **3 Light Tank Companies**
 - 3 LIGHT TANKS
- **Stand Inventory**
 - 1 recon Jeep w/LMG
 - 1 ASSAULT GUN
 - 1 ARMORED MORTAR
 - 9 LIGHT TANKS

US Medium Tank Battalion Mar 1942 – Aug 1943

- **Base**
 - 1 recon Jeep w/LMG
 - 1 ASSAULT GUN
 - 1 ARMORED MORTAR
- **3 Medium Tank Companies**
 - 3 MEDIUM TANKS [all same type]
- **Stand Inventory**
 - 1 recon Jeep w/LMG
 - 1 ASSAULT GUN
 - 1 Armored Mortar
 - 9 MEDIUM TANKS [all same type]

US Tank Battalion Sep 1943 – 1945

- **Base**
 - 1 recon Jeep w/LMG
 - 1 ASSAULT GUN
 - 1 ARMORED MORTAR
- **1 Light Tank Company**
 - 3 LIGHT TANKS
- **3 Medium Tank Companies [pick one type]**
 - **Sep'43-Jul'44**
 - 3 MEDIUM TANKS [all same type]
 - **Aug'44-Apr'45**
 - 3 MEDIUM TANKS [all same type (usually 75mm), or two w/75mm gun and one w/76mm gun]
 - **Apr'45-'45**
 - 3 MEDIUM TANKS [all same type (usually 75mm), or one w/75mm gun and two w/76mm gun]

Stand Inventory

- 1 recon Jeep w/LMG
- 1 ASSAULT GUN
- 1 ARMORED MORTAR
- 3 LIGHT TANKS
- 9 MEDIUM TANKS

US Independent Tank Battalion Mar 1942 – 1945

- **Base**
 - 1 recon Jeep w/LMG
 - 1 ASSAULT GUN
 - 1 ARMORED MORTAR
- **3 Medium Tank Companies [pick one type] or 3 Light Tank Companies**
 - **Medium Tank Company '42-Jul'44**
 - 3 MEDIUM TANKS [all same type]
 - **Medium Tank Company Aug'44-Apr'45**
 - 3 MEDIUM TANKS [all same type (usually 75mm), or two w/75mm gun and one w/76mm gun]
 - **Medium Tank Company Apr'45-'45**
 - 3 MEDIUM TANKS [all same type (usually 75mm), or one w/75mm gun and two w/76mm gun]
 - **Light Tank Company**
 - 3 LIGHT TANKS
- **Stand Inventory**
 - 1 ASSAULT GUN
 - 1 ARMORED MORTAR
 - 9 MEDIUM TANKS
 - 3 LIGHT TANKS

US Armored Infantry Battalion

- **Base**
 - 1 recon Jeep w/LMG
 - 1 ASSAULT GUN
 - 1 ARMORED MORTAR
 - 1 Armored Infantry MG Plt + 1 M2 Halftrack
- **3 Armored Infantry Companies**
 - 3 Armored Infantry stands + 3 M3 Halftracks
 - 1 AT GUN + 1 M2 Halftrack [in '44-'45 the AT gun + halftrack was often not present]
- **Stand Inventory**
 - 1 recon Jeep w/LMG
 - 1 ASSAULT GUN
 - 1 ARMORED MORTAR
 - 1 Armored Infantry MG Plt
 - 1-4 M2 Halftracks
 - 9 Armored Infantry stands
 - 9 M3 Halftracks
 - 0-3 AT GUNS

US Infantry Battalion 1942 – Jun 1943

- **Base**
 - 1 M3 37mm ATG + 1 Jeep
 - 2 Infantry MG Plt + 2 Light Trucks
 - 1 81mm Mortar M1 + 1 Light Truck
- **3 Infantry Companies**
 - 3 Infantry Rifle stands
 - 1 Infantry Weapons stand
- **Stand Inventory**
 - 1 M3 37mm ATG
 - 1 Jeep
 - 2 Infantry MG Plt
 - 3 Light Truck
 - 1 81mm Mortar M1
 - 9 Infantry Rifle stands

- 9 Infantry Weapons stands

US Infantry Battalion Jul 1943 – 1945

- **Base**
 - 1 M1 57mm ATG + 1 Light Truck
 - 2 Infantry MG Plt
 - 1 81mm Mortar M1
- **3 Infantry Companies**
 - 3 Infantry Rifle stands
 - 1 Infantry Weapons stand
- **Stand Inventory**
 - 1 M1 57mm ATG
 - 1 Light Truck
 - 2 Infantry MG Plt
 - 1 81mm Mortar M1
 - 9 Infantry Rifle stands
 - 3 Infantry Weapons stands

US Parachute Infantry Battalion

- **Base**
 - 2 Parachute MG Teams
 - 1 81mm Mortar M1
- **3 Parachute Infantry Companies**
 - 3 Parachute Infantry stands
- **Stand Inventory**
 - 2 Parachute MG Teams
 - 1 81mm Mortar M1
 - 9 Parachute Infantry stands

US Glider Infantry Battalion

- **Base**
 - 1 Glider MG stand
 - 1 81mm Mortar M1
- **3 Glider Infantry Companies**
 - '42-Feb'45:
 - 2 Glider Infantry stands
 - 1 Glider Weapons stand
 - Mar'45-'45:
 - 1 M1 57mm AT Gun + 1 Light Truck
 - 3 Glider Infantry stands
 - 1 Glider Weapons stand
- **Stand Inventory**
 - 1 Glider MG stand
 - 1 81mm Mortar M1
 - If '42-Feb'45 Glider Infantry Companies:
 - 6 Glider Infantry stands
 - 3 Glider Weapons stand
 - If Mar'45-'45 Glider Infantry Companies:
 - 3 M1 57mm AT GUN
 - 3 Light Trucks
 - 9 Glider Infantry stands
 - 3 Glider Weapons stands

US Ranger Battalion

- **Base**
 - 1 81mm Mortar M1
- **6 Ranger Companies**
 - 2 Ranger stands
- **Stand Inventory**
 - 1 81mm Mortar M1
 - 12 Ranger stands

US/Canadian 1st Special Service Force Battalion

- **3 Special Service Force Companies**
 - 3 Special Service Force stands

- **Stand Inventory**

- 9 Special Service Force stands

US Armored Reconnaissance Battalion 1942-43

- **3 Reconnaissance Companies**
 - 1 recon ARMORED CAR
 - 1 recon M3 GMC Autocar
 - 1 M3 37mm ATG + 1 Jeep
- **1 Light Tank Company**
 - 3 LIGHT TANKS
- **Stand Inventory**
 - 3 ARMORED CARS
 - 3 M3 GMC Autocar
 - 3 M3 37mm ATG
 - 3 Jeeps
 - 3 LIGHT TANKS

US Cavalry Reconnaissance Squadron 1943-45

- **Base**
 - 2 M8 HMC
- **3 Reconnaissance Companies**
 - 2 recon ARMORED CARS
 - 2 recon Jeep w/HMG
- **1 Light Tank Company**
 - 3 LIGHT TANKS
- **Stand Inventory**
 - 2 M8 HMC
 - 6 ARMORED CARS
 - 6 Jeep w/HMG
 - 3 LIGHT TANKS

US Constabulary Cavalry Reconnaissance Squadron 1946-48

- **Base**
 - 0-2 M8 HMC or Jeep w/HMG
- **2-4 Reconnaissance Companies**
 - 2 recon ARMORED CARS
 - 2 recon Jeep w/HMG or 2 recon Infantry Rifle stands + 2 Medium Trucks
- **Stand Inventory**
 - 0-2 M8 HMC or 0-2 Jeep w/HMG
 - 4-8 Jeep w/HMG or 4-8 Infantry Rifle stands
 - 0 or 4-8 Medium Trucks

Attachments¹³

- **Cavalry Recon Troop**
 - [Armored Regiment] Mar'42-Sep'43: 2 Jeep w/LMG; 1 Light Tank; 3 M3A1 Scout Car; 1 M3 GMC Autocar
 - [Standard Armored Division] Sep'43-'45: 2 Jeep w/LMG; 2 M8 Greyhound
 - [Heavy Armored Division] Sep'43-'45: 3 Jeeps; 3 M8 Greyhound; 1 M8 HMC
 - [Infantry Division] Apr'42-Mar'43: 3 Jeep w/LMG; 1 M3 37mm ATG; 1 M3A1 Scout Car; 1 81mm Mortar M1 + 1 Light Truck
 - [Infantry Division] Apr'43-Jul'43: 3 Jeep w/LMG; 1 M3 37mm ATG; 1 M8 Greyhound; 1 81mm Mortar M1 + 1 Light Truck
 - [Infantry Division] Jul'43-'45: 3 Jeep w/LMG; 1 M8 Greyhound
- **Cavalry Recon Fire Support Troop [one per 4 Cavalry Recon Troops]**
 - [Standard Armored Division] Sep'43-'45: 2 M8 HMC
- **SP Tank Destroyer Company**
 - Jun'42-Nov'42: 1 M6 GMC Fargo; 2 SP Heavy Tank Destroyers

¹³ Note that some organizations overlap in time.

- Dec'42-Jan'43: 3 SP Heavy Tank Destroyers
- Jan'43-Mar'43: 1 M3A1 Scout Car; 3 SP Heavy Tank Destroyers
- Apr'43-'45: 1 M20 Scout Car; 3 SP Heavy Tank Destroyers
- **SP Tank Destroyer Recon Company [one per three SP Tank Destroyer Companies]**
 - Jun'42-Jan'43: 3 Jeep w/LMG; 1 M3A1 Scout Car; 1 Infantry Engineer stand + 1 Light Truck
 - Jan'43-Mar'43: 3 Jeep w/LMG; 1 M3A1 Scout Car
 - Apr'43-'45: 3 Jeep w/LMG; 1 M8 Greyhound; 1 Infantry Engineer stand + 1 Light Truck
- **Towed Tank Destroyer Company**
 - Dec'41-Jan'43: 3 M3 37mm ATG + 3 Jeep
 - May'43-'44: 3 M5 76mm ATG + 3 M3 Halftracks
 - Jan'45-Feb'45: 3 M5 76mm ATG + 3 M3 Halftracks or 3 M39 Gun Tractors
- **Towed Tank Destroyer Recon Platoon [one per three Towed Tank Destroyer Companies]**
 - Jan'43-'45: 1 Jeep w/LMG
- **Cannon Company**
 - [Infantry Regiment] Apr'42-Jul'43: 1 T30 75mm HMC; 1 T19 105mm HMC Section
 - [Infantry Regiment] Jul'43-'45: 1 M3 105mm Pack How + 1 Light Truck
- **Anti-tank Company**
 - **[Infantry Regiment] Apr'42-Jul'43: 3 M3 37mm ATG + 3 Light Trucks**
 - [Infantry Regiment] Jul'43-'45: 2 M1 57mm ATG + 3 Light Trucks
- **Engineer Company**
 - [Infantry Division] Apr'42-Jul'43: 3 Infantry Engineer stands; 1 M3 37mm ATG + 1 Jeep; 1 M2 Halftrack; 1 Medium Truck
 - [Infantry Division] Jul'43-'45: 3 Infantry Engineer stands; 1 Jeep; 1 Medium Truck
 - [Standard or Heavy Armored Division] Sep'43-'45: 3 Armored Engineer stands + 2 Light Trucks + 1 M3 Halftrack
- **Multiple Rocket Launcher Platoon [replaces a tank stand in tank battalion]**
 - [Standard or Heavy Armored Division] '44-'45: 1 M17 Whizbang on M4
 - [Standard or Heavy Armored Division] Aug'44-'45: 1 T34 Caliope on M4

Artillery Support Groups

- **105mm Armored Field Artillery Battalion**
 - [Armored Division] Mar'42-Sep'43: 3 M7 HMC Priest; [if on-table] 2 M6 GMC Fargo
 - [Standard or Heavy Armored Division] Sep'43-'45: 3 M7 HMC Priest
- **105mm Towed Howitzer Battalion**
 - [Infantry Division] Apr'42-Jul'43: 3 M2 105mm How + 3 Medium Trucks; [if on-table] 1 M3 37mm ATG + 1 Light Truck
 - [Infantry Division] Jul'43-'45: 3 M2 105mm How + 3 Medium Trucks or 3 M5 Tractors
- **155mm Towed Howitzer Battalion**
 - [Infantry Division] Apr'42-Jul'43: 3 155MM TOWED HOWITZERS + 3 Medium Trucks; [if on-table] 1 M3 37mm ATG + 1 Light Truck
 - [Infantry Division] Jul'43-'45: 3 155MM TOWED HOWITZERS + 3 M5 Tractors or 3 Medium Trucks
- **Multiple Rocket Launcher Platoon**
 - [Standard or Heavy Armored Division] '44-'45: 1 M17 Whizbang on M4

- [Standard or Heavy Armored Division] Aug'44-'45: 1 T34 Caliope on M4

Equipment Notes

- **155MM TOWED HOWITZER:**
 - '42-'43: M1 155mm How, or 155mm FG M1917/M1918
 - '44-'45: M1 155mm How
- **ARMORED CAR:**
 - '41-: M3A1 Scout Car
 - Apr'43-'44: M8 Greyhound, M20 Scout Car, or M3A1 Scout Car
 - '45-'50: M8 Greyhound or M20 Scout Car
- **ARMORED MORTAR: [listed in rough order of decreasing prevalence where known]**
 - '42: M4 Mortar Carrier + 81mm Mortar M1, M4A1 MMC, or M21 MMC
 - '43-May'43: M4 Mortar Carrier + 81mm Mortar M1, or M4A1 MMC
 - Jun'43-'43: M4 Mortar Carrier + 81mm Mortar M1, M4A1 MMC, or M21 MMC
 - '44-'45: M4A1 MMC, M4 Mortar Carrier + 81mm Mortar M1, or M21 MMC
- **ASSAULT GUN: [listed in rough order of decreasing prevalence where known]**
 - '42-Jul'43: T30 75mm HMC
 - Aug'43-'43: M8 HMC, M7 HMC Priest, or T30 75mm HMC
 - '44-May'44: M8 HMC, or M7 HMC Priest
 - Jun'44-Jul'44: M8 HMC (Stuart); M4(105) Sherman IB; or M7 HMC Priest
 - Aug'44-Sep'44: M8 HMC (Stuart); M4(105) Sherman IB, M4A3(105) Sherman IVB, or M7 HMC Priest
 - Oct'44-'45: M4(105) Sherman IB, M4A3(105) Sherman IVB, or M8 HMC (Stuart)
- **AT GUN: [listed in rough order of decreasing prevalence where known]**
 - '40-May'43: M3 37mm ATG
 - Jun'43-Feb'44: M3 37mm ATG, or M1 57mm ATG
 - Mar'44-'45: M1 57mm ATG, or M3 37mm ATG
- **LIGHT TANK: [listed in rough order of decreasing prevalence where known]**
 - '42: M3 Stuart
 - '43: M5 Stuart; M3 Stuart; M3A3 Stuart
 - '44-Dec'44: M5 Stuart; M3A3 Stuart; M3 Stuart
 - Dec'44: M5 Stuart; M24 Chaffee; M3A3 Stuart
- **MEDIUM TANK: [listed in rough order of decreasing prevalence where known]**
 - '42-Jun'43: M4 Sherman I, M4A1 Sherman II, or M3 Lee/Grant series
 - Jul'43-Aug'44: M4 Sherman I, M4A1 Sherman II, or M4A3 Sherman IV
 - Aug'44-'44: M4A3 Sherman IV, M4 Sherman I, M4A1 Sherman II, M4A3(76) Sherman IVA, M4A1(76) Sherman IIA, or M4A3E2 Jumbo Sherman [mainly in independent tank battalions]
 - Jan'45-Apr'45: M4A3 Sherman IV, M4 Sherman I, M4A1 Sherman II, M4A3(76) Sherman IVA, M4A1(76) Sherman IIA, M4A2 Sherman III [mainly in Patton's 3rd Army], M4A4 Sherman V [mainly in Patton's 3rd Army], or M4A3E2 Jumbo Sherman [mainly in independent tank battalions]
 - Apr'45-'45: M4A3(76) Sherman IVA, M4A1(76) Sherman IIA, M4A3 Sherman IV, M4 Sherman I, M4A1 Sherman II, or M4A3E2 Jumbo Sherman [mainly in independent tank battalions]

- SP HEAVY TANK DESTROYER: [listed in rough order of decreasing prevalence where known]
 - Dec'41-Feb'43: M3 GMC Autocar
 - Mar'43-'43: M10 Wolverine, or M3 GMC Autocar
 - '44-Apr'44: M10 Wolverine
 - Apr'44-Sep'44: M10 Wolverine, or M18 Hellcat
 - Oct'44-Nov'44: M10 Wolverine, M18 Hellcat, or M36 Jackson
 - Dec'44: M10 Wolverine, M18 Hellcat, M36 Jackson, or M36B1 Jackson
 - Jan'45: M10 Wolverine, M36 Jackson, M18 Hellcat, or M36B1 Jackson
 - Feb'45-Apr'45: M36 Jackson, M10 Wolverine, M18 Hellcat, or M36B1 Jackson
 - May'45-'45: M36 Jackson, M10 Wolverine, M18 Hellcat, M36B1 Jackson, or M36B2 Jackson

U.S. Marines 1941–1945

Quality

1939-1949: 30% Average; 40% Good; 30% Excellent

Artillery Accuracy & Friction Response

1939-1949: Artillery Accuracy 4+; Response 3+

Combat Formations

US Marine Battalion D-Series 1941 – Mar 1943

- **Base**
 - 1 M3 37mm ATG + 1 Jeep
 - 1 81mm Mortar M1
 - 3 Marine MG stands
- **3 Marine Rifle Companies**
 - 3 Marine Rifle stands
 - 1 Marine Weapons stand
- **Stand Inventory**
 - 1 M3 37mm ATG
 - 1 Jeep
 - 1 81mm Mortar M1
 - 3 Marine MG stands
 - 9 Marine Rifle stands
 - 3 Marine Weapons stand

US Marine Battalion E-Series Apr 1943 – Apr 1944

- **Base**
 - 1 81mm Mortar M1
 - 3 Marine MG stands
- **3 Marine Rifle Companies**
 - 3 Marine Rifle stands
 - 1 Marine Weapons stand
- **Stand Inventory**
 - 1 81mm Mortar M1
 - 3 Marine MG stands
 - 9 Marine Rifle stands
 - 3 Marine Weapons stand

US Marine Battalion F-Series May 1944 – May 1945

- **Base**
 - 1 81mm Mortar M1
- **3 Marine Rifle Companies**
 - 3 Marine Rifle stands
 - 1 Marine MG stand
- **Stand Inventory**
 - 1 81mm Mortar M1
 - 9 Marine Rifle stands
 - 3 Marine MG stand

US Marine Battalion G-Series Jun 1945 – 1945

- **Base**
 - 1 81mm Mortar M1
- **3 Marine Rifle Companies**
 - 3 Marine Rifle stands
 - 1 Marine MG stand
- **Stand Inventory**
 - 1 81mm Mortar M1
 - 9 Marine Rifle stands
 - 3 Marine MG stand

Attachments

- Light Tank Company [max 4 from '41-Aug'43, then max 2 from Sep'43-'44]
 - 3 LIGHT TANKS
 - Medium Tank Company [max 1 from Sep'43-Apr'44, then max 3 from May'44-'45]
 - 3 MEDIUM TANKS
 - Marine Rifle Company
 - '41-Apr'44: 3 Marine Rifle stands; 1 Marine Weapons stand
 - May'44-'45: 3 Marine Rifle stands; 1 Marine MG stand
 - AT Battery [choose one of the following lines]
 - '41-'43: 1 M3 GMC Autocar
 - '42-'44: 1 M6 GMC Fargo
 - Flame Tank Platoon [max 3]
 - 1 FLAME TANK
 - Marine Engineer Platoon [max 3]
 - 1 Marine Engineer stand
-

Artillery Support Groups

- 75mm Pack Howitzer Battalion [max 1]
 - 3 M1A1 75mm Pack How + 3 Light Trucks
 - 105mm Towed Howitzer Battalion [max 3]
 - 3 M2 105mm How + 3 Medium Trucks
 - 155mm Towed Howitzer Battalion [max 1]
 - 3 M1 155mm How + 3 Medium Trucks
 - 155mm Towed Howitzer Battery [max 3, availability modifier -2]
 - 1 M1 155mm How + 1 Medium Trucks
-

Equipment Notes

- FLAME TANK:
 - M3 Stuart w/Flame-gun or M4A3R3 Zippo
- LIGHT TANK:
 - M2A4 [early Pacific only], M3 Stuart series, M5 Stuart
- MEDIUM TANK:
 - M4A2 Sherman III, or M4A3 Sherman IV

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Appendix D: Data Charts

Pre-1950

Although extensive and detailed, the Data Charts are not comprehensive. We hope that most gamers will never find any vehicles missing that they need. The infantry data is representative, but won't reflect all available armament combinations from any given period, for any of the armies listed. Similarly, the artillery lists cover most weapon types, but some specialized weapons may be missing. The goal is to get players up and playing, and as they grow comfortable with the system and want to tackle more obscure scenarios that may require a vehicle or other equipment we've missed, they can begin to tinker on their own. To that end we provided a lot of the tools needed for tinkering in Appendix B.

To find in the Data Charts the data for the vehicle, anti-tank gun, anti-aircraft gun, and infantry stands listed in an Army List, first look under the country the army is from. If you don't find the stand type listed there, look under the country in which it is manufactured (the U.S., Russia, France, Germany, and the U.K. are likely places). If you still don't find the stand type under the country it was made in, then look in the Generic lists of equipment included at the end of the each chart.

A small number of vehicles have a second main weapon. In these cases the extra weapon will be listed on an additional row below the rest of the vehicle's data for that time range.

The pre-1950 equipment lists have vehicles and equipment listed under category subheadings (e.g., "Light Tanks") to aid scenario designers in locating the data they need.

D.1 Vehicle, Antitank Gun, and Antiaircraft Gun Data Chart, Pre-1950

See end of chart for Generic vehicles and guns, and for explanation of notations.

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes						
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo										
France																							
French Cavalry Tanks																							
AMR 33 VM	34-40	8	7t	1 - 1	-	1	6	-1	-	-	-	-	-	-	-	-	7.5mm MG						
AMR 35 ZT	35-40	8	6t	1 - 1	-	1	6	-1	-	-	-	-	-	-	-	-	7.5mm MG						
AMR 35 w/HMG	36-40	10	6t	1 - 1	0	1	6	-1	-	-	-	-	-	-	-	-	13.2mm/L75 R (France)						
AMC 35 ACG	35-40	33	6t	3 - 2	4	2	8	-2	-	-	-	-	-	-	-	-	47mm/L32 R (France)						
Somua S35	36-42	47	4t	4 A 3	4	2	8	-2	-	-	-	-	-	-	-	-	47mm/L32 R (France)						
H35	36-42	23	3t	3 - 3	1	2	6	-2	-	-	-	-	-	-	-	-	37mm/L21 R (France)						
H35 w/long 37mm	36-42	27	3t	3 - 3	2	2	8	-2	-	-	-	-	-	-	-	-	37mm/L33 R (France)						
H39	39-42	23	4t	3 - 3	1	2	6	-2	-	-	-	-	-	-	-	-	37mm/L21 R (France)						
H39 w/long 37mm	40-42	27	4t	3 - 3	2	2	8	-2	-	-	-	-	-	-	-	-	37mm/L33 R (France)						
ARL 44	49-50	127	6t	7 - 5	8	3	10	-1	10	3	8	-	-	-	-	-	90mm/L? R (France)						
French Infantry Tanks																							
Renault FT-17	18-31	7	3t	1 - 0	-	1	6	-1	-	-	-	-	-	-	-	-	7.92mm MG						
Renault FT-17 m.1931	32-42	7	3t	1 - 0	-	1	6	-1	-	-	-	-	-	-	-	-	7.5mm MG						
Renault FT w/37mm	18-34	12	3t	1 - 0	0	2	4	-2	-	-	-	-	-	-	-	-	37mm/L21 R (France)						
	35-42	16	3t	1 - 0	1	2	6	-2	-	-	-	-	-	-	-	-							
Renault BS	19-42	21	3t	1 - 0	4	2	6	-1	-	-	-	-	-	-	-	-	75mm/L17 R (France)						
Char 2C	22-40	53	3t	4 A 4	5	3	6	-1	-	-	-	-	-	-	-	-	75mm/L36 R (France)						
Char D1	32-40	23	3t	3 A 3	1	2	4	-2	-	-	-	-	-	-	-	-	47mm/L21 R (France)						
Char D2 w/SA34	37-40	23	3t	3 A 3	1	2	4	-2	-	-	-	-	-	-	-	-	47mm/L21 R (France)						
Char D2 w/SA35	mar40-40	35	3t	3 A 3	4	2	8	-2	-	-	-	-	-	-	-	-	47mm/L32 R (France)						
Char B1 bis	36-42	58	4t	5 A 4	4	2	8	-2	-	-	-	-	-	-	-	-	47mm/L32 R (France)						
					4	2	6	-1	-	-	-	-	-	-	-	-	75mm/L17 R (France)						
R35	36-42	23	4t	3 - 3	1	2	6	-2	-	-	-	-	-	-	-	-	37mm/L21 R (France)						
FCM 36	38-40	28	3t	4 A 4	1	2	6	-2	-	-	-	-	-	-	-	-	37mm/L21 R (France)						
R40	39-40	27	4t	3 - 3	2	2	8	-2	-	-	-	-	-	-	-	-	37mm/L33 R (France)						
French APCs & Transporters																							
Chenillette (Renault UE)	32-42	5	7t	0 - 0	-	-	-	-	-	-	-	-	-	0	½								
Chenillette w/MG	may40	5	7t	0 - 0	-	1	6	-1	-	-	-	-	-	0	½	7.5mm MG							

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
TRC 37L (Lorraine)	40	6	5t	0 - 0	-	-	-	-	-	-	-	-	-	0	1	
VBCP 38L (Lorraine)	40	6	5t	0 - 0	-	-	-	-	-	-	-	-	-	0	1	
French Armored Cars																
AMC P16	32-34	8	6ht	0 - 0	0	2	4	-2	-	-	-	-	-	-	-	37mm/L21 R (France)
	35-40	12	6ht	0 - 0	1	2	6	-2	-	-	-	-	-	-	-	
AMD 35 Panhard 178	35-42	25	6w	2 A 1	2	2	8	-3	-	-	-	-	-	-	-	25mm/L47 R (France)
Laffly 50 AM	33-34	9	5w	0 - 0	0	3	4	-2	-	-	-	-	-	-	-	37mm/L21 R (France)
	35-40	14	5w	0 - 0	1	3	6	-2	-	-	-	-	-	-	-	
French Tank Destroyers																
AMR 35 ZT3	36-40	20	6t	1 - 1	2	2	8	-3	-	-	-	-	-	f	-	25mm/L72 R SA34 (France)
AMR 35 ZT2	39-40	20	6t	1 - 1	2	2	8	-3	-	-	-	-	-	-	-	25mm/L72 R SA34 (France)
Laffly W15 TCC	jun40-40	18	7w	s	5	2	8	-2	-	-	-	-	-	r	-	47mm/L53 R (France)
French Towed AT Guns																
25 SA-L '34 25mm ATG	34-42	15	2x	s	2	3	8	-3	-	-	-	-	-	f	½	25mm/L72 R SA34 (France)
25 SA-L '34 ATG Section	34-42	15	2x	s	2	3	8	-3	-	-	-	-	-	f	½	25mm/L72 R SA34 (France)
25 SA-L '37 25mm ATG	38-42	15	2x	s	2	3	8	-3	-	-	-	-	-	f	½	25mm/L72 R SA37 (France)
25 SA-L '37 ATG Section	38-42	15	2x	s	2	3	8	-3	-	-	-	-	-	f	½	25mm/L72 R SA37 (France)
37 mle 1916 IG	16-40	5	2x	s	0	3	4	-2	-	-	-	-	-	f	½	37mm/L21 R (France)
47 SA '37 47mm ATG	38-42	21	0x	s	5	3	8	-2	-	-	-	-	-	f	1	47mm/L53 R (France)
French Towed AA Guns																
20mm CA Oerlikon	39-43	18	1x	s	2	2 ²	20 ²	-1	-	-	-	-	-	-	1	20mm/L70 R AA (Switzerland)
25mm Hotchkiss '38 AAG	39-43	16	1x	s	2	2 ²	16 ²	-1	-	-	-	-	-	-	1	25mm/L60 R AA (France)
75mm AAG	33-43	24	0x	s	4he	2 ²	20 ²	-1	-	-	-	-	-	-	1	75mm/L54 R AA (France)
French Transport & Soft Vehicles																
Car	39-43	1	7w	s	-	-	-	-	-	-	-	-	-	-	½	
Bus	40	5	4w	s	-	-	-	-	-	-	-	-	-	-	2	
Light Truck	39-43	2	7w	s	-	-	-	-	-	-	-	-	-	-	1	
Medium Truck	39-43	5	5w	s	-	-	-	-	-	-	-	-	-	-	2	
Light Halftrack	39-40	2	7ht	s	-	-	-	-	-	-	-	-	-	-	1	
Medium Halftrack	39-40	5	6ht	s	-	-	-	-	-	-	-	-	-	-	2	
Light Horse Limber	all	1	5w	s	-	-	-	-	-	-	-	-	-	-	½	
Horse Limber	all	2	3w	s	-	-	-	-	-	-	-	-	-	-	1	
Wagon	all	2	3w	s	-	-	-	-	-	-	-	-	-	-	1	

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes					
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo									
Germany																						
German Light Tanks																						
Pz. I A-B	34-41	11	8t	2 - 0	-	1	6	-1	-	-	-	-	-	-	-	-	7.92mm MG					
Pz. IC	42-44	21	9t	3 - 1	0	2	6	-3	-	-	-	-	-	-	-	-	7.92mm R (Germany)					
Pz. IF	43-44	26	3t	6 - 4	-	1	6	-1	-	-	-	-	-	-	-	-	7.92mm MG					
Pz. IIA-C	37-40	20	7t	1 - 0	1	3	8	-1	-	-	-	-	-	-	-	-	20mm/L55 R (Germany)					
	41-43	20	7t	1 - 0	1	3	8	-1	2	3	4	-	-	-	-	-						
Pz. IIC(mod)	40	27	7t	3 - 0	1	3	8	-1	-	-	-	-	-	-	-	-	20mm/L55 R (Germany)					
	41-43	28	7t	3 - 0	1	3	8	-1	2	3	4	-	-	-	-	-						
Pz. IID-E (very rare)	39-mar40	24	9t	2 - 0	1	3	8	-1	-	-	-	-	-	-	-	-	20mm/L55 R (Germany)					
Pz. IIF	41-43	28	7t	3 - 0	1	3	8	-1	2	3	4	-	-	-	-	-	20mm/L55 R (Germany)					
Pz. IIJ	43	43	4t	5 - 4	1	3	8	-1	2	3	4	-	-	-	-	-	20mm/L55 R (Germany)					
Pz. III Luchs	oct43-45	27	6t	3 - 1	1	3	8	-1	-	-	-	-	-	d	-	-	20mm/L55 R (Germany)					
SdKfz 140/1 AufKPz. 38(t)	apr44-45	31	7t	4 - 1	1	3	8	-1	-	-	-	-	-	o	-	-	20mm/L55 R (Germany)					
German Medium Tanks																						
Pz. 35(t)	39-40	28	5t	2 A 0	2	3	8	-2	-	-	-	-	-	-	-	-	37mm/L40 R (Germany)					
	41	28	5t	2 A 0	2	3	8	-2	4	3	4	-	-	-	-	-						
Pz. 38(t)A-D	39-40	30	6t	2 A 0	3	3	8	-2	-	-	-	-	-	-	-	-	37mm/L48 R (Germany)					
	41	32	6t	2 A 0	3	3	8	-2	4	3	4	-	-	-	-	-						
Pz. 38(t)E-G	41-42	50	6t	4 - 2	3	3	8	-2	4	3	4	-	-	-	-	-	37mm/L48 R (Germany)					
Pz. 38(t)S	41-42	32	6t	2 A 0	3	3	8	-2	4	3	4	-	-	-	-	-	37mm/L48 R (Germany)					
Pz. IIIA-D	37-feb40	23	8t	1 - 1	2	3	8	-2	-	-	-	-	-	-	-	-	37mm/L47 R (Germany)					
Pz. IIIE-F	39-40	30	7t	3 - 3	2	3	8	-2	-	-	-	-	-	-	-	-	37mm/L47 R (Germany)					
	41	32	7t	3 - 3	2	3	8	-2	4	3	4	-	-	-	-	-						
Pz. IIIG (early)	40	30	7t	3 - 3	2	3	8	-2	-	-	-	-	-	-	-	-	37mm/L47 R (Germany)					
	41-42	32	7t	3 - 3	2	3	8	-2	4	3	4	-	-	-	-	-						
Pz. IIIG	jul40-40	45	7t	3 - 3	4	3	8	-2	-	-	-	-	-	-	-	-	50mm/L42 R (Germany)					
	41-43	48	7t	3 - 3	4	3	8	-2	5	3	6	-	-	-	-	-						
Pz. IIIH	41-43	58	6t	4 - 3	4	3	8	-2	5	3	6	-	-	-	-	-	50mm/L42 R (Germany)					
Pz. IIIJ	may41-43	69	6t	5 - 3	4	3	8	-2	5	3	6	-	-	-	-	-	50mm/L42 R (Germany)					
Pz. IIIJ(mod)	apr42-43	84	6t	6 A 3	4	3	8	-2	5	3	6	-	-	-	-	-	50mm/L42 R (Germany)					
Pz. IIIJ	mar42-43	76	6t	5 - 3	5	3	8	-2	7	3	6	-	-	-	-	-	50mm/L60 R (Germany)					
Pz. IIIJ(mod)	apr42-43	91	6t	6 A 3	5	3	8	-2	7	3	6	-	-	-	-	-	50mm/L60 R (Germany)					
Pz. IIIL	jun42-43	91	6t	6 A 3	5	3	8	-2	7	3	6	-	-	-	-	-	50mm/L60 R (Germany)					

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
Pz. IIIM	oct42-43	91	6t	6 A 3	5	3	8	-2	7	3	6	-	-	d	-	50mm/L60 R (Germany)
Pz. IIIN	jun42-44	60	6t	5 - 3	4	3	6	-1	6h	3	4	-	-	d	-	75mm/L24 R (Germany)
Pz. IVA	jan38-41	25	6t	1 - 0	4	3	6	-1	-	-	-	-	-	-	-	75mm/L24 R (Germany)
Pz. IVA(mod)	oct40-41	28	6t	2 - 1	4	3	6	-1	-	-	-	-	-	-	-	75mm/L24 R (Germany)
Pz. IVB-C	apr38-41	36	7t	3 - 0	4	3	6	-1	-	-	-	-	-	-	-	75mm/L24 R (Germany)
Pz. IVB-C(mod)	oct40-41	40	7t	3 A 1	4	3	6	-1	-	-	-	-	-	-	-	75mm/L24 R (Germany)
Pz. IVD	oct39-41	36	7t	3 - 1	4	3	6	-1	-	-	-	-	-	-	-	75mm/L24 R (Germany)
Pz. IVD(mod)	oct40-41	40	7t	3 A 2	4	3	6	-1	-	-	-	-	-	-	-	75mm/L24 R (Germany)
Pz. IVE	jun41-41 42-43	40 42	7t	3 A 2	4	3	6	-1	-	-	-	-	-	-	-	75mm/L24 R (Germany)
Pz. IVF1	42-43	49	6t	4 - 3	4	3	6	-1	6h	3	4	-	-	-	-	75mm/L24 R (Germany)
Pz. IVF2-G	jun42-43	87	6t	4 - 3	7	3	10	-1	8	3	8	-	-	d	-	75mm/L43 R (Germany)
Pz. IVG(mod)	sep42-43	98	6t	5 - 3	7	3	10	-1	8	3	8	-	-	d	-	75mm/L43 R (Germany)
Pz. IVG-H	apr43-43 44-45	102 98	6t	5 A 3	7	3	10	-1	8	3	8	-	-	d	-	75mm/L48 R (Germany)
Pz. IVJ	jun44-45	97	5t	5 A 3	7	3	10	-1	-	-	-	-	-	d	-	75mm/L48 R (Germany)
German Heavy Tanks																
Pz. VD Panther	jul43-43 44-45	129 125	8t	7 - 4	8	3	10	-1	9	3	8	-	-	d	-	75mm/L70 R (Germany)
Pz. VA-G Panther	sep43-43 44-45	128 124	7t	7 - 4	8	3	10	-1	9	3	8	-	-	d	-	75mm/L70 R (Germany)
Pz. VI E Tiger I	aug42-43 44-45	124 120	5t	6 - 5	8	3	12	-1	9	3	8	-	-	d	-	88mm/L56 R (Germany)
Pz. VI B Tiger II	jul44-45	159	5t	9 - 6	9	3	12	-1	-	-	-	-	-	d	-	88mm/L71 R (Germany)
German Armored Infantry Vehicles																
SdKfz 250/1	42-45	6	8ht	0 A 0	-	1	6	-1	-	-	-	-	-	0	½	7.92mm MG
SdKfz 251/1	sep39-45	7	7ht	0 A 0	-	1	6	-1	-	-	-	-	-	0	1	7.92mm MG
SdKfz 251/4 Tractor	sep39-42	7	7ht	0 A 0	-	1	6	-1	-	-	-	-	-	0	1	7.92mm MG
leSPW U304(f)	44	6	7ht	0 - 0	-	-	-	-	-	-	-	-	-	0	1	
mSPW S307(f)	44	6	6ht	0 - 0	-	-	-	-	-	-	-	-	-	0	1	
German Armored Cars & Light Recon AFVs																
Kfz 13	32-40	4	9w	0 - 0	-	1	6	-1	-	-	-	-	-	0	-	7.92mm MG
SdKfz 221	35-41 42-45	4 17	7w	0 - 0	-	1	6	-1	-	-	-	-	-	0	-	7.92mm MG
			7w	0 - 0	4	3	4	-3	-	-	-	-	-	0	-	28mm/L61 TB (Germany)

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
SdKfz 222	39-40	16	7w	0 - 0	1	3	8	-1	-	-	-	-	-	0	-	20mm/L55 R (Germany)
	41-43	16	7w	0 - 0	1	3	8	-1	2	3	4	-	-	0	-	
	44-45	16	7w	0 - 0	1	3	8	-1	-	-	-	-	-	0	-	
SdKfz 222 (late)	42-43	24	7w	2 - 0	1	3	8	-1	2	3	4	-	-	0	-	20mm/L55 R (Germany)
	44-45	23	7w	2 - 0	1	3	8	-1	-	-	-	-	-	0	-	
SdKfz 223	35-45	4	7w	0 - 0	-	1	6	-1	-	-	-	-	-	0	-	7.92mm MG
SdKfz 223 (late)	jun42-45	11	7w	2 - 0	-	1	6	-1	-	-	-	-	-	0	-	7.92mm MG
SdKfz 231 & 232, 6-rad	32-40	16	7w	0 - 0	1	3	8	-1	-	-	-	-	-	-	-	20mm/L55 R (Germany)
SdKfz 231 & 232, 8-rad	32-40	20	9w	1 - 0	1	3	8	-1	-	-	-	-	-	-	-	20mm/L55 R (Germany)
	41-may42	21	9w	1 - 0	1	3	8	-1	2	3	4	-	-	-	-	
	jun42-43	28	9w	3 - 0	1	3	8	-1	2	3	4	-	-	-	-	
	44-45	28	9w	3 - 0	1	3	8	-1	-	-	-	-	-	-	-	
SdKfz 233	42-45	29	9w	2 - 0	4	3	6	-1	6h	3	4	-	-	fo	-	75mm/L24 R (Germany)
SdKfz 250/9	jun43-43	18	8ht	0 A 0	1	3	8	-1	2	3	4	-	-	0	-	20mm/L55 R (Germany)
	44-45	17	8ht	0 A 0	1	3	8	-1	-	-	-	-	-	0	-	
SdKfz 234/1	jul44-45	28	9w	3 - 0	1	3	8	-1	-	-	-	-	-	0	-	20mm/L55 R (Germany)
SdKfz 234/2	44-45	53	9w	3 - 0	5	3	8	-2	-	-	-	-	-	-	-	50mm/L60 R (Germany)
SdKfz 234/3	jul44-45	38	9w	3 - 0	4	3	6	-1	6h	3	4	-	-	fo	-	75mm/L24 R (Germany)
SdKfz 234/4	dec44-45	72	9w	3 - 0	7	3	10	-1	-	-	-	-	-	fo	-	75mm/L46 R (Germany)
SdKfz 251/23	45	17	7ht	0 A 0	1	3	8	-1	-	-	-	-	-	0	-	20mm/L55 R (Germany)
German Assault Guns & Tank Destroyers																
StuG IIIA-E	may40-41	47	7t	4 - 3	4	3	6	-1	-	-	-	-	-	-	-	75mm/L24 R (Germany)
	42-43	49	7t	4 - 3	4	3	6	-1	6h	3	4	-	-	f	-	
StuG IIIF	apr42-43	87	7t	4 - 3	7	3	10	-1	8	3	8	-	-	f	-	75mm/L43 R (Germany)
	44-45	82	7t	4 - 3	7	3	10	-1	-	-	-	-	-	f	-	
StuG IIIF (mod)	jun42-43	97	6t	5 - 3	7	3	10	-1	8	3	8	-	-	f	-	75mm/L43 R (Germany)
	44-45	93	6t	5 - 3	7	3	10	-1	-	-	-	-	-	f	-	
StuG IIIF (mod, late)	sep42-43	97	6t	5 - 3	7	3	10	-1	8	3	8	-	-	f	-	75mm/L48 R (Germany)
	44-45	93	6t	5 - 3	7	3	10	-1	-	-	-	-	-	f	-	
StuG IIIG	jan43-43	100	6t	5 A 3	7	3	10	-1	8	3	8	-	-	fd	-	75mm/L48 R (Germany)
	44-45	96	6t	5 A 3	7	3	10	-1	-	-	-	-	-	fd	-	
StuG 33B	nov42-43	63	7t	5 - 4	7he	2	6	+0	7h	2	4	-	-	f	-	150mm/L11 R (Germany)
StuH42 (early)	apr43-45	69	6t	5 - 3	6	3	6	-1	6h	3	4	-	-	f	-	105mm/L28 R (Germany)
StuH42 (late)	apr43-45	73	6t	5 A 3	6	3	6	-1	6h	3	4	-	-	f	-	105mm/L28 R (Germany)
Brummbär (SturmPz. IV)	may43-45	87	5t	7 A 4	7he	2	6	+0	7h	2	4	-	-	f	-	150mm/L12 R (Germany)
StuG IV (early)	jan44-45	96	6t	5 A 3	7	3	10	-1	-	-	-	-	-	f	-	75mm/L48 R (Germany)

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
StuG IV (late)	jun44-45	95	5t	5 A 3	7	3	10	-1	-	-	-	-	-	f	-	75mm/L48 R (Germany)
Sturmmörser Tiger	sep44-45	124	5t	8 - 6	18he	2	6	+0	-	-	-	-	-	f	-	380mm/L5 SB (Germany)
Ferdinand / Elefant	apr43-43 44	159 155	4t 4t	9 - 6 9 - 6	9 9	3 3	12 12	-1 -1	10	3	6	-	-	f	-	88mm/L71 R (Germany)
JgdPz. IV (early)	mar44-45	104	6t	6 - 3	7	3	10	-1	-	-	-	-	-	f	-	75mm/L48 R (Germany)
JgdPz. IV	may44-45	115	6t	7 - 4	7	3	10	-1	-	-	-	-	-	f	-	75mm/L48 R (Germany)
Pz. IV/70(V) & (A)	dec44-45	119	5t	7 - 4	8	3	10	-1	-	-	-	-	-	f	-	75mm/L70 R (Germany)
Jagdpanther	jun44-45	138	7t	7 - 4	9	3	12	-1	-	-	-	-	-	f	-	88mm/L71 R (Germany)
Hetzer	jul44-45	114	5t	7 - 3	7	3	10	-1	-	-	-	-	-	f	-	75mm/L48 R (Germany)
Jagdtiger	dec44-45	157	5t	9 - 6	9	3	12	-1	-	-	-	-	-	f	-	128mm/L55 R (Germany)
German Self-Propelled AT Guns																
8.8cm auf Zgkw 12t	39-40	46	6ht	0 - s	7	3	12	-1	-	-	-	-	-	o	-	88mm/L56 R (Germany)
SdKfz 251/10 Section	40 41-43 44	11 12 11	7ht 7ht 7ht	0 A 0 0 A 0 0 A 0	2 2 2	1 1 1	8 8 8	-2 -2 -2	-	-	-	-	-	o	-	37mm/L45 R (Germany)
SdKfz 251/10	40 41-43 44	20 21 20	7ht 7ht 7ht	0 A 0 0 A 0 0 A 0	2 2 2	3 3 3	8 8 8	-2 -2 -2	-	-	-	-	-	o	-	37mm/L45 R (Germany)
PzJg. I	mar40-40 41-43	24 25	7t 7t	0 - 0 0 - 0	4 4	3 3	8 8	-2 -2	-	-	-	-	-	fo fo	-	47mm/L43 R (Germany)
4.7cm PaK(t) auf Pz. 35R(f)	jun41-43 44-45	43 40	3t 3t	3 - 2 3 - 2	4 4	3 3	8 8	-2 -2	5	3	6	-	-	fo fo	-	47mm/L43 R (Germany)
SdKfz 250/10	42-43 44-45	21 20	8ht 8ht	0 A 0 0 A 0	2 2	3 3	8 8	-2 -2	4	3	4	-	-	fo fo	-	37mm/L45 R (Germany)
SdKfz 250/11	42-45	19	8ht	0 A 0	4	3	4	-3	-	-	-	-	-	fo	-	28mm/L61 TB (Germany)
Diana	42	43	7ht	0 - s	7	3	10	-1	8	3	8	-	-	-	-	76mm/L52 R (Germany)
PaK 36(r) auf Pz. II Marder II	apr42-43	66	6t	2 A 0	7	3	10	-1	8	3	8	-	-	fo	-	76mm/L52 R (Germany)
Marder I	jul42-43 44	45 40	4t 4t	0 A 0 0 A 0	7	3	10	-1	8	3	8	-	-	-	-	75mm/L46 R (Germany)
Marder II	jul42-43 44-45	73 69	6t 6t	3 - 0 3 - 0	7	3	10	-1	8	3	8	-	-	fo fo	-	75mm/L46 R (Germany)
Marder III w/76mm	jul42-43 44	67 63	7t 7t	2 A 1 2 A 1	7	3	10	-1	8	3	8	-	-	fo fo	-	76mm/L52 R (Germany)
PaK 40 auf Pz. 38(t)	dec42-43	73	6t	3 - 1	7	3	10	-1	8	3	8	-	-	fo	-	75mm/L46 R (Germany)
Marder III w/75mm	may43-43 44-45	40 36	6t 6t	0 - 0 0 - 0	7	3	10	-1	8	3	8	-	-	fo fo	-	75mm/L46 R (Germany)

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
Nashorn / Hornisse	jun43-45	72	6t	1 A 0	9	3	12	-1	-	-	-	-	-	f0	-	88mm/L71 R (Germany)
8.8cm auf Zgkw 18t	44	47	7ht	0 - s	7	3	12	-1	-	-	-	-	-	0	-	88mm/L56 R (Germany)
PaK 40 auf mSPW S307(f)	44	36	6ht	0 - 0	7	3	10	-1	-	-	-	-	-	f0	-	76mm/L46 R (Germany)
PaK 40 auf GW 39H	44-45	67	4t	3 - 2	7	3	10	-1	-	-	-	-	-	f0	-	76mm/L46 R (Germany)
PaK 40 auf RSO	44-45	30	8t	s	7	3	10	-1	-	-	-	-	-	f	-	75mm/L46 R (Germany)
SdKfz 251/22	45	40	6t	0 A 0	7	3	10	-1	-	-	-	-	-	f0	-	75mm/L46 R (Germany)
German Towed AT Guns																
PaK 35/36 37mm ATG	36-40	15	2x	s	2	3	8	-2	-	-	-	-	-	f	½	37mm/L45 R (Germany)
	41-43	15	2x	s	2	3	8	-2	4	3	4	-	-	f	½	
	44-45	15	2x	s	2	3	8	-2	-	-	-	-	-	f	½	
47mm PaK 36(t) ATG	39-40	19	1x	s	4	3	8	-2	-	-	-	-	-	f	½	47mm/L43 R (Germany)
	41-43	20	1x	s	4	3	8	-2	5	3	6	-	-	f	½	
	44-45	19	1x	s	4	3	8	-2	-	-	-	-	-	f	½	
47mm PaK 141(f) ATG	jul40-45	21	0x	s	5	3	8	-2	-	-	-	-	-	f	1	47mm/L53 R (France)
PaK 38 50mm ATG	Jul40-40	21	0x	s	5	3	8	-2	-	-	-	-	-	f	1	50mm/L60 R (Germany)
	41-43	22	0x	s	5	3	8	-2	7	3	6	-	-	f	1	
	44-45	21	0x	s	5	3	8	-2	-	-	-	-	-	f	1	
PaK 40 75mm ATG	42-43	29	0x	s	7	3	10	-1	8	3	8	-	-	f	1	75mm/L46 R (Germany)
	44-45	28	0x	s	7	3	10	-1	-	-	-	-	-	f	1	
PaK 97/38 75mm ATG	jun42-44	13	0x	s	4he	3	4	-1	-	-	-	-	-	f	1	75mm/L36 R (Germany)
PaK 36(r) 76mm ATG	apr42-43	29	0x	s	7	3	10	-1	8	3	8	-	-	f	1	76mm/L52 R (Germany)
	44-45	28	0x	s	7	3	10	-1	-	-	-	-	-	f	1	
PaK 39(r) 76mm ATG	apr42-43	29	0x	s	7	3	10	-1	8	3	8	-	-	f	1	76mm/L46 R (Germany)
	44-45	28	0x	s	7	3	10	-1	-	-	-	-	-	f	1	
8cm PAW 600	45	22	4x	s	7h	3	6	-1	-	-	-	-	-	-	1	81mm/L36 SB (Germany)
PaK 43 88mm ATG	43	48	0x	s	9	3	12	-1	10	3	6	-	-	-	1	88mm/L71 R (Germany)
	44-45	44	0x	s	9	3	12	-1	-	-	-	-	-	-	1	
PaK 43/41 88mm ATG	43	47	0x	s	9	3	12	-1	10	3	6	-	-	f	1	88mm/L71 R (Germany)
	44-45	43	0x	s	9	3	12	-1	-	-	-	-	-	f	1	
PaK 44 128mm ATG	44-45	43	0x	s	9	3	12	-1	-	-	-	-	-	f	1	128mm/L55 R (Germany)
2.8cm sPzB 41 ATG	41-45	13	2x	s	4	3	4	-3	-	-	-	-	-	-	½	28mm/L61 TB (Germany)
2.8cm sPzB 41 leFl41 ATG	41-45	13	4x	s	4	3	4	-3	-	-	-	-	-	-	½	28mm/L61 TB (Germany)
4.2cm lePaK 41 ATG	41-43	21	1x	s	7	3	6	-3	-	-	-	-	-	f	1	42mm/L54 TB (Germany)
7.5cm PaK 41 ATG	41-43	30	0x	s	8	3	10	-1	-	-	-	-	-	f	1	75mm/L58 TB (Germany)
German AA Vehicles																
Truck w/AAMG	39-45	2	6w	s	-	1 [®]	12 [®]	-1	-	-	-	-	-	-	-	7.92mm MG AAx2

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
SdKfz 10/4	39-41	10	8ht	s	1	1 ²	16 ²	-1	-	-	-	-	-	-	20mm/L65 R AA (Germany)	
SdKfz 10/5	42-45	14	8ht	s	1	2 ²	16 ²	-1	-	-	-	-	-	-	20mm/L65 R AA (Germany)	
SdKfz 6/2	39-44	17	7ht	s	2	2 ²	16 ²	-2	-	-	-	-	-	0	-	37mm/L60 R AA (Germany)
SdKfz 7/1	39-45	18	7ht	s	1	6 ²	16 ²	+0	-	-	-	-	-	-	-	20mm/L65 R AAx4 (Germany)
SdKfz 7/2	43-45	17	7ht	s	2	2 ²	16 ²	-2	-	-	-	-	-	-	-	37mm/L60 R AA (Germany)
FlakPz. I	41	17	5t	0 - s	1	2 ²	16 ²	-1	-	-	-	-	-	0	-	20mm/L55 R AA (Germany)
8.8cm Flak auf Vomag	41?	46	5w	s	7	2 ²	24 ²	-1	-	-	-	-	-	-	-	88mm/L56 R AA (Germany)
SdKfz 251/17	43-45	21	7ht	0 A 0	1	2 ²	16 ²	-1	-	-	-	-	-	0	1	20mm/L55 R AA (Germany)
FlakPz. 38(t)	44-45	21	7t	1 - 0	1	2 ²	16 ²	-1	-	-	-	-	-	0	-	20mm/L65 R AA (Germany)
Möbelwagen	apr44-45	33	6t	3 - 3	2	2 ²	16 ²	-2	-	-	-	-	-	0	-	37mm/L60 R AA (Germany)
Wirbelwind (FlakPz. IV)	jul44-dec44	36	6t	3 - 2	1	6 ²	16 ²	+0	-	-	-	-	-	0	-	20mm/L65 R AAx4 (Germany)
SdKfz 251/21	sep44-45	15	7ht	0 A 0	1	1 ²	16 ²	-1	-	-	-	-	-	0	-	15mm/L83 R AA (Germany)
SdKfz 251/21	sep44-45	18	7ht	0 A 0	1	2 ²	16 ²	-1	-	-	-	-	-	0	-	20mm/L55 R AA (Germany)
Ostwind	sep44-45	44	5t	4 - 3	2	2 ²	16 ²	-2	-	-	-	-	-	0	-	37mm/L60 R AA (Germany)
German Towed AA Guns																
2cm Flak 30	36-45	10	0x	s	1	1 ²	16 ²	-1	-	-	-	-	-	-	1	20mm/L65 R AA (Germany)
2cm Flak 38	39-45	13	0x	s	1	2 ²	16 ²	-1	-	-	-	-	-	-	1	20mm/L65 R AA (Germany)
2cm Flakvierling 38	41-45	17	0x	s	1	6 ²	16 ²	+0	-	-	-	-	-	-	1	20mm/L65 R AAx4 (Germany)
3.7cm Flak 36/37	37-45	16	0x	s	2	2 ²	16 ²	-2	-	-	-	-	-	-	1	37mm/L60 R AA (Germany)
3.7cm Flak 43	44-45	16	0x	s	2	2 ²	16 ²	-2	-	-	-	-	-	-	1	37mm/L60 R AA (Germany)
3.7cm Flakzwilling 43	44-45	18	0x	s	2	3 ²	16 ²	-2	-	-	-	-	-	-	1	37mm/L60 R AAx2 (Germany)
8.8cm Flak 18/36/37	33-45	42	0x	s	7	2 ²	24 ²	-1	-	-	-	-	-	-	1	88mm/L56 R AA (Germany)
German Flame AFVs & Engineer Vehicles																
Pz. IB Demolition Layer	39-42	16	8t	2 - 0	11he	1	C	+2	-	-	-	-	-	-	-	Heavy Demolition Charge 7.92mm MG
SdKfz 251/5 Pioneer Pzw.	sep39-43	7	7ht	0 A 0	-	1	6	-1	-	-	-	-	-	0	1	7.92mm MG
SdKfz 251/7 Pioneer Pzw.	42-45	7	7ht	0 A 0	-	1	6	-1	-	-	-	-	-	0	1	7.92mm MG
Pz. I Flamm	apr41	19	5t	2 A 2	4he	3	1	+1	-	-	-	-	-	-	-	Flamethrower
Pz. II Flamm	jun41-dec41	19	5t	2 A 2	4he	3	1	+1	-	-	-	-	-	f	-	Flamethrower
Flammwagen auf Pz. B-2(f)	42-44	63	4t	5 - 4	4he	3	1	+1	-	-	-	-	-	f	-	Flamethrower 47mm/L32 R (France)
Pz. III (Fl)	jul43-dec43	37	6t	6 - 3	4he	3	1	+1	-	-	-	-	-	-	-	Flamethrower
SdKfz 251/16	43-45	12	7ht	0 A 0	4he	3	1	+1	-	-	-	-	-	-	-	Flamethrower

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
FlammPz. 38(t) Hetzer	dec44	46	5t	7 - 3	4he	3	1	+1	-	-	-	-	-	f	-	Flamethrower
<i>German Transport and Soft Vehicles</i>																
Kettenkrad	39-45	1	7ht	s	-	-	-	-	-	-	-	-	-	-	½	
Kubelwagen	mar40-45	1	7w	s	-	-	-	-	-	-	-	-	-	-	½	
Schwimmwagen	41-45	1	7wa	s	-	-	-	-	-	-	-	-	-	-	½	
SdKfz 2 Tractor	jun41-45	1	9ht	s	-	-	-	-	-	-	-	-	-	-	½	
SdKfz 3 Maultier	43	2	6ht	s	-	-	-	-	-	-	-	-	-	-	1	
SdKfz 4 Maultier	43-45	5	6ht	s	-	-	-	-	-	-	-	-	-	-	2	
SdKfz 6 Tractor	35-45	2	7ht	s	-	-	-	-	-	-	-	-	-	-	1	
SdKfz 7 Tractor	38-45	5	7ht	s	-	-	-	-	-	-	-	-	-	-	2	
SdKfz 10 Tractor	37-45	2	8ht	s	-	-	-	-	-	-	-	-	-	-	1	
SdKfz 11 Tractor	38-45	5	7ht	s	-	-	-	-	-	-	-	-	-	-	2	
sWS	44-45	5	5ht	s	-	-	-	-	-	-	-	-	-	-	2	
RSO	oct42-45	2	6t	s	-	-	-	-	-	-	-	-	-	-	1	
Light Truck	28-45	2	6w	s	-	-	-	-	-	-	-	-	-	-	1	
Medium Truck	37-45	5	6w	s	-	-	-	-	-	-	-	-	-	-	2	
Light Horse Limber	all	1	5w	s	-	-	-	-	-	-	-	-	-	-	½	
Horse Limber	all	2	3w	s	-	-	-	-	-	-	-	-	-	-	1	
<i>Italy</i>																
<i>Italian Light Tanks</i>																
L3/33 (CV-33)	34-41	9	7t	1 A 0	-	1	4	-1	-	-	-	-	-	f	-	6.5mm LMG
L3/35 (CV-35)	36-41	9	6t	1 A 0	-	1	6	-1	-	-	-	-	-	f	-	8mm MG
L3 cc (North Africa)	40-41	19	7t	1 A 0	1	2	8	-3	-	-	-	-	-	f	-	20mm/L72 R (Italy)
L3 Lf	34-41	14	7t	1 A 0	4he	2	1	+1	-	-	-	-	-	f	-	Flamethrower
L5/21 (FIAT 3000 m.21)	21-41	11	4t	2 - 0	-	1	4	-1	-	-	-	-	-	-	-	6.5mm LMG
L5/30 (FIAT 3000 m.30)	30-41	23	4t	2 - 0	2	2	8	-2	-	-	-	-	-	-	-	37mm/L40 R (Italy)
L6/40	41-43	25	5t	3 - 1	1	2	8	-1	-	-	-	-	-	-	-	20mm/L65 R (Italy)
<i>Italian Medium Tanks</i>																
M11/39	39-41	27	4t	3 - 1	-	1	6	-1	-	-	-	-	-	-	-	8mm MG 37mm/L40 R (Italy)
M13/40	40-41	29	4t	3 - 3	3	2	8	-2	-	-	-	-	-	-	-	47mm/L32 R (Italy)
M14/41	40-41	30	4t	3 - 3	3	2	8	-2	5	2	6	-	-	-	-	47mm/L32 R (Italy)

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
	42-43	30	5t	3 - 3	3	2	8	-2	5	2	6	-	-	-	-	
M15/42	43	47	6t	4 - 3	4	2	8	-2	5	2	6	-	-	-	-	47mm/L40 R (Italy)
Italian Heavy Tanks																
P26/40	44	63	8t	5 - 4	5	2	8	-1	-	-	-	-	-	-	-	75mm/L34 R (Italy)
Italian Armored Personnel Carriers																
AS 37 APC	42-43	6	6w	0 - 0	-	1	6	-1	-	-	-	-	-	0	1	8mm MG
AC 665 NM APC	42-43	4	5w	0 - 0	-	1	6	-1	-	-	-	-	-	-	-	8mm MG
Italian Armored Cars & Recce Vehicles																
Lancia IZM	16-42	4	5w	0 - 0	-	1	6	-1	-	-	-	-	-	-	-	8mm MG
AB Fiat 611 w/MG	35-43	22	4w	1 - 0	2	3	8	-2	-	-	-	-	-	-	-	37mm/L40 R (Italy)
AB Fiat 611 w/37mm	35-43	7	4w	1 - 0	-	1	6	-1	-	-	-	-	-	-	-	8mm MG
AB 40	41-43	8	6w	1 - 0	-	1	6	-1	-	-	-	-	-	-	-	8mm MG
AB 41	42-43	18	6w	1 - 0	1	2	8	-1	-	-	-	-	-	-	-	20mm/L65 R (Italy)
AB 41/43	42-43	18	6w	1 - 0	1	2	8	-1	-	-	-	-	-	-	-	20mm/L65 R (Italy)
Sahariana w/MG	42-43	2	9w	s	-	1	6	-1	-	-	-	-	-	-	-	8mm MG
Sahariana w/ATR	42-43	10	8w	s	1	2	8	-3	-	-	-	-	-	-	-	20mm/L72 R (Italy)
Sahariana w/20mm	42-43	10	8w	s	1	1 [®]	16 [®]	-1	-	-	-	-	-	-	-	20mm/L65 R AA (Italy)
Sahariana w/37mm	42-43	12	7w	s	2	2	8	-2	-	-	-	-	-	r	-	37mm/L40 R (Italy)
Sahariana w/47mm	42-43	16	7w	s	3	2	8	-2	5	3	6	-	-	r	-	47mm/L32 R (Italy)
AB Lince	44-45	8	7w	1 - 0	-	1	6	-1	-	-	-	-	-	-	-	8mm MG
Italian Assault Guns																
Semovente 47/32	42-43	30	5t	3 - 1	3	2	8	-2	5	2	6	-	-	0	-	47mm/L32 R (Italy)
Semovente 75/18	42-43	30	4t	3 - 3	4he	2	6	-1	6	2	6	-	-	-	-	75mm/L18 R (Italy)
Semovente 75/34	42-43	39	6t	3 - 3	5	2	8	-1	-	-	-	-	-	-	-	75mm/L34 R (Italy)
Semovente 105/25	43	53	6t	5 - 3	5he	2	6	-1	-	-	-	-	-	-	-	105mm/L25 R (Italy)
Semovente 90/53	43	81	4t	3 - 3	7	3	12	-1	6	3	6	-	-	0	-	90mm/L53 R (Italy)
Semovente M43 75/34	44-45	71	5t	6 - 4	5	2	8	-1	-	-	-	-	-	-	-	75mm/L34 R (Italy)
Semovente M43 75/46	44-45	104	5t	6 - 4	7	3	10	-1	-	-	-	-	-	-	-	75mm/L46 R (Italy)
Semovente M43 105/25	44-45	63	5t	6 - 4	5he	2	6	-1	-	-	-	-	-	-	-	105mm/L25 R (Italy)
Italian Towed AT Guns																
20/65 M35 20mm ATG	35-45	12	2x	s	1	3	8	-1	-	-	-	-	-	-	1	20mm/L65 R (Italy)
37/45 37mm ATG	36-40	15	2x	s	2	3	8	-2	-	-	-	-	-	f	1	37mm/L45 R (Italy)

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	
47/32 M35 47mm ATG	36-41	17	2x	s	3	3	8	-2	-	-	-	-	f	1	47mm/L32 R (Italy)
	42-45	18	2x	s	3	3	8	-2	5	3	6	-	f	1	
Italian Self-Propelled AA Guns															
AC 20/65 SP AAG	35-45	13	6w	s	1	2 ²	16 ²	-1	-	-	-	-	-	-	20mm/L65 R AA (Italy)
AC Ceirano 50 CK SP AAG	41-43	24	4w	s	5	2 ²	16 ²	-1	-	-	-	-	-	-	75mm/L27 R AA (Italy)
AC 90/53 SP AAG	41-45	49	5w	s	7	2 ²	24 ²	-1	6	3	6	-	-	-	90mm/L53 R AA (Italy)
Italian Towed AA Guns															
20/65 M35 20mm AAG	35-45	13	2x	s	1	2 ²	16 ²	-1	-	-	-	-	-	1	20mm/L65 R AA (Italy)
20/77 Scotti 20mm AAG	33?-45	13	4x	s	1	2 ²	16 ²	-1	-	-	-	-	-	1	20mm/L77 R AA (Italy)
75/46 M34 75mm AAG	40?-45	21	0x	s	4he	2 ²	16 ²	-1	-	-	-	-	-	1	75mm/L46 R AA (Italy)
90/53 90mm AAG	42-45	45	0x	s	7	2 ²	24 ²	-1	6	3	6	-	-	1	90mm/L53 R AA (Italy)
Italian Transport & Soft Vehicles															
Car	39-45	1	7w	s	-	-	-	-	-	-	-	-	-	½	
Light Truck	39-45	2	6w	s	-	-	-	-	-	-	-	-	-	1	
Medium Truck	39-45	5	5w	s	-	-	-	-	-	-	-	-	-	2	
Poland															
Polish Tanks															
TK (TK-3)	31-39	4	8t	0 - 0	-	1	6	-1	-	-	-	-	f	-	7.92mm MG
TKS w/MG	34-39	8	8t	1 - 0	-	1	6	-1	-	-	-	-	f	-	7.92mm MG
TKS w/20mm	38-39	23	8t	1 - 0	2	3	8	-1	-	-	-	-	f	-	20mm/L73 R (Poland)
7TP w/MG	36-39	9	5t	1 A 0	-	2	6	-1	-	-	-	-	-	-	7.92mm MG
7TP w/37mm	36-39	21	5t	1 A 0	2	2	8	-2	-	-	-	-	-	-	37mm/L45 R (Sweden)
Vickers Mk E w/MG	33-39	7	5t	1 - 0	-	2	6	-1	-	-	-	-	-	-	7.92mm MG
Vickers Mk E w/47mm	33-39	17	5t	1 - 0	3	2	4	-2	-	-	-	-	-	-	47mm/L18 R QF (UK)
Polish Armored Cars															
wz. 29	29-34	9	6w	0 - 0	0	3	4	-2	-	-	-	-	-	-	37mm/L21 R (France)
	35-39	14	6w	0 - 0	1	3	6	-2	-	-	-	-	-	-	
wz. 34 w/MG	34-39	4	6w	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.92mm MG
wz. 34 w/37mm	34	9	6w	0 - 0	0	3	4	-2	-	-	-	-	-	-	37mm/L21 R (France)
	35-39	14	6w	0 - 0	1	3	6	-2	-	-	-	-	-	-	
Polish AT & AA Guns															
wz. 36 37mm ATG	36-39	15	2x	s	2	3	8	-2	-	-	-	-	f	½	37mm/L45 R (Sweden)
40mm Bofors AAG	36-39	29	0x	s	4	2 ²	28 ²	-1	-	-	-	-	-	1	40mm/L56 R AA (Sweden)

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	
AA MG	38-39	2	4x	S	-	1 ^②	12 ^②	-1	-	-	-	-	-	-	7.92mm MG AA
Polish Transport & Soft Vehicles															
Car	33-39	1	7w	S	-	-	-	-	-	-	-	-	-	-	½
Light Truck	30-39	2	6w	S	-	-	-	-	-	-	-	-	-	-	1
Medium Truck	30-39	5	5w	S	-	-	-	-	-	-	-	-	-	-	2
Light Horse Limber	all	1	5w	S	-	-	-	-	-	-	-	-	-	-	½
Horse Limber	all	2	3w	S	-	-	-	-	-	-	-	-	-	-	1
Soviet Union / Russia															
Soviet Light Tanks															
T-27A	32-41	4	7t	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.62mm MG
T-27B	32-41	4	10t	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.62mm MG
T-37	33-41	4	6ta	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.62mm MG
T-37A m.1934	34-41	4	8ta	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.62mm MG
T-38	37-41	4	6ta	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.62mm MG
T-38A m.1938	38-41	4	7ta	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.62mm MG
T-40 (T-30A)	40-42	8	7ta	0 A 0	0	1	6	-1	-	-	-	-	-	-	12.7mm HMG
T-40 (T-30B)	40-42	12	6t	1 A 1	0	1	6	-1	-	-	-	-	-	-	12.7mm HMG
T-60 m.1941	41-43	23	7t	2 A 1	1	2	8	-1	-	-	-	-	-	-	20mm/L82 R (Russia)
T-60A m.1942	42-43	25	6t	3 - 2	1	2	8	-1	-	-	-	-	-	-	20mm/L82 R (Russia)
T-70	42-44	53	7t	5 - 3	3	2	8	-2	5	2	4	-	-	-	45mm/L46 R (Russia)
T-80	42-44	53	7t	5 - 3	3	2	8	-2	5	2	4	-	-	-	45mm/L46 R (Russia)
Soviet Light Infantry Tanks															
T-18	29-32	14	2t	1 - 0	1	2	4	-2	-	-	-	-	-	-	37mm/L21 R (Russia)
T-18/45	41	22	3t	1 - 0	3	2	8	-2	-	-	-	-	-	-	45mm/L46 R (Russia)
T-26A m.1931-32	31-38	5	5t	0 A 0	-	1	6	-1	-	-	-	-	f	-	7.62mm MG
T-26A m.1932	32-38	17	5t	0 A 0	2	2	8	-2	-	-	-	-	f	-	37mm/L42 R (Russia)
T-26B m.1933	33-41	22	5t	1 - 0	3	2	8	-2	-	-	-	-	-	-	45mm/L46 R (Russia)
T-26S m.1938	38-41	23	4t	1 A 0	3	2	8	-2	-	-	-	-	-	-	45mm/L46 R (Russia)
T-26S m. 1939	39-41	23	4t	1 A 1	3	2	8	-2	-	-	-	-	-	-	45mm/L46 R (Russia)
T-50	41	42	10t	4 - 3	3	2	8	-2	-	-	-	-	-	-	45mm/L46 R (Russia)
	42	44	10t	4 - 3	3	2	8	-2	5	2	4	-	-	-	

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
Soviet Medium Tanks																	
BT-2 w/37mm	32-38	22	14t	1 A 0	2	2	8	-2	-	-	-	-	-	-	-	-	37mm/L42 R (Russia)
BT-2 w/MG	32-38	9	14t	1 A 0	-	1	6	-1	-	-	-	-	-	-	-	-	7.62mm MG
BT-5	33-41	25	14t	1 A 0	3	2	8	-2	-	-	-	-	-	-	-	-	45mm/L46 R (Russia)
BT-5A	33-41	25	14t	1 A 0	4he	2	6	-1	2	2	6	-	-	-	-	-	76mm/L17 R (Russia)
BT-7	35-36	25	14t	1 A 0	3	2	8	-2	-	-	-	-	-	-	-	-	45mm/L46 R (Russia)
	37-41	27	14t	2 - 0	3	2	8	-2	-	-	-	-	-	-	-	-	
BT-7A	36-41	25	14t	1 A 0	4he	2	6	-1	2	2	6	-	-	-	-	-	76mm/L17 R (Russia)
BT-7M / BT-8	39-41	27	14t	2 - 0	3	2	8	-2	-	-	-	-	-	-	-	-	45mm/L46 R (Russia)
T-34/76A m.1940	41-42	71	9t	5 - 4	5	2	10	-1	-	-	-	-	-	-	-	-	76mm/L31 R (Russia)
T-34/76B m.1941	41-jul42 aug42-43	76 79	9t	5 - 4	6	2	10	-1	-	-	-	-	-	-	-	-	76mm/L43 R (Russia)
T-34/76C m.1942	42-jul42 aug42-44	76 79	9t	5 - 4	6	2	10	-1	-	-	-	-	-	-	-	-	76mm/L43 R (Russia)
T-34/76D m.1943	43-45 46-49	90 90	9t	6 - 4	6	2	10	-1	7	2	6	-	-	-	-	-	76mm/L43 R (Russia)
9t	6 - 4	6/7h	2	10	-1	7	2	6	-	-	-	-	-	-	-	-	
T-34/85	44-49	122	7t	7 - 5	7	3	10	-1	8	3	8	-	-	-	-	-	85mm/L55 R (Russia)
T-44	45-50	133	7t	8 - 6	7	3	10	-1	8	3	8	-	-	-	-	-	85mm/L55 R (Russia)
Soviet Heavy Tanks																	
T-28A m.1932	33-41	28	8t	2 A 1	4he	2	6	-1	2	2	6	-	-	-	-	-	76mm/L17 R (Russia)
T-28B m.1938	38-41	40	8t	2 A 1	5	2	10	-1	-	-	-	-	-	-	-	-	76mm/L31 R (Russia)
T-28E	40-41	73	7t	5 A 3	5	2	10	-1	-	-	-	-	-	-	-	-	76mm/L31 R (Russia)
T-35A	35-41 17	38 17	5t	3 - 2	4he 3	2	6	-1	2	2	6	-	-	-	-	-	76mm/L17 R (Russia) 45mm/L46 R (Russia)
KV-1	40-41	67	5t	5 - 5	5	2	10	-1	-	-	-	-	-	-	-	-	76mm/L31 R (Russia)
KV-1A m.1940	41-jul42 aug42-43	85 87	6t	6 - 5	6	2	10	-1	-	-	-	-	-	-	-	-	76mm/L43 R (Russia)
6t	6 - 5	6	2	10	-1	7	2	6	-	-	-	-	-	-	-	-	
KV-1E m.1940	41-jul42 aug42-43	85 87	6t	6 - 6	6	2	10	-1	-	-	-	-	-	-	-	-	76mm/L43 R (Russia)
6t	6 - 6	6	2	10	-1	7	2	6	-	-	-	-	-	-	-	-	
KV-1B m.1941	41-jul42 aug42-43	85 87	6t	6 - 5	6	2	10	-1	-	-	-	-	-	-	-	-	76mm/L43 R (Russia)
6t	6 - 5	6	2	10	-1	7	2	6	-	-	-	-	-	-	-	-	
KV-1C m.1942	42-jul42 aug42-43	85 87	6t	6 - 6	6	2	10	-1	-	-	-	-	-	-	-	-	76mm/L43 R (Russia)
6t	6 - 6	6	2	10	-1	7	2	6	-	-	-	-	-	-	-	-	
KV-1S	42-jul42 aug42-44	74 77	7t	5 - 5	6	2	10	-1	-	-	-	-	-	-	-	-	76mm/L43 R (Russia)
7t	5 - 5	6	2	10	-1	7	2	6	-	-	-	-	-	-	-	-	

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
KV-2	40-41	71	5t	6 - 5	7	2	6	+0	-	-	-	-	-	-	-	152mm/L22 R (Russia)
KV-85	43-45	121	6t	7 - 6	7	3	10	-1	8	3	8	-	-	-	-	85mm/L55 R (Russia)
IS-1	sep43-44	119	5t	7 - 6	7	3	10	-1	8	3	8	-	-	-	-	85mm/L55 R (Russia)
IS-2	44-50	112	5t	7 - 6	9	2	10	-1	7h	2	6	-	-	-	-	122mm/L43 R (Russia)
IS-2 w/straight nose	jun44-50	112	5t	7 - 6	9	2	10	-1	7h	2	6	-	-	-	-	122mm/L43 R (Russia)
IS-3	45-50	134	5t	9 - 6	9	2	10	-1	7h	2	6	-	-	-	-	122mm/L43 R (Russia)
IS-4	48-50	135	6t	9 - 6	9	2	10	-1	7h	2	6	-	-	-	-	122mm/L43 R (Russia)
Soviet Armored Cars																
BA-27	29-41	11	5w	0 - 0	1	2	4	-2	-	-	-	-	-	-	-	37mm/L21 R (Russia)
FAI	33-42	4	5w	0 - 0	-	1	6	-1	-	-	-	-	-	-	-	7.62mm MG
BA-3, BA-6	35-41 42	18 19	5w 5w	0 - 0 0 - 0	3 3	2	8	-2	-	-	-	-	-	-	-	45mm/L46 R (Russia)
BA-10	35-41 42-43	22 23	5w 5w	1 - 0 1 - 0	3 3	2	8	-2	-	-	-	-	-	-	-	45mm/L46 R (Russia)
BA-20	36-42	4	5w	0 - 0	-	1	6	-1	-	-	-	-	-	-	-	7.62mm MG
BA-64B	43-50	4	7w	0 - 0	-	1	6	-1	-	-	-	-	-	0	-	7.62mm MG
Soviet Assault Guns & Tank Destroyers																
ZiS-30	oct41-jun42	30	5t	0 - s	7	3	8	-2	8	3	6	-	-	f	-	57mm/L73 R (Russia)
SU-76P	42	21	8t	0 - s	4he	3	6	-1	2	3	6	-	-	fo	-	76mm/L17 R (Russia)
SU-76	jan43-jun43	69	8t	3 - 0	6	3	10	-1	7	3	6	-	-	f	-	76mm/L43 R (Russia)
SU-76M	jun43-45	68	8t	3 - 0	6	3	10	-1	7	3	6	-	-	fo	-	76mm/L43 R (Russia)
SU-76i	may43-feb44	80	7t	4 - 3	6	3	10	-1	7	3	6	-	-	f	-	76mm/L43 R (Russia)
SU-85	aug43-45	99	8t	5 - 4	7	3	10	-1	8	3	8	-	-	f	-	85mm/L55 R (Russia)
SU-85M	sep44-45	121	8t	7 - 4	7	3	10	-1	8	3	8	-	-	f	-	85mm/L55 R (Russia)
SU-122	43-45	72	8t	5 - 4	6he	3	6	-1	7h	3	6	-	-	f	-	122mm/L23 R (Russia)
SU-152	43-45	73	6t	5 - 5	8	2	8	+0	-	-	-	-	-	fd	-	152mm/L28 R (Russia)
ISU-122	may44-44	58	5t	6 - 5	9	1	10	-1	7h	1	6	-	-	f	-	122mm/L46 R (Russia)
ISU-122S	oct44-58	99	5t	6 - 5	9	2	10	-1	7h	2	6	-	-	f	-	122mm/L43 R (Russia)
ISU-152	45 46-63	83 86	5t 5t	6 - 5 6 - 5	8	2	8	+0	-	-	-	-	-	f	-	152mm/L28 R (Russia)
SU-100	45	122	7t	7 - 4	8	3	10	-1	-	-	-	-	-	f	-	100mm/L56 R (Russia)
	46-58	127	7t	7 - 4	9	3	10	-1	-	-	-	-	-	f	-	

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
Soviet Towed AT Guns																	
1-K M1930 37mm ATG	32-41	15	2x	s	2	3	8	-2	-	-	-	-	-	f	½	37mm/L42 R (Russia)	
M1932 45mm ATG	32-mar42	17	1x	s	3	3	8	-2	-	-	-	-	-	f	1	45mm/L46 R (Russia)	
	apr42-43	18	1x	s	3	3	8	-2	5	3	4	-	-	f	1		
53-K M1937 45mm ATG	37-mar42	17	1x	s	3	3	8	-2	-	-	-	-	-	f	1	45mm/L46 R (Russia)	
	apr42-44	18	1x	s	3	3	8	-2	5	3	4	-	-	f	1		
M-42 45mm ATG	42-mar42	22	1x	s	5	3	8	-2	6	3	4	-	-	f	1	45mm/L66 R (Russia)	
	apr42-45	22	1x	s	5	3	8	-2	6	3	4	-	-	f	1	45mm/L66 R (Russia)	
ZiS-2 m.1941 57mm ATG	Jul41-41	26	0x	s	7	3	8	-2	8	3	6	-	-	f	1	57mm/L73 R (Russia)	
	42	28	0x	s	8	3	8	-2	9	3	6	-	-	f	1		
ZiS-2 m.1943 57mm ATG	Jul43-45	28	0x	s	8	3	8	-2	9	3	6	-	-	f	1	57mm/L73 R (Russia)	
Soviet AA Vehicles																	
Quad 7.62mm AA MG Truck	39-45	2	7w	s	-	2 ²	12 ²	-1	-	-	-	-	-	-	-	7.62mm MG AAx4	
12.7mm AA MG Truck	39-45	6	7w	s	0	1 ²	12 ²	-1	-	-	-	-	-	-	-	12.7mm HMG AA	
ZSU-37	44-45	43	8t	3 - 0	3	2 ²	16 ²	-2	-	-	-	-	-	0	-	37mm/L70 R AA (Russia)	
Soviet Towed AA Guns																	
7.62mm quad AA MG	39-45	2	0x	s	-	2 ²	12 ²	-1	-	-	-	-	-	-	1	7.62mm MG AAx4	
12.7mm AA MG	39-45	6	2x	s	0	1 ²	12 ²	-1	-	-	-	-	-	-	½	12.7mm HMG AA	
25mm AAG M1940 72-K	42-45	13	0x	s	1	2 ²	16 ²	-1	-	-	-	-	-	-	1	25mm/L64 R AA (Russia)	
37mm AAG M1939 61-K	39-45	19	0x	s	3	2 ²	16 ²	-2	-	-	-	-	-	-	1	37mm/L70 R AA (Russia)	
76mm AAG M1938	39-41	29	0x	s	6	2 ²	20 ²	-1	-	-	-	-	-	-	1	76mm/L53 R AA (Russia)	
	42-45	30	0x	s	6	2 ²	20 ²	-1	7	3	6	-	-	-	1		
85mm AAG M1939 52-K	39-41	32	0x	s	7	2 ²	20 ²	-1	-	-	-	-	-	-	1	85mm/L55 R AA (Russia)	
	42-45	36	0x	s	7	2 ²	20 ²	-1	8	3	8	-	-	-	1		
Soviet Flame AFVs & Engineer Vehicles																	
OT-26	31-40	10	5t	0 A 0	4he	2	1	+1	-	-	-	-	-	-	-	Flamethrower	
OT-130	38-41	10	5t	0 A 0	4he	2	1	+1	-	-	-	-	-	-	-	Flamethrower	
OT-133	39-41	14	4t	1 A 0	4he	2	1	+1	-	-	-	-	-	-	-	Flamethrower	
OT-134	40-41	23	4t	1 A 0	3	2	8	-2	-	-	-	-	-	-	-	45mm/L46 R (Russia) Flamethrower	
					4he	2	1	+1	-	-	-	-	-	f			
KV-8	42-43	61	6t	6 - 6	4he	2	1	+1	-	-	-	-	-	-	-	Flamethrower 45mm/L46 R (Russia)	
					3	2	8	-2	5	2	4	-	-	-	-		
KV-8S	42-43	50	6t	5 - 5	4he	2	1	+1	-	-	-	-	-	-	-	Flamethrower 45mm/L46 R (Russia)	
					3	2	8	-2	5	2	4	-	-	-	-		
OT-34	42-45	76	9t	5 - 4	4he	2	1	+1	-	-	-	-	-	-	-	Flamethrower	

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	
OT-34/85	44-45	97	7t	7 - 5	4he 6	2 2	1 10	+1 -1	-	2	6	-	-	-	76mm/L43 R (Russia) Flamethrower 76mm/L43 R (Russia)
Soviet Transport & Soft Vehicles															
RF-8 Combat Aerosan	42-45	1	8s	s	-	1	6	-1	-	-	-	-	-	-	½ 7.62mm MG
NKL-26 Combat Aerosan	42-45	5	8s	0-s	-	1	6	-1	-	-	-	-	-	-	½ 7.62mm MG
NKL-16 Transport Aerosan	42-45	2	8s	s	-	-	-	-	-	-	-	-	-	-	1
Car	40-45	1	7w	s	-	-	-	-	-	-	-	-	-	-	½
Jeep	41-53	1	9w	s	-	-	-	-	-	-	-	-	-	-	½
Jeep w/LMG	41-53	1	9w	s	-	1	6	-1	-	-	-	-	-	-	½ 7.62mm MG
Jeep w/HMG	41-53	4	9w	s	0	1	6	-1	-	-	-	-	-	-	½ 12.7mm HMG
Light Truck	42-45	2	8w	s	-	-	-	-	-	-	-	-	-	-	1
Medium Truck	43-55	5	7w	s	-	-	-	-	-	-	-	-	-	-	2
Half-tracked Truck	41-45	2	7ht	s	-	-	-	-	-	-	-	-	-	-	1
Light Gun Tractor	37-45	6	4t	0 - 0	-	-	-	-	-	-	-	-	-	-	1 tows light guns
Medium Gun Tractor	35-45	2	4t	s	-	-	-	-	-	-	-	-	-	-	1 tows medium guns
Heavy Gun Tractor	39-45	2	4t	s	-	-	-	-	-	-	-	-	-	-	1 tows heavy guns
Light Horse Limber	all	1	5w	s	-	-	-	-	-	-	-	-	-	-	½
Horse Limber	all	2	3w	s	-	-	-	-	-	-	-	-	-	-	1
Wagon	all	2	3w	s	-	-	-	-	-	-	-	-	-	-	1
United Kingdom															
U.K. Light Tanks															
Lt. Tank Mk. I-II	29-40	4	7t	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.62mm MG
Mk.III w/MG	33-40	4	7t	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.62mm MG
Mk.III w/HMG	33-40	7	7t	0 - 0	0	1	6	-1	-	-	-	-	-	-	12.7mm HMG
Mk.IV w/MG	34-40	4	10t	0 - 0	-	1	6	-1	-	-	-	-	-	-	7.62mm MG
Mk.IV w/HMG	34-40	7	10t	0 - 0	0	1	6	-1	-	-	-	-	-	-	12.7mm HMG
Mk.V w/MG	35-40	4	9t	0 - 0	-	1	6	-1	-	-	-	-	d	-	7.62mm MG
Mk.V w/HMG	35-40	7	9t	0 - 0	0	1	6	-1	-	-	-	-	d	-	12.7mm HMG
Mk.VI-VIB	35-41	11	8t	1 - 0	0	1	6	-1	-	-	-	-	d	-	12.7mm HMG
Mk.VIC	41	13	8t	1 - 0	1	1	8	-1	-	-	-	-	d	-	15mm HMG
Tetrarch	41-aug42	25	10t	1 - 0	4	2	8	-2	-	-	-	-	d	-	40mm/L52 R 2-pdr (UK)
	sep42-45	27	10t	1 - 0	5	2	8	-2	-	-	-	-	d	-	

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
U.K. Medium & Cruiser Tanks																	
Medium Mk.II	25-39	27	3t	0 A 0	5	3	8	-2	-	-	-	-	-	-	-	-	47mm/L60 R 3-pdr (UK)
Cruiser Mk.I A9	38-41	27	5t	1 - 0	4	3	8	-2	-	-	-	-	-	-	-	-	40mm/L52 R 2-pdr (UK)
Cruiser Mk.II A10	39-41	42	3t	3 - 3	4	3	8	-2	-	-	-	-	-	-	-	-	40mm/L52 R 2-pdr (UK)
Cruiser Mk.III A13	39-40	29	11t	1 - 0	4	3	8	-2	-	-	-	-	-	-	-	-	40mm/L52 R 2-pdr (UK)
Cruiser Mk.IV A13 Mk. II	40-41	48	11t	3 - 1	4	3	8	-2	-	-	-	-	-	d	-	-	40mm/L52 R 2-pdr (UK)
Crusader I-II	41-aug42	57	8t	4 - 3	4	3	8	-2	-	-	-	-	-	d	-	-	40mm/L52 R 2-pdr (UK)
	sep42-42	63	8t	4 - 3	5	3	8	-2	-	-	-	-	-	d	-	-	
Crusader III	aug42-43	61	8t	4 - 3	7	2	8	-2	-	-	-	-	-	d	-	-	57mm/L50 R 6-pdr (UK)
Cromwell	44-53	92	10t	5 - 4	6	3	10	-1	-	-	-	-	-	d	-	-	75mm/L37 R (UK)
Challenger	44-jul44	109	9t	5 - 4	9	3	10	-1	-	-	-	-	-	d	-	-	76mm/L55 R 17-pdr (UK)
	aug44-45	114	9t	5 - 4	9	3	10	-1	10	3	8	-	-	d	-	-	
Sherman IIC Firefly	44-jul44	107	7t	5 - 3	9	3	10	-1	-	-	-	-	-	d	-	-	76mm/L55 R 17-pdr (UK)
	aug44-45	111	7t	5 - 3	9	3	10	-1	10	3	8	-	-	d	-	-	
Sherman IVC Firefly	44-jul44	108	8t	5 - 3	9	3	10	-1	-	-	-	-	-	d	-	-	76mm/L55 R 17-pdr (UK)
	aug44-45	112	8t	5 - 3	9	3	10	-1	10	3	8	-	-	d	-	-	
Sherman VC Firefly	44-jul44	105	6t	5 - 3	9	3	10	-1	-	-	-	-	-	d	-	-	76mm/L55 R 17-pdr (UK)
	aug44-45	110	6t	5 - 3	9	3	10	-1	10	3	8	-	-	d	-	-	
Comet	45-50	118	8t	6 - 4	8	3	10	-1	9	3	8	-	-	d	-	-	77mm/L50 R (UK)
Centurion Mk.2	46-50	144	6t	8 - 6	9	3	10	-1	10	3	8	-	-	d	-	-	76mm/L55 R 17-pdr (UK)
U.K. Close Support Tanks																	
Tetrarch CS	41-aug42	22	10t	1 - 0	4he	2	6	-1	-	-	-	-	-	d	-	-	76mm/L25 R 3" How (UK)
Cruiser Mk.I CS A9	38-41	7	5t	1 - 0	smk	1	6	n/a	-	-	-	-	-	-	-	-	95mm/L16 R 3.7" Mrtr (UK)
					-	1	6	-1	-	-	-	-	-	-	-	7.62mm MG	
Cruiser Mk.IIA CS A10	39-41	15	3t	3 - 3	smk	1	6	n/a	-	-	-	-	-	-	-	-	95mm/L16 R 3.7" Mrtr (UK)
					-	1	6	-1	-	-	-	-	-	-	-	7.62mm MG	
Cruiser Mk.IV CS A13 Mk. II	40-41	16	11t	3 - 1	smk	1	6	n/a	-	-	-	-	-	d	-	-	95mm/L16 R 3.7" Mrtr (UK)
					-	1	6	-1	-	-	-	-	-	-	-	7.62mm MG	
Crusader I-II CS	41-42	48	8t	4 - 3	4he	3	6	-1	-	-	-	-	-	d	-	-	76mm/L25 R 3" How (UK)
Centaur IV	jun44	66	6t	5 - 4	5he	3	6	-1	6h	3	6	-	-	d	-	-	95mm/L23 R 3.7" How (UK)
Cromwell VI	44-53	70	10t	5 - 4	5he	3	6	-1	6h	3	6	-	-	d	-	-	95mm/L23 R 3.7" How (UK)
Matilda II CS	40-aug42	55	3t	5 - 5	4he	3	6	-1	-	-	-	-	-	-	-	-	76mm/L25 R 3" How (UK)
Valentine III CS	41	55	3t	5 - 4	4he	3	6	-1	-	-	-	-	-	d	-	-	76mm/L25 R 3" How (UK)
Churchill II CS	41	76	4t	6 - 5	4he	3	6	-1	-	-	-	-	-	d	f	-	76mm/L25 R 3" How (UK)
					4	3	8	-2	-	-	-	-	-	-	-	-	40mm/L52 R 2-pdr (UK)

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
Churchill V	jun42-44	76	4t	6 A 5	5he	3	6	-1	-	-	-	-	-	d	-	95mm/L23 R 3.7" How (UK)
Churchill VIII	44-51	87	4t	7 A 6	5he	3	6	-1	-	-	-	-	-	d	-	95mm/L23 R 3.7" How (UK)
U.K. Infantry Tanks																
Matilda I w/MG	39-40	22	3t	5 - 4	-	1	6	-1	-	-	-	-	-	d	-	7.62mm MG
Matilda I w/HMG	39-40	25	3t	5 - 4	0	1	6	-1	-	-	-	-	-	d	-	12.7mm HMG
Matilda II	40-aug42 sep42-42	67 74	3t	5 A 5	4	3	8	-2	-	-	-	-	-	d	-	40mm/L52 R 2-pdr (UK)
Valentine I-II, IV, VI, VII, VIIA	41-aug42 sep42-42	53 58	3t	5 - 4	4	2	8	-2	-	-	-	-	-	d	-	40mm/L52 R 2-pdr (UK)
Valentine III, V	41-aug42 sep42-43	64 70	3t	5 - 4	4	3	8	-2	-	-	-	-	-	d	-	40mm/L52 R 2-pdr (UK)
Valentine VIII, IX	43	68	3t	5 - 4	7	2	8	-2	-	-	-	-	-	d	-	57mm/L50 R 6-pdr (UK)
Valentine X	43	68	4t	5 - 4	7	2	8	-2	-	-	-	-	-	d	-	57mm/L50 R 6-pdr (UK)
Valentine XI	44-45	72	4t	5 - 4	6	2	10	-1	-	-	-	-	-	d	-	75mm/L37 R (UK)
Churchill I	41-may42 jun42-42	76 79	4t	6 - 5	4	3	8	-2	-	-	-	-	-	d	-	40mm/L52 R 2-pdr (UK)
			4t	6 A 5	4he	3	6	-1	-	-	-	-	-	f	-	76mm/L25 R 3" How (UK)
			4t	6 A 5	4	3	8	-2	-	-	-	-	-	d	-	76mm/L25 R 3" How (UK)
Churchill II	41-may42 jun42-42	76 86	4t	6 A 5	4he	3	6	-1	-	-	-	-	-	d	-	40mm/L52 R 2-pdr (UK)
Churchill III-IV	mar42-may44 jun44-44	97 101	4t	6 A 5	7	3	8	-2	-	-	-	-	-	d	-	57mm/L50 R 6-pdr (UK)
Churchill IV (NA 75)	43-45	101	4t	6 A 5	7	3	8	-2	9	3	8	-	-	d	-	57mm/L50 R 6-pdr (UK)
Churchill VI	44-45	101	4t	6 A 5	6	3	10	-1	-	-	-	-	-	d	-	75mm/L37 R (UK)
Churchill VII	44-51	112	4t	7 A 6	6	3	10	-1	-	-	-	-	-	d	-	75mm/L37 R (UK)
U.K. Armored Carriers & Transporters																
Cavalry Carrier	38-40	6	10t	0 - 0	-	1	6	-1	-	-	-	-	-	0	1	7.7mm MG
Universal Carrier	38-53	6	10t	0 - 0	-	1	6	-1	-	-	-	-	-	0	1	7.7mm MG
Bren Carrier	38-53	5	10t	0 - 0	-	1	6	-1	-	-	-	-	-	0	½	7.7mm MG
Bren Carrier w/ATR	38-41 42	7 11	10t	0 - 0	-	1	6	-1	-	-	-	-	-	0	½	7.7mm MG
			0	1	4	-3	-	-	-	-	-	-	-	f	-	14mm/L65 R Boys ATR (UK)
			-	1	6	-1	-	-	-	-	-	-	-	0	½	7.7mm MG
			0	3	4	-3	-	-	-	-	-	-	-	f	-	14mm/L65 R Boys ATR (UK)
MMG Carrier	42-50	6	10t	0 - 0	-	1	6	-1	-	-	-	-	-	0	1	7.7mm MG
Lloyd Carrier	41-53	6	8t	0 - s	-	-	-	-	-	-	-	-	-	0	1	
C15TA armored truck	43-45	10	7w	1 - 0	-	-	-	-	-	-	-	-	-	0	1	

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes		
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
Crusader Gun Tractor	44-46	21	8t	4 - 3	-	-	-	-	-	-	-	-	-	0	1		
Priest Kangaroo	aug44-45	21	7t	4 - 2	-	1	6	-1	-	-	-	-	-	0	1	7.7mm MG	
Ram Kangaroo	sep44-45	36	6t	7 - 4	-	1	6	-1	-	-	-	-	-	0	1	7.7mm MG	
Sherman Kangaroo	nov44-45	25	6t	5 - 3	-	1	6	-1	-	-	-	-	-	0	1	7.7mm MG	
Stuart Recce	46-55	21	9t	4 - 3	-	1	6	-1	-	-	-	-	-	0	1	7.7mm MG	
U.K. Armored Cars & Light Recce AFV																	
Rolls-Royce 1924	24-40	4	5w	0 - 0	-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Scout Carrier	38-41	10	10t	0 - 0	0	3	4	-3	-	-	-	-	-	fdo	-	14mm/L65 R Boys ATR (UK)	
	43-45	4	10t	0 - 0	-	1	6	-1	-	-	-	-	-	-	do	-	7.7mm MG
Indian Pattern Carrier	40-45	8	7w	1 - 0	-	1	6	-1	-	-	-	-	-	0	-	7.7mm MG	
Indian Pattern Carrier w/ATR	40-45	13	9w	1 - 0	0	3	4	-3	-	-	-	-	-	fo	-	14mm/L65 R Boys ATR (UK)	
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Daimler Dingo Scout Car	40-55	11	9w	2 - 0	-	1	6	-1	-	-	-	-	-	fo	-	7.7mm MG	
Lynx I Scout Car	42-45	11	7w	2 - 0	-	1	6	-1	-	-	-	-	-	f	-	7.7mm MG	
Lynx II Scout Car	432-45	11	7w	2 - 0	-	1	6	-1	-	-	-	-	-	fo	-	7.7mm MG	
Humber Scout Car	43-45	8	9w	1 - 0	-	1	6	-1	-	-	-	-	-	0	-	7.7mm MG	
Rolls-Royce (mod)	40-41	9	5w	0 - 0	0	3	4	-3	-	-	-	-	-	-	-	14mm/L65 R Boys ATR (UK)	
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Morris LRC I	40-45	12	5w	1 - 0	0	2	4	-3	-	-	-	-	-	fd	-	14mm/L65 R Boys ATR (UK)	
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Morris LRC II	43-45	12	7w	1 - 0	0	2	4	-3	-	-	-	-	-	fd	-	14mm/L65 R Boys ATR (UK)	
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Humber LRC I	41-43	13	7w	1 - 0	0	3	4	-3	-	-	-	-	-	0	-	14mm/L65 R Boys ATR (UK)	
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Humber LRC II	41-43	13	7w	1 - 0	0	3	4	-3	-	-	-	-	-	-	-	14mm/L65 R Boys ATR (UK)	
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Humber LRC III	41-43	13	9w	1 - 0	0	3	4	-3	-	-	-	-	-	-	-	14mm/L65 R Boys ATR (UK)	
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Guy 1	40	10	6w	1 - 0	0	1	6	-1	-	-	-	-	-	d	-	12.7mm HMG	
Marmon-Herrington I	40-43	13	4w	1 - 0	0	3	4	-3	-	-	-	-	-	d	-	14mm/L65 R Boys ATR (UK)	
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Marmon-Herrington II-III	41-43	13	6w	1 - 0	0	3	4	-3	-	-	-	-	-	d	-	14mm/L65 R Boys ATR (UK)	
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG	
Marmon-Herrington mod	41-43	19	6w	1 - 0	1	3	8	-1	-	-	-	-	-	do	-	20mm/L65 R (Italy)	
Marmon-Herrington mod	41-43	25	6w	1 - 0	3	3	8	-2	-	-	-	-	-	do	-	47mm/L32 R (Italy)	

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
Marmon-Herrington mod	41-43	23	6w	1 - 0	2	3	8	-2	4	3	4	-	-	do	-	37mm/L45 R (Germany)
Marmon-Herrington mod	41-43	23	6w	1 - 0	2	3	8	-3	-	-	-	-	-	do	-	25mm/L72 R SA37 (France)
Marmon-Herrington IV	43-45	39	6w	2 - 0	5	3	8	-2	-	-	-	-	-	d	-	40mm/L52 R 2-pdr (UK)
Daimler AC	jun41-aug42	28	6w	1 - 0	4	3	8	-2	-	-	-	-	-	d	-	40mm/L52 R 2-pdr (UK)
	sep42-60	30	6w	1 - 0	5	3	8	-2	-	-	-	-	-	d	-	
Daimler AC w/Littlejohn	44-60	39	6w	1 - 0	7	3	8	-2	-	-	-	-	-	d	-	40mm/L52 R 2-pdr LJ (UK)
Humber I-II	sep41-45	13	6w	1 - 0	1	1	8	-1	-	-	-	-	-	d	-	15mm HMG
Humber I AA	43-45	8	6w	1 - 0	-	2 ²	12 ²	-1	-	-	-	-	-	d	-	7.92mm MG AAx4
Humber IV	43-45	30	6w	1 - 0	5	3	8	-2	-	-	-	-	-	d	-	37mm/L53 R (US)
Fox AC	42-45	10	6w	1 - 0	0	1	6	-1	-	-	-	-	-	d	-	12.7mm HMG
Otter LRC	42-45	13	6w	1 - 0	0	3	4	-3	-	-	-	-	-	fdo	-	14mm/L65 R Boys ATR (UK)
					-	1	6	-1	-	-	-	-	-	-	-	7.7mm MG
AEC 1	42-aug42	54	5w	4 - 3	4	3	8	-2	-	-	-	-	-	d	-	40mm/L52 R 2-pdr (UK)
	sep42-42	61	5w	4 - 3	5	3	8	-2	-	-	-	-	-	d	-	
AEC 2	43	73	6w	4 - 3	7	3	8	-2	-	-	-	-	-	d	-	57mm/L50 R 6-pdr (UK)
AEC 3	44-45	77	6w	4 - 3	6	3	10	-1	-	-	-	-	-	d	-	75mm/L37 R (US)
Staghound I	43-45	62	6w	4 - 3	5	3	8	-2	-	-	-	-	-	-	-	37mm/L53 R (US)
Staghound II	43-45	47	6w	4 - 3	4he	3	6	-1	-	-	-	-	-	-	-	76mm/L25 R 3" How (UK)
Staghound III	43-45	77	6w	4 - 3	6	3	10	-1	-	-	-	-	-	-	-	75mm/L37 R (UK)
U.K. Self-Propelled AT Guns																
25mm ATG portee	39-40	15	6w	s	2	3	8	-3	-	-	-	-	-	r	-	25mm/L72 R SA34 (France)
37mm ATG portee	40-42	15	6w	s	2	3	8	-2	-	-	-	-	-	r	-	37mm/L45 R (Sweden)
2-pdr ATG portee	40-aug42	20	6w	s	4	3	8	-2	-	-	-	-	-	r	-	40mm/L52 R 2-pdr (UK)
	sep42-45	22	6w	s	5	3	8	-2	-	-	-	-	-	r	-	
6-pdr ATG portee	may42-may44	26	5w	s	7	3	8	-2	-	-	-	-	-	r	-	57mm/L50 R 6-pdr (UK)
	jun44-45	27	5w	s	7	3	8	-2	9	3	8	-	-	r	-	
Deacon	43	29	5w	0 - 0	7	3	8	-2	-	-	-	-	-	r	-	57mm/L50 R 6-pdr (UK)
Achilles	44-jul44	104	6t	5 - 3	9	3	10	-1	-	-	-	-	-	o	-	76mm/L55 R 17-pdr (UK)
	aug44-55	108	6t	5 - 3	9	3	10	-1	10	3	8	-	-	o	-	
Archer	oct44-45	83	4t	3 - 3	9	3	10	-1	10	3	8	-	-	ro	-	76mm/L55 R 17-pdr (UK)
Avenger	jun45-45	112	9t	5 - 4	9	3	10	-1	10	3	8	-	-	o	-	76mm/L55 R 17-pdr (UK)
U.K. Towed AT Guns																
25mm Hotchkiss ATG	39-40	15	2x	s	2	3	8	-3	-	-	-	-	-	f	½	25mm/L72 R SA34 (France)
37mm Bofors ATG	40-42	15	2x	s	2	3	8	-2	-	-	-	-	-	f	½	37mm/L45 R (Sweden)

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
2-pdr ATG	39-aug42 sep42-43	19 21	1x 1x	s s	4 5	3 3	8 8	-2 -2	-	-	-	-	-	-	1 1	40mm/L52 R 2-pdr (UK)
2-pdr ATG w/Littlejohn	43-45	25	1x	s	7	3	8	-2	-	-	-	-	-	-	1	40mm/L52 R 2-pdr LJ (UK)
6-pdr ATG	may42-may44 jun44-45	25 26	0x 0x	s s	7 7	3 3	8 8	-2 -2	-	-	-	-	-	f f	1 1	57mm/L50 R 6-pdr (UK)
17-pdr ATG	feb43-jul44 aug44-45	33 38	0x 0x	s s	9 9	3 3	10 10	-1 -1	-	-	-	-	-	f f	1 1	76mm/L55 R 17-pdr (UK)
U.K. AA Vehicles																
Light Truck w/AA MG	39-45	2	7w	s	-	1 ²	12 ²	-1	-	-	-	-	-	-	1	7.7mm MG AA
Light Truck w/2xAA MG	39-45	2	7w	s	-	1 ²	12 ²	-1	-	-	-	-	-	-	1	7.7mm MG AAx2
Light Tank AA	41-43	4	9t	0 - 0	-	2 ²	12 ²	-1	-	-	-	-	-	-	-	7.92mm MG AAx4
Staghound AA	43-45	21	6w	3 - 2	0	1 ²	12 ²	-1	-	-	-	-	-	0	-	12.7mm HMG AAx2
Crusader III, AA Mk I	44-45	87	8t	4 - 3	4	2 ²	28 ²	-1	-	-	-	-	-	-	-	40mm/L56 R AA (Sweden)
Crusader III, AA Mk II	44	53	8t	4 - 3	2	2 ²	20 ²	-1	-	-	-	-	-	-	-	20mm/L70 R AA (Switzerland)
Centaur AA	44	63	6t	5 - 4	2	2 ²	20 ²	-1	-	-	-	-	-	-	-	20mm/L70 R AA (Switzerland)
40mm AAG on Truck	40-45	30	6w	s	4	2 ²	28 ²	-1	-	-	-	-	-	-	-	40mm/L56 R AA (Sweden)
U.K. Towed AA Guns																
AA LMG	39-45	2	4x	s	-	1 ²	12 ²	-1	-	-	-	-	-	-	½	7.7mm MG AA
Twin AA LMG	41-45	2	4x	s	-	1 ²	12 ²	-1	-	-	-	-	-	-	½	7.7mm MG AA
20mm Polsten AAG	mar44-55	16	4x	s	2	2 ²	16 ²	-1	-	-	-	-	-	-	1	20mm/L72 R AA (UK)
20mm Oerlikon AAG	40-45	18	2x	s	2	2 ²	20 ²	-1	-	-	-	-	-	-	1	20mm/L70 R AA (Switzerland)
40mm AAG	41-45	29	0x	s	4	2 ²	28 ²	-1	-	-	-	-	-	-	1	40mm/L56 R AA (Sweden)
3" 20-cwt AAG	14-41	24	0x	s	4he	2 ²	20 ²	-1	-	-	-	-	-	-	1	76mm/L46 R 3" AA (UK)
3.7" AAG	39-59	29	0x	s	5he	2 ²	24 ²	-1	-	-	-	-	-	-	1	94mm/L50 R 3.7" AA (UK)
U.K. Flame AFVs & Engineer Vehicles																
Churchill AVRE	44-54	55	4t	6 A 5	20he	2	C	+0	-	-	-	-	-	d	-	209mm Petard (UK)
Churchill Crocodile	44-51	112	4t	7 A 6	6 4he	3 3	10 1	-1 +1	-	-	-	-	-	d f	-	75mm/L37 R (UK) Flamethrower
Churchill AVLB	44-45 46-63	27 32	4t 4t	6 A 5 7 A 6	- -	- -	- -	-	-	-	-	-	-	-	-	-
Wasp	40-45	10	10t	0 - 0	4he	3	1	+1	-	-	-	-	-	fo	-	Flamethrower
Ram Badger (hull mount)	45	46	6t	7 - 4	4he	3	1	+1	-	-	-	-	-	fo	-	Flamethrower
U.K. Transport & Soft Vehicles																
Car, Heavy Utility	may41-58	1	7w	s	-	-	-	-	-	-	-	-	-	-	½	

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Notes
Light Truck	39+	2	7w	s	-	-	-	-	-	-	-	-	-	1		
Medium Truck	41-45	5	5w	s	-	-	-	-	-	-	-	-	-	2		
Quad (C8 Arty, Tractor)	39+	2	6w	s	-	-	-	-	-	-	-	-	-	1		
Dragon	24-40	6	7t	0 - s	-	-	-	-	-	-	-	-	0	1		
United States																
<i>U.S. Light Tanks</i>																
M2A4	jun40-43	34	11t	2 A 2	5	2	8	-2	-	-	-	-	-	-	37mm/L53 R (US)	
M3 Stuart	nov41-43	41	10t	3 - 2	5	2	8	-2	-	-	-	-	-	-	37mm/L53 R (US)	
M3 Stuart (diesel)	nov41-43	41	9t	3 - 2	5	2	8	-2	-	-	-	-	-	-	37mm/L53 R (US)	
M3A3 Stuart	43	51	8t	4 - 3	5	2	8	-2	-	-	-	-	-	-	37mm/L53 R (US)	
M5 Stuart	43-45	64	9t	4 - 3	5	3	8	-2	-	-	-	-	-	-	37mm/L53 R (US)	
M24 Chaffee	sep44-53	79	8t	4 - 3	6	3	10	-1	-	-	-	-	d	-	75mm/L37 R (US)	
<i>U.S. Medium Tanks</i>																
M3 Lee/Grant (early)	may42-45	89	7t	5 - 3	5	3	8	-2	-	-	-	-	-	-	37mm/L50 R (US)	
					6	3	10	-1	-	-	-	-	f	-	75mm/L31 R (US)	
M3 Lee/Grant (late)	may42-45	89	7t	5 - 3	5	3	8	-2	-	-	-	-	-	-	37mm/L50 R (US)	
					6	3	10	-1	-	-	-	-	f	-	75mm/L40 R (US)	
M4 Sherman I	sep42-45	88	6t	5 - 3	6	3	10	-1	-	-	-	-	d	-	75mm/L40 R (US)	
M4A1 Sherman II	sep42-45	89	7t	5 - 3	6	3	10	-1	-	-	-	-	d	-	75mm/L40 R (US)	
M4A2 Sherman III	sep42-45	88	6t	5 - 3	6	3	10	-1	-	-	-	-	d	-	75mm/L40 R (US)	
M4A3 Sherman IV	sep42-45	90	8t	5 - 3	6	3	10	-1	-	-	-	-	d	-	75mm/L40 R (US)	
M4A4 Sherman V	sep42-45	88	6t	5 - 3	6	3	10	-1	-	-	-	-	d	-	75mm/L40 R (US)	
M4A1(76) Sherman IIA	jul44-aug44 sep44-55	95 99	7t	5 - 4	7	3	10	-1	-	-	-	-	d	-	76mm/L50 R (US)	
			7t	5 - 4	7	3	10	-1	9	3	8	-	d	-		
M4A2(76) Sherman IIIA	jul44-aug44 sep44-55	94 98	6t	5 - 4	7	3	10	-1	-	-	-	-	d	-	76mm/L50 R (US)	
			6t	5 - 4	7	3	10	-1	9	3	8	-	d	-		
M4A3(76) Sherman IVA	jul44-aug44 sep44-55	95 99	7t	5 - 4	7	3	10	-1	-	-	-	-	d	-	76mm/L50 R (US)	
			7t	5 - 4	7	3	10	-1	9	3	8	-	d	-		
<i>U.S. Close Support Tanks</i>																
M8 HMC	43-44	48	9t	4 - 3	4he	3	6	-1	-	-	-	88	hsc	o	-	75mm/L16 R (US)
M4(105) Sherman IB	jun44-50	67	7t	5 - 3	5he	3	6	-1	6h	3	6	112	hsc	d	-	105mm/L23 R (US)
M4(105) Sherman IB (late)	nov44-50	67	7t	5 - 4	5he	3	6	-1	6h	3	6	112	hsc	d	-	105mm/L23 R (US)
M4A3(105) Sherman IVB	jun44-50	67	7t	5 - 4	5he	3	6	-1	6h	3	6	112	hsc	d	-	105mm/L23 R (US)

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
<i>U.S. Infantry Tanks</i>																	
M4A3E2 Jumbo Sherman	aug44-45	121	6t	8 - 6	6	3	10	-1	-	-	-	-	-	d	-	75mm/L40 R (US)	
LVT(A)1	feb44-45	41	8ta	2 - 0	5	3	8	-2	-	-	-	-	-	-	-	37mm/L53 R (US)	
LVT(A)4	jun44-50	36	7ta	3 - 2	4he	3	6	-1	-	-	-	-	-	-	-	75mm/L16 R (US)	
LVT(A)5	may45-54	35	7ta	3 - 2	4he	3	6	-1	-	-	-	-	-	0	-	75mm/L16 R (US)	
<i>U.S. Heavy Tanks</i>																	
T26E3	dec44-mar45	135	5t	7 - 5	8	3	12	-1	10	3	8	-	-	d	-	90mm/L50 R (US)	
M26 Pershing	apr45-51	135	5t	7 - 5	8	3	12	-1	10	3	8	-	-	d	-	90mm/L50 R (US)	
<i>U.S. Armored Infantry Vehicles</i>																	
M2 Halftrack	jun41-53	13	8ht	1 - 0	0	1	6	-1	-	-	-	-	-	0	1	12.7mm HMG	
M3 Halftrack	jun41-53	13	8ht	1 - 0	0	1	6	-1	-	-	-	-	-	0	1	12.7mm HMG	
M5 Halftrack	43-53	13	8ht	1 - 0	0	1	6	-1	-	-	-	-	-	0	1	12.7mm HMG	
M39	46-53	21	14t	3 - 1	0	1	6	-1	-	-	-	-	-	0	1	12.7mm HMG	
LVT2 Buffalo II	nov43-50	10	8ta	s	0	1	6	-1	-	-	-	-	-	0	3	12.7mm HMG	
LVT(A)2 Buffalo II	44-50	15	8ta	1 - 0	0	1	6	-1	-	-	-	-	-	0	2	12.7mm HMG	
LVT4 Buffalo IV	jun44-50	18	8ta	1 - 0	0	1	6	-1	-	-	-	-	-	0	3	12.7mm HMG	
LVT3 Bushmaster	apr45-50	18	8ta	1 - 0	0	1	6	-1	-	-	-	-	-	0	3	12.7mm HMG	
LVT3C (USMC)	50-54	15	8ta	1 - 0	-	1	6	-1	-	-	-	-	-	-	3	7.62mm MG	
<i>U.S. Armored Cars</i>																	
M3A1 Scout Car	41-45	13	7w	1 - 0	0	1	6	-1	-	-	-	-	-	0	1	12.7mm HMG	
M8 Greyhound	apr43-50	50	7w	3 - 1	5	3	8	-2	-	-	-	-	-	0	-	37mm/L53 R (US)	
M20 Scout Car	apr43-53	20	7w	3 - 1	0	1	6	-1	-	-	-	-	-	0	1	12.7mm HMG	
<i>U.S. Tank Destroyers</i>																	
M3 GMC Autocar	41-43	43	8ht	1 - 0	6	3	10	-1	-	-	-	-	-	fo	-	75mm/L31 R (US)	
T48 Tank Destroyer	42-44	38	7ht	1 - 0	7	3	8	-4	-	-	-	-	-	fo	-	57mm/L50 R (US)	
M6 GMC Fargo	42-44	22	9w	s	5	3	8	-2	-	-	-	-	-	r	-	37mm/L53 R (US)	
M10 Wolverine	mar43-aug44	93	6t	5 - 3	7	3	10	-1	-	-	-	-	-	0	-	76mm/L50 R (US)	
	sep44-44	97	6t	5 - 3	7	3	10	-1	9	3	8	-	-	0	-		
M18 Hellcat	apr44-aug44	73	9t	3 - 1	7	3	10	-1	-	-	-	-	-	0	-	76mm/L55 R (US)	
	sep44-45	78	9t	3 - 1	7	3	10	-1	9	3	8	-	-	0	-		
M36 Jackson	oct44-45	114	7t	5 - 3	8	3	12	-1	10	3	8	-	-	0	-	90mm/L50 R (US)	
M36B1 Jackson	dec44-45	125	7t	6 - 3	8	3	12	-1	10	3	8	-	-	0	-	90mm/L50 R (US)	
M36B2 Jackson	may45-45	114	7t	5 - 3	8	3	12	-1	10	3	8	-	-	0	-	90mm/L50 R (US)	

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
U.S. Towed AT Guns																	
M3 37mm ATG	40-45	21	2x	s	5	3	8	-2	-	-	-	-	-	f	½	37mm/L53 R (US)	
M1 57mm ATG	43-aug44	25	0x	s	7	3	8	-4	-	-	-	-	-	f	1	57mm/L50 R (US)	
	sep44-45	25	0x	s	7	3	8	-2	-	-	-	-	-	f	1		
M5 76mm ATG	43-aug44	28	0x	s	7	3	10	-1	-	9	3	8	-	f	1	76mm/L50 R (US)	
	sep44-50	29	0x	s	7	3	10	-1	-	-	-	-	-	f	1		
U.S. SP AA Guns																	
M13 MGMC	42-45	13	8ht	1 - 0	0	1 ²	12 ²	-1	-	-	-	-	-	0	-	12.7mm HMG AAx2	
M15 MGMC	42-50	35	8ht	1 - 0	5	2 ²	16 ²	-2	-	-	-	-	-	0	-	37mm/L54 R AA (US)	
					0	1 ²	12 ²	-1	-	-	-	-	-	-	-	12.7mm HMG AAx2	
M16 MGMC	42-53	15	8ht	1 - 0	0	2 ²	12 ²	-1	-	-	-	-	-	0	-	12.7mm HMG AAx4	
M17 MGMC	42-53	15	8ht	1 - 0	0	2 ²	12 ²	-1	-	-	-	-	-	0	-	12.7mm HMG AAx4	
M19 GMC	45-54	94	8t	3 - 3	4	4 ²	28 ²	-1	-	-	-	-	-	0	-	40mm/L56 R AAx2 (Sweden)	
U.S. Towed AA Guns																	
M51 4x12.7mm AAG	42-45	8	0x	s	0	2 ²	12 ²	-1	-	-	-	-	-	-	1	12.7mm HMG AAx4	
M1 37mm AAG	40-45	24	0x	s	5	2 ²	16 ²	-2	-	-	-	-	-	-	1	37mm/L54 R AA (US)	
M1 40mm AAG	41-45	29	0x	s	4	2 ²	28 ²	-1	-	-	-	-	-	-	1	40mm/L56 R AA (Sweden)	
M3 76mm AAG	28-41	24	0x	s	4he	2 ²	20 ²	-1	-	-	-	-	-	-	1	76mm/L50 R AA (US)	
M1 90mm AAG	42-aug44	38	0x	s	8	2 ²	20 ²	-1	-	-	-	-	-	-	1	90mm/L50 R AA (US)	
	sep44-45	43	0x	s	8	2 ²	20 ²	-1	10	3	8	-	-	-	1		
U.S. Flame AFVs & Engineer Vehicles																	
M3 Stuart w/Flame-gun	sep43-45	21	10t	3 - 2	4he	2	1	+1	-	-	-	-	-	-	-	-	Flamethrower
M4A3R3 Zippo	43-45	90	8t	5 - 3	6	3	10	-1	-	-	-	-	-	d	-	75mm/L40 R (US) Flamethrower	
Bulldozer	41-45	15	7t	3 - s	-	-	-	-	-	-	-	-	-	-	-	-	
U.S. Transport & Soft Vehicles																	
Jeep	41-45	1	9w	s	-	-	-	-	-	-	-	-	-	-	½		
Jeep w/LMG	41-45	1	9w	s	-	1	6	-1	-	-	-	-	-	-	½	7.62mm MG	
Jeep w/HMG	41-45	4	9w	s	0	1	6	-1	-	-	-	-	-	-	½	12.7mm HMG	
Light Truck	42-45	2	8w	s	-	-	-	-	-	-	-	-	-	-	1		
Medium Truck	42-45	5	7w	s	-	-	-	-	-	-	-	-	-	-	2		
M39 Tractor	aug44-45	21	11t	3 - 1	0	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG	
M5 Tractor	42-45	8	8t	s	0	1	6	-1	-	-	-	-	-	-	2	12.7mm HMG	
M4 Tractor	42-45	10	7t	s	0	1	6	-1	-	-	-	-	-	-	3	12.7mm HMG	

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
Generic																	
Jeep	41-49	1	9w	s	-	-	-	-	-	-	-	-	-	-	-	½	
Jeep w/LMG	41-49	1	9w	s	-	1	6	-1	-	-	-	-	-	-	-	½	7.62mm MG
Jeep w/HMG	41-49	4	9w	s	0	1	6	-1	-	-	-	-	-	-	-	½	12.7mm HMG
Light Truck	39-49	2	8w	s	-	-	-	-	-	-	-	-	-	-	-	1	
Light Truck w/LMG	39-49	2	8w	s	-	1	6	-1	-	-	-	-	-	-	-	1	
Light Truck w/HMG	39-49	5	8w	s	0	1	6	-1	-	-	-	-	-	-	-	1	
Medium Truck	39-49	5	7w	s	-	-	-	-	-	-	-	-	-	-	-	2	
Light Horse Limber	all	1	5w	s	-	-	-	-	-	-	-	-	-	-	-	½	
Horse Limber	all	2	3w	s	-	-	-	-	-	-	-	-	-	-	-	1	
Wagon	all	2	3w	s	-	-	-	-	-	-	-	-	-	-	-	1	

Move Notes:

- t Tracked
- w Wheeled
- ht Half-tracked
- a Amphibious
- x Towed
- p Airmobile
- s Skis
- n Helicopter (nap of earth move rating)

Armor Notes:

- s Soft vehicle, or soft vehicle facing
- no armor modifier vs. h-class weapons
- A +1 armor modifier vs. h-class weapons
- B +2 armor modifier vs. h-class weapons
- C +3 armor modifier vs. h-class weapons
- D +4 armor modifier vs. h-class weapons
- E +5 armor modifier vs. h-class weapons
- F +6 armor modifier vs. h-class weapons

Gun Notes:

- h h-class
- he he-class
- @ Antiaircraft

Missile Notes:

- 1 1st generation missile
- 2 2nd generation missile
- 3 3rd generation missile
- † Top-attack missile
- u Has unlimited missile ammo
- A All-aspect surface-to-air missile
- R Rear-aspect surface-to-air missile

Ind Fire Ammo Notes:

- h Conventional HE ammo
- s Smoke (both normal and incendiary)
- c Chemical
- i ICM (improved conventional munitions)
- l Laser-guided projectiles
- g GPS-guided projectiles
- m Artillery delivered mines

Equipment Notes:

- s Weapon stabilization
- ss Advanced weapon stabilization
- t 1st generation thermal sights
- 2 2nd generation thermal sights
- i Infrared or image intensification sights
- n NBC system
- c CTV
- v IVIS
- o Open-topped vehicle
- f Limited gun traverse - forward firing
- r Limited gun traverse - rearward firing
- d smoke dischargers (pre-1950 only)

D.2 Artillery Point Cost, Pre-1950

Artillery has two point values, one for direct fire and one for indirect fire. Select which one to use based on how it is being employed in the scenario. Towed artillery used for indirect fire does not pay additional points to get its prime movers, but its prime movers cannot be used to transport other stands.

D.2.1 Guns, and Howitzers

For guns and howitzers, the direct fire point value is the point value listed in the Artillery Data Chart. For the indirect fire (usually off-table) point value, use the following tables to get the base point value.

Caliber	Artillery Type		
	Self-propelled Support Group	Towed Support Group	Battalion Mortar Stand
30-69mm	7	5	4
70-89mm	13	10	7
90-119mm	16	12	8
120-139mm	36	28	20
140-169mm	42	32	21
170+ mm	72	57	45

When you have the base point value, use the following equation to get the final point value.

$$\text{Final PV} = \text{Base PV} \times \text{Accuracy Num Mod} \times \text{Avail Mod}$$

where the Accuracy Number Modifier is:

- 1.22 for a 2+ artillery accuracy number
- 1.11 for a 3+ artillery accuracy number
- 1.00 for a 4+ artillery accuracy number
- 0.88 for a 5+ artillery accuracy number
- 0.77 for a 6+ artillery accuracy number

and the Availability Modifier is:

- 1.67 for a +2 availability modifier
- 1.33 for a +1 availability modifier
- 1.00 for a 0 availability modifier (the normal case)
- 0.67 for a -1 availability modifier
- 0.33 for a -2 availability modifier

D.2.2 Mortars

For mortars, if on-table, compute their direct fire point value (i.e., the vehicle value for SP mortars, zero for towed mortars) and add their indirect fire point values (as computed above for guns and howitzers). For off-table mortars, simply use their indirect fire point value.

D.2.3 Multiple Rocket Launchers

For multiple rocket launchers (MRLs), you need the classification of the system: Light (Lt), Medium (Med), Heavy (Hvy), or Very Heavy (Vry Hvy). You'll also need the number of fire units. This table gives the point cost for *1 fire unit from 1 stand*. You'll need to total the cost of the fire units for each stand.

Point Cost	Lt HE	Med HE	Hvy HE	Vry Hvy HE
1 Fire Unit	1	2	8	12

Gun example: A Soviet 122mm howitzer battalion in a rifle division in 1945 has 4 122mm howitzers, an accuracy number of 5+ and an availability modifier of +1. The base point cost is 28 (it is a towed unit), the multiplier for the accuracy number is 0.88, and the multiplier for the availability modifier is 1.33. So $28 \times 0.88 \times 1.33 = 32.77$ which rounds to 33 points for the battalion.

MRL example: A Soviet BM-13-16 multiple rocket launcher regiment in a tank army in 1945 has 6 BM-13-16 stands. The BM-13-16 is medium with two fire units of HE per stand. Med HE fire units costs 2 points each. So $6 \times 2 \times 2 = 24$ points for the regiment.

D.3 Artillery Data Chart, Pre-1950

See end of chart for Generic vehicles and guns, and for explanation of notations.

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes						
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo										
France																							
French Towed Guns																							
75 mle 1897 75mm FG	14-42	18	0x	s	5	3	6	-1	-	-	-	68	h	f	1	75mm/L36 R (France)							
L13S 105mm FG	14-42	18	0x	s	5he	3	6	-1	-	-	-	120	h	f	1	105mm/L28 R (France)							
105 ct.'35B 105mm How	36-42	18	0x	s	5he	3	6	-1	-	-	-	103	h	f	1	105mm/L18 R (France)							
155 C mle 1917 How	17-42	17	0x	s	7he	2	6	+0	-	-	-	108	h	f	1	155mm/L14 R (France)							
French Mortars																							
81mm mle 27/31	31-42	7	2x	s	-	-	-	-	-	-	-	28	hs	-	½	81mm Mtr (France)							
Germany																							
German Self-Propelled Guns																							
siG 33(Sf) Pz. IB	may40-41	23	5t	0 A 0	7he	2	6	+0	-	-	-	46	hs	fo	-	150mm/L11 R (Germany)							
	42-43	23	5t	0 A 0	7he	2	6	+0	7h	2	4	46	hs	fo	-								
siG 33(Sf) Pz. II	42-43	32	6t	2 A 1	7he	2	6	+0	7h	2	4	46	hs	fo	-	150mm/L12 R (Germany)							
10.5cm leFH 18 auf Lorraine jun42-43	24	4t	0 - 0	6	3	6	-1	6h	3	4	123	hs	fo	-	105mm/L28 R (Germany)								
15cm sFH 13/1 auf Lorraine jun42-45	22	4t	0 - 0	7he	2	6	+0	7h	2	4	68	hs	fo	-	150mm/L17 R (Germany)								
Sdkfz 251/9 Section	sep42-45	12	7ht	0 A 0	4	1	6	-1	6h	1	4	-	-	fo	-	75mm/L24 R (Germany)							
Sdkfz 251/9	sep42-45	23	7ht	0 A 0	4	3	6	-1	6h	3	4	-	-	fo	-	75mm/L24 R (Germany)							
SdKfz 250/8	43-45	23	8ht	0 A 0	4	3	6	-1	6h	3	4	-	-	o	-	75mm/L24 R (Germany)							
10.5cm leFH18 auf GW IVb	43	38	5t	2 A 0	6	3	6	-1	6h	3	4	123	hs	fo	-	105mm/L28 R (Germany)							
Grille (siG 33(Sf) Pz. 38(t))	mar43-45	30	6t	2 - 0	7he	2	6	+0	7h	2	4	46	hs	fo	-	150mm/L12 R (Germany)							
Grille (siG 33/1(Sf) Pz.38(t))	may43-45	26	6t	1 - 0	7he	2	6	+0	7h	2	4	46	hs	fo	-	150mm/L12 R (Germany)							
Wespe	jul43-45	26	5t	0 A 0	6	3	6	-1	6h	3	4	123	hs	fo	-	105mm/L28 R (Germany)							
Hummel	jul43-45	30	6t	1 A 0	7he	2	8	+0	7h	2	4	132	hs	fo	-	150mm/L30 R (Germany)							
10.5cm leFH18 auf GW 39H	44	45	4t	3 - 2	6	3	6	-1	6h	3	4	123	hs	fo	-	105mm/L28 R (Germany)							
siG 33/2(Sf) Jpz. 38(t) Hetzer	45	70	4t	6 - 3	7he	2	6	+0	7h	2	4	46	hs	fo	-	150mm/L12 R (Germany)							
German Towed Guns																							
7.5cm LG 40 RR	41	13	0x	s	4he	3	4	-1	-	-	-	68	hs	f	½	75mm/L10 R (Germany)							
	42-45	14	0x	s	4he	3	4	-1	6h	3	4	68	hs	f	½								
7.5cm FK 16nA	34-41	13	0x	s	4he	3	4	-1	-	-	-	128	hs	f	1	75mm/L36 R (Germany)							
	42-45	16	0x	s	6h	3	4	-1	-	-	-	128	hs	f	1								

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Notes
7.5cm leIG 18	38-41	13	0x	s	4he	3	4	-1	-	-	-	35	hs	f	½	75mm/L12 R (Germany)
	42-45	14	0x	s	4he	3	4	-1	6h	3	4	35	hs	f	½	
7.5cm leIG 18 Section	38-41	5	0x	s	4he	1	4	-1	-	-	-	35	hs	f	½	75mm/L12 R (Germany)
	42-45	6	0x	s	4he	1	4	-1	6h	1	4	35	hs	f	½	
7.5cm leIG 37	jun44-45	14	0x	s	4	3	4	-1	6h	3	4	51	hs	f	1	75mm/L22 R (Germany)
7.5cm leIG 42	aug44-45	14	0x	s	4	3	4	-1	6h	3	4	51	hs	f	1	75mm/L22 R (Germany)
8.8cm Raketenwerfer "Püppchen"	43-45	12	3x	s	7h	3	2	-1	-	-	-	-	-	-	-	½ 88mm/L18 RG (Germany)
10cm leFH 14/19(t)	40-41	18	0x	s	5he	3	6	-1	-	-	-	99	hs	f	1	100mm/L24 R (Germany)
10.5cm leFH 18	35-41	18	0x	s	5	3	6	-1	-	-	-	123	hs	f	1	105mm/L28 R (Germany)
	42-45	20	0x	s	6	3	6	-1	6h	3	4	123	hs	f	1	
10.5cm K18	34-41	33	0x	s	9	3	10	-1	-	-	-	190	hs	f	1	105mm/L52 R (Germany)
15cm sIG 33	27-41	17	0x	s	7he	2	6	+0	-	-	-	46	hs	f	1	150mm/L12 R (Germany)
	42-45	18	0x	s	7he	2	6	+0	7h	2	4	46	hs	f	1	
15cm sIG 33 Section	27-41	9	0x	s	7he	1	6	+0	-	-	-	46	hs	f	1	150mm/L12 R (Germany)
	42-45	9	0x	s	7he	1	6	+0	7h	1	4	46	hs	f	1	
15cm sFH 18	33-41	20	0x	s	7he	2	8	+0	-	-	-	132	hs	f	1	150mm/L30 R (Germany)
	42-45	21	0x	s	7he	2	8	+0	7h	2	4	132	hs	f	1	
German Mortars																
SdKfz 251/2	sep39-45	12	7ht	0 A 0	-	-	-	-	-	-	-	24	hs	0	-	81mm Mtr (Germany)
					-	1	6	-1	-	-	-	-	-	-	-	7.92mm MG
SdKfz 250/7	42-45	12	8ht	0 A 0	-	-	-	-	-	-	-	24	hs	0	-	81mm Mtr (Germany)
					-	1	6	-1	-	-	-	-	-	-	-	7.92mm MG
8cm sGrW 34 81mm Mtr	34-45	7	2x	s	-	-	-	-	-	-	-	24	hs	-	½	81mm Mtr (Germany)
kz 8cm GW 42 81mm Mtr	41-45	7	3x	s	-	-	-	-	-	-	-	11	hs	-	½	81mm Lt Mtr (Germany)
12cm sGrW 42 120mm Mtr	42-45	20	2x	s	-	-	-	-	-	-	-	60	hs	-	½	120mm Mtr (Germany)
German Multiple Rocket Launchers																
15cm Nebelwerfer 41	41-45	varies	0x	s	-	-	-	-	-	-	-	17-69	hs	-	1	Med, 1 fire unit
15cm Panzerwerfer 42	42-45	varies	6ht	0 - 0	-	-	-	-	-	-	-	17-69	hs	-	-	Med, 1 fire unit
21cm Nebelwerfer 42	43-45	varies	0x	s	-	-	-	-	-	-	-	20-78	h	f	1	Hvy, 1 fire unit
Wurfgerät 40/41 (28cm)	40-45	varies	0x	s	-	-	-	-	-	-	-	5-21	h	f	1	Vry Hvy, 1 fire unit
Wurfgerät 40/41 (32cm)	40-45	varies	0x	s	-	-	-	-	-	-	-	5-20	h	f	1	Vry Hvy, 1 fire unit
28cm Nebelwerfer 41	41-45	varies	0x	s	-	-	-	-	-	-	-	5-21	h	f	1	Vry Hvy, 1 fire unit
32cm Nebelwerfer 41	41-45	varies	0x	s	-	-	-	-	-	-	-	5-20	h	f	1	Vry Hvy, 1 fire unit
28cm Wurfahmen 40	40?-45	varies	7ht	0 A 0	-	-	-	-	-	-	-	5-21	h	f	-	Vry Hvy, 1 fire unit
32cm Wurfahmen 40	40?-45	varies	7ht	0 A 0	-	-	-	-	-	-	-	5-20	h	f	-	Vry Hvy, 1 fire unit

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip		
30cm Nebelwerfer 42	42?-15	varies	0x	s	-	-	-	-	-	-	11-45	h	f	1	Vry Hvy, 1 fire unit	
30cm Raketenwerfer 56	43?-15	varies	0x	s	-	-	-	-	-	-	11-45	h	f	1	Vry Hvy, 1 fire unit	
Italy																
Italian Self-Propelled Guns (Truck-Mounted)																
AC 65/17 SP How	nov41-43	16	5w	s	3he	3	6	-2	5	3	6	68	h	-	-	65mm/L17 R (Italy)
AC 75/27 TL37 SP FG	41 42-43	22 23	6w 6w	s s	5 5	3	8	-1	-	-	-	102 102	h h	-	-	75mm/L27 R (Italy)
AC 100/17 SP How	41 42-43	19 20	6w 6w	s s	5he 5he	3	6	-1	-	-	-	89 89	h h	f f	-	100mm/L17 R (Italy)
AC 102/35 SP FG	17-43	22	6w	s	5he	3	8	-1	-	-	-	-	-	f	-	102mm/L35 R (Italy)
Italian Towed Guns																
65/17 M13 65mm IG	13-43	15	1x	s	3he	3	6	-2	5	3	6	68	h	f	1	65mm/L17 R (Italy)
75/18 M35 75mm How	36-41 42-45	16 17	0x 0x	s s	4he 4he	3	6	-1	-	-	-	95 95	h h	f f	1	75mm/L18 R (Italy)
75/27 M06 75mm How	35-41 42-45	21 22	0x 0x	s s	5 5	3	8	-1	-	-	-	102 102	h h	f f	1	75mm/L27 R (Italy)
75/27 M11 75mm How	35-41 42-45	21 22	0x 0x	s s	5 5	3	8	-1	-	-	-	102 102	h h	f f	1	75mm/L27 R (Italy)
75/32 M37 75mm FG	37-41 42-45	21 22	0x 0x	s s	5 5	3	8	-1	-	-	-	125 125	h h	f f	1	75mm/L32 R (Italy)
100/17 M14 100mm How	19-41 42-45	18 19	0x 0x	s s	5he 5he	3	6	-1	-	-	-	89 89	h h	f f	1	100mm/L17 R (Italy)
100/24 100mm How	19-45	18	0x	s	5he	3	6	-1	-	-	-	99	h	f	1	100mm/L24 R (Italy)
105/11 Mountain How	41-43	18	0x	s	5he	3	6	-1	-	-	-	72	h	-	1	105mm/L11 R (Italy)
105/28 M13 FG	13-41 42-45	18 19	0x 0x	s s	5he 5he	3	6	-1	-	-	-	120 120	h h	f f	1	105mm/L28 R (Italy)
149/13 M14 How	19-45	17	0x	s	7he	2	6	+0	-	-	-	80	h	f	1	149mm/L13 R (Italy)
149/19 M37 How	38-45	17	0x	s	7he	2	6	+0	-	-	-	150	h	f	1	149mm/L19 R (Italy)
149/28 Krupp How	41-45	20	0x	s	7he	2	8	+0	-	-	-	132	hs	f	1	149mm/L28 R (Italy)
149/35 M00 FG	00-45	20	0x	s	7he	2	8	+0	-	-	-	180	h	f	1	149mm/L35 R (Italy)
149/40 M35 FG	40-45	20	0x	s	7he	2	8	+0	-	-	-	240	h	f	1	149mm/L40 R (Italy)
Italian Mortars																
81/14 M35 Mortar	35-45	7	0x	s	-	-	-	-	-	-	-	38	h	-	½	81mm Mtr (Italy)

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes					
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo									
Poland																						
Polish Towed Guns																						
wz. 97/17 75mm FG	20-39	18	0x	s	5	3	6	-1	-	-	-	68	h	f	1	75mm/L36 R (France)						
wz. 14/19 100mm FG	20-39	18	0x	s	5he	3	6	-1	-	-	-	99	h	f	1	100mm/L24 R (Italy)						
wz. 29 105mm FG	20-39	18	0x	s	5he	3	6	-1	-	-	-	120	h	f	1	105mm/L28 R (France)						
wz. 17 155mm How	20-39	17	0x	s	7he	2	6	+0	-	-	-	108	h	f	1	155mm/L14 R (France)						
Soviet Union / Russia																						
Soviet Towed Guns																						
M1927 76mm IG	27-42	17	1x	s	4he	3	6	-1	2	3	6	42	h	f	1	76mm/L17 R (Russia)						
	43-45	17	1x	s	4he	3	6	-1	6h	3	6	42	h	f	1							
M1943 76mm IG	43-45	17	1x	s	4he	3	6	-1	6h	3	6	42	h	f	1	76mm/L17 R (Russia)						
76mm M1900/02 FG	02-42	22	0x	s	4he	3	10	-1	-	-	-	85	hsc	f	1	76mm/L30 R (Russia)						
76mm M1902/30 FG	30-34	22	0x	s	4he	3	10	-1	-	-	-	132	hsc	f	1	76mm/L40 R (Russia)						
	35-42	26	0x	s	6	3	10	-1	-	-	-	132	hsc	f	1							
F-22 M1936 76mm FG	37-jul42	26	0x	s	6	3	10	-1	-	-	-	138	hsc	f	1	76mm/L52 R (Russia)						
	aug42-43	27	0x	s	6	3	10	-1	7	3	6	138	hsc	f	1	76mm/L52 R (Russia)						
USV M1939 76mm FG	oct39-jul42	26	0x	s	6	3	10	-1	-	-	-	132	hsc	f	1	76mm/L42 R (Russia)						
	aug42-43	27	0x	s	6	3	10	-1	7	3	6	132	hsc	f	1							
ZiS-3 M1942 76mm FG	mar42-jul42	26	0x	s	6	3	10	-1	-	-	-	138	hsc	f	1	76mm/L52 R (Russia)						
	aug42-45	27	0x	s	6	3	10	-1	7	3	6	138	hsc	f	1	76mm/L52 R (Russia)						
BS-3 M1944 100mm FG	44-45	30	0x	s	8	3	10	-1	-	-	-	200	hs	f	1	100mm/L60 R (Russia)						
	46-55	33	0x	s	9	3	10	-1	-	-	-	200	hs	f	1							
M1910/30 107mm FG	30-42	30	0x	s	8	3	10	-1	-	-	-	161	hsc	f	1	107mm/L37 R (Russia)						
M1910/30 122mm How	30-45	20	0x	s	6he	3	6	-1	-	-	-	89	hsc	f	1	122mm/L13 R (Russia)						
M1909/37 122mm How	37-42	20	0x	s	6he	3	6	-1	-	-	-	89	hsc	f	1	122mm/L14 R (Russia)						
M-30 M1938 122mm How	40-42	20	0x	s	6he	3	6	-1	-	-	-	118	hsc	f	1	122mm/L23 R (Russia)						
	43-50	21	0x	s	6he	3	6	-1	7h	3	6	118	hsc	f	1							
M1931/37 122mm FG	37-42	13	0x	s	9	1	10	-1	-	-	-	204	h	f	1	122mm/L46 R (Russia)						
	43-46	13	0x	s	9	1	10	-1	7h	1	6	204	h	f	1							
M1909/30 152mm How	31-45	17	0x	s	7he	2	6	+0	-	-	-	89	hc	f	1	152mm/L13 R (Russia)						
M1910/37 152mm How	38-42	17	0x	s	7he	2	6	+0	-	-	-	89	hc	f	1	152mm/L12 R (Russia)						
M-10 M1938 152mm How	40-45	17	0x	s	7he	2	6	+0	-	-	-	124	hc	f	1	152mm/L24 R (Russia)						
	46-50	18	0x	s	7he	2	6	+0	9h	2	6	124	hc	f	1							
D-1 M1943 152mm How	44-45	17	0x	s	7he	2	6	+0	-	-	-	124	hc	f	1	152mm/L23 R (Russia)						
	46-50	18	0x	s	7he	2	6	+0	9h	2	6	124	hc	f	1							

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
M1910/30 152mm FG	30-42	22	0x	s	8	2	8	+0	-	-	-	168	hc	f	1	152mm/L28 R (Russia)
M1910/34 152mm FG	35-45	22	0x	s	8	2	8	+0	-	-	-	168	hc	f	1	152mm/L28 R (Russia)
ML-20 M1937 152mm FG	37-45	22	0x	s	8	2	8	+0	-	-	-	168	hc	f	1	152mm/L28 R (Russia)
	46-50	23	0x	s	8	2	8	+0	9h	2	6	168	hc	f	1	
Soviet Mortars																
82mm Mtr	37-50	7	2x	s	-	-	-	-	-	-	-	30	hs	f	½	82mm Mtr (Russia)
120mm Mtr	38-50	20	0x	s	-	-	-	-	-	-	-	57	hs	f	½	120mm Mtr (Russia)
160mm Mtr	43-50	21	0x	s	-	-	-	-	-	-	-	52	hs	f	½	160mm Mtr (Russia)
Soviet Multiple Rocket Launchers																
BM-8-36	aug41-50	varies	7w	s	-	-	-	-	-	-	-	15-59	h	f	-	Light, 4 fire units
BM-8-48	43?-50	varies	7w	s	-	-	-	-	-	-	-	15-59	h	f	-	Light, 5 fire units
BM-8-24	44-50	varies	7t	2 A 1	-	-	-	-	-	-	-	15-59	h	f	-	Light, 3 fire units
BM-8-8	44?-50	varies	9w	s	-	-	-	-	-	-	-	15-59	h	f	-	Light, 1 fire unit
BM-13-16	jul41-50	varies	7w	s	-	-	-	-	-	-	-	20-85	h	f	-	Med, 2 fire units
BM-13 w/M-13-DD	44?-45	varies	7w	s	-	-	-	-	-	-	-	30-118	h	f	-	Med, 1 fire unit
BM-31-12	43-50	varies	7w	s	-	-	-	-	-	-	-	11-43	h	f	-	Vry Hvy, 2 fire units
M-30 w/Rama	42-50	varies	0x	s	-	-	-	-	-	-	-	7-28	h	f	1	Vry Hvy, 1 fire unit
United Kingdom																
U.K. Self-Propelled Guns																
Bishop	42-jun42	44	3t	3 - 2	4he	3	8	-1	6	3	8	122	hsc	f	-	88mm/L28 R 25-pdr (UK)
	jul42-42	45	3t	3 - 2	4he	3	8	-1	7	3	8	122	hsc	f	-	
Sexton	43-56	57	7t	4 - 2	4he	3	8	-1	6	3	8	122	hsc	fo	-	88mm/L28 R 25-pdr (UK)
U.K. Towed Guns																
13-pdr FG	04-40	16	0x	s	4he	3	6	-1	-	-	-	54	h	f	1	76mm/L23 R 13-pdr (UK)
18-pdr FG Mk IV	29-40	24	0x	s	4he	4	10	-1	-	-	-	99	hsc	f	1	84mm/L30 R 18-pdr (UK)
25-pdr Mk I FG	35-40	20	0x	s	4he	3	8	-1	6	3	8	108	hsc	f	1	88mm/L27 R 18/25-pdr (UK)
25-pdr Mk II, Mk III FG	41-jun42	20	0x	s	4he	3	8	-1	6	3	8	122	hsc	-	1	88mm/L28 R 25-pdr (UK)
	jul42-45	21	0x	s	4he	3	8	-1	7	3	8	122	hsc	-	1	
25-pdr Pack How	43-45	17	0x	s	4he	3	6	-1	5	3	6	90	hsc	f	1	88mm/L14 R 25-pdr (UK)
3.7" Howitzer	17-60	18	0x	s	5he	3	6	-1	-	-	-	54	hs	f	1	94mm/L12 R 3.7" How (UK)
4.5" Howitzer	14-40	18	0x	s	5he	3	6	-1	-	-	-	66	hs	f	1	114mm/L16 R 4.5" How (UK)
4.5" FG	40-59	24	0x	s	5he	3	10	-1	-	-	-	180	h	f	1	114mm/L41 R 4.5" Gun (UK)
60-pdr FG	05-44	20	0x	s	7he	2	8	+0	-	-	-	142	h	f	1	140mm/L30 R 60-pdr (UK)

Name	Period	Points	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo			
5.5" FG	may42-78?	20	0x	s	7he	2	8	+0	-	-	-	140	h	f	1	140mm/L30 R 5.5" Gun (UK)
6" Howitzer	15-45	17	0x	s	7he	2	6	+0	-	-	-	104	hs	f	1	152mm/L13 R 6" How (UK)
<i>U.K. Mortars</i>																
Mortar carrier (Aust.)	42 43-53	11 11	10t 10t	0 - 0 0 - 0	-	-	-	-	-	-	-	15 25	hs hs	o o	-	76mm (3") Mtr (UK)
3-inch ML Mortar	32-42 43-50	7 7	2x 2x	s s	-	-	-	-	-	-	-	15 25	hs hs	- -	½ ½	76mm (3") Mtr (UK)
SB 4.2-inch Mortar	42 43-50	8 8	0x 0x	s s	-	-	-	-	-	-	-	30 36	hs hs	- -	½ ½	107mm (4.2") Mtr (UK)
<i>U.K. Multiple Rocket Launchers</i>																
Land Mattress	nov44-45	varies	0x	s	-	-	-	-	-	-	-	35-72	h	-	1	Med, 4 fire units
<i>United States</i>																
<i>U.S. SP Guns</i>																
T30 75mm HMC	42-43	25	8ht	1 - 0	4he	3	6	-1	-	-	-	88	hsc	o	-	75mm/L16 R (US)
T19 105mm HMC Section	42 43	15 16	8ht 8ht	1 - 0 1 - 0	5he 5he	1 1	6 6	-1	-	-	-	112 112	hsc hsc	o o	-	105mm/L23 R (US)
T19 105mm HMC	42 43	27 28	8ht 8ht	1 - 0 1 - 0	5he 5he	3 3	6 6	-1	-	-	-	112 112	hsc hsc	o o	-	105mm/L23 R (US)
M7 HMC Priest	sep42-42 43-53	51 54	7t 7t	4 - 2 4 - 2	5he 5he	3 3	6 6	-1	-	-	-	112 112	hsc hsc	fo fo	-	105mm/L23 R (US)
M7B1 HMC Priest	44-45	55	9t	4 - 2	5he	3	6	-1	6h	3	6	112	hsc	fo	-	105mm/L23 R (US)
M37 HMC	46-56	31	5t	2 - 1	5he	3	6	-1	6h	3	6	112	hsc	fo	-	105mm/L23 R (US)
M41 HMC Gorilla	46-56	25	5t	1 - 0	7he	2	6	+0	-	-	-	146	hsc	fo	-	155mm/L23 R (US)
M12 GMC	jul44-55	43	6t	2 - 1	9	2	8	+0	-	-	-	163	hsc	fo	-	155mm/L36 R (US)
M40 GMC	jul44-55	42	5t	2 - 1	9	2	8	+0	-	-	-	232	hsc	fo	-	155mm/L45 R (US)
M43 HMC	aug45-55	57	5t	2 - 1	18he	2	6	+0	-	-	-	168	h	fo	-	203mm/L25 R (US)
<i>U.S. Towed Guns</i>																
M1A1 75mm Pack How	34-45	16	1x	s	4he	3	6	-1	-	-	-	88	hsc	f	1	75mm/L16 R (US)
M2 105mm How	41-42 43-05	18 19	0x 0x	s s	5he 5he	3 3	6 6	-1	-	-	-	112 112	hsc hsc	f f	1 1	105mm/L23 R (US)
M3 105mm Pack How	mar43-45	19	0x	s	5he	3	6	-1	6h	3	6	76	hs	f	1	105mm/L16 R (US)
155mm FG M1917/M1918	17-43	23	0x	s	9	2	8	+0	-	-	-	163	hsc	f	1	155mm/L36 R (US)
M1 155mm How	42-75	17	0x	s	7he	2	6	+0	-	-	-	146	hsc	f	1	155mm/L23 R (US)
M1 155mm FG	42-45	23	0x	s	9	2	8	+0	-	-	-	232	hsc	f	1	155mm/L45 R (US)

Name	Period	Points	Move	Armor	----- Gun -----				Special AT Ammo			Indirect Fire			Equip	Cap	Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
<i>U.S. Mortars</i>																	
M4 Mortar Carrier	42-43	13	8ht	1 - 0	0	1	6	-1	-	-	-	-	-	0	1	12.7mm HMG	
M4A1 MMC	43-45	15	8ht	1 - 0	-	-	-	-	-	-	-	30	hs	ro	-	81mm Mtr (US)	
					0	1	6	-1	-	-	-	-	-	-	-	12.7mm HMG	
M21 MMC	jun43-45	15	8ht	1 - 0	-	-	-	-	-	-	-	30	hs	fo	-	81mm Mtr (US)	
					0	1	6	-1	-	-	-	-	-	-	-	12.7mm HMG	
81mm Mortar M1	37?-50	7	2x	s	-	-	-	-	-	-	-	30	hs	-	½	81mm Mtr (US)	
4.2-inch Mortar M2	43-50	8	0x	s	-	-	-	-	-	-	-	40	hsc	-	½	107mm Mtr (US)	
<i>U.S. Multiple Rocket Launchers</i>																	
T27 on Truck	43-45	varies	7w	s	-	-	-	-	-	-	-	10-42	h	f	-	Light, 1 fire unit	
T34 Calliope on M4	aug44-45	varies	6t	5 - 3	6	3	10	-1	-	-	-	-	-	d	-	75mm/L40 R (US)	
			6t		-	-	-	-	-	-	-	10-42	h	-	-	Light, 6 fire units	
M17 Whiz-bang on M4	44-45	varies	6t	5 - 3	6	3	10	-1	-	-	-	-	-	d	-	75mm/L40 R (US)	
			12he		2	6	+0		-	-	-	-	-	-	-	Fires one turn; 182mm Rckt (US)	
T66 Honeycomb	may45-50	varies	0x	s	-	-	-	-	-	-	-	12-48	h	f	1	Light, 3 fire units	

Move Notes:

- t Tracked
- w Wheeled
- ht Half-tracked
- a Amphibious
- x Towed
- p Airmobile
- s Skis
- n Helicopter (nap of earth move rating)

Armor Notes:

- s Soft vehicle, or soft vehicle facing
- no armor modifier vs. h-class weapons
- A +1 armor modifier vs. h-class weapons
- B +2 armor modifier vs. h-class weapons
- C +3 armor modifier vs. h-class weapons
- D +4 armor modifier vs. h-class weapons
- E +5 armor modifier vs. h-class weapons
- F +6 armor modifier vs. h-class weapons

Gun Notes:

- h h-class
- he he-class
- @ Antiaircraft

Missile Notes:

- 1 1st generation missile
- 2 2nd generation missile
- 3 3rd generation missile
- † Top-attack missile
- u Has unlimited missile ammo
- A All-aspect surface-to-air missile
- R Rear-aspect surface-to-air missile

Ind Fire Ammo Notes:

- h Conventional HE ammo
- s Smoke (both normal and incendiary)
- c Chemical
- i ICM (improved conventional munitions)
- l Laser-guided projectiles
- g GPS-guided projectiles
- m Artillery delivered mines

Equipment Notes:

- s Weapon stabilization
- ss Advanced weapon stabilization
- t 1st generation thermal sights
- 2 2nd generation thermal sights
- i Infrared or image intensification sights
- n NBC system
- c CTV
- v IVIS
- o Open-topped vehicle
- f Limited gun traverse - forward firing
- r Limited gun traverse - rearward firing
- d smoke dischargers (pre-1950 only)

D.4 Infantry Data Chart, Pre-1950

See end of chart for explanation of notations.

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			---LAW---			---MAW---			---SAM---			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
France																		
Infantry	40	17	4	+0	2 / 4	4	2he	1	C	-	-	-	-	-	-	1	1	Improvised/None
MG Plt	40	18	4	+1	(2 / 3)	6	2he	1	C	-	-	-	-	-	-	1	1	Improvised/None
Motorcycle Infantry #1	40	18	8w	+1	2 / 3	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
Motorcycle Infantry #2	40	19	8w	+1	2 / 4	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
Cavalry #1	40	14	10	-1	2 / 4	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
Cavalry #2	40	17	10	+0	2 / 4	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
Dragoon Infantry	40	19	4	+1	2 / 4	4	2he	1	C	-	-	-	-	-	-	1	1	Improvised/None
Chasseur Infantry	40	19	4	+1	2 / 4	4	2he	1	C	-	-	-	-	-	-	1	1	Improvised/None
Germany																		
Infantry	39-41	18	4	+1	2 / 3	4	2he	1	C	-	-	-	-	-	-	1	1	Improvised/None
	42	24	4	+1	2 / 4	4	2he	1	C	4h	1	C	-	-	-	1	1	Improvised/AT R-Gr
	43-jul43	21	4	+0	2 / 4	4	2he	1	C	4h	1	C	-	-	-	1	1	Improvised/AT R-Gr
	aug43-jun44	24	4	+0	2 / 4	4	4h	1	C	8h	1	C	-	-	-	1	1	AT R-Gr/Panzerfaust
	jul44-45	26	4	+1	2 / 4	4	4h	1	C	8h	1	C	-	-	-	1	1	AT R-Gr/Panzerfaust
Bicycle Infantry	39-41	18	4w	+1	2 / 3	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
	42	24	4w	+1	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	-	Improvised/AT R-Gr
	43-jul43	21	4w	+0	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	-	Improvised/AT R-Gr
	aug43-jun44	24	4w	+0	2 / 4	4	4h	1	C	8h	1	C	-	-	-	-	-	AT R-Gr/Panzerfaust
	jul44-45	26	4w	+1	2 / 4	4	4h	1	C	8h	1	C	-	-	-	-	-	AT R-Gr/Panzerfaust
MG Plt	39-jul43	18	4	+1	(2 / 3)	6	2he	1	C	-	-	-	-	-	-	1	1	Improvised/None
	aug43-45	24	4	+1	(2 / 3)	6	2he	1	C	8h	1	C	-	-	-	1	1	Improvised/Panzerfaust
Heavy MG Plt	jul44-45	26	4	+1	(3 / 4)	6	2he	1	C	8h	1	C	-	-	-	1	1	Improvised/Panzerfaust
Motorized PzGr	39	18	4	+1	2 / 3	4	2he	1	C	-	-	-	-	-	-	1	1	Improvised/None
	40-41	20	4	+1	3 / 4	4	2he	1	C	-	-	-	-	-	-	1	1	Improvised/None
	42-jul43	24	4	+1	3 / 4	4	2he	1	C	4h	1	C	-	-	-	1	1	Improvised/AT R-Gr
	aug43-45	27	4	+1	3 / 4	4	4h	1	C	8h	1	C	-	-	-	1	1	AT R-Gr/Panzerfaust
Motorized PzGr Sturm	Oct44-45	22	4	+0	1 / 4	4	4h	1	C	8h	1	C	-	-	-	1	1	AT R-Gr/Panzerfaust
Motorized Pioneer	39-41	17	4	+0	2 / 4	4	2he	1	C	-	-	-	-	-	-	1	1	Improvised/None
	42-jul43	24	4	+1	2 / 4	4	2he	1	C	4h	1	C	-	-	-	1	1	Improvised/AT R-Gr
	aug43-sep44	25	4	+1	2 / 4	4	2he	1	C	8h	1	C	-	-	-	1	1	Improvised/Panzerfaust
Armored PzGr	42-jul43	24	4	+1	3 / 4	4	2he	1	C	4h	1	C	-	-	-	1	1	Improvised/AT R-Gr
	aug43-45	27	4	+1	3 / 4	4	4h	1	C	8h	1	C	-	-	-	1	1	AT R-Gr/Panzerfaust
Recon Team	42-jul43	17	4	-1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	½	½	Improvised/AT R-Gr
	aug43-45	20	4	-1	2 / 3	4	4h	1	C	8h	1	C	-	-	-	½	½	AT R-Gr/Panzerfaust

Infantry Stand Type	---Anti-Infantry---						-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
	Period	Points	Move	AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Armored Pioneer	42	24	4	+1	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	43-jul43	24	4	+1	2 / 5	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	aug43-45	27	4	+1	2 / 5	4	4h	1	C	8h	1	C	-	-	-	-	1	AT R-Gr/Panzerfaust
Volksgrenadier	44-45	26	4	+1	2 / 4	4	4h	1	C	8h	1	C	-	-	-	-	1	AT R-Gr/Panzerfaust
VolksGr Sturm SMG	44-45	23	4	+0	1 / 5	4	4h	1	C	8h	1	C	-	-	-	-	1	AT R-Gr/Panzerfaust
VolksGr Sturm AR	44-45	23	4	-1	2 / 6	4	4h	1	C	8h	1	C	-	-	-	-	1	AT R-Gr/Panzerfaust
Bicycle VolksGr	44-45	26	4w	+1	2 / 4	4	4h	1	C	8h	1	C	-	-	-	-	-	AT R-Gr/Panzerfaust
Bicycle VGr Sturm SMG	44-45	23	4w	+0	1 / 5	4	4h	1	C	8h	1	C	-	-	-	-	-	AT R-Gr/Panzerfaust
Bicycle VGr Sturm AR	44-45	23	4w	-1	2 / 6	4	4h	1	C	8h	1	C	-	-	-	-	-	AT R-Gr/Panzerfaust
Motorcycle Rifle	39	18	8w	+1	2 / 3	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
	40	19	8w	+1	2 / 4	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
	41-Jul43	20	8w	+1	3 / 4	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
	aug43-45	26	8w	+1	3 / 4	4	2he	1	C	8h	1	C	-	-	-	-	-	Improvised/Panzerfaust
Motorcycle MG Plt	40-jul43	18	8w	+1	(2 / 3)	6	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
	aug43-45	24	8w	+1	(2 / 3)	6	2he	1	C	8h	1	C	-	-	-	-	-	Improvised/Panzerfaust
Escort Infantry	jun44-45		22	4	+0	1 / 5	4	2he	1	C	8h	1	C	-	-	-	1	Improvised/Panzerfaust
Panzerschreck Team	may43-45		18	4	+0	0 / 2	4	2he	1	C	8h	3	2	-	-	-	½	Improvised/Panzerschrek
Poland																		
Infantry	38-39	29	4	+0	2 / 3	4	2he	1	C	1	1	4	-	-	-	-	1	Improvised/AT Rifle
MG Plt	38-39	19	4	+1	3 / 3	6	2he	1	C	-	-	-	-	-	-	-	1	Improvised/None
MG Tachanka	38-39	19	5w	+1	(3 / 3)	6	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
Cavalry	38-39	27	10	-1	2 / 4	4	2he	1	C	1	1	4	-	-	-	-	1	Improvised/AT Rifle
Bicycle Infantry	38-39	14	4w	-1	2 / 4	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
Motorized Cavalry	38-39	27	4	-1	2 / 4	4	2he	1	C	1	1	4	-	-	-	-	1	Improvised/AT Rifle
Motorcycle Infantry	38-39	14	8w	-1	2 / 4	4	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
Soviet Union / Russia																		
Rifle Infantry	39-jul41	22	4	+1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	aug41-41	20	4	+0	2 / 3	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	42-mar42	21	4	+0	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	apr42-42	24	4	+1	3 / 4	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	43-aug43	26	4	+1	3 / 4	4	6h	1	C	4h	1	C	-	-	-	-	1	AT H-Gr/AT R-Gr
	sep43-48	23	4	+0	2 / 4	4	6h	1	C	4h	1	C	-	-	-	-	1	AT H-Gr/AT R-Gr
	49	25	4	+0	2 / 4	4	6h	1	C	8h	1	1	-	-	-	-	1	AT H-Gr/RPG-2
SMG Infantry	42	13	4	+0	0 / 4	2	2he	1	C	-	-	-	-	-	-	-	1	Improvised/None
	43-48	15	4	+0	0 / 4	2	6h	1	C	-	-	-	-	-	-	-	1	AT H-Gr/None
	49	21	4	+0	0 / 4	2	6h	1	C	8h	1	1	-	-	-	-	1	AT H-Gr/RPG-2
Recon Infantry	39-45	16	4	+0	1 / 2	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
MG Plt	40-43	18	4	+1	(2 / 3)	6	2he	1	C	-	-	-	-	-	-	1	Improvised/None	
	43-45	23	4	+1	(2 / 3)	6	2he	1	C	6h	1	C	-	-	-	1	Improvised/AT H-Gr	
LMG Plt	jun42-42	17	4	+0	2 / 4	4	2he	1	C	-	-	-	-	-	-	1	Improvised/None	
	43-45	22	4	+0	2 / 4	4	2he	1	C	6h	1	C	-	-	-	1	Improvised/AT H-Gr	
Motorcycle Infantry #1	jul40-45	17	8w	+0	2 / 4	4	2he	1	C	-	-	-	-	-	-	-	Improvised/None	
Motorcycle Infantry #2	jul40-42	21	8w	+0	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	Improvised/AT R-Gr	
	43-45	23	8w	+0	2 / 4	4	6h	1	C	4h	1	C	-	-	-	-	AT H-Gr/AT R-Gr	
Motorcycle Team	39-jul41	13	8w	-1	2 / 3	4	2he	1	C	-	-	-	-	-	-	-	Improvised/None	
Motorcycle MG Plt	40-43	18	8w	+1	(2 / 3)	6	2he	1	C	-	-	-	-	-	-	-	Improvised/None	
	43-45	23	8w	+1	(2 / 3)	6	2he	1	C	6h	1	C	-	-	-	-	Improvised/AT H-Gr	
Brigade Infantry #1	sep41-43	22	4	+1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
Brigade Infantry #2	oct41-43	20	4	+0	2 / 3	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
Brigade Infantry #3	apr42-43	22	4	+1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
Brigade Infantry #4	aug42-43	22	4	+1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
Mounted Infantry	apr41-45	17	10	+0	2 / 4	4	2he	1	C	-	-	-	-	-	-	-	Improvised/None	
Mounted Infantry Team	aug42-45	12	10	+0	1 / 2	4	2he	1	C	-	-	-	-	-	-	-	Improvised/None	
ATR Team	dec41-49	31	4	+0	0 / 4	1	6h	1	C	2	3	4	-	-	-	½	AT H-Gr/AT Rifle	
Motorized Infantry #1	nov39-jul40	22	4	+1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
	aug41-41	22	4	+1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
	dec41-43	22	4	+1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
Motorized AT Team	aug41-sep41	28	4	+0	1 / 6	4	4he	1	C	4he	3	1	-	-	-	½	Early AT H-Gr/Flamethrower	
Motorized SMG	nov43-45	17	4	+0	1 / 5	4	2he	1	C	-	-	-	-	-	-	1	Improvised/None	
Motorized Infantry #2	jul40-jul41	22	4	+1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
	jul41-41	21	4	+0	2 / 4	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
Motorized Infantry #3	apr42-45	22	4	+1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
Pioneer	39-42	20	4	-1	2 / 5	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	
	43-48	23	4	+0	1 / 5	4	6h	1	C	4h	1	C	-	-	-	1	AT H-Gr/AT R-Gr	
	49	25	4	+0	1 / 6	4	6h	1	C	8h	1	1	-	-	-	1	AT H-Gr/RPG-2	
Flamethrower Team	41-45	21	4	+0	0 / 5	2	4he	3	1	-	-	-	-	-	-	½	Flamethrower/None	
Cavalry	39-42	17	10	-1	2 / 3	4	2he	1	C	4h	1	C	-	-	-	-	Improvised/AT R-Gr	
	43-45	19	10	-1	2 / 3	4	6h	1	C	4h	1	C	-	-	-	-	AT H-Gr/AT R-Gr	
Cavalry SMG	feb43-45	20	10	+0	1 / 3	4	6h	1	C	4h	1	C	-	-	-	-	AT H-Gr/AT R-Gr	
MG Tachanka	39-45	18	5w	+1	(2 / 3)	6	2he	1	C	-	-	-	-	-	-	-	Improvised/None	
Cavalry Pioneer	39-45	20	10	-1	2 / 5	4	2he	1	C	4h	1	C	-	-	-	-	Improvised/AT R-Gr	
Cavalry Motor Rifle	39-jul41	24	4	+1	2 / 4	4	2he	1	C	4h	1	C	-	-	-	1	Improvised/AT R-Gr	

Infantry Stand Type				---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
	Period	Points	Move	AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Light Cavalry	jul41-41	18	10	-1	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	-	Improvised/AT R-Gr
LC MG Tachanka	jul41-41	20	5w	+1	(3 / 4)	6	2he	1	C	-	-	-	-	-	-	-	-	Improvised/None
Cavalry ATR Team	dec41-45	31	10	+0	0 / 4	1	6h	1	C	2	3	4	-	-	-	-	-	AT H-Gr/AT Rifle
United Kingdom																		
Infantry	38-feb41	26	4	+0	2 / 4	4	2he	1	C	0	1	4	-	-	-	-	1	Improvised/Boys AT Rifle
	mar42-jun43	27	4	+0	2 / 4	4	4h	1	C	0	1	4	-	-	-	-	1	AT R-Gr/Boys AT Rifle
	Jul43-49	22	4	+0	2 / 4	4	2he	1	C	6h	1	1	-	-	-	-	1	Improvised/PIAT
ATR Team	38-jun43	19	4	+0	1 / 1	4	4h	1	C	0	3	4	-	-	-	-	½	AT R-Gr/Boys AT Rifle
Recce Team	38-jun43	13	4	-1	2 / 3	4	2he	1	C	-	-	-	-	-	-	-	½	Improvised/None
	Jul43-45	18	4	-1	2 / 3	4	2he	1	C	6h	1	1	-	-	-	-	½	Improvised/PIAT
Motor Infantry	40-feb41	26	4	+0	2 / 4	4	2he	1	C	0	3	4	-	-	-	-	1	Improvised/Boys AT Rifle
	mar41-jun43	27	4	+0	2 / 4	4	4h	1	C	0	3	4	-	-	-	-	1	AT R-Gr/Boys AT Rifle
	Jul43-45	22	4	+0	2 / 4	4	2he	1	C	6h	1	1	-	-	-	-	1	Improvised/PIAT
MG Plt	39-jun43	18	4	+1	(2 / 3)	6	2he	1	C	-	-	-	-	-	-	-	1	Improvised/None
	Jul43-45	23	4	+1	(2 / 3)	6	2he	1	C	6h	1	1	-	-	-	-	1	Improvised/PIAT
Parachute Infantry	42-jun43	26	4	-1	2 / 6	4	4h	1	C	0	3	4	-	-	-	-	1	AT R-Gr/Boys AT Rifle
	Jul43-45	21	4	-1	2 / 6	4	2he	1	C	6h	2	1	-	-	-	-	1	Improvised/PIAT
Glider Infantry	43-jun43	21	4	+0	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	Jul43-jun44	22	4	+0	2 / 4	4	2he	1	C	6h	1	1	-	-	-	-	1	Improvised/PIAT
	Jul44-45	23	4	+1	2 / 3	4	2he	1	C	6h	1	1	-	-	-	-	1	Improvised/PIAT
Glider Weapons	43-jun44	20	4	+1	(2 / 2)	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
Commando Assault	43-may44	18	4	-1	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	Jun44-45	21	4	+0	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
Commando Weapons	43-jun43	23	4	+1	(3 / 3)	6	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	Jul43-45	24	4	+1	(3 / 3)	6	2he	1	C	6h	1	1	-	-	-	-	1	Improvised/PIAT
United States																		
Infantry Rifle	37-40	17	4	+0	2 / 4	4	2he	1	C	-	-	-	-	-	-	-	1	Improvised/None
	41-nov42	21	4	+0	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	Nov42-49	28	4	+1	2 / 4	4	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
Infantry Weapons	39	18	4	+1	(2 / 3)	4	2he	1	C	-	-	-	-	-	-	-	1	Improvised/None
	41-nov42	22	4	+1	(2 / 3)	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	Nov42-jul43	26	4	+1	(2 / 3)	4	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
	Jul43-may45	29	4	+1	(3 / 4)	4	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
	Jun45-49	54	4	+1	(3 / 4)	4	7h	2	3	8h	2	2	-	-	-	-	1	M18 57mm RR/M20 75mm RR
Infantry MG	41-feb44	24	4	+1	(3 / 4)	6	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	Feb44-49	29	4	+1	(3 / 4)	6	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
Infantry Engineer	apr42-jun43	18	4	+1	(2 / 3)	6	2he	1	C	-	-	-	-	-	-	-	1	Improvised/None
	Jul43-49	27	4	+1	(2 / 4)	6	2he	1	C	6h	1	2	-	-	-	-	1	Improvised/2.36" Bazooka

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Armored Infantry	nov42-49	26	4	+1	2 / 3	4	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
Armored Infantry MG	41-feb44	24	4	+1	(3 / 4)	6	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	feb44-49	29	4	+1	(3 / 4)	6	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
Armored Engineer	42-49	27	4	+1	(2 / 4)	6	2he	1	C	6h	1	2	-	-	-	-	1	Improvised/2.36" Bazooka
Parachute Infantry	43-45	27	4	+1	2 / 4	4	2he	1	C	6h	1	2	-	-	-	-	1	Improvised/2.36" Bazooka
	45	25	4	+1	2 / 3	4	2he	1	C	6h	1	2	-	-	-	-	1	Improvised/2.36" Bazooka
Parachute MG Team	42-45	27	4	+1	2 / 4	4	2he	1	C	6h	1	2	-	-	-	-	½	Improvised/2.36" Bazooka
Glider Infantry	42-45	26	4	+0	2 / 4	4	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
Glider Weapons	42-45	26	4	+1	(3 / 3)	6	2he	1	C	6h	1	2	-	-	-	-	1	Improvised/2.36" Bazooka
Glider MG	42-45	28	4	+1	(3 / 4)	6	2he	1	C	6h	1	2	-	-	-	-	1	Improvised/2.36" Bazooka
Special Service Force	43-44	25	4	-1	2 / 7	4	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
Ranger	43-45	26	4	+0	2 / 4	4	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
Marine Rifle	41-mar43	22	4	+0	2 / 5	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	apr43-43	24	4	+1	2 / 4	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	44-apr44	28	4	+1	2 / 4	4	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
	may44-49	29	4	+1	2 / 5	4	4h	1	C	6h	1	2	-	-	-	-	1	AT R-Gr/2.36" Bazooka
Marine Weapons	41-mar43	20	4	+0	2 / 3	4	2he	1	C	4h	1	C	-	-	-	-	1	Improvised/AT R-Gr
	apr43-43	25	4	+1	(2 / 3)	4	2he	1	C	6h	1	2	-	-	-	-	1	Improvised/2.36" Bazooka
	44-apr44	25	4	+1	(2 / 3)	4	2he	1	C	6h	1	2	-	-	-	-	1	Improvised/2.36" Bazooka
Marine MG	41-mar43	22	4	+1	(2 / 3)	6	2he	1	C	4h	1	C	-	-	-	-	½	Improvised/AT R-Gr
	apr43-43	24	4	+1	(3 / 4)	6	2he	1	C	4h	1	C	-	-	-	-	½	Improvised/AT R-Gr
	44-apr44	28	4	+1	(3 / 4)	6	2he	1	C	6h	1	2	-	-	-	-	½	Improvised/2.36" Bazooka
	may44-49	28	4	+1	3 / 4	4	2he	1	C	6h	1	2	-	-	-	-	½	Improvised/2.36" Bazooka
Marine Engineer	41-42	15	4	-1	2 / 5	4	2he	1	C	-	-	-	-	-	-	-	1	Improvised/None
	43-49	24	4	-1	2 / 6	4	2he	1	C	6h	1	2	-	-	-	-	1	Improvised/2.36" Bazooka

General Infantry Notes:

An infantry stand whose ROF is listed in parenthesis has its ROF halved (round down) if it moves in the same turn it fires. For example: (2 / 3)

A LAW or MAW whose ROF is followed by an asterisk is a missile. Apply the normal missile generation restrictions for movement. For example: 1*

Move Notes:

- t Tracked
- w Wheeled
- ht Half-tracked
- a Amphibious
- x Towed
- p Airmobile
- s Skis
- n Helicopter (nap of earth move rating)

Gun Notes:

- h h-class
- he he-class
- @ Antiaircraft

Missile Notes:

- 1 1st generation missile
- 2 2nd generation missile
- 3 3rd generation missile
- † Top-attack missile
- u Has unlimited missile ammo
- A All-aspect surface-to-air missile
- R Rear-aspect surface-to-air missile

Equipment Notes:

- s Weapon stabilization
- ss Advanced weapon stabilization
- t 1st generation thermal sights
- 2 2nd generation thermal sights
- i Infrared or image intensification sights
- n NBC system
- c CTV
- v IVIS
- o Open-topped vehicle
- f Limited gun traverse - forward firing
- r Limited gun traverse - rearward firing
- d smoke dischargers (pre-1950 only)

Armor Notes:

- s Soft vehicle, or soft vehicle facing
- no armor modifier vs. h-class weapons
- A +1 armor modifier vs. h-class weapons
- B +2 armor modifier vs. h-class weapons
- C +3 armor modifier vs. h-class weapons
- D +4 armor modifier vs. h-class weapons
- E +5 armor modifier vs. h-class weapons
- F +6 armor modifier vs. h-class weapons

Ind Fire Ammo Notes:

- h Conventional HE ammo
- s Smoke (both normal and incendiary)
- c Chemical
- i ICM (improved conventional munitions)
- l Laser-guided projectiles
- g GPS-guided projectiles
- m Artillery delivered mines

D.5 Aircraft Data Chart, Pre-1950

See end of chart for explanation of notations.

Aircraft	Avail Date	Load Rating	GP Bombs	Cluster Bombs	Rockets	Missiles	MG Strafe	Cannon Strafe	A-10 Strafe	Armored
France										
Bloch 131 (reconnaissance bomber)	38-40	1	x							
Breguet 691 (ground attack)	39-40	1	x						1	
Italy										
Ca.309	39+	1	x				2			
Ca.310	38+	1	x				2			
Ca.313	40-?	1	x				2			
Ca.314C	40?+	1	x				2			
Ba.65	36-41	1	x				2			
Germany										
Ju-87A,B Stuka	36-45	1	x				2			
Ju-87D Stuka	41-45	2	x				2			
Ju-87G Stuka	43-45	0					2	1		x
FW-190 A, D	42-45	1	x					1		
FW-190F, G	43-45	1	x					1		
Bf-109E, F, G	39-45	0.5	x					1		
Bf-110C, E	41-45	1	x					1		
Me-210/410	43-45	2	x					1		
Me-262	44-45	1	x					1		
Me-262A-2	45	2	x					1		
Ju-88A, C	39-51	5	x				2			
Ju-88P	42-45	0						1		x
Hs-123	36-44	1	x				2			
Hs-129	42-45	0						1		x
Poland										
PZL.23 Karas (light bomber)	36-46	1	x				2			
PZL.43 Karas (light bomber)	37-46	1	x				2			
Soviet Union / Russia										
P-39	43-45		x					1		
P-63 (rare)	44-45	1	x					1		
Il-2 Sturmovik	41-42	1	x		x			1		
Il-2 Sturmovik	42	1	x		x			1		
Il-2M Sturmovik	43-45	1	x	x	x			1		
Il-10	45-56	1	x	x	x			1		
Su-2	41-42	1	x		x		2			
I-16	36-43	1	x		x		2			
La-5	43-45	1	x		x			1		
LaGG-3	41-45	0	x		x			1		
Pe-2	41-46?	3	x				2			
R-5	31-44	0.5	x				2			
U-2	29-53+	0.5	x				2			

Aircraft	Avail Date	Load Rating	GP Bombs	Cluster Bombs	Rockets	Missiles	MG Strafe	Cannon Strafe	A-10 Strafe	Armored
<i>United Kingdom</i>										
Beaufighter	42-60	1	X		X			1		
Hurricane IIB	41-45	1	X					2		
Hurricane IID	41-45	1	X		X			1		
Typhoon	43-45	2	X		X			1		
Tempest V	44-46?	2	X		X			1		
P-40	41-44	2	X				2			
Battle	37-41	1	X				2			
Spitfire VC	41-45	0.5	X					1		
Spitfire IX	43-45	1	X					1		
Lysander	39-40	0.5	X				2			
<i>United States</i>										
A-36 Apache	42-44	1	X				2			
P-47D Thunderbolt	44-45	2	X		X		2			
A-20 Havoc	41-45	4	X		X		2			
P-38J, L	43-45	3	X		X			1		
P-39	42-43	0.5	X					1		
P-40	41-44	2	X				2			
P-51B, C	43-45	1	X				2			
F4U Corsair	43+	2	X		X		2			
P-51D	44-53	2	X		X		2			

Notes:

- x the aircraft can use this weapon type or has this property
- 1 the aircraft can make one strafing attack of this type
- 2 the aircraft can make two strafing attacks of this type

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Appendix E: Army Lists

1950 Onward

These Army Lists are intended to be representative, and to act as a starting point to allow gamers to quickly assemble orders of battle for scenarios. Although we tried to be fairly comprehensive, they are not definitive. In reality most armies have at least two generations of equipment in service at any given time. There are usually variations on the standard organizational scheme, even in peacetime, and war tends to increase that variation. If an army is in a period of organizational transition, there may be wholly different organizations of the same unit type in service simultaneously. For example, in late 1942, Soviet infantry divisions had no less than three different sets of tables of organization and equipment (TO&Es) in effect simultaneously. Indeed, some armies have never fully settled on standard organizations for tactical and operational units.

Support units are also problematic; such information can be difficult to pin down, and sometimes armies lack the equipment that they list in their TO&Es. Referees are encouraged to add air defense and engineering assets as they deem appropriate.

In the Army Lists, the troop qualities of various organizations of the army are listed, the Artillery Accuracy and Friction Response number or numbers for the army are listed, and Combat Formations available for the army and period are presented. After the combat formations section of each army list comes the Attachments section, followed by the Artillery Support Groups section, and finally the Equipment Notes section.

Combat Formations are composed of Base supporting stands and Combat Units. For western-style armies Combat Formations are usually battalions, and for Russian-style and Third World armies they are usually regiments or brigades. Base stands and stands listed in parentheses are not subject to cohesion. At the end of each combat formation entry is a stand inventory totalling the number of each type of stand needed to field that combat formation as listed. The army lists are generally based on tables of organization and equipment (TO&E), so it should be noted that units in the field could have fewer stands than given in the lists. For instance, during World War II, German and Soviet units sometimes got as low as 30% of their TO&E strength before being pulled out of combat.

As stated in Rule 6.4, stands and Combat Units listed as “recon” on the Army lists are not subject to cohesion.

Notes and optional items are included in footnotes or enclosed in square brackets. For example, [optional +3 Light Trucks].

For cases where a unit varied in the types of equipment it has, an enumerative term is used in the list, to represent the different possible equipments. The enumerative term is printed in small caps, such as SCOUT VEHICLE. The Equipment Notes section of the army list gives the definitions of the enumerative term, listing what types of equipment it represents, as well as date ranges of availability in some instances. MBT is the most commonly used enumerative term.

For example, in the Germany (West/United) Army 1980s+ army list, AA VEHICLE is defined as: Roland, Gepard.

Australian Army 1966–2015

Quality

1966-1990: 70% Good; 20% Excellent; 10% Superb
1991+: 75% Average; 20% Good; 5% Excellent

Artillery Accuracy & Friction Response

1966-1979: Artillery Accuracy 4+; Response 2+
1980-1995: Artillery Accuracy 3+; Response 2+
1996+: Artillery Accuracy 2+; Response 2+

Combat Formations

Armored Regiment 1966 – 2002

- **Base**
 - 2 Recon Team stands + 2 M113
 - 1 AA UNIT + 1 M113
- **4 Armored Squadrons**
 - 3 MBT
- **Stand Inventory**
 - 2 Recon Team stands
 - 2 M113
 - 1 AA UNIT
 - 1 M113
 - 12 MBT

Mechanized Battalion 1976 – 1985

- **Base**
 - 2 Land Rover w/106mm RR
 - 1 Land Rover w/106mm RR
 - 2 Recon Team stands + 2 M113
 - 2 M125 SP 81mm Mtr
- **3 Mechanized Infantry Companies**
 - 3 Mech Infantry stands + 3 M113
- **Stand Inventory**
 - 3 Land Rover w/106mm RR
 - 2 Recon Team stands
 - 11 M113
 - 2 M125 SP 81mm Mtr
 - 9 Mech Infantry stands

Mechanized Battalion 1986 – 2015

- **Base**
 - 2 Mech AT Team stands + 2 M113
 - 1 Land Rover w/106mm RR
 - 2 Recon Team stands + 2 M113
 - 2 M125 SP 81mm Mtr
- **3 Mechanized Infantry Companies**
 - 3 Mech Infantry stands + 3 M113
- **Stand Inventory**
 - 2 Mech AT Team stands
 - 13 M113
 - 1 Land Rover w/106mm RR
 - 2 Recon Team stands
 - 2 M125 SP 81mm Mtr
 - 9 Mech Infantry stands

Light Infantry Battalion 1955 – 1985

- **Base**
 - 2 DFS Weapons Team stands + 2 Land Rovers
 - 2 Land Rover w/106mm RR
 - 2 Recon Team stands

- 2 81mm Mtr + 2 Land Rovers
- 1 Pioneer stand + 1 Medium Truck

4 Light Infantry Companies

- 2 Infantry stands; 1 Infantry w/MAW stand

Stand Inventory

- 2 DFS Weapons Team stands
- 4 Land Rovers
- 2 Land Rover w/106mm RR
- 2 Recon Team stands
- 2 81mm Mtr
- 1 Pioneer stand
- 1 Medium Truck
- 8 Infantry stands
- 4 Infantry w/MAW stand

Light Infantry Battalion 1986 – 2015

- **Base**
 - 2 DFS Weapons Team stands + 2 Land Rovers
 - 2 Inf AT Team stands + 2 Land Rovers
 - 2 Recon Team stands
 - 2 81mm Mtr + 2 Land Rovers
 - 1 Pioneer stand + 1 Medium Truck
- **4 Light Infantry Companies**
 - 2 Infantry stands; 1 Infantry w/MAW stand
- **Stand Inventory**
 - 2 DFS Weapons Team stands
 - 2 Inf AT Team stands
 - 6 Land Rovers
 - 2 Recon Team stands
 - 2 81mm Mtr
 - 1 Pioneer stand
 - 1 Medium Truck
 - 8 Infantry stands
 - 4 Infantry w/MAW stand

Motorized Infantry Battalion 1976 – 1985

- **Base**
 - 2 DFS Weapons Team stands + 2 Land Rovers
 - 2 Land Rover w/106mm RR
 - 2 Recon Team stands
 - 2 81mm Mtr + 2 Land Rovers
 - 1 Pioneer stand + 1 Medium Truck
- **3 or 4 Motorized Infantry Companies**
 - 3 Motorized Infantry stands + 3 Medium Trucks
- **Stand Inventory**
 - 2 DFS Weapons Team stands
 - 4 Land Rovers
 - 2 Land Rover w/106mm RR
 - 2 Recon Team stands
 - 2 81mm Mtr
 - 1 Pioneer stand
 - 9 or 12 Motorized Infantry stands
 - 10 or 13 Medium Trucks

Motorized Infantry Battalion 1986 – 2004

- **Base**
 - 2 DFS Weapons Team stands + 2 Land Rovers
 - 2 Motorized AT Team stands + 2 Land Rovers
 - 2 Recon Team stands
 - 2 81mm Mtr + 2 Land Rovers
 - 1 Pioneer stand + 1 Medium Truck
- **3 or 4 Motorized Infantry Companies**
 - 3 Motorized Infantry stands + 3 Medium Trucks
- **Stand Inventory**
 - 2 DFS Weapons Team stands
 - 6 Land Rovers

- 2 Motorized AT Team stands
- 2 Recon Team stands
- 2 81mm Mtr
- 1 Pioneer stand
- 9 or 12 Motorized Infantry stands
- 10 or 13 Medium Trucks

Motorized Infantry Battalion 2005 – 2015

- **Base**
 - 2 DFS Weapons Team stands + 2 Bushmaster APCs
 - 2 Motorized AT Team stands + 2 Bushmaster APCs
 - 2 Recon Team stands
 - 2 81mm Mtr + 2 Bushmaster APCs
 - 1 Pioneer stand + 1 Bushmaster APC
- **3 or 4 Motorized Infantry Companies**
 - 3 Motorized Infantry stands + 3 Bushmaster APCs
- **Stand Inventory**
 - 2 DFS Weapons Team stands
 - 2 Motorized AT Team stands
 - 2 Recon Team stands
 - 2 81mm Mtr
 - 1 Pioneer stand
 - 9 or 12 Motorized Infantry stands
 - 16 or 19 Bushmaster APCs

Commando Regiment

- **Base**
 - 2 81mm Mtr + 2 ATV
 - 2 Motorcycle Recon Team stands
 - 1 Commando AT Team stand + 1 ATV
- **3 Commando Companies**
 - 3 Commando stands
- **Stand Inventory**
 - 2 81mm Mtr
 - 2 Motorcycle Recon Team stands
 - 1 Commando AT Team stand
 - 3 ATV
 - 9 Commando stands

Cavalry Regiment 1950 – 2015

- **3 Cavalry Squadrons (all same type)**
 - **'50-'65**
 - 3 Ferret Scout Cars
 - **'66-'73**
 - 1 Saracen
 - 1 Saladin
 - 1 Ferret Scout Car
 - 1 recon Infantry stand
 - **'72-'77**
 - 1 M113 FSV
 - 2 M113 + 2 Recon Team stands
 - **'78-'86**
 - 1 M113 MRV
 - 2 M113 + 2 Recon Team stands
 - **'86-'91**
 - 3 M113 + 3 Recon Team stands
 - [optional 1 M125 SP 81mm Mtr]
 - **'92-'05**
 - 3 ASLAV-25
 - 1 ASLAV-PC w/MG + 1 Recon Team stand
 - **'06-'15**
 - 3 ASLAV-25
 - 1 ASLAV-PC w/AGL + 1 Recon Team stand

Stand Inventory

- If '50-'65:
 - 3 Ferret Scout Cars
- If '66-'73:
 - 1 Saracen
 - 1 Saladin
 - 1 Ferret Scout Car
 - 1 recon Infantry stand
- If '72-'77:
 - 1 M113 FSV
 - 2 M113
 - 2 Recon Team stands
- If '78-'86:
 - 1 M113 MRV
 - 2 M113
 - 2 Recon Team stands
- If '86-'91:
 - 3 M113
 - 3 Recon Team stands
 - [optional 1 M125 SP 81mm Mtr]
- If '92-'05:
 - 3 ASLAV-25
 - 1 ASLAV-PC w/MG
 - 1 Recon Team stand
- If '06-'15:
 - 3 ASLAV-25
 - 1 ASLAV-PC w/AGL
 - 1 Recon Team stand

Attachments

- **Armored Squadron** [only if no full armored regiment is employed]
 - 3 MBT
- **Mechanized Infantry Company**
 - '86-'15: 3 Mech Infantry stands + 3 M113
- **Motorized Infantry Company**
 - '76-'04: 3 Motorized Infantry stands + 3 Medium Trucks
 - '05-'15: 3 Motorized Infantry stands + 3 Bushmaster APCs
- **Light Infantry Company**
 - 2 Infantry stands; 1 Infantry w/MAW stand
- **Cavalry Squadron**
 - '50-'65: 3 Ferret Scout Cars
 - '66-'73: 1 Saracen; 1 Saladin; 1 Ferret Scout Car; 1 recon Infantry stand
 - '72-'77: 1 M113 FSV; 2 M113 + 2 Recon Team stands;
 - '78-'86: 1 M113 MRV; 2 M113 + 2 Recon Team stands
 - '86-'91: 3 M113 + 3 Recon Team stands; [optional 1 M125 SP 81mm Mtr]
 - '92-'05: 3 ASLAV-25; 1 ASLAV-PC w/MG + 1 Recon Team stand
 - '06-'15: 3 ASLAV-25; 1 ASLAV-PC w/AGL + 1 Recon Team stand
- **Commando Company**
 - 3 Commando stands
- **Light AA Battery:**
 - 1 Towed Rapier + 1 Light Truck or 1 M113
- **Very Light AA Battery**
 - 4 AA UNITS + 4 Land Rover or 4 M113
- **Special Forces Troop:**
 - '66-'15: 2 Dismount SAS Team stands [optional insertion by parachute or boat]
 - '87-'15: 2 Mounted SAS Team stands + 2 LRPV
- **APC Troop**
 - '76-'04: 4 M113
 - '05-'15: 4 Bushmaster APCs

- **APC Squadron**
 - 3 APC Troops
 - '76-'04: 4 M113
 - '05-'15: 4 Bushmaster APCs
- **Utility Helicopter Squadron:**
 - '63-'03: 3 UH-1
 - '87-'15: 3 UH-60
 - '09-'15: 3 NH90
- **Reconnaissance Helicopter Squadron**
 - '63-'15: 3 OH-58
- **Armed Reconnaissance Helicopter Squadron**
 - '08-'15: 3 Tigers
- **Engineer Squadron:**
 - '50-'15: 3 Engineer stands + 3 Medium Trucks
 - '76-'04: 3 Engineer stands + 3 M113
 - '05-'15: 3 Engineer stands + 3 Bushmaster APCs

Artillery Support Groups

- **Field Artillery Battalion: [one of the following lines]**
 - '50-'15: 3 M101 105mm How + 3 Light Trucks; [optional 1 FO + 1 TRANSPORT]
 - '62?-'72: 3 5.5" FG + 3 Medium Trucks; [optional 1 FO + 1 TRANSPORT]
 - '74?-'15: 3 L118 Light Gun + 3 Light Trucks; [optional 1 FO + 1 TRANSPORT]
 - '78?-'15: 3 M198 155mm How + 3 Medium Trucks; [optional 1 FO + TRANSPORT]

Equipment Notes

- **AA UNIT:**
 - '74-'85: Redeye Team stand
 - '86-'15: RBS-70 Team stand
- **MBT:**
 - '50-'76: Centurion series
 - '76-'07: Leopard 1 AS
 - '07-'15: M1A1 AIM
- **TRANSPORT:**
 - '66-'04: M113 or Land Rover
 - '05-'15: Bushmaster APC, M113, or Land Rover

Belgian Army 1980s+

Quality

1980+: 20% Marginal; 45% Fair; 25% Average; 10% Good

Artillery Accuracy & Friction Response

1980-1984: Artillery Accuracy 4+; Response 2+
 1985-2000: Artillery Accuracy 3+; Response 2+
 2001+: Artillery Accuracy 2+; Response 2+

Combat Formations

Recon Battalion

- **3 Recon Companies**
 - 2 recon Scorpion
 - 2 recon Scimitar
 - 1 recon Spartan
 - 1 recon Infantry stand
 - 1 recon Striker
- **Stand Inventory**
 - 6 Scorpion
 - 6 Scimitar
 - 3 Spartan
 - 3 Infantry stand
 - 3 Striker

Mech Battalion

- **Base**
 - 1 recon Scorpion
 - 1 recon Scimitar
 - 1 M106 SP 107mm Mortar
 - 1 Milan Team stand + 1 Jeep
- **3 Mech Companies**
 - 4 APC + 4 Infantry stands
- **Stand Inventory**
 - 1 Scorpion
 - 1 Scimitar
 - 1 M106 SP 107mm Mortar
 - 1 Milan Team stand
 - 1 Jeep
 - 12 APC
 - 12 Infantry stands

Tank Battalion

- **Base**
 - 1 recon Scorpion
 - 1 recon Scimitar
- **3 Tank Companies**
 - 3 MBT
- **Stand Inventory**
 - 1 Scorpion
 - 1 Scimitar
 - 9 MBT

Attachments

- **Recon Company**
 - 2 recon Scorpion
 - 2 recon Scimitar
 - 1 recon Spartan
 - 1 recon Infantry stand
 - 1 recon Striker

- **Tank Company**
 - 3 MBT
- **Mech Company**
 - 4 APC + 4 Infantry stands
- **AT Gun Company**
 - 3 JgPz Kanones
- **AT Missile Company**
 - 3 Milan Team stands + 3 Jeeps
- **AA Platoon: [one of the following]**
 - (1 M167 Vulcan + 1 Light Truck)
 - (1 Gepard SP AA Gun)

Artillery Support Groups

- **Brigade Field Artillery Battalion**
 - 3 M108 SP 105mm How; [optional 1 FO + 1 Jeep]
- **Corp Artillery Battalion**
 - 3 M109A1-4 SP 155mm How; [optional 1 FO + 1 Jeep]
- **Corp Heavy Artillery Battalion**
 - 3 M110 SP 203mm How; [optional 1 FO + 1 Jeep]
- **Corp Heavy Artillery Battery [availability modifier -2]**
 - 1 M110 SP 203mm How; [optional 1 FO + 1 Jeep]

Equipment Notes

- **APC:**
 - AIFV-B, M113, or AMX VCI
- **MBT:**
 - Leopard 1BE, Leopard 1BE Upgraded, or M47
- **Generic Wheeled APC:**
 - Jeep w/LMG
- **Generic Tracked APC:**
 - M113

British Army 1980s+

Quality

1980+: 20% Average; 40% Good; 25% Excellent; 15% Superb

Artillery Accuracy & Friction Response

1980-1995: Artillery Accuracy 3+; Response 2+

1996+: Artillery Accuracy 2+; Response 2+

Combat Formations

Armoured Regiment

- **Base**
 - 2 recce Scorpions
 - 1 FV-438
- **4 Armoured Squadrons**
 - '80-'90
 - 4 MBT
 - '90+
 - 3 MBT
- **Stand Inventory**
 - 2 Scorpions
 - 1 FV-438
 - If '80-'90:
 - 16 MBT
 - If '90+:
 - 12 MBT

Armoured Infantry Battalion

- **Base**
 - 2 recce Scorpion
 - 2 FV-432 Mortar Carriers
 - 2 Spartan w/Milan, or 2 FV-432 + 2 Milan Team stands
- **3 Armoured Infantry Companies**
 - 3 IFV + 3 Infantry stands
- **Stand Inventory**
 - 2 Scorpion
 - 2 FV-432 Mortar Carriers
 - 2 Spartan w/Milan, or 2 FV-432 + 2 Milan Team stands
 - 9 IFV
 - 9 Infantry stands

Armoured Recce Regiment (BAOR) 1980 – 1985

- **2 Medium Recce Squadrons**
 - 4 Scorpions
- **1 Close Recce Squadron**
 - 10 Scimitars
- **Stand Inventory**
 - 8 Scorpions
 - 10 Scimitars

Armoured Recce Regiment (BAOR) 1985+

- **4 Medium Recce Squadrons**
 - 4 Scimitars
 - 1 Striker
- **Stand Inventory**
 - 16 Scimitars
 - 4 Striker

Armoured Recce Regiment (UK) 1980 – 1985

- **2 Medium Recce Squadrons**
 - 2 Scimitars
 - 2 Scorpions
 - **1 Close Recce Squadron**
 - 5 Foxes
 - **Stand Inventory**
 - 4 Scimitars
 - 4 Scorpions
 - 5 Foxes
-

Armoured Recce Regiment (UK) 1985+

- **3 Medium Recce Squadrons**
 - 2 Scimitars
 - 2 Scorpions
 - **1 Guided Weapons Squadron**
 - 3 Striker
 - **Stand Inventory**
 - 6 Scimitars
 - 6 Scorpions
 - 3 Striker
-

Light Infantry Battalion

- **Base**
 - 2 81mm Mtr + 2 Light Truck
 - 1 Milan Team stand + 1 Light Truck
 - **3 Infantry Companies**
 - 3 Infantry stands
 - **Stand Inventory**
 - 2 81mm Mtr + 2 Light Truck
 - 1 Milan Team stand + 1 Light Truck
 - 9 Infantry stands
-

Motorised Infantry Battalion

- **4 Motorised Infantry Companies**
 - 3 Infantry stands + 3 APCs
 - **1 Motorised Infantry Heavy Weapons Company**
 - 1 81mm Mtr + 1 Light Truck
 - 2 Milan Team stands + 2 Light Trucks
 - 1 ARMORED CAR
 - **Stand Inventory**
 - 12 Infantry stands
 - 12 APCs
 - 1 81mm Mtr
 - 3 Light Trucks
 - 2 Milan Team stands
 - 1 ARMORED CAR
-

Infantry Battalion (Reserve)

- **4 Reserve Infantry Companies**
 - 3 Infantry stands + 3 Light Trucks
 - **1 Reserve Infantry Heavy Weapons Company**
 - 1 81mm Mtr + 1 Light Truck
 - 2 Milan Team stands + 2 Light Trucks
 - 1 Assault Pioneer stand + 1 Medium Truck
 - **Stand Inventory**
 - 12 Infantry stands
 - 14 Light Trucks
 - 1 81mm Mtr
 - 2 Medium Truck
 - 2 Milan Team stands
 - 1 Assault Pioneer stand
-

Attachments

- **Armoured Squadron**
 - 1980-1990: 4 MBT
 - 1990+: 3 MBT
 - **Armoured Infantry Company**
 - 3 IFV + 3 Infantry stands
 - **Medium Recce Squadron (BAOR)**
 - 1980-1985: 4 Scorpions
 - 1985+: 4 Scimitars; 1 Striker
 - **Close Recce Troop (BAOR)**
 - 1980-1985: 2 Scimitars
 - **Medium Recce Squadron (UK)**
 - 2 Scimitars; 2 Scorpions
 - **Reserve Infantry Company**
 - 3 Infantry stands + 3 Light Trucks
 - **Army Air Corps Squadron**
 - 2 Lynx or 2 Gazelle [armed with TOW-series anti-tank missiles]
 - **LLAD Battery**
 - (2 Javelin Team stands + 2 Spartan)
 - **Rapier Battery [one of the following lines]**
 - (2 Tracked Rapier SP SAM)
 - (2 Towed Rapier SAM + 2 Medium Trucks)
-

Artillery Support Groups

- **SP Artillery Regiment [availability modifier +2]**
 - 6 Abbot; [optional 1 FO + 1 IFV]
 - **SP Field Artillery Battery**
 - 3 M109A1-4 SP 155mm How; [optional 1 FO + 1 IFV]
 - **Towed Artillery Regiment**
 - 3 FH-70 + 3 Medium Trucks
 - **Heavy Regiment [one of the following lines]**
 - [availability modifier +1]: 4 M110 SP 203mm How
 - [availability modifier +1]: 4 M107 SP 175mm How
 - **MLRS Battery**
 - 2 M270 MLRS
-

Equipment Notes

- **APC:**
 - Saxon or Saracen
- **ARMoured CAR:**
 - Ferret or Fox
- **IFV:**
 - FV432 or Warrior
- **MBT:**
 - Chieftain, Challenger 1, or Challenger 2

Canadian Army 1980s+

The 4th Canadian Mechanized Brigade Group dedicated to NATO in the 1980s consisted of 2 Mechanized Battalions, 1 Armored Regiment, 1 Air Defense Battery, 4 Mechanized Engineer Detachments, 1 Engineer Recon Platoon, and 1 SP Artillery Regiment.

Quality

1980-1990: 20% Average; 40% Good; 30% Excellent; 10% Superb
1991+: 40% Fair; 50% Average; 5% Good; 5% Excellent

Artillery Accuracy & Friction Response

1980-1995: Artillery Accuracy 3+; Response 2+
1996+: Artillery Accuracy 2+; Response 2+

Combat Formations

Armored Regiment

- **Base**
 - 4 recon Lynx
 - 2 M113 TOW (M150)
- **3 Armored Squadrons**
 - 4 MBT
- **Stand Inventory**
 - 4 recon Lynx
 - 2 M113 TOW (M150)
 - 12 MBT

Mechanized Battalion

- **Base**
 - 2 recon Lynx
 - 2 M125 SP 81mm Mtr
 - 2 M113 TOW (M150)
- **4 Mech Infantry Companies**
 - '80-'93
 - 3 Infantry stands + 3 APC
 - '94-'15
 - 2 Infantry w/ATGM stands + 2 APC
 - 1 Infantry w/MAW+ATGM stand + 1 APC
- **Stand Inventory**
 - 2 recon Lynx
 - 2 M125 SP 81mm Mtr
 - 2 M113 TOW (M150)
 - If '80-'93:
 - 12 Infantry stands
 - 12 APC
 - If '94-'15:
 - 8 Infantry w/ATGM stands
 - 4 Infantry w/MAW+ATGM stand
 - 12 APC

Light Armored Regiment

- **Base**
 - 2 Jeep w/TOW
- **3 Light Armored Companies**
 - (1 81mm Mtr + 1 Grizzly)
 - 4 Cougars
- **Stand Inventory**
 - 2 Jeep w/TOW
 - 3 81mm Mtr
 - 3 Grizzlies
 - 12 Cougars

Infantry Battalion

- [Total of 4 companies in the battalion split between Armored Infantry and Motorized Infantry]
- **Base**
 - 2 Cougar
 - 2 Jeep w/TOW
 - 2 81mm Mtr + 2 Jeep
- **1 or 2 Armored Infantry Companies**
 - 3 Infantry stands + 3 Grizzly
- **3 or 2 Motorized Infantry Companies**
 - 3 Infantry stands + 3 Medium Trucks
- **Stand Inventory**
 - 2 Cougar
 - 2 Jeep w/TOW
 - 2 81mm Mtr + 2 Jeep
 - 12 Infantry stands
 - 3 or 6 Grizzlies
 - 9 or 6 Medium Trucks

Attachments

- **Armored Squadron**
 - 4 MBT
- **Mech Infantry Company**
 - '80-'93: 3 Infantry stands + 3 APC
 - '94-'15: 2 Infantry w/ATGM stands + 2 APC; 1 Infantry w/MAW+ATGM stand + 1 APC
- **Air Defense Battery**
 - '80-'89: (2 Blowpipe Team stands + 2 Light Trucks or 2 M113)
 - '90-'02?: (2 Javelin Team stands + 2 Light Trucks or 2 M113)
- **Mechanized Engineer Detachment**
 - 2 Assault Pioneer stands + 1 APC + 1 Medium Truck
- **Armored Engineer Detachment**
 - 2 Assault Pioneer stands + 1 Grizzly + 1 Medium Truck
- **Engineer Recon Platoon**
 - 1 recon Lynx
- **Helicopter Recon Flight**
 - '80-'96: 1 OH-58

Artillery Support Groups

- **SP Artillery Regiment [availability modifier +2]**
 - '80-'05: 6 M109A1-4 SP 155m How; [optional 1 FO + 1 APC]
- **Towed Artillery Regiment [Mobile Command Bgde Group, availability modifier -1]**
 - '80-'90?: 2 M114 155mm How + 2 Medium Trucks; [optional 1 FO + 1 Grizzly]
- **Towed Artillery Regiment**
 - '05-'15: 3 M777 155m How + 3 Medium Trucks
 - '07-'15: 3 M777 w/Excaliber + 3 Medium Trucks
- **Towed Artillery Regiment [Mobile Command Bgde Group, availability modifier -1]**
 - 2 M101 105mm How + 2 Medium Trucks; [optional 1 FO + 1 Grizzly]

Equipment Notes

- **MBT:**
 - Leopard C1, Leopard C1A1, Leopard C2, Leopard C2 uparmored, Leopard 2A6 [starting 2007]
- **APC:**
 - M113, M113A3 [Canadian entry], M113A3 uparmored [Canadian entry]

Danish Army 1980s+

Quality

1980+: 20% Marginal; 45% Fair; 25% Average; 10% Good

Artillery Accuracy & Friction Response

1980-1984: Artillery Accuracy 4+; Response 2+

1985-2000: Artillery Accuracy 3+; Response 2+

2001+: Artillery Accuracy 2+; Response 2+

Combat Formations

Tank Battalion

- **Base**
 - 2 Jeep w/TOW or 2 Jeep w/106mm RR
 - 1 recon APC
- **2 Tank Companies**
 - 2 MBT
- **1 Mechanized Infantry Company**
 - 3 Infantry stands + 3 APC
- **[optional] 1 Reserve Motorized Infantry Company**
 - 3 Infantry stands + 3 Medium Trucks
- **Stand Inventory**
 - 2 Jeep w/TOW or 2 Jeep w/106mm RR
 - 1 recon APC
 - 4 MBT
 - *If no Reserve Motorized Infantry Company:*
 - 3 Infantry stands
 - 3 APC
 - *If Reserve Motorized Infantry Company:*
 - 6 Infantry stands
 - 3 APC
 - 3 Medium Trucks

Mechanized Battalion

- **Base**
 - 2 Jeep w/TOW
 - 1 recon APC + 1 Towed 120mm Mortar
 - 1 M106 SP 107mm Mtr
- **1 Tank Company**
 - 2 MBT
- **2 Mechanized Infantry Companies**
 - 3 Infantry stands + 3 APC
- **[optional] 1 Reserve Motorized Infantry Company**
 - 3 Infantry stands + 3 Medium Trucks
- **Stand Inventory**
 - 2 Jeep w/TOW
 - 1 Towed 120mm Mortar
 - 2 MBT
 - *If no Reserve Motorized Infantry Company:*
 - 6 Infantry stands
 - 7 APC
 - *If Reserve Motorized Infantry Company:*
 - 9 Infantry stands
 - 7 APC
 - 3 Medium Trucks

Motorized Battalion

- **Base**
 - 2 Jeep w/106mm RR
 - 1 recon APC + 1 Towed 120mm Mortar
 - 1 81mm Mtr + 1 Medium Truck

3 Motorized Infantry Companies

- 3 Infantry stands + 3 Medium Trucks
- **Stand Inventory**
 - 2 Jeep w/106mm RR
 - 1 recon APC
 - 1 Towed 120mm Mortar
 - 1 81mm Mtr
 - 9 Infantry stands
 - 10 Medium Trucks

Attachments

- **Tank Company**
 - 2 MBT
- **Mechanized Infantry Company**
 - 3 Infantry stands + 3 APC
- **Reserve Motorized Infantry Company**
 - 3 Infantry stands + 3 Medium Trucks
- **Attack Helicopter Company**
 - 3 Hughes 500 Defender [armed with TOW-series anti-tank missiles]
- **Air Defence Battery [one of the following lines]**
 - (2 Redeye Team + 2 Jeep)
 - (1 Redeye Team + 1 Jeep; 1 Towed 40mm AA Gun + 1 Medium Truck)

Artillery Support Groups

- **Medium Howitzer/Gun Battalion**
 - 3 M114 155mm How
- **Artillery Battalion [has one each of the following two support groups]**
 - SP Batteries [availability modifier -1]: 2 M109A1-4 SP 155mm How;
 - Towed Battery [availability modifier -2]: 1 M114 155mm How + 1 Medium Truck
- **Light Howitzer Battery [availability modifier -2]**
 - 1 M101 105mm How + 1 Light Truck

Equipment Notes

- **APC:**
 - M113
- **MBT:**
 - Leopard 1 [Leopard 1A3 until 1992, 1A5 from 1992 onward], Centurion Mk5 series [see Denmark vehicle data, not UK], M41 (Denmark), or Leopard 2

Dutch Army (Netherlands) 1980s+

Quality

1980+: 20% Marginal; 45% Fair; 25% Average; 10% Good

Artillery Accuracy & Friction Response

1980-1984: Artillery Accuracy 4+; Response 2+

1985-2000: Artillery Accuracy 3+; Response 2+

2001+: Artillery Accuracy 2+; Response 2+

Combat Formations

Mechanized Infantry Battalion

■ Base

- 1 AT VEHICLE
- 1 Towed 120mm Mortar + 1 APC

■ 3 Mech Infantry Companies

- 3 Infantry stands + 3 APC

■ Stand Inventory

- 1 AT VEHICLE
- 1 Towed 120mm Mortar
- 9 Infantry stands
- 10 APC

Armored Battalion

■ Base

- 1 recon Lynx

■ 3 Armored Companies [choose one type]

■ Option A

- 3 OLD MBT

■ Option B

- 4 NEW MBT

■ Stand Inventory

- 1 recon Lynx
- If Option A:
 - 9 OLD MBT
- If Option B:
 - 12 NEW MBT

Recon Battalion

■ 3 Recon Companies

- 3 recon Lynx

■ Stand Inventory

- 9 recon Lynx

Attachments

■ Mechanized Infantry Company

- 3 Infantry stands + 3 APC

■ Armored Company [one of the following lines]

- 3 OLD MBT
- 4 NEW MBT

■ Recon Company

- 3 recon Lynx

Artillery Support Groups

■ Field Artillery Battalion

- 3 M109A1-5 SP 155mm How; [optional 1 FO + 1 Jeep]

■ Heavy Artillery Battalion [one of the following lines]

- 3 M110 SP 203mm How; [optional 1 FO + 1 Jeep]

- 3 M107 SP 175mm How; [optional 1 FO + 1 Jeep]

■ Heavy Artillery Battery [availability modifier -2]

- 1 M110 SP 203mm How; [optional 1 FO + 1 Jeep]

■ Towed Howitzer Battalion

- 3 M198 155mm How + 3 Medium Trucks; [optional 1 FO + 1 Jeep]

■ MLRS Battery

- 1 M270 MLRS

Equipment Notes

■ APC:

- YPR-765 or M113

■ AT VEHICLE:

- YPR-765 PR AT or YPR-765 PW AT

■ NEW MBT:

- Leopard 2 or Leopard 2A6

■ OLD MBT:

- Leopard 1 or Leopard 1-V

Egyptian Army 1967

Quality

1955-1972: 20% Poor; 45% Marginal; 20% Fair; 15% Average

Artillery Accuracy & Friction Response

Artillery Accuracy 5+; Response 3+

Combat Formations

Infantry Brigade

- **Base**
 - 1 recon Infantry stand
 - 1 Medium Truck
 - 2 recon Jeep w/LMG
 - 1 ZPU-4 AAG + 1 Medium Truck
 - 1 120mm Mortar + 1 Medium Truck
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Light Trucks
- **3 Infantry Battalions**
 - (1 82mm Mtr)
 - 1 AT GUN
 - 9 Infantry stands
- **1 Tank Battalion**
 - 6 MBT
- **Stand Inventory**
 - 1 recon Infantry stand
 - 3 Medium Trucks
 - 2 recon Jeep w/LMG
 - 1 ZPU-4 AAG
 - 1 120mm Mortar
 - 3 Engineer stands
 - 3 APC or 3 Light Trucks
 - 3 82mm Mtr
 - 3 AT GUN
 - 27 Infantry stands
 - 6 MBT

Mechanized Infantry Brigade

- **Base**
 - 2 recon BRDM-1
 - 1 ZU-23/2 AAG + 1 Medium Truck
 - 1 120mm Mortar + 1 Medium Truck
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Light Trucks
- **3 Mechanized Infantry Battalions [choose one type]**
 - **APC-Based**
 - (1 82mm Mtr + 1 APC)
 - 1 AT GUN + 1 APC
 - 9 Infantry stands + 9 APC
 - **Truck-Based**
 - (1 82mm Mtr + 1 Light Truck)
 - 1 AT GUN + 1 Light Truck
 - 9 Infantry stands + 9 Light Trucks
- **1 Tank Battalion**
 - 6 MB
- **Stand Inventory**
 - 2 recon BRDM-1
 - 1 ZU-23/2 AAG
 - 1 120mm Mortar
 - 2 Medium Trucks

- 3 Engineer stands
- 3 APC or 3 Light Trucks
- 6 MBT
- **If APC-Based:**
 - 3 82mm Mtr
 - 3 AT GUN
 - 27 Infantry stands +
 - 33 APC
- **If Truck-Based:**
 - 3 82mm Mtr
 - 3 AT GUN
 - 27 Infantry stands
 - 33 Light Trucks

Armored Brigade

- **Base**
 - recon 1 PT-76 series
 - 1 recon BRDM-1
 - 1 BTR-152 w/Quad MG
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Light Trucks
- **3 Tank Battalions**
 - 6 MBT
- **1 Mechanized Infantry Battalion**
 - (1 82mm Mtr + 1 APC)
 - 1 AT GUN + 1 APC
 - 9 Infantry stands + 9 APC
- **Stand Inventory**
 - recon 1 PT-76 series
 - 1 recon BRDM-1
 - 1 BTR-152 w/Quad MG
 - 3 Engineer stands
 - 3 APC or 3 Light Trucks
 - 18 MBT
 - 1 82mm Mtr
 - 1 AT GUN
 - 9 Infantry stands
 - 11 APC

Parachute Brigade

- **Base**
 - 1 recon Infantry stand + 1 Medium Truck
 - 2 recon Jeep w/LMG
 - 1 ZPU-4 AAG + 1 Medium Truck
- **1 Parachute Brigade Engineer Company**
 - 3 Engineer stands
- **3 Parachute Infantry Battalions**
 - (1 82mm Mtr)
 - 1 B-10 82mm RR
 - 9 Infantry stands
 - 2 Parachute MG stands
- **Stand Inventory**
 - 1 recon Infantry stand
 - 2 Medium Trucks
 - 2 recon Jeep w/LMG
 - 1 ZPU-4 AAG
 - 3 Engineer stands
 - 3 82mm Mtr
 - 3 B-10 82mm RR
 - 27 Infantry stands
 - 6 Parachute MG stands

Attachments

- **Tank Battalion**
 - 6 MBT

- **Mechanized Infantry Battalion (APC)**
 - (1 82mm Mtr + 1 APC); 1 AT GUN + 1 APC; 9 Infantry stands + 9 APC
- **Mechanized Infantry Battalion (Truck)**
 - (1 82mm Mtr + 1 Light Truck); 1 AT GUN + 1 Light Truck; 9 Infantry stands + 9 Light Trucks
- **Infantry Battalion**
 - (1 82mm Mtr); 1 AT GUN; 9 Infantry stands
- **Parachute Infantry Battalion**
 - (1 82mm Mtr); 1 B-10 82mm RR; 9 Infantry stands; 2 Parachute MG stands
- **AT Gun Battalion [max one per 4 combat formations]**
 - 2 D-44 AT Gun + 1 BS-3 Field Gun + 3 Light Trucks
- **AT Gun Battery [max three per 4 combat formations, one of the following lines]**
 - 1 D-44 AT Gun + 1 Light Truck
 - 1 BS-3 AT Gun + 1 Light Truck
- **Recon Battalion [max one per 4 combat formations]**
 - 2 MBT; 2 PT-76 series; 1 recon Infantry stand + 2 Infantry stands + 3 APC
- **Assault Gun Battalion [max one per 4 combat formations, must be attached to Infantry or Mech Infantry Brigade]**
 - 5 SU-100
- **Army AAA Battalion [max one]**
 - (3 ZU-23/2 AAG + 3 Light Trucks)
- **Army AAA Battery [max three]**
 - (1 ZU-23/2 AAG + 1 Light Truck)
- **Engineer Battalion [max one per 4 combat formations]:**
 - 9 Infantry stands + 9 APC or 9 Light Trucks

Artillery Support Groups

- **Artillery Battalion**
 - 3 M-30 122mm How + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
- **Mortar Battalion [max one per 4 combat formations]**
 - 3 M-160 160mm Mtr + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
- **Army Artillery Battalion [max one, one of the following lines]**
 - 3 M-46 130mm FG + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
 - 3 D-1 152mm How or 3 D-20 152mm How, + 3 Medium Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
- **Army Mortar Battalion [max one, one of the following lines]**
 - 3 2B8 240mm Mtr + 3 Medium Truck; [optional 1 FO + 1 Jeep or 1 BTR-152]
 - 3 M-160 160mm Mtr + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]

Equipment Notes

- **APC:**
 - BTR-152, Walid APC, BTR-50PK, or OT-62B
- **AT GUN:**
 - B-10 82mm RR or B-11 107mm RR
- **MBT:**
 - T-54A, T-54B, T-34/85, T-55A, or IS-3M [max one battalion of IS-3M]

Egyptian Army 1973

Quality

1973+: 25% Poor; 45% Marginal; 20% Fair; 10% Average

Artillery Accuracy & Friction Response

Artillery Accuracy 5+; Response 3+

Combat Formations

Infantry Brigade

- **Base**
 - 1 recon Infantry stand + 1 Light Truck
 - 2 recon Jeep w/LMG
 - 1 ZPU-4 + 1 Light Truck
 - 2 SA-7 Team stands + 2 Jeeps
 - 1 120mm Mtr + 1 Light Truck
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Medium Trucks
- **3 Infantry Battalions**
 - (1 82mm Mtr)
 - 1 AT GUN
 - 1 Sagger Team stand
 - 9 Infantry stands
- **1 Tank Battalion**
 - 6 MBT
- **Stand Inventory**
 - 3 Light Trucks
 - 2 Jeeps
 - 2 Jeep w/LMG
 - 1 ZPU-4
 - 2 SA-7 Team stands
 - 1 120mm Mtr
 - 3 Engineer stands
 - 3 APC or 3 Medium Trucks
 - 3 82mm Mtr
 - 3 AT GUN
 - 3 Sagger Team stands
 - 28 Infantry stands
 - 6 MBT

Mechanized Infantry Brigade

- **Base**
 - 2 recon BRDM-1
 - 1 ZU-23/2 AAG + 1 Light Truck
 - 2 SA-7 Team + 2 Jeeps
 - 1 120mm Mtr + 1 Light Truck
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Medium Trucks
- **3 Mechanized Infantry Battalions [choose one type]**
 - **APC-Based**
 - (1 82mm Mtr + 1 APC)
 - 1 AT GUN + 1 APC
 - 1 Sagger Team stand + 1 APC
 - 9 Infantry stands + 9 APC
 - **Truck-Based**
 - (1 82mm Mtr + 1 Light Truck)
 - 1 AT GUN + 1 Light Truck
 - 1 Sagger Team stand + 1 Light Truck
 - 9 Infantry stands + 9 Light Trucks

- **1 Tank Battalion**
 - 6 MBT
- **Stand Inventory**
 - 2 BRDM-1
 - 1 ZU-23/2 AAG
 - 2 Light Truck
 - 2 SA-7 Team
 - 2 Jeeps
 - 1 120mm Mtr
 - 3 Engineer stands
 - 3 APC or 3 Medium Trucks
 - 6 MBT
- If APC-Based:
 - 3 82mm Mtr
 - 3 AT GUN
 - 3 Sagger Team stand
 - 27 Infantry stands
 - 36 APC
- If Truck-Based:
 - 3 82mm Mtr
 - 3 AT GUN
 - 3 Sagger Team stand
 - 27 Infantry stands
 - 36 Light Trucks

Armored Brigade

- **Base**
 - 1 recon PT-76
 - 1 recon BRDM-1
 - 1 ZSU-23/4
 - 2 SA-7 Team stands + 2 Jeeps
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Medium Trucks
- **3 Tank Battalions**
 - 6 MBT
- **1 Mechanized Infantry Battalion**
 - (1 82mm Mtr + 1 APC)
 - 1 AT GUN + 1 APC
 - 1 Sagger Team stand + 1 APC
 - 9 Infantry stands + 9 APC
- **Stand Inventory**
 - 1 PT-76
 - 1 BRDM-1
 - 1 ZSU-23/4
 - 2 SA-7 Team stands
 - 2 Jeeps
 - 3 Engineer stands
 - 3 APC or 3 Medium Trucks
 - 18 MBT
 - 1 82mm Mtr
 - 1 AT GUN
 - 1 Sagger Team stand
 - 9 Infantry stands
 - 12 APC

Parachute Brigade

- **Base**
 - 1 recon Infantry stand + 1 Light Truck
 - 2 recon Jeep w/LMG
 - 1 ZPU-4 AAG + 1 Light Truck
 - 2 SA-7 Team stands
- **1 Parachute Brigade Engineer Company**
 - 3 Engineer stands
- **3 Parachute Infantry Battalions**
 - (1 82mm Mtr)
 - 1 B-10 82mm RR
 - 9 Infantry stands

- 2 Parachute MG stands
- **Stand Inventory**
 - 2 Light Trucks
 - 2 Jeep w/LMG
 - 1 ZPU-4 AAG
 - 2 SA-7 Team stands
 - 3 Engineer stands
 - 3 82mm Mtr
 - 3 B-10 82mm RR
 - 28 Infantry stands
 - 6 Parachute MG stands

Air Assault Brigade

- **Base**
 - 2 SA-7 Team stands
- **3 Air Assault Battalions**
 - 1 Sagger Team stand
 - 1 SA-7 Team stand
 - 9 Infantry stands
- **Stand Inventory**
 - 2 SA-7 Team stands
 - 3 Sagger Team stand
 - 3 SA-7 Team stand
 - 27 Infantry stands

Commando Brigade

- **Base**
 - 2 recon Jeep w/LMG
 - 1 recon Infantry stand + 1 Light Truck
 - 2 SA-7 Team stands
- **3 Ranger Battalions**
 - 4 Sagger Team stands
 - 1 SA-7 Team stand
 - 9 Infantry stands
- **Stand Inventory**
 - 2 Jeep w/LMG
 - 1 Light Truck
 - 5 SA-7 Team stands
 - 12 Sagger Team stands
 - 28 Infantry stands

Attachments

- **Tank Battalion**
 - 6 MBT
- **Mechanized Infantry Battalion [APC-based]**
 - (1 82mm Mtr + 1 APC); 1 AT GUN + 1 APC; 1 Sagger Team stand + 1 APC; 9 Infantry stands + 9 APC
- **Mechanized Infantry Battalion [Truck-based]**
 - (1 82mm Mtr + 1 Light Truck); 1 AT GUN + 1 Light Truck; 1 Sagger Team stand + 1 Light Truck; 9 Infantry stands + 9 Light Trucks;
- **Infantry Battalion**
 - (1 82mm Mtr); 1 AT GUN; 1 Sagger Team stand; 9 Infantry stands
- **Parachute Infantry Battalion**
 - (1 82mm Mtr); 1 B-10 82mm RR; 9 Infantry stands; 2 Parachute MG stands
- **AT Gun Battalion [max one per 4 combat formations]**
 - 2 D-44 AT Guns + 1 BS-3 Field Gun + 3 Light Trucks
- **AT Gun Battery [max three per 4 combat formations, one of the following lines]**
 - 1 D-44 AT Gun + 1 Light Truck
 - 1 BS-3 Field Gun + 1 Light Truck

- AT Missile Battalion [max one per 4 combat formations]
 - 3 BRDM-2 AT-3b
- Tank Destroyer Battalion [max one per 4 combat formations, must be attached to Infantry or Mech Infantry Brigade]
 - 3 BMP-1
- Recon Battalion [max one per 4 combat formations]
 - 2 MBT; 2 PT-76 series; 1 recon Infantry stand + 2 Infantry stands + 3 APC
- Assault Gun Battalion [max one per 4 combat formations, must be attached to Infantry or Mech Infantry Brigade]
 - 5 SU-100
- Army AAA Battalion [max one]
 - (3 ZU-23/2 + 3 Medium Trucks)
- Army AAA Battery [max three]
 - (1 ZU-23/2 AAG + 1 Light Truck)
- Engineer Battalion [max one per 4 combat formations]
 - 9 engineer Infantry stands + 9 APC or 9 Medium Trucks

Artillery Support Groups

- Artillery Battalion
 - 3 M-30 122mm How or 3 D-30 122mm FG, + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
- Mortar Battalion [max one per 4 combat formations]
 - 3 M-160 160mm Mtr + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
- Army Artillery Battalion [max one, one of the following lines]
 - 3 M-46 130mm FG + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
 - 3 D-1 152mm How or 3 D-20 152mm How, + 3 Medium Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
 - 3 S-23 180mm FG + 1 Medium Truck; [optional 1 FO + 1 Jeep or 1 BTR-152]
- Army MRL Battalion [max one]
 - 3 BM-21 Grad MRL; [optional 1 FO + 1 Jeep or 1 BTR-152]
- Army MRL Battery [max three]
 - 1 BM-21 Grad MRL; [optional 1 FO + 1 Jeep or 1 BTR-152]
- Army Mortar Battalion [max one, one of the following lines]
 - 3 2B8 240mm Mtr + 3 Medium Truck; [optional 1 FO + 1 Jeep or 1 BTR-152]
 - 3 M-160 160mm Mtr + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]

Equipment Notes

- APC:
 - BTR-50PK, Walid APC, OT-62B, BTR-152, or BMP-1 [only a few available]
- AT Gun:
 - B-10 82mm RR or B-11 107mm RR
- MBT:
 - T-55A, T-62, T-54B, or T-34/85

French Army 1980s+

Quality

1980+: 20% Marginal; 30% Fair; 20% Average; 20% Good; 5% Excellent; 5% Superb

Artillery Accuracy & Friction Response

1980-1984: Artillery Accuracy 4+; Response 2+
1985-2000: Artillery Accuracy 3+; Response 2+
2001+: Artillery Accuracy 2+; Response 2+

Combat Formations

Mechanized Infantry Regiment 1980 - 1984

- Base
 - 1 120mm Mtr + 1 AMX-10P
- 2 Mech Infantry Companies
 - 2 Infantry stands + 2 Infantry w/Milan stands¹ + 4 AMX-10P
- 2 Armored Companies
 - 2 MBT
- Stand Inventory
 - 1 120mm Mtr
 - 4 Infantry stands
 - 4 Infantry w/Milan stands
 - 9 AMX-10P
 - 4 MBT

Mechanized Infantry Regiment 1984+

- Base
 - 1 120mm Mtr + 1 AMX-10P
- 2 Mech Infantry Companies
 - 3 Infantry stands + 1 Infantry w/Milan stand² + 4 AMX-10P
- 1 Armored Company
 - 4 MBT
- Stand Inventory
 - 1 120mm Mtr
 - 1 AMX-10P
 - 6 Infantry stands
 - 2 Infantry w/Milan stands
 - 8 AMX-10P
 - 4 MBT

Armored Regiment 1980 – 1984

- 4 Armored Squadrons
 - 3 MBT
- 1 Mech Infantry Company
 - 4 Infantry stands + 4 AMX-10P
- Stand Inventory
 - 12 MBT
 - 4 Infantry stands
 - 4 AMX-10P

¹ This Milan may be fired from the AMX-10P, or dismounted with and used by the infantry stand (player must designate when dismounting where the Milan goes).

² This Milan may be fired from the AMX-10P, or dismounted with and used by the infantry stand (player must designate when dismounting where the Milan goes).

Armored Regiment 1984+

- 4 Armored Squadrons
 - 4 MBT
- 1 Mech Infantry Company
 - 3 Infantry stands + 1 Infantry w/Milan stand³ + 4 AMX-10P
- Stand Inventory
 - 16 MBT
 - 3 Infantry stands
 - 1 Infantry w/Milan stand
 - 4 AMX-10P

Motorized Infantry Regiment 1980 – 1984

- Base
 - 1 SCOUT ATGM
 - 3 SCOUT VEHICLES
 - 1 120mm Mtr + 1 VAB 6x6
 - 2 81mm Mtr + 2 VAB 6x6
 - 1 20mm AA Gun + 1 Light Truck
- 4 Motorized Rifle Companies
 - 2 Infantry stands + 1 Infantry w/Milan stand⁴ + 3 VAB 6x6
- Stand Inventory
 - 1 SCOUT ATGM
 - 3 SCOUT VEHICLES
 - 1 120mm Mtr
 - 2 81mm Mtr
 - 1 20mm AA Gun
 - 1 Light Truck
 - 8 Infantry stands
 - 4 Infantry w/Milan stands
 - 15 VAB 6x6

Motorized Infantry Regiment 1984+

- Base
 - 3 SCOUT ATGM
 - 3 SCOUT VEHICLES
 - 1 120mm Mtr + 1 VAB 6x6
 - 2 81mm Mtr + 2 VAB 6x6
 - 2 20mm AA Gun + 2 Light Trucks
- 4 Motorized Infantry Companies
 - 3 Infantry stands + 3 VAB 6x6
- Stand Inventory
 - 3 SCOUT ATGM
 - 3 SCOUT VEHICLES
 - 1 120mm Mtr
 - 2 81mm Mtr
 - 2 20mm AA Gun
 - 2 Light Trucks
 - 12 Infantry stands
 - 15 VAB 6x6

Light Armored Regiment (AMX-13)

- 3 Light Armored Squadrons
 - 3 AMX-13 75mm or 3 AMX-13 90mm
 - 1 AMX-13 SS-11
- Stand Inventory
 - 9 AMX-13 75mm or 9 AMX-13 90mm
 - 3 AMX-13 SS-11

- 3 This Milan may be fired from the AMX-10P, or dismounted with and used by the infantry stand (player must designate when dismounting where the Milan goes).
- 4 This Milan may be fired from the AMX-10P, or dismounted with and used by the infantry stand (player must designate when dismounting where the Milan goes).

Light Armored Regiment (AMX-10RC) 1982+

- 3 Light Armored Squadrons
 - 3 AMX-10RC
 - 1 VCAC Milan (VAB)
- Stand Inventory
 - 9 AMX-10RC
 - 3 VCAC Milan (VAB)

Light Armored Regiment (ERC-90)

- 3 Light Armored Squadrons
 - 3 ERC-90
 - 1 SCOUT ATGM
- Stand Inventory
 - 9 ERC-90
 - 3 SCOUT ATGM

Airborne or Marine Regiment

- Base
 - 1 120mm Mtr + 1 Light Truck
 - 1 20mm AA Gun + 1 Light Truck
 - 2 81mm Mtr
 - 2 Milan Teams
- 4 Airborne Companies
 - 4 Infantry stands
- Stand Inventory
 - 1 120mm Mtr
 - 2 Light Trucks
 - 1 20mm AA Gun
 - 2 81mm Mtr
 - 2 Milan Teams
 - 16 Infantry stands

Attachments

- **Armored Company**
 - '80-'84: 3 MBT
 - '84+: 4 MBT
- **Mechanized Infantry Company**
 - '80-'84: 2 Infantry stands + 2 Infantry w/Milan stands⁵ + 4 AMX-10P
 - '84+: 3 Infantry stands + 1 Infantry w/Milan stand⁶ + 4 AMX-10P
- **Motorized Infantry Company**
 - '80-'84: 2 Infantry stands + 1 Infantry w/Milan stand⁷ + 3 VAB 6x6
 - '84+: 3 Infantry stands + 3 VAB 6x6
- **Recon Company**
 - [Armored Division]: 1 SCOUT ATGM; 3 SCOUT VEHICLES
 - [Infantry Division]: 3 AMX-10RC
- **Tank Destroyer Company**
 - 3 VCAC HOT (VAB)
- **Attack Helicopter Company [one of the following lines]**
 - 2 Gazelle [both armed with HOT or both with 20mm]
 - 2 Alouette III [both armed with SS.11 or both with 20mm]

⁵ This Milan may be fired from the AMX-10P, or dismounted with and used by the infantry stand (player must designate when dismounting where the Milan goes).

⁶ This Milan may be fired from the AMX-10P, or dismounted with and used by the infantry stand (player must designate when dismounting where the Milan goes).

⁷ This Milan may be fired from the AMX-10P, or dismounted with and used by the infantry stand (player must designate when dismounting where the Milan goes).

- AAA Battery
 - (3 AMX-13 DCA)
- SAM Battery
 - (2 AMX-30 Roland)

Artillery Support Groups

- Field Artillery Regiment [availability modifier +1]
 - 4 Mk F3 SP 155mm Gun or 4 GCT SP 155mm Gun; [optional 1 FO + 1 Jeep]
- Towed Artillery Regiment [availability modifier +1]
 - 4 OB-155-50 BF + 4 Medium Trucks; [optional 1 FO + 1 Jeep]
- Airborne Artillery Regiment [availability modifier +1]
 - 4 3 M101 105mm How + 3 Light Trucks; [optional 1 FO + 1 Jeep]
- MLRS Battery
 - '85+?: 1 or 2 M270 MLRS; [optional 1 FO + 1 Jeep]

Equipment Notes

- MBT:
 - AMX-30, AMX-30B2 series [starting in 1981], or LeClerc [starting in 1994]
- Scout ATGM:
 - '80-'85: Jeep w/Milan
 - '85+: VBL Milan
- Scout Vehicle:
 - '80-'85: Jeep w/LMG
 - '85+: VBL Reco 12.7

German (West/United) Army 1980s+

Quality

1980-1992: 25% Fair; 40% Average; 20% Good; 15% Excellent
1993+: 15% Marginal; 25% Fair; 40% Average; 10% Good; 10% Excellent

Artillery Accuracy & Friction Response

1980-1995: Artillery Accuracy 3+; Response 2+
1996+: Artillery Accuracy 2+; Response 2+

Combat Formations

Panzer Battalion

- 3 Panzer Companies
 - 3 MBT
- Stand Inventory
 - 9 MBT

Mixed Panzer Battalion

- 2 Panzer Companies
 - 3 MBT
- 1 Panzer Grenadier Company
 - 3 Infantry stands + 3 IFV
- Stand Inventory
 - 6 MBT
 - 3 Infantry stands
 - 3 IFV

Panzer Grenadier Battalion

- Base
 - 1 Panzermörser SP 120mm Mtr
- 3 Panzer Grenadier Companies
 - 3 Infantry stands + 3 IFV
- Stand Inventory
 - 1 Panzermörser SP 120mm Mtr
 - 9 Infantry stands
 - 9 IFV

Panzer Reconnaissance (Aufklärungs) Battalion

- 2 Heavy Recon Companies
 - 2 MBT
 - 1 recon Luchs
- 1 Light Recon Company
 - 3 recon Luchs
- 1 Recon Infantry Company
 - 3 Infantry stands + 3 Fuchs
- Stand Inventory
 - 4 MBT
 - 5 Luchs
 - 3 Infantry stands
 - 3 Fuchs

Airborne (Fallschirmjäger) Battalion

- 2 Airborne Companies
 - 3 Infantry stands
 - 1 Kraka PzAbw Milan

- | | |
|--|---|
| <ul style="list-style-type: none"> ▪ 2 Heavy Airborne Companies <ul style="list-style-type: none"> • 1 Kraka PzAbw TOW • 2 Kraka w/20mm ▪ Stand Inventory <ul style="list-style-type: none"> • 6 <i>Infantry stands</i> • 2 Kraka PzAbw <i>Milan</i> • 2 Kraka PzAbw <i>TOW</i> • 4 Kraka w/20mm | <ul style="list-style-type: none"> ▪ MBT: <ul style="list-style-type: none"> • Leopard 2 series [in Panzer Divisions], Leopard 1 series [in Panzer or Panzergrenadier Divisions], M48A2G2 [in Reserve Brigades] ▪ Generic Tracked APC: <ul style="list-style-type: none"> • M113 ▪ Generic Wheeled Vehicles: <ul style="list-style-type: none"> • Fuchs |
|--|---|

Light Infantry (Jäger) Battalion

- **3 Light Infantry (Jäger) Companies**
 - 3 *Infantry stands* + 3 APC
- **1 Jäger Weapons Company**
 - 2 Jagdpanzer Kanone
 - 1 120mm Mtr + 1 Medium Truck
 - 4 Milan Team stands + 2 APC
- **Stand Inventory**
 - 9 *Infantry stands*
 - 11 APC
 - 2 Jagdpanzer Kanone
 - 1 120mm Mtr
 - 1 Medium Truck
 - 4 Milan Team stands

Attachments

- **Airborne Mortar Platoon**
 - (1 Kraka SP 120mm Mtr)
- **Airborne AT Platoon**
 - 1 Kraka PzAbw TOW
- **Attack Helicopter Company**
 - 3 BO105
- **Air Defence Battery [one of the following lines]**
 - 1 AA VEHICLE
 - (2 Redeye Teams + 2 Fuchs)
- **Pioneer Platoon**
 - 1 Pioneer stand + 1 Fuchs
- **Antitank (Panzerjäger) Company**
 - 3 AT VEHICLES

Artillery Support Groups

- **Brigade SP Howitzer Battalion:**
 - 3 M109A1-4 SP 155mm How
- **Division Artillery Battalion:**
 - 3 FH-70 + 3 Medium Trucks [also has 1 Heavy SP Howitzer Battery below]
- **Heavy Howitzer Battery [availability modifier -2]:**
 - 1 M110 SP 203mm How
- **Rocket Artillery Battery:**
 - 2 LARS MRL series

Equipment Notes

- **AA Vehicle:**
 - Roland, Gepard
- **APC:**
 - M113, M113A1, or M113A2
- **AT VEHICLE:**
 - Jaguar series
- **IFV:**
 - Marder series

Iraqi Army 1973

Quality

1965-1989: 90% Poor; 10% Marginal

Artillery Accuracy & Friction Response

Artillery Accuracy 5+; Response 3+

Combat Formations

Mechanized Brigade [max one]

- **Base**
 - 2 recon BRDM-1
 - 1 ZSU-57/2
 - 1 120mm Mtr + 1 Light Truck

- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 BTR-152

- **3 Infantry Battalions**
 - (1 82mm Mtr + 1 Light Truck)
 - 1 AT GUN + 1 BTR-60PB
 - 1 Sagger Team stand + 1 Light Truck
 - 9 Infantry stands + 9 BTR-60PB

- **1 Tank Battalion**
 - 6 T-55A

- **Stand Inventory**
 - 2 BRDM-1
 - 1 ZSU-57/2
 - 1 120mm Mtr
 - 7 Light Trucks
 - 3 Engineer stands
 - 3 BTR-152
 - 3 82mm Mtr
 - 3 AT GUNS
 - 3 Sagger Team stands
 - 27 Infantry stands
 - 30 BTR-60PB
 - 6 T-55A

Armored Brigade [max two]

- **Base**
 - 1 recon PT-76 series
 - 1 recon BRDM-1
 - 1 ZSU-57/2

- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 BTR-152

- **3 Tank Battalions**
 - 6 T-55A

- **1 Mechanized Infantry Battalion**
 - (1 82mm Mtr + 1 Light Truck)
 - 1 B-10 82mm RR + 1 BTR-50PK
 - 9 Infantry stands + 9 BTR-50PK

- **Stand Inventory**
 - 1 PT-76 series
 - 1 BRDM-1
 - 1 ZSU-57/2
 - 3 Engineer stands
 - 3 BTR-152
 - 18 T-55A
 - 1 82mm Mtr
 - 1 Light Truck
 - 1 B-10 82mm RR
 - 1 BTR-50PK

- 9 Infantry stands
- 9 BTR-50PK

Attachments

Tank Battalion

- 6 T-55A

Mechanized Infantry Battalion

- (1 82mm Mtr + 1 Light Truck); 1 B-10 82mm RR + 1 BTR-50PK; 9 Infantry stands + 9 BTR-50PK

Infantry Battalion

- (1 82mm Mtr + 1 Light Truck); 1 AT GUN + 1 BTR-60PB; 1 Sagger Team stand + 1 Light Truck; 9 Infantry stands + 9 BTR-60PB

AT Gun Battalion [max one]

- 2 D-44 AT Gun + 1 BS-3 Field Gun + 3 Light Trucks

Recon Battalion [max one]

- 2 T-55A; 2 PT-76 series; 3 Infantry stands + 3 BTR-60PB

Artillery Brigade Engineer Company [max one]

- 3 Engineer stands + 3 Medium Trucks

Artillery Brigade AAA Battery [max one]

- 1 S-60 AAG + 1 Light Truck

Artillery Support Groups

Artillery Battalion [max four]

- 3 M-30 122mm How + 3 Light Trucks; [optional 1 FO + 1 Jeep]

Equipment Notes

AT Gun:

- B-10 82mm RR or B-11 107mm RR

Iraqi Army 1990

Quality

1990-2004: 90% Poor; 10% Marginal

Artillery Accuracy & Friction Response

Artillery Accuracy 4+; Response 3+

Combat Formations

Infantry Brigade

- **Base**
 - 3 81mm Mtr
 - 1 recon Infantry stand
- **3 Infantry Battalions**
 - 9 Infantry stands
- **Stand Inventory**
 - 3 81mm Mtr
 - 1 Infantry stand
 - 27 Infantry stands

Motorized Infantry Brigade

- **Base**
 - 3 81mm Mtr + 3 Light Truck
 - 1 recon Infantry stand
- **3 Motorized Battalions [choose one type]**
 - **Truck-Based**
 - 9 Infantry stands + 9 Light Trucks
 - **APC-Based**
 - 9 Infantry stands + 9 WHEELED APCs
- **Stand Inventory**
 - 3 81mm Mtr + 3 Light Truck
 - 1 recon Infantry stand
 - If Truck-Based:
 - 27 Infantry stands
 - 27 Light Trucks
 - If APC-Based:
 - 27 Infantry stands
 - 27 WHEELED APCs

Republican Guard Motorized Brigade

- **Base**
 - 1 recon Infantry stand
 - 2 120mm Mtr + 2 Light Trucks
- **3 Motorized Battalions [choose one type]**
 - **Truck-Based**
 - 9 Infantry stands + 9 Light Trucks
 - **APC-Based**
 - 9 Infantry stands + 9 WHEELED APCs
- **Stand Inventory**
 - 1 Infantry stand
 - 2 120mm Mtr
 - 2 Light Trucks
 - If Truck-Based:
 - 27 Infantry stands
 - 27 Light Trucks
 - If APC-Based:
 - 27 Infantry stands
 - 27 WHEELED APCs

Mechanized Infantry Brigade

- **Base**
 - 1 recon BRDM-2
 - 1 recon Infantry stand
- **3 Mechanized Infantry Battalions**
 - (1 82mm Mtr + 1 APC)
 - 1 recon BRDM-2
 - 1 BRDM-2 AT-3c
 - 9 Infantry stands + 9 TRACKED APC
- **1 Armored Regiment**
 - 1 recon BRDM-2
 - 6 MBT
- **Stand Inventory**
 - 5 BRDM-2
 - 3 82mm Mtr
 - 3 APC
 - 3 BRDM-2 AT-3c
 - 28 Infantry stands
 - 27 TRACKED APC
 - 6 MBT

Republican Guard Mechanized Infantry Brigade

- **Base**
 - 1 recon BRDM-2
 - 2 120mm Mtr + 2 APC
- **3 BMP Battalions**
 - (1 82mm Mtr + 1 IFV)
 - 1 recon BRDM-2
 - 9 Infantry stands + 9 IFV
- **1 Armored Regiment**
 - 1 recon BRDM-2
 - 9 MBT
- **Stand Inventory**
 - 5 BRDM-2
 - 2 120mm Mtr
 - 2 APC
 - 3 82mm Mtr
 - 27 Infantry stands
 - 30 IFV
 - 9 MBT

Armored Brigade

- **Base**
 - 1 recon BRDM-2 or PT-76 series
 - 1 recon Infantry stand
- **3 Armored Regiments**
 - 1 recon BRDM-2
 - 6 MBT
- **1 Mech Infantry Battalion**
 - (1 82mm Mtr + 1 APC)
 - 1 recon BRDM-2
 - 1 BRDM-2 AT-3c
 - 9 Infantry stands + 9 TRACKED APC
- **Stand Inventory**
 - 1 BRDM-2 or PT-76 series
 - 4 BRDM-2
 - 18 MBT
 - 1 82mm Mtr
 - 1 APC
 - 1 BRDM-2 AT-3c
 - 10 Infantry stands
 - 9 TRACKED APC

Republican Guard Armored Brigade

- **Base**
 - 1 recon BRDM-2, 2 120mm Mtr + 2 APC
- **3 Armored Regiments**
 - 1 recon BRDM-2
 - 9 MBT
- **1 BMP Battalion**
 - (1 82mm Mtr + 1 IFV)
 - 1 recon BRDM-2
 - 9 Infantry stands + 9 IFV
- **Stand Inventory**
 - 5 BRDM-2
 - 2 120mm Mtr
 - 2 APC
 - 27 MBT
 - 1 82mm Mtr
 - 9 Infantry stands
 - 10 IFV

Commando Brigade

- **Base**
 - 1 82mm Mtr + 1 Light Truck
- **1, 2, or 3 Commando Battalions**
 - 9 recon Infantry stands + 9 Light Trucks
- **Stand Inventory**
 - 1 82mm Mtr
 - 9, 18, or 27 Infantry stands
 - 10, 19, or 28 Light Trucks

Attachments

- **Armored Regiment**
 - 1 recon BRDM-2; 6 MBT
- **Infantry Battalion**
- **Mech Infantry Battalion**
 - (1 82mm Mtr + 1 APC; 1 recon BRDM-2); 1 BRDM-2 AT-3c; 9 Infantry stands + 9 TRACKED APC
- **BMP Battalion**
 - (1 82mm Mtr + 1 IFV); 1 recon BRDM-2; 9 Infantry stands + 9 IFV
- **Motorized Battalion [one of the following lines]**
 - [Truck-Based]: 9 Infantry stands + 9 Light Trucks
 - [APC-Based]: 9 Infantry stands + 9 WHEELED APCs
- **Commando Battalion**
 - 9 recon Infantry stands + 9 Light Trucks
- **SPAA Battalion [one of the following lines]**
 - (3 SA-9 SP SAM; 3 ZSU-23/4)
 - (3 SA-13 SP SAM; 3 ZSU-23/4)
- **AA Battalion [one of the following lines]**
 - (3 ZPU-2 AAG + 3 Medium Trucks)
 - (3 ZPU-4 AAG + 3 Medium Trucks)
 - (3 ZU-23/2 AAG + 3 Medium Trucks)
 - (3 M1939 37mm AAG + 3 Medium Trucks)
 - (3 S-60 AAG + 3 Medium Trucks)
 - (3 SAM TEAM + 3 Light Trucks)

Artillery Support Groups

- **Medium Towed Artillery Battalion**
 - [Infantry/Motorized Division Arty Brigade, max 3]: 3 122MM TOWED GUNS + 3 Light Trucks; [optional 1 FO + 1 WHEELED APC]

- [Mechanized/Tank Division Arty Brigade, max 2]: 3 122MM TOWED GUNS + 3 Light Trucks; [optional 1 FO + 1 WHEELED APC]

▪ Mortar Battalion:

- [Infantry/Motorized Division Arty Brigade, max 1]: 1 120mm Mtr + 1 Light Truck; [optional 1 FO + 1 Light Truck]

▪ SP Medium Artillery Battalion

- [Republican Guard, max 3]: 3 2S1 SP 122mm Guns; [optional 1 FO + 1 TRACKED APC]

▪ SP Heavy Artillery Battalion

- [Mechanized/Tank Division, max 1]: 3 2S3 SP 152mm How; [optional 1 FO + 1 TRACKED APC]
- [Republican Guard, max 3]: 3 155MM SP GUNS; [optional 1 FO + 1 TRACKED APC]

▪ Corp Heavy Artillery Battalion [max 3, one of the following lines]

- 3 130mm Towed Guns; [optional 1 FO + 1 Wheeled APC]
- 3 152mm Towed Guns; [optional 1 FO + 1 Wheeled APC]
- 3 155mm Towed Guns; [optional 1 FO + 1 Wheeled APC]

▪ MRL Battalion [Mechanized/Tank Division Arty Brigade, max 1]

- 3 Light MRLs

Equipment Notes

▪ 122MM TOWED GUN:

- M-30 122mm How, D-30 122mm FG, M1931/37 122mm FG, or D74 122mm FG

▪ 130MM TOWED GUN:

- M-46 130mm FG or Type 59 130mm FG

▪ 152MM TOWED GUN:

- D-1 152mm How, D-20 152mm How, or ML-20 152mm How

▪ 155MM TOWED GUN:

- M114 155mm How, GHN-45 155mm Gun, or G5 155mm Gun

▪ 155MM SP GUN:

- Mk F3 SP 155mm Gun or GCT SP 155mm Gun

▪ APC:

- Type 63C APC, MTLB, BTR-50, BTR-60 series, EE-11 Urutu, or Panhard M3

▪ IFV:

- BMP-1 series or BMP-2 series

▪ LIGHT MRL:

- Type 63 MRL, BM-21 Grad MRL, BM-21V MRL, ASTROS II w/SS-30

▪ MBT:

- T55 series, T62 series, Type 69-II MBT, or T-72 Export

▪ SAM TEAM:

- SA-7 Team, SA-14 Team, SA-18 Team, or SA-16 Team

▪ TRACKED APC:

- Type 63C APC, MTLB, or BTR-50

▪ WHEELED APC:

- BTR-60 series, EE-11 Urutu, or Panhard M3

Israel Defense Force 1967

Quality

1950-1969: 25% Fair; 30% Average; 35% Good; 5% Excellent; 5% Superb

Artillery Accuracy & Friction Response

Artillery Accuracy 4+; Response 2+

Combat Formations

Armored Battalion

- **Base**
 - 1 Makmat SP 120mm Mtr
- **3 Tank Companies**
 - 2 MBT
- **Stand Inventory**
 - 1 Makmat SP 120mm Mtr
 - 6 MBT

Mechanized Infantry Battalion

- **Base**
 - 1 MORTAR UNIT
 - 1 Jeep w/106mm RR
- **3 Mechanized Infantry Companies**
 - 3 Infantry stands + 3 M3 Halftracks
- **Stand Inventory**
 - 1 MORTAR UNIT
 - 1 Jeep w/106mm RR
 - 9 Infantry stands
 - 9 M3 Halftracks

Infantry Battalion

- **Base**
 - 1 81mm Mtr + 1 Light Truck
 - 1 MG Team + 1 Medium Truck
 - 1 Jeep w/106mm RR
- **3 Infantry Companies [choose one type]**
 - **Halftrack-Based**
 - 3 Infantry stands + 3 M3 Halftracks
 - **Truck-Based**
 - 3 Infantry stands + 3 Medium Trucks
- **Stand Inventory**
 - 1 81mm Mtr
 - 1 Light Truck
 - 1 MG Team
 - 1 Jeep w/106mm RR
 - *If Halftrack-Based:*
 - 1 Medium Truck
 - 9 Infantry stands
 - 9 M3 Halftracks
 - *If Truck-Based:*
 - 9 Infantry stands
 - 10 Medium Trucks

Parachute Infantry Battalion

- **Base**
 - 1 81mm Mtr + 1 Light Truck
 - 1 Jeep w/106mm RR

▪ 4 Parachute Infantry Companies [choose one type]

- **Half-track-Based**
 - 3 Infantry stands + 3 M3 Halftracks
- **Truck-Based**
 - 3 Infantry stands + 3 Medium Trucks
- **Stand Inventory**
 - 1 81mm Mtr
 - 1 Light Truck
 - 1 Jeep w/106mm RR
 - *If Halftrack-Based:*
 - 12 Infantry stands
 - 12 M3 Halftracks
 - *If Truck-Based:*
 - 12 Infantry stands
 - 12 Medium Trucks

Attachments

- **Tank Company**
 - 2 MBT
- **Mechanized Infantry Company**
 - 3 Infantry stands + 3 M3 Halftracks
- **Infantry Company [one of the following lines]**
 - 3 Infantry stands + 3 M3 Halftracks
 - 3 Infantry stands + 3 Medium Trucks
- **Parachute Infantry Company [one of the following lines]**
 - 3 Infantry stands + 3 M3 Halftracks
 - 3 Infantry stands + 3 Medium Trucks
- **Engineer Company [one of the following lines]**
 - 3 Engineer stands + 3 M3 Halftracks
 - 3 Engineer stands + 3 Medium Trucks
- **Reconnaissance Company [one of the following lines]**
 - [Armored Brigade]: (2 MBT; 1 recon Infantry stand + 1 M3 Halftrack)
 - [Infantry or Parachute Brigade]: (2 recon Infantry stands; 2 Jeep w/LMG; 2 Jeep w/HMG; 1 Jeep w/106mm RR)
- **AAA Battery [one of the following lines]**
 - (3 M16 SP AA Gun)
 - (3 M55 Quad AAG + 3 Medium Truck)
- **AT Company [only with Infantry Battalion or Parachute Infantry Battalion, one of the following lines]**
 - 2 Jeep w/106mm RR
 - 2 M3 Halftrack w/90mm

Artillery Support Groups

- **Artillery Battalion [one of the following lines, plus if on-table 1 Bazooka Team stand + 1 Jeep w/LMG]**
 - 3 M109A1-4 SP 155mm How
 - 3 M7 HMC Priest
 - 3 M-66 160mm Mtr + 3 M3 Halftracks
 - 3 M114 155mm How + 3 Medium Trucks
 - 3 M101 105mm How + 3 Light Trucks

Equipment Notes

- **MBT:**
 - Centurion Mk 5/1, Sho't series, Sherman M51, M48A2 Patton, Sherman M50 Mk1, Sherman M50 Mk2, AMX-13, or M1 Super Sherman
- **MORTAR UNIT:**
 - 1 Makmat SP 120mm Mtr, or 1 M-65 120mm Mtr + 1 Light Truck

Israel Defense Force 1973

Quality

1970-1990: 25% Fair; 30% Average; 35% Good; 5% Excellent; 5% Superb

Artillery Accuracy & Friction Response

Artillery Accuracy 4+; Response 2+

Combat Formations

Armored Battalion

- Base
 - 1 Makmat SP 120mm Mtr
- 3 [or occasionally 4] Tank Companies
 - 2 MBT
- Stand Inventory
 - 1 Makmat SP 120mm Mtr
 - 6 or 8 MBT

Mechanized Infantry Battalion

- Base
 - 1 MORTAR UNIT
 - 1 Jeep w/106mm RR
- 3 Mechanized Infantry Companies
 - 3 Infantry stands + 3 APC
- Stand Inventory
 - 1 MORTAR UNIT
 - 1 Jeep w/106mm RR
 - 9 Infantry stands
 - 9 APC

Infantry Battalion

- Base
 - 1 81mm Mtr + 1 Light Truck
 - 1 Jeep w/106mm RR
- 3 Infantry Companies [choose one type]
 - APC-Based
 - 3 Infantry stands + 3 APC
 - Truck-Based
 - 3 Infantry stands + 3 Medium Trucks
- Stand Inventory
 - 1 81mm Mtr + 1 Light Truck
 - 1 Jeep w/106mm RR
 - If APC-Based:
 - 9 Infantry stands
 - 9 APC
 - If Truck-Based:
 - 9 Infantry stands
 - 9 Medium Trucks

Parachute Infantry Battalion

- Base
 - 1 Towed 81mm Mortar + 1 Medium Truck
 - 1 Jeep w/106mm RR
- 4 Parachute Infantry Companies
 - APC-Based
 - 3 Infantry stands + 3 APC
 - Truck-Based
 - 3 Infantry stands + 3 Medium Trucks

Stand Inventory

- 1 Towed 81mm Mortar + 1 Medium Truck
- 1 Jeep w/106mm RR
- If APC-Based:
 - 12 Infantry stands
 - 12 APC
- If Truck-Based:
 - 12 Infantry stands
 - 12 Medium Trucks

Armored Recon Battalion

- 3 Armored Recon Companies
 - 2 MBT
 - 2 recon Infantry stands + 2 APC
- 1 Light Recon Company
 - 2 recon Infantry stands
 - 2 Jeep w/LMG
 - 2 Jeep w/HMG
 - 1 Jeep w/106mm RR
- Stand Inventory
 - 6 MBT
 - 8 Infantry stands
 - 6 APC
 - 2 Jeep w/LMG
 - 2 Jeep w/HMG
 - 1 Jeep w/106mm RR

Attachments

- Tank Company
 - 2 MBT
- Mechanized Infantry Company
 - 3 Infantry stands + 3 APC
- Infantry Company [one of the following lines]
 - 3 Infantry stands + 3 APC
 - 3 Infantry stands + 3 Medium Trucks
- Parachute Infantry Company [one of the following lines]
 - 3 Infantry stands + 3 APC
 - 3 Infantry stands + 3 Medium Trucks
- Engineer Company [one of the following lines]
 - 3 Engineer stands + 3 M3 Halftracks
 - 3 Engineer stands + 3 Medium Trucks
- Reconnaissance Company [one of the following lines]
 - [Armored Brigade]: (2 MBT, 1 recon Infantry stand + 1 APC)
 - [Mechanized/Infantry/Parachute or Reserve Armored Brigade]: (2 recon Infantry stands, 2 Jeep w/LMG, 2 Jeep w/HMG, 1 Jeep w/106mm RR)
- AAA Battery [one of the following lines]
 - (3 M3 w/TCM-20 SP AA Gun)
 - (3 Towed TCM-20 + 3 Medium Trucks)
 - (3 M16 SP AA Gun)
 - (3 M55 Quad AAG + 3 Medium Trucks)
- AT Company [only with Infantry Battalion or Parachute Battalion, one of the following lines]
 - 2 Jeep w/106mm RR
 - 2 M3 Halftrack w/90mm

Artillery Support Groups

- Artillery Battalion [one of the following lines, plus if on-table 1 Bazooka Team stand + 1 Jeep w/LMG]
 - 3 M107 SP 175mm How
 - 3 M109A1-4 SP 155mm How
 - 3 Makmat SP 160mm Mtr
 - 3 M7 HMC Priest

- 3 M-66 160mm Mtr + 3 M3 Halftracks
- 3 M114 155mm How + 3 Medium Trucks
- 3 M101 105mm How + 3 Light Trucks

Equipment Notes

- **APC:**
 - M3 Halftrack, M113 [In the 134th Armored Brigade may be BTR-50 or OT-62 series]
- **MBT:**
 - Sho't series, Magach 3, Magach 5, Sherman M51, Magach 6, or AMX-13 [In the 134th Armored Brigade Tiran 4, Tiran 5]
- **MORTAR UNIT:**
 - 1 Makmat SP 120mm Mtr, or 1 M-65 120mm Mtr + 1 Light Truck

Italian Army 1980s+

Quality

1980+: 20% Marginal; 45% Fair; 25% Average; 10% Good

Artillery Accuracy & Friction Response

1980-1984: Artillery Accuracy 4+; Response 2+
1985-2000: Artillery Accuracy 3+; Response 2+
2001+: Artillery Accuracy 2+; Response 2+

Combat Formations

Armored Battalion

- **3 Tank Companies**
 - 3 MBT
- **Stand Inventory**
 - 9 MBT

Mechanized Battalion

- **Base**
 - 2 M106 SP 107mm Mtr
 - 2 Jeep w/106mm RR or 2 Jeep w/TOW
- **3 Mechanized Infantry Companies**
 - (1 M125 SP 81mm Mtr)
 - 1 Jeep w/106mm RR
 - 3 Infantry stands + 3 APC
- **Stand Inventory**
 - 2 M106 SP 107mm Mtr
 - 2 Jeep w/106mm RR or 2 Jeep w/TOW
 - 3 Jeep w/106mm RR
 - 3 M125 SP 81mm Mtr
 - 9 Infantry stands
 - 9 APC

Motorized Battalion

- **Base**
 - 1 120mm Mtr + 1 Light Truck
 - 2 Jeep w/106mm RR
- **3 Motorized Infantry Companies**
 - (1 M125 SP 81mm Mtr)
 - 1 Jeep w/106mm RR
 - 3 Infantry stands + 3 Light Trucks
- **Stand Inventory**
 - 1 120mm Mtr
 - 5 Jeep w/106mm RR
 - 3 M125 SP 81mm Mtr
 - 9 Infantry stands
 - 10 Light Trucks

Parachute Battalion

- **Base**
 - 1 120mm Mtr + 1 Light Truck
 - 2 Jeep w/106mm RR or 2 Jeep w/TOW
- **3 Parachute Companies**
 - 3 Infantry stands [optional + 3 Light Trucks]
 - 1 Jeep w/106mm RR or 1 Jeep w/TOW
- **Stand Inventory**
 - 1 120mm Mtr
 - 1 Light Truck
 - 5 Jeep w/106mm RR or 5 Jeep w/TOW
 - 9 Infantry stands
 - [optional + 9 Light Trucks]

Alpini Battalion

- **Base**
 - 1 120mm Mtr + 1 Light Truck
 - 2 Jeep w/106mm RR or 2 Jeep w/TOW
- **3 Alpini Companies**
 - 3 Infantry stands [optional + 3 Light Trucks]
 - 1 Jeep w/106mm RR or 1 Jeep w/TOW
- **Stand Inventory**
 - 1 120mm Mtr
 - 1 Light Truck
 - 5 Jeep w/106mm RR or 5 Jeep w/TOW
 - 9 Infantry stands
 - [optional + 9 Light Trucks]

Armored Cavalry Regiment

- **3 Armored Cavalry Companies**
 - 2 recon CAVALRY TANKS
 - 2 recon Jeep w/LMG
- **Stand Inventory**
 - 6 CAVALRY TANKS
 - 6 Jeep w/LMG

Attachments

- **Armored Company**
 - 3 MBT
- **Mechanized Infantry Company**
 - (1 M125 SP 81mm Mtr); 1 Jeep w/106mm RR; 3 Infantry stands + 3 APC
- **Motorized Infantry Company**
 - (1 M125 SP 81mm Mtr); 1 Jeep w/106mm RR; 3 Infantry stands + 3 Light Trucks
- **Parachute Company**
 - 3 Infantry stands [optional + 3 Light Trucks]; 1 Jeep w/106mm RR or 1 Jeep w/TOW
- **Alpini Company**
 - 3 Infantry stands [optional + 3 Light Trucks]; 1 Jeep w/106mm RR or 1 Jeep w/TOW
- **Armored Cavalry Company**
 - 2 recon MBT; 2 recon Jeep w/LMG

Artillery Support Groups

- **Field Artillery Battalion**
 - [Armored/Mech Units]: 3 M109A1-4 SP 155mm How; [optional 1 FO, + 1 Jeep or 1 M113]
 - [Motorized Units, one of the following lines]:
 - 3 M114 155mm How + 3 Medium Trucks; [optional 1 FO, + 1 Jeep or 1 M113]
 - 3 FH-70 + 3 Medium Trucks; [optional 1 FO, + 1 Jeep or 1 M113]
 - [Alpini or Para Brigade]: 3 M56 105mm Pack How + 3 Light Trucks
- **Field Artillery Battery [Alpini Brigade, one of the following lines, availability modifier -2]**
 - 1 M114 155mm How + 1 Medium Truck
 - 1 FH-70 + 1 Medium Truck
- **Heavy Artillery Battalion**
 - 3 M110 SP 203mm How; [optional 1 FO + 1 Jeep]
- **MRL Battery**
 - 1 M270 MLRS

Equipment Notes

- **APC:**
 - M113, VCC-1, VCC-80, or Puma [the Italian, not Israeli vehicle]
- **CAVALRY TANK:**
 - '80-'92: Leopard 1
 - '91+: Centauro B1
- **MBT:**
 - Leopard 1, M47, M60A1, or C1 Ariete
- **Generic Wheeled APC:**
 - VCC-1
- **Generic Tracked APC:**
 - M113 series

Jordanian Army 1967

Quality

1965-1972: 25% Poor; 15% Marginal; 40% Fair; 20% Average

Artillery Accuracy & Friction Response

Artillery Accuracy 4+; Response 2+

Combat Formations

Armored Regiment

- **Base**
 - 1 recon Ferret
- **3 Tank Squadrons**
 - 3 MBT
- **Stand Inventory**
 - 1 *recon Ferret*
 - 9 *MBT*

Mechanized Battalion

- **Base**
 - 1 Jeep w/106mm RR
 - 1 HMG Support stand + 1 Light Truck
 - 2 3-inch ML Mtr Mk II + 2 Light Trucks
- **3 Infantry Companies**
 - 3 Infantry stands + 3 Saracen
- **Stand Inventory**
 - 1 *Jeep w/106mm RR*
 - 1 *HMG Support stand*
 - 3 *Light Trucks*
 - 2 *3-inch ML Mtr Mk II*
 - 9 *Infantry stands*
 - 9 *Saracen*

Attachments

- **Tank Squadron**
- **Infantry Company**
- **Recon Squadron [max one per 3 combat formations, one of the following lines]**
 - 2 Jeep w/LMG; 1 Jeep w/106mm RR; 2 Infantry stands + 2 Saracen
 - 2 Saladin; 2 Ferrets; 1 Saracen + 1 Infantry stand
- **AA Company [max one per 3 combat formations]**
 - (3 M42 Duster)
- **Engineer Company [one of the following lines]**
 - 3 Engineer stands + 3 Saracen
 - 3 Engineer stands + 3 Medium Truck

Artillery Support Groups

- **Artillery Regiment [max one regiment per 3 combat formations, one of the following lines]**
 - 3 M52 SP 105mm How; [optional 1 FO stand + 1 Saracen or 1 Jeep]
 - 3 M114 155mm How + 3 Medium Trucks; [optional 1 FO stand + 1 Saracen or 1 Jeep]
 - 3 M101 105mm How + 3 Light Trucks; [optional 1 FO stand + 1 Saracen or 1 Jeep]

Equipment Notes

- **MBT:**
 - Centurion Mk 5, M47, or M48A2

Jordanian Army 1973

Quality

1973+: 30% Poor; 20% Marginal; 50% Fair; 10% Average

Artillery Accuracy & Friction Response

Artillery Accuracy 4+; Response 2+

Combat Formations

Armored Regiment

- Base
 - 1 recon Ferret
- 3 Tank Squadrons
 - 3 MBT
- Stand Inventory
 - 1 recon Ferret
 - 9 MBT

Mechanized Battalion

- Base
 - 2 Jeep w/106mm RR
 - 1 M106 SP 107mm Mtr
- 3 Infantry Companies
 - (1 M125 SP 81mm Mtr)
 - 3 Infantry stands + 3 M113
- Stand Inventory
 - 2 Jeep w/106mm RR
 - 1 M106 SP 107mm Mtr
 - 3 M125 SP 81mm Mtr
 - 9 Infantry stands
 - 9 M113

Attachments

- Tank Squadron
 - 3 MBT
- Infantry Company
 - (1 M125 SP 81mm Mtr); 3 Infantry stands + 3 M113
- Recon Squadron [max one per 3 combat formations]
 - 2 Jeep w/LMG, 1 Jeep w/106mm RR, 2 Infantry stands + 2 M113
- AA Company [max one per 3 combat formations]
 - (3 M42 Duster)
- Engineer Company [one of the following lines]
 - 3 Engineer stands + 3 M113
 - 3 Engineer stands + 3 Medium Trucks

Artillery Support Groups

- Artillery Regiment [max one regiment per 3 combat formations, one of the following lines]
 - 3 M52 SP 105mm How; [optional 1 FO stand + 1 M113 or 1 Jeep]
 - 3 M114 155mm How + 3 Medium Trucks; [optional 1 FO stand + 1 M113 or 1 Jeep]
 - 3 M101 105mm How + 3 Light Trucks; [optional 1 FO stand + 1 M113 or 1 Jeep]

Equipment Notes

▪ MBT:

- Tariq [Jordan also had M48A2 and M47 tanks, but these did not see combat]

North Vietnamese/Viet Cong Army 1964–1974

Quality

NVA: 15% Poor; 20% Marginal; 30% Fair; 25% Average; 10% Good
[Main force units will be at least Fair quality; Sapper stands will usually be Good quality]
Viet Cong: 25% Poor; 25% Marginal; 25% Fair; 20% Average; 5% Good
[Main force units will be at least Marginal quality, Sapper stands will usually be Good quality]

Artillery Accuracy & Friction Response

Artillery Accuracy 4+; Response 2+
[Optionally, preplanned fire may have Artillery Accuracy of 2+]

Combat Formations

North Vietnamese Infantry Regiment 1964 – 1974

- **Base**
 - 2 NVA RECOILLESS RIFLES
 - 2 NVA MORTAR
 - 2 12.7mm AAG
- **3 Infantry Battalions**
 - 1 recon NVA RIFLE STAND
 - 1 recon NVA SAPPER STAND
 - 9 NVA RIFLE STANDS
 - 1 NVA MORTAR
 - 1 NVA RECOILLESS RIFLE
- **0-2 Attachments**
- **0-2 Artillery Support Groups**

Viet Cong Infantry Regiment 1964 – 1974

- **Base**
 - 2 VC RECOILLESS RIFLES
 - 2 VC MORTARS
 - 0-2 12.7mm AAG
- **3 Infantry Battalions**
 - 1 recon VC SAPPER STAND
 - 9 VC RIFLE STANDS
 - 0-1 VC MORTAR
 - 0-1 VC RECOILLESS RIFLE
- **0-2 Attachments**
- **0-2 Artillery Support Groups**

Attachments

- **Tank Company***
 - 3 MBT
- **Motorized Rifle Company***
 - '68-'74: 3 NVA RIFLE STANDS + 3 Type 63A APC [Chinese]; 0-1 MBT
- **Sapper Company**
 - 3 recon NVA SAPPER STANDS
- **AT Company**
 - 3 VC RECOILLESS RIFLES
- **Mortar Company**
 - 3 VC MORTARS

[* NVA armored forces only appeared on the battlefield four times up to the end of 1973: at Lang Vei Special Forces Camp in 1968, Ben Het in 1969, the ARVN attack into Laos in 1971, and the Eastertide Offensive of 1972.]

Artillery Support Groups⁸

- **120mm Mortar Battalion**
 - 3 M-43 120mm Mtr [optional + 3 Light Trucks]
- **120mm Mortar Battery [availability modifier -2]**
 - 1 M-43 120mm Mtr [optional + 1 Light Truck]
- **122mm Artillery Battalion**
 - 3 D-74 122mm FG + 3 Light Trucks
- **130mm Artillery Battalion**
 - 3 M-46 130mm FG + 3 Light Trucks
- **152mm Artillery Battalion**
 - 3 D-20 152mm How + 3 Light Trucks
- **MRL Battery**
 - 1 Type 63 MRL + 1 Light Truck

Equipment Notes

- **MBT:**
 - '64-'71: T-34/85 or PT-76
 - '72-'74: T-54, PT-76 or T-34/85
- **NVA MORTAR:**
 - 82mm Mtr [Russian], 81mm Mortar M1 [U.S. WW2 mortar], or [rarely] M-43 120mm Mtr [Russian]
- **NVA RECOILLESS RIFLE:**
 - '64-'65: 57mm RR Team stand, M20 75mm RR [U.S.], M40 106mm RR [U.S., rare]
 - '66: SPG-9 Rocket Gun [Russian], M20 75mm RR [U.S.], 57mm RR Team stand, M40 106mm RR [U.S., rare]
 - '67-'74: SPG-9 Rocket Gun [Russian], M40 106mm RR [U.S., rare]
- **NVA RIFLE STAND:⁹**
 - '64: NVA Infantry SAR+R2 stand
 - '65-'66: NVA Infantry SAR+R2 stand, NVA Infantry AR+R2 stand [rare]
 - '67: NVA Infantry SAR+R2 stand, NVA Infantry AR+R2 stand, NVA Infantry SAR+R7 stand [rare], NVA Infantry AR+R7 stand [rare]
 - '68: NVA Infantry AR+R2 stand, NVA Infantry AR+R7 stand, NVA Infantry SAR+R2 stand [rare], NVA Infantry SAR+R7 stand [rare]
 - '69-'74: NVA Infantry AR+R2 stand, NVA Infantry AR+R7 stand
- **NVA Sapper Stand:¹⁰**
 - '64: NVA Sapper SAR+R2 stand
 - '65-'66: NVA Sapper SAR+R2 stand, NVA Sapper AR+R2 stand [rare]
 - '67: NVA Sapper SAR+R2 stand, NVA Sapper AR+R2 stand, NVA Sapper SAR+R7 stand [rare], NVA Sapper AR+R7 stand [rare]
 - '68: NVA Sapper AR+R2 stand, NVA Sapper AR+R7 stand, NVA Sapper SAR+R2 stand [rare], NVA Sapper SAR+R7 stand [rare]
 - '69-'74: NVA Sapper AR+R2 stand, NVA Sapper AR+R7 stand

8 The 122mm, 130mm, and 152mm artillery battalions would usually only be available in North Vietnam or near the DMZ/border areas.

9 The infantry stand names refer to the varied weapons in use: SAR = semi-automatic rifles, AR = assault rifles, R2 = RPG-2, and R7 = RPG-7

10 Sappers can breach obstacles like engineers.

- **VC MORTAR:**
 - 82mm Mtr [Russian] or 81mm Mortar M1 [US WW2 mortar]
- **VC RECOILLESS RIFLE:**
 - '64: 57mm RR Team stand , M20 75mm RR [U.S.], M40 106mm RR [U.S., rare]
 - '66: SPG-9 Rocket Gun [Russian], M20 75mm RR [U.S.], 57mm RR Team stand, M40 106mm RR [U.S., rare]
 - '67-'74: SPG-9 Rocket Gun [Russian], 57mm RR Team stand, M40 106mm RR [U.S., rare]
- **VC RIFLE STAND:**
 - '64-'66: VC Infantry SAR stand
 - '67: VC Infantry SAR+R2 stand
 - '68: VC Infantry SAR+R2 stand, VC Infantry AR+R2 stand, VC Infantry SAR+R7 stand [rare], VC Infantry AR+R7 stand [rare]
 - '69-'74: VC Infantry AR+R2 stand, VC Infantry AR+R7 stand
- **VC Sapper Stand:¹¹**
 - '64-'66: VC Sapper SAR stand
 - '67: VC Sapper SAR+R2 stand
 - '68: VC Sapper SAR+R2 stand, VC Sapper AR+R2 stand, VC Sapper SAR+R7 stand [rare], VC Sapper AR+R7 stand [rare]
 - '69-'74: VC Sapper AR+R2 stand, VC Sapper AR+R7 stand

Russian/Soviet/CIS Army 1970+

The postwar Soviet Army grew out of the Red Army of World War 2. The defining characteristics of the Red Army were size, resilience and massive quantities of materiel.

By any standard, the Red Army was huge—it numbered 4.8 million at the beginning of Operation Barbarossa and conscripted 29.5 million men during the war. On average, during the war the Red Army mustered 400-500 rifle divisions and 40-60 tank and mechanized “corps” (division-sized formations). It began the war with more tanks than the rest of the world combined; it ended the war in a similar state. At the end of the war, the Red Army numbered 11.3 million.

The Red Army was also stunningly resilient. In the opening months of Operation Barbarossa, the Germans tore it apart. Yet by the fall of 1941, the Red Army had rebuilt itself. By the winter of 1941, the Red Army was able to mount a massive counteroffensive. By the end of 1942, the Red Army had seized the strategic initiative and kept it for the rest of the war. The Red Army also suffered horrific manpower losses during the war—as many as 11 million dead. Despite these challenges, the Red Army crushed the Wehrmacht.

The Red Army was also well-equipped and highly mechanized, especially after 1942 (as relocated Soviet factories came online). In the 1930s, American industrial experts trained a whole generation of Soviet managers, engineers and planners in American-style industrial practices. This allowed the Soviet economy to utterly out-produce the Germans in key military equipment during World War 2. Soviet equipment was generally robust, well-designed, effective and extremely easy to produce. As a result, the Red Army outnumbered the entire world in armored and mechanized divisions in 1945. And most of them were near full strength.

After the war ended, the Red Army became the Soviet Army. Like its American and British counterparts, it was rapidly downsized (from 11.3 million to about 2.8 million by 1948). But unlike its Western counterparts, the Soviet Army did not devolve into a “hollow army”. Rather, it retained almost all of its armored and mechanized formations and demobilized most of its rifle divisions. Throughout the Cold War, the Soviet Army fielded over 200 divisions. In 1957, the Soviets converted all remaining rifle divisions into fully mechanized divisions. By contrast, the US Army only managed this feat 20 years later. Clearly, the Soviet Army inherited two of the defining characteristics of the Red Army—size and materiel.

For us, no task has been more controversial than evaluating the Soviet Army. The Soviet Army was a study in contrasts. On one hand, it was highly mechanized, well equipped and numerically superior to its likely opponents in key weapons systems. During most of the Cold War, the Soviet Army enjoyed enormous prestige among the Soviet people. This allowed it to consume a huge proportion of the Soviet economy—25% is a consistent estimate—and to attract high quality officers. Soviet weapons were generally well-regarded and capable. These factors argued for a generous evaluation.

But... the Soviet Army also had serious systemic deficiencies that could not help but reduce combat effectiveness. It was a conscript army that lacked a long-term professional NCO corps. Despite the prestige among the Soviet society as a whole, military service was terribly unpopular among the conscripts themselves. Conditions among the enlisted men were bad—poor quality food, terrible living conditions and barbaric hazing. Alcoholism and corruption was rampant among both enlisted personnel and officers. Soviet regiments had to operate fairly sophisticated agricultural enterprises to keep their troops fed, which necessarily compromised operational readiness. To maximize the number of combat units, the Soviets skimped on logistics and command/control. For instance, an American battalion commander had more command and control assets than a Soviet regimental commander.

¹¹ Sappers can breach obstacles like engineers.

In addition, the Western press routinely overstated the effectiveness of the Soviet Army in the 1970s. The reasons for this are complex and outside the scope of this introduction, but it had a definite effect on Western attitudes about the Soviet Army.

Our assessment is that modern wargamers have generally overestimated the Soviet Army's effectiveness, for very understandable reasons. On the surface, it looked like a highly capable force—well equipped, numerically superior and well-led. And the Soviets succeeded in hiding its deficiencies throughout the Cold War. The few accounts of horrible conditions in the Soviet Army came from defectors, whose objectivity was doubtful. In general, serious analysts tended to ignore these reports and focused on quantifiable measures. And most of these painted a very rosy picture of the Soviet Army.

So the Soviet Army in FFT has a lower average quality rating than many old-time modern wargamers are comfortable with. However, we believe that the evidence strongly supports this assessment. We also used Trevor Dupuy's Quantified Judgment Model from *Numbers, Predictions and War* to calibrate Soviet effectiveness. We also feel that Soviet tactical and operational doctrine supports our assessment. This doctrine was developed on the Eastern Front in World War 2 and continued with modest refinements throughout the Cold War. The striking feature of Soviet doctrine is that it assumes relatively low-quality troops. And we think that it works well for such forces. It would not have been a good fit for a Western-style army.

Note that references to "low quality" are not a judgment of the personal qualities of Soviet troops. As one German general said, "They were first class fighters from the start...over time they [became] first class soldiers." We think that the Soviet Army would have been a very formidable enemy. While it had serious problems, its equipment and doctrine were well-designed to minimize these weaknesses. If you doubt us, play a late-1970s scenario with M60A1s versus 3 times as many T-64As...

Quality

1961-1970: 25% Poor; 25% Marginal; 40% Fair; 5% Average; 5% Good
1971-1984: 40% Marginal; 50% Fair; 5% Average; 5% Good
1985-1990: 25% Poor; 35% Marginal; 20% Fair; 10% Average; 10% Good
1991-1995: 50% Poor; 25% Marginal; 20% Fair; 5% Average
1996+: 70% Poor; 15% Marginal; 10% Fair; 5% Average

Artillery Accuracy & Friction Response

1970-1979: Artillery Accuracy 5+; Response 2+
1980-1995: Artillery Accuracy 4+; Response 2+
1996+: Artillery Accuracy 3+; Response 2+

Combat Formations

Tank Regiment 1970 – 1975

- **Base**
 - 1 SP SAM
 - 1 SP AA GUN
 - 2 recon BRDM-2
 - 1 recon PT-76B
- **3 Tank Battalions¹²**
 - 6 MBT
- **1 Engineer Company**
 - 2 Engineer stands + 2 Medium Trucks
 - 1 AVLB
 - 1 GMZ Armored Minelayer

12 One company (2 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.

Stand Inventory

- 1 SP SAM
- 1 SP AA GUN
- 2 BRDM-2
- 1 PT-76B
- 18 MBT
- 2 Engineer stands
- 2 Medium Trucks
- 1 AVLB
- 1 GMZ Armored Minelayer

Tank Regiment 1975 – 1980

- **Base**
 - 1 SP SAM
 - 1 SP AA GUN
 - 1 recon BRDM-2
 - 1 recon PT-76B
- **3 Tank Battalions¹³**
 - 6 MBT
- **1 Engineer Company**
 - 2 Engineer stands + 2 Medium Trucks
 - 1 AVLB
 - 1 GMZ Armored Minelayer
- **Stand Inventory**
 - 1 SP SAM
 - 1 SP AA GUN
 - 1 BRDM-2
 - 1 PT-76B
 - 18 MBT
 - 2 Engineer stands
 - 2 Medium Trucks
 - 1 AVLB
 - 1 GMZ Armored Minelayer

Tank Regiment [Category I] 1980+

- **Base**
 - 1 SP SAM
 - 1 SP AA GUN
 - 1 recon BRDM-2
 - 1 recon IFV
- **3 Tank Battalions¹⁴**
 - 6 MBT
- **1 Motor Rifle Battalion¹⁵**
 - (1 MORTAR UNIT)
 - 3 Infantry stands + 3 IFV
 - 3 Infantry stands or 3 Infantry w/ATGM stands + 3 IFV
 - 3 Infantry stands or 3 Infantry w/SAM stands + 3 IFV
- **1 Engineer Company**
 - 2 Engineer stands + 2 Medium Trucks
 - 1 AVLB
 - 1 GMZ Armored Minelayer

13 One company (2 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.

14 One company (2 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.

15 Battalion is composed of 3 rifle companies of 3 IFV + 3 Infantry stands each. Infantry stands of each type must be divided evenly amongst the companies. One company may be detached prior to the game start (and combined with a tank company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.

<ul style="list-style-type: none"> ▪ Stand Inventory <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 1 BRDM-2 • 18 MBT • 1 MORTAR UNIT • 3 Infantry stands • 3 Infantry stands or 3 Infantry w/ATGM stands • 3 Infantry stands or 3 Infantry w/SAM stands • 10 IFV • 2 Engineer stands • 2 Medium Trucks • 1 AVL • 1 GMZ Armored Minelayer 	<ul style="list-style-type: none"> • 3 Infantry stands or 3 Infantry w/ATGM stands + 3 IFV • 3 Infantry stands or 3 Infantry w/SAM stands + 3 IFV ▪ 1 Tank Battalion (MR)¹⁸ <ul style="list-style-type: none"> • 9 MBT ▪ 1 Engineer Company <ul style="list-style-type: none"> • 2 Engineer stands + 2 Medium Trucks • 1 AVL • 1 GMZ Armored Minelayer ▪ 1 Regimental 122mm SP Artillery Battalion [see the Artillery Support Groups] ▪ Stand Inventory <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA Gun • 2 BRDM-2 • 2 AT Vehicles • 3 Mortar Units • 9 Infantry stands • 9 Infantry stands or 9 Infantry w/ATGM stands • 9 Infantry stands or 9 Infantry w/SAM stands • 27 IFV • 9 MBT • 2 Engineer stands • 2 Medium Trucks • 1 AVL • 1 GMZ Armored Minelayer
<p>Tank Regiment [Category II] 1980+</p> <ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 1 recon BRDM-2 • 1 recon IFV ▪ 3 Tank Battalions¹⁶ <ul style="list-style-type: none"> • 6 MBT ▪ 1 Motor Rifle Company <ul style="list-style-type: none"> • 1 Infantry stand + 1 IFV • 1 Infantry stand or 1 Infantry w/ATGM stand + 1 IFV • 1 Infantry stand or 1 Infantry w/SAM stand + 1 IFV ▪ 1 Engineer Company <ul style="list-style-type: none"> • 2 Engineer stands + 2 Medium Trucks • 1 AVL • 1 GMZ Armored Minelayer ▪ Stand Inventory <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 1 BRDM-2 • 1 PT-76B • 18 MBT • 1 Infantry stand • 1 Infantry stand or 1 Infantry w/ATGM stand • 1 Infantry stand or 1 Infantry w/SAM stand • 3 IFV • 2 Engineer stands • 2 Medium Trucks • 1 AVL • 1 GMZ Armored Minelayer 	<p>BMP Motor Rifle Regiment 1975 – 1980</p> <ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 1 recon BRDM-2 • 1 recon PT-76B ▪ AT Missile Battery <ul style="list-style-type: none"> • 2 AT VEHICLES ▪ 3 BMP Motor Rifle Battalions¹⁹ <ul style="list-style-type: none"> • (1 MORTAR UNIT) • 3 Infantry stands + 3 IFV • 3 Infantry stands or 3 Infantry w/ATGM stands + 3 IFV • 3 Infantry stands or 3 Infantry w/SAM stands + 3 IFV ▪ 1 Tank Battalion (MR)²⁰ <ul style="list-style-type: none"> • 9 MBT ▪ 1 Engineer Company <ul style="list-style-type: none"> • 2 Engineer stands + 2 Medium Trucks • 1 AVL • 1 GMZ Armored Minelayer ▪ 1 Regimental 122mm SP Artillery Battalion [see the Artillery Support Groups] ▪ Stand Inventory <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA Gun • 1 BRDM-2 • 2 AT Vehicles
<p>BMP Motor Rifle Regiment 1970-1975</p> <ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 2 recon BRDM-2 • 1 recon PT-76B ▪ AT Missile Battery <ul style="list-style-type: none"> • 2 AT VEHICLES ▪ 3 BMP Motor Rifle Battalions¹⁷ <ul style="list-style-type: none"> • (1 MORTAR UNIT) • 3 Infantry stands + 3 IFV <p>¹⁶ One company (2 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.</p> <p>¹⁷ Battalion is composed of 3 rifle companies of 3 IFV + 3 Infantry stands each. Infantry stands of each type must be divided evenly amongst the companies. One company may be detached prior to the game start (and combined with a tank company if also detached) to form an advance guard for the force.</p>	<p>¹⁸ One company (3 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.</p> <p>¹⁹ Battalion is composed of 3 rifle companies of 3 IFV + 3 Infantry stands each. Infantry stands of each type must be divided evenly amongst the companies. One company may be detached prior to the game start (and combined with a tank company if also detached) to form an advance guard for the force.</p> <p>²⁰ One company (3 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.</p>

- 3 Mortar Units
- 9 Infantry stands
- 9 Infantry stands or 9 Infantry w/ATGM stands
- 9 Infantry stands or 9 Infantry w/SAM stands
- 27 IFV
- 9 MBT
- 2 Engineer stands
- 2 Medium Trucks
- 1 AVLB
- 1 GMZ Armored Minelayer

BMP Motor Rifle Regiment 1980 – 1985

- Base
 - 1 SP SAM
 - 1 SP AA GUN
 - 1 recon BRDM-2
 - 1 recon IFV
- AT Missile Battery
 - 2 AT VEHICLES
- 3 BMP Motor Rifle Battalions²¹
 - (1 MORTAR UNIT)
 - 3 Infantry stands + 3 IFV
 - 3 Infantry stands or 3 Infantry w/ATGM stands + 3 IFV
 - 3 Infantry stands or 3 Infantry w/SAM stands + 3 IFV
- 1 Tank Battalion (MR)²²
 - 9 MBT
- 1 Engineer Company
 - 2 Engineer stands + 2 Medium Trucks
 - 1 AVLB
 - 1 GMZ Armored Minelayer
- 1 Regimental 122mm SP Artillery Battalion [see the Artillery Support Groups]
- Stand Inventory
 - 1 SP SAM
 - 1 SP AA Gun
 - 1 BRDM-2
 - 2 AT Vehicles
 - 3 Mortar Units
 - 9 Infantry stands
 - 9 Infantry stands or 9 Infantry w/ATGM stands
 - 9 Infantry stands or 9 Infantry w/SAM stands
 - 28 IFV
 - 9 MBT
 - 2 Engineer stands
 - 2 Medium Trucks
 - 1 AVLB
 - 1 GMZ Armored Minelayer

BMP Motor Rifle Regiment 1985+

- Base
 - 1 Vasilek 82mm Mtr + 1 APC
 - 1 AGS-17 AGL + 1 IFV
 - 1 SP SAM
 - 1 SP AA GUN
 - 1 recon BRDM-2
 - 1 recon IFV

21 Battalion is composed of 3 rifle companies of 3 IFV + 3 Infantry stands each. Infantry stands of each type must be divided evenly amongst the companies. One company may be detached prior to the game start (and combined with a tank company if also detached) to form an advance guard for the force.

22 One company (3 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.

- AT Missile Battery
 - 2 AT VEHICLES
- 3 BMP Motor Rifle Battalions²³
 - (1 MORTAR UNIT)
 - 3 Infantry stands + 3 IFV
 - 3 Infantry stands or 3 Infantry w/ATGM stands + 3 IFV
 - 3 Infantry stands or 3 Infantry w/SAM stands + 3 IFV
- 1 Tank Battalion (MR)²⁴
 - 9 MBT
- 1 Engineer Company
 - 2 Engineer stands + 2 Medium Trucks
 - 1 AVLB
 - 1 GMZ Armored Minelayer
- 1 Regimental 122mm SP Artillery Battalion [see the Artillery Support Groups]
- Stand Inventory
 - 1 Vasilek 82mm Mtr
 - 1 APC
 - 1 SP SAM
 - 1 SP AA GUN
 - 1 BRDM-2
 - 2 AT VEHICLES
 - 3 MORTAR UNITS
 - 9 Infantry stands
 - 9 Infantry stands or 9 Infantry w/ATGM stands
 - 9 Infantry stands or 9 Infantry w/SAM stands
 - 28 IFV
 - 9 MBT
 - 2 Engineer stands
 - 2 Medium Trucks
 - 1 AVLB
 - 1 GMZ Armored Minelayer

BTR Motor Rifle Regiment 1970-1975

- Base
 - 1 SP SAM
 - 1 SP AA GUN
 - 2 recon BRDM-2
 - 1 recon PT-76B
- AT Missile Battery
 - 2 AT VEHICLES
- 3 BTR Motor Rifle Battalions²⁵
 - (1 MORTAR UNIT)
 - 1 Missile Team + 1 RECOILLESS GUN + 1 APC
 - 1 AGS-17 AGL + 1 APC
 - 3 Infantry stands + 3 APC
 - 3 Infantry stands or 3 Infantry w/ATGM stands + 3 APC
 - 3 Infantry stands or 3 Infantry w/SAM stands + 3 APC

23 Battalion is composed of 3 rifle companies of 3 IFV + 3 Infantry stands each. Infantry stands of each type must be divided evenly amongst the companies. One company may be detached prior to the game start (and combined with a tank company if also detached) to form an advance guard for the force.

24 One company (3 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.

25 Battalion is composed of 3 rifle companies of 3 APC + 3 Infantry stands each. Infantry stands of each type must be divided evenly amongst the companies. One company may be detached prior to the game start (and combined with a tank company if also detached) to form an advance guard for the force.

<ul style="list-style-type: none"> ▪ 1 Tank Battalion (MR)²⁶ <ul style="list-style-type: none"> • 9 MBT ▪ 1 Engineer Company <ul style="list-style-type: none"> • 2 Engineer stands + 2 Medium Trucks • 1 AVLB • 1 GMZ Armored Minelayer ▪ 1 Regimental 122mm Towed Artillery Battery or 1 Regimental 120mm Mortar Battery [see the Artillery Support Groups] ▪ Stand Inventory <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 2 BRDM-2 • 1 PT-76B • 2 AT VEHICLES • 3 MORTAR UNITS • 3 Missile Teams • 3 RECOILLESS GUNS • 3 AGS-17 AGL • 9 Infantry stands • 9 Infantry stands or 9 Infantry w/ATGM stands • 9 Infantry stands or 9 Infantry w/SAM stands • 33 APC • 9 MBT • 2 Engineer stands • 2 Medium Trucks • 1 AVLB • 1 GMZ Armored Minelayer
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BTR Motor Rifle Regiment 1975 – 1980

<ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 1 recon BRDM-2 • 1 recon PT-76B ▪ AT Missile Battery <ul style="list-style-type: none"> • 2 AT VEHICLES ▪ 3 BTR Motor Rifle Battalions²⁷ <ul style="list-style-type: none"> • (1 MORTAR UNIT) • 1 Missile Team + 1 RECOILLESS GUN + 1 APC • 1 AGS-17 AGL + 1 APC • 3 Infantry stands + 3 APC • 3 Infantry stands or 3 Infantry w/ATGM stands + 3 APC • 3 Infantry stands or 3 Infantry w/SAM stands + 3 APC ▪ 1 Tank Battalion (MR)²⁸ <ul style="list-style-type: none"> • 9 MBT ▪ 1 Engineer Company <ul style="list-style-type: none"> • 2 Engineer stands + 2 Medium Trucks • 1 AVLB • 1 GMZ Armored Minelayer ▪ 1 Regimental 122mm Towed Artillery Battalion [see the Artillery Support Groups]

<p style="text-align: center;">Support Groups]</p> <ul style="list-style-type: none"> ▪ Stand Inventory <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 1 BRDM-2 • 1 PT-76B • 2 AT VEHICLES • 3 MORTAR UNITS • 3 Missile Teams • 3 RECOILLESS GUNS • 3 AGS-17 AGL • 9 Infantry stands • 9 Infantry stands or 9 Infantry w/ATGM stands • 9 Infantry stands or 9 Infantry w/SAM stands • 33 APC • 9 MBT • 2 Engineer stands • 2 Medium Trucks • 1 AVLB • 1 GMZ Armored Minelayer
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BTR Motor Rifle Regiment 1980 – 1985

<ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 1 recon BRDM-2 • 1 recon IFV ▪ AT Missile Battery <ul style="list-style-type: none"> • 2 AT VEHICLES ▪ 3 BTR Motor Rifle Battalions²⁹ <ul style="list-style-type: none"> • (1 MORTAR UNIT) • 1 Missile Team + 1 RECOILLESS GUN + 1 APC • 1 AGS-17 AGL + 1 APC • 3 Infantry stands + 3 APC • 3 Infantry stands or 3 Infantry w/ATGM stands + 3 APC • 3 Infantry stands or 3 Infantry w/SAM stands + 3 APC ▪ 1 Tank Battalion (MR)³⁰ <ul style="list-style-type: none"> • 9 MBT ▪ 1 Engineer Company <ul style="list-style-type: none"> • 2 Engineer stands + 2 Medium Trucks • 1 AVLB • 1 GMZ Armored Minelayer ▪ 1 Regimental 122mm Towed Artillery Battalion [see the Artillery Support Groups] ▪ Stand Inventory <ul style="list-style-type: none"> • 1 SP SAM • 1 SP AA GUN • 1 BRDM-2 • 1 IFV • 2 AT VEHICLES • 3 MORTAR UNITS • 3 Missile Teams • 3 RECOILLESS GUNS • 3 AGS-17 AGL • 9 Infantry stands • 9 Infantry stands or 9 Infantry w/ATGM stands • 9 Infantry stands or 9 Infantry w/SAM stands • 33 APC

- 26 One company (3 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.
- 27 Battalion is composed of 3 rifle companies of 3 APC + 3 Infantry stands each. Infantry stands of each type must be divided evenly amongst the companies. One company may be detached prior to the game start (and combined with a tank company if also detached) to form an advance guard for the force.
- 28 One company (3 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.

- 29 Battalion is composed of 3 rifle companies of 3 APC + 3 Infantry stands each. Infantry stands of each type must be divided evenly amongst the companies. One company may be detached prior to the game start (and combined with a tank company if also detached) to form an advance guard for the force.
- 30 One company (3 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.

- 9 MBT
- 2 Engineer stands
- 2 Medium Trucks
- 1 AVL
- 1 GMZ Armored Minelayer

BTR Motor Rifle Regiment 1985+

- **Base**
 - 1 Vasilek 82mm Mtr + 1 APC
 - 1 SP SAM
 - 1 SP AA GUN
 - 1 recon BRDM-2
 - 1 recon IFV
- **AT Missile Battery**
 - 2 AT VEHICLES
- **3 BTR Motor Rifle Battalions³¹**
 - (1 MORTAR UNIT)
 - 1 Missile Team + 1 RECOILLESS GUN + 1 APC
 - 3 Infantry stands + 3 APC
 - 3 Infantry stands or 3 Infantry w/ATGM stands + 3 APC
 - 3 Infantry stands or 3 Infantry w/SAM stands + 3 APC
- **1 Tank Battalion (MR)³²**
 - 9 MBT
- **1 Engineer Company**
 - 2 Engineer stands + 2 Medium Trucks
 - 1 AVL
 - 1 GMZ Armored Minelayer
- **1 Regimental 122mm Towed Artillery Battalion [see the Artillery Support Groups]**
- **Stand Inventory**
 - 1 Vasilek 82mm Mtr
 - 1 SP SAM
 - 1 SP AA GUN
 - 1 BRDM-2
 - 1 IFV
 - 2 AT VEHICLES
 - 3 MORTAR UNITS
 - 3 Missile Teams
 - 3 RECOILLESS GUNS
 - 9 Infantry stands
 - 9 Infantry stands or 9 Infantry w/ATGM stands
 - 9 Infantry stands or 9 Infantry w/SAM stands
 - 31 APC
 - 9 MBT
 - 2 Engineer stands
 - 2 Medium Trucks
 - 1 AVL
 - 1 GMZ Armored Minelayer

Attachments

- **Tank Battalion**
 - [Tank Division]: 6 MBT
 - [Motor Rifle Division]: 9 MBT
- **Independent Tank Battalion**
 - 9 MBT

³¹ Battalion is composed of 3 rifle companies of 3 APC + 3 Infantry stands each. Infantry stands of each type must be divided evenly amongst the companies. One company may be detached prior to the game start (and combined with a tank company if also detached) to form an advance guard for the force.

³² One company (3 MBT) may be detached prior to the game start (and combined with a motor rifle company if also detached) to form an advance guard for the force. Advance guard stands trace cohesion to other advance guard stands.

▪ Motor Rifle Battalion

- [BMP] '80+: (1 MORTAR UNIT); 3 Infantry stands + 3 IFV; 3 Infantry stands or 3 Infantry w/ATGM stands + 3 IFV; 3 Infantry stands or 3 Infantry w/SAM stands + 3 IFV
- [BTR] '80-'85: (1 MORTAR UNIT); 1 Missile Team + 1 RECOILLESS GUN + 1 APC; 1 AGS-17 AGL + 1 APC; 3 Infantry stands + 3 APC; 3 Infantry stands or 3 Infantry w/ATGM stands + 3 APC; 3 Infantry stands or 3 Infantry w/SAM stands + 3 APC
- [BTR] '85+: (1 MORTAR UNIT); 1 Missile Team + 1 RECOILLESS GUN + 1 APC; 3 Infantry stands + 3 APC; 3 Infantry stands or 3 Infantry w/ATGM stands + 3 APC; 3 Infantry stands or 3 Infantry w/SAM stands + 3 APC

▪ Recon Battalion

- '70-'75+: 2 recon PT-76B; 3 recon BRDM-2
- '75-'80+: 2 recon PT-76B; 2 recon BRDM-2
- '80-'85+: 2 recon BMP or 2 recon PT-76B; 2 recon BRDM-2
- '85+: 4 recon BMP; 1 recon BRDM; 1 recon Infantry stand + 1 BTR

▪ Antitank Battalion [one of the following lines]

- 2 AT GUNS + 2 MTLB; 2 BRDM-2 AT-5 series
- 2 AT GUNS + 2 Light Trucks; 2 BRDM-2 AT-5 series
- 4 AT GUNS + 4 MTLB
- 4 AT GUNS + 4 Light Trucks

▪ Attack Helicopter Company

- 2 Mi-24 "Hind"

▪ SAM Regiment [one of the following lines]

- '80+: (5 SA-8; 5 SAM Teams + 5 Light Trucks)
- '90+: (4 SA-15; 4 SAM Teams + 4 Light Trucks)

▪ SAM Battery [one of the following lines]

- '80+: (1 SA-8; 1 SAM Team + 1 Light Truck)
- '90+: (1 SA-15; 1 SAM Team + 1 Light Truck)

▪ Fuel-air Explosive MRL Battery

- '81+: (2 TOS-1) [these are MRLs, see the Artillery Data]

▪ 1 Engineer Company

- 2 Engineer stands + 2 Medium Trucks; 1 AVL; 1 GMZ Armored Minelayer

Artillery Support Groups

▪ Regimental 122mm SP Artillery Battalion

- 3 2S1 SP 122mm Gun; [optional 1 FO + 1 APC]

▪ Regimental 122mm Towed Artillery Battalion

- 3 D-30 122mm FG + 3 Light Trucks; [optional 1 FO + 1 APC]

▪ Regimental 122mm Towed Artillery Battery [availability modifier -2]

- 1 D-30 122mm FG + 3 Light Trucks; [optional 1 FO + 1 APC]

▪ Regimental 120mm Mortar Battery [availability modifier -2]

- '70-'81: 1 M-43 120mm Mtr + 1 Light Truck; [optional 1 FO + 1 APC]
- '81+: 1 2B11/2S12 120mm Mtr + 1 Light Truck; [optional 1 FO + 1 APC]

▪ 152mm SP Artillery Battalion

- [Divisional, max 3, one of the following lines]

- 3 2S3 SP 152mm Gun; [optional 1 FO + 1 APC]

- 3 2S5 SP 152mm Gun; [optional 1 FO + 1 APC]

• [Army, max 1, one of the following lines]

- 3 2S3 SP 152mm Gun; [optional 1 FO + 1 APC]

- 3 2S5 SP 152mm Gun; [optional 1 FO + 1 APC]

▪ 152mm Towed Artillery Battalion

- [Divisional, max 3]: 3 D-20 152mm How + 3 Medium Trucks; [optional 1 FO + 1 APC]

- [Army, max 1]: 3 2A36 152mm FG + 3 Medium Trucks; [optional 1 FO + 1 APC]

- **Rocket Launcher Battalion**
 - [Divisional, max 1]: 3 LIGHT MRLs; [optional 1 FO + 1 APC]
- **Rocket Launcher Battery**
 - [Army, max 3]: 1 Uragan MRL; [optional 1 FO + 1 APC]

Equipment Notes

- [Check equipment availability dates where no date ranges are indicated.]
- **AT Vehicle**
 - '70-'77: BRDM-2 AT-3 series
 - '77-'85: BRDM-2 AT-5 series or BRDM-2 AT-3 series
 - '85+: BRDM-2 AT-5 series
- **MORTAR UNIT**
 - '80-'81: 1 M-43 120mm Mtr + 1 Light Truck
 - '82-'89: 1 2B11/2S12 120mm Mtr + 1 Light Truck, 1 M-43 120mm Mtr + 1 Light Truck
 - '90+: 1 2S-23 Nona-SVK, or 1 2B11/2S12 120mm Mtr + 1 Light Truck
- **APC:**
 - BTR-60 series, BTR-70, or BTR-80 series
- **AT Gun:**
 - T-12 AT Gun, MT-12 AT Gun, or 2A45M AT Gun
- **AVLB:**
 - '70-'87: MTU-12, MTU-55, or MTU-20
 - '88+: MTU-72, MTU-20, or MTU-55
- **FO Vehicle:**
 - 1V14 / 1V15 FO Vehicle, PRP-3, or PRP-4
- **IFV:**
 - BMP-1 series, BMP-2 series, or BMP-3
- **Light MRL:**
 - BM-21 Prima MRL or BM-21 Grad MRL
- **MBT:**
 - T-55 series, T-62 series, T-64 series, T-72 series, T-80 series, or T-90 series
- **Recoilless Gun:**
 - B-10 82mm RR, B-11 107mm RR, SPG-9 Rocket Gun
- **SP AA Gun:**
 - ZSU-23/4 or 2S6M Tungska SP SAM/AAG
- **SP SAM:**
 - SA-9 SP SAM or SA-13 SP SAM
- **Generic Wheeled APC:**
 - BTR-60 series, BTR-70, or BTR-80 series
- **Generic Tracked APC:**
 - MTLB or BMP-1

Russian/Soviet/CIS Airborne Forces 1970s+

Quality

1961-1990: 50% Average; 50% Good
 1991-1995: 50% Fair; 50% Average
 1996+: 65% Fair; 35% Average

Artillery Accuracy & Friction Response

1970-1979: Artillery Accuracy 5+; Response 2+
 1980-1995: Artillery Accuracy 4+; Response 2+
 1996+: Artillery Accuracy 3+; Response 2+

Combat Formations

Air Assault Brigade 1981+

- **Base**
 - 1 recon AB IFV
 - 1 recon BRDM-2
 - 1 2S9 SP 120mm GMtr
- **2 Air Assault Battalions**
 - 9 Infantry stands + 9 AB IFV
- **2 Light Parachute Battalions**
 - 6 Infantry stands
 - 1 Missile Team
- **1 Airborne Light AT Battery**
 - 2 Missile Teams
- **1 Airborne Artillery Battery [see Artillery Support Groups]**
- **Stand Inventory**
 - 1 AB IFV
 - 1 BRDM-2
 - 1 2S9 SP 120mm GMtr
 - 30 Infantry stands
 - 18 AB IFV
 - 4 Missile Teams

Airborne Regiment 1970 – 1980

- **Base**
 - 1 ZSU-23/2 AAG + 1 Light Truck, or 1 SAM TEAM + 1 Light Truck
 - 1 D-30 122mm FG + 1 Light Truck, or 1 M-43 120mm Mtr + 1 Light Truck
- **3 Airborne Battalions**
 - (1 82mm Mtr)
 - 1 SPG-9 Rocket Gun
 - 2 ASU-57
 - 9 Infantry stands
- **Airborne AT Battery**
 - 2 AT VEHICLES
- **Stand Inventory**
 - 1 ZSU-23/2 AAG or 1 SAM TEAM
 - 1 D-30 122mm FG or 1 M-43 120mm Mtr
 - 2 Light Trucks
 - 3 82mm Mtr
 - 3 SPG-9 Rocket Gun
 - 6 ASU-57
 - 27 Infantry stands
 - 2 AT VEHICLES

Airborne Regiment 1981+

- Base
 - 1 2S9 SP 120mm GMtr
- 3 Airborne Battalions
 - 9 Infantry stands + 9 AB IFV
- Airborne AT Battery
 - 2 AT VEHICLES
- Stand Inventory
 - 1 2S9 SP 120mm GMtr
 - 27 Infantry stands
 - 27 AB IFV
 - 2 AT VEHICLES

Attachments

- Airborne AA Battery³³
 - (2 SAM Teams, 1 AA UNIT)
- Airborne Assault Gun Battalion³⁴
 - 3 ASU-85 or 6 ASU-85
- Airborne Divisional Recon Company
 - '70-'79: 4 recon BRDM-2
 - '80+: 2 recon BRDM-2; 3 recon Infantry stands + 3 Light Trucks
- Attack Helicopter Company
 - 2 Mi-24 "Hind"
- Transport Helicopter Company
 - 2 Mi-8 "Hip"

Artillery Support Groups

- Airborne Artillery Battery [availability modifier -2]
 - 1 D-30 122mm FG + 1 Light Truck
- Airborne Artillery Battalion [max 1]
 - 3 D-30 122mm FG + 3 Light Trucks
- MRL Battery [max 1]
 - 1 RPU-14 MRL + 1 Light Truck

Equipment Notes

- AA UNIT
 - '80-'90: 1 ZU-23/2 AAG + 1 Medium Truck
 - '91-'15: 1 ZSU-23/4, or 1 ZU-23/2 AAG + 1 Medium Truck
- AB IFV:
 - BMD-1 series, BMD-2, or BMD-3
- AT VEHICLE
 - '70-'80: BRDM-2 AT-3 series, BRDM-1 AT-3 series, or BRDM-1 AT-2 series
 - '81+: BRDM-2 AT-5 series
- SAM TEAM:
 - Category 1 SAM Team [missile used will depend on date]

33 There is one Airborne AA Battery per Air Assault Brigade, one per Airborne Regiment, and 3 in the Airborne Div AA Battalion. Towed ZU-23/2 AAA may be upgraded to ZSU-23/4 in 1990s.

34 Airborne Division asset: 1 Battalion per division.

Russian/Soviet/CIS Naval Infantry Forces 1970s+

Quality

1961-1970: 25% Poor; 25% Marginal; 40% Fair; 5% Average; 5% Good
1971-1984: 40% Marginal; 50% Fair; 5% Average; 5% Good
1985-1990: 25% Poor; 35% Marginal; 20% Fair; 10% Average; 10% Good
1991-1995: 50% Poor; 25% Marginal; 20% Fair; 5% Average
1996+: 70% Poor; 15% Marginal; 10% Fair; 5% Average

Artillery Accuracy & Friction Response

1970-1979: Artillery Accuracy 5+; Response 2+
1980-1995: Artillery Accuracy 4+; Response 2+
1996+: Artillery Accuracy 3+; Response 2+

Combat Formations

Naval Infantry Regiment³⁵

- Base
 - 1 recon PT-76B
 - 1 recon BRDM-2
 - 1 NAVAL MORTAR BATTERY
- 1 Tank Battalion
 - 6 PT-76B
 - 3 PT-76B or 3 NAVAL MBT
- 3 Naval Infantry Battalions
 - (1 82mm Mtr + 1 Light Truck)
 - 1 Missile Team + 1 APC
 - 9 Infantry stands + 9 APC
- 1 Naval Infantry AT Company
 - 2 AT VEHICLES
- 1 Naval Infantry Artillery Battalion (see Artillery Support Groups)
- Stand Inventory
 - 1 BRDM-2
 - 1 NAVAL MORTAR BATTERY
 - 7 PT-76B
 - 3 PT-76B or 3 NAVAL MBT
 - 3 82mm Mtr
 - 3 Light Trucks
 - 3 Missile Teams
 - 27 Infantry stands
 - 30 APC
 - 2 AT VEHICLES

Naval Infantry Brigade

- Base
 - 1 recon PT-76B
 - 1 recon BRDM-2
 - 1 NAVAL MORTAR BATTERY)
- 2 Tank Battalions
 - 6 PT-76B
 - 3 PT-76B or 3 NAVAL MBT
- 4 or 5 Naval Infantry Battalions
 - (1 82mm Mtr + 1 Light Truck)
 - 1 Missile Team + 1 APC
 - 9 Infantry stands + 9 APC

35 A Naval Infantry Regiment is very similar to a BTR Regiment of a Motorized Rifle Division, while a Naval Infantry Brigade has two additional infantry battalions, one additional tank battalion, and rocket launcher battalion.

- Naval Infantry AT Company
 - 2 AT VEHICLES
- 1 Naval Infantry Artillery Battalion (see Artillery Support Groups)
- 1 Naval Infantry Rocket Launcher Battalion (see Artillery Support Groups)
- Stand Inventory
 - 1 PT-76B
 - 1 BRDM-2
 - 1 NAVAL MORTAR BATTERY
 - 12 PT-76B
 - 6 PT-76B or 6 NAVAL MBT
 - 4 or 5 82mm Mtr
 - 4 or 5 Light Trucks
 - 4 or 5 Missile Teams
 - 36 or 45 Infantry stands
 - 40 or 50 APC
 - 2 AT VEHICLES

Attachments

- Naval Infantry AA Battery³⁶
 - (1 ZSU-23/4; 1 SP SAM)

Artillery Support Groups

- Naval Infantry Artillery Battalion³⁷
 - 3 2S1 SP 122mm Gun
- Naval Infantry Rocket Launcher Battalion
 - 3 BM-21 Grad MRL or 3 BM-21 Prima MRL

Equipment Notes

- AT VEHICLE:
 - BRDM-2 AT-5 series
- APC³⁸:
 - BTR-60 series or BTR-70
- NAVAL MBT:
 - T-55AD or T-72 series
- NAVAL MORTAR BATTERY:
 - '61-'90: 1 M43 120mm Mtr +1 APC
 - '90-'15: 1 2S23 SP 120mm GMtr
- SP SAM:
 - SA-9 SP SAM or SA-13 SP SAM

Spanish Army 1980s+

Quality

1980+: 20% Marginal; 45% Fair; 25% Average; 10% Good

Artillery Accuracy & Friction Response

1980-1984: Artillery Accuracy 4+; Response 2+

1985-2000: Artillery Accuracy 3+; Response 2+

2001+: Artillery Accuracy 2+; Response 2+

Combat Formations

Armored Battalion

- Base
 - 2 M125 SP 81mm Mtr
- 3 Tank Companies
 - 3 MBT
- Stand Inventory
 - 2 M125 SP 81mm Mtr
 - 9 MBT

Mechanized Battalion

- Base
 - 2 SP MORTARS
 - 1 Jeep w/106mm RR or 1 Jeep w/TOW
- 3 Mechanized Companies
 - 2 Infantry stands + 1 ATGM INFANTRY stand + 3 APC or 3 IFV
- Stand Inventory
 - 2 SP MORTARS
 - 1 Jeep w/106mm RR or 1 Jeep w/TOW
 - 6 Infantry stands
 - 3 ATGM INFANTRY stands
 - 9 APC or 9 IFV

Motorized Infantry Battalion (APC-Based)

- Base
 - 1 120mm Mtr + 2 Light Trucks
 - 2 81mm Mtr + 2 Light Trucks
- 3 Motorized Companies
 - 3 Infantry stands + 3 APC
- 1 Recon Company
 - 1 recon M41 Walker Bulldog
 - 3 recon Infantry stands + 3 APC
- Stand Inventory
 - 1 120mm Mtr
 - 4 Light Trucks
 - 2 81mm Mtr
 - 12 Infantry stands
 - 12 APC
 - 1 M41 Walker Bulldog

Motorized Infantry Battalion (Truck-Based)

- Base
 - 1 120mm Mtr + 2 Light Trucks
 - 2 81mm Mtr + 2 Light Trucks
- 3 Motorized Companies
 - 3 Infantry stands + 3 Medium Trucks
- 1 Recon Company
 - 1 recon M41 Walker Bulldog
 - 3 recon Infantry stands + 3 Medium Trucks

³⁶ There is only one AA Battery per Naval Infantry Regt or Brigade.

³⁷ A Naval Infantry Regiment has 1 Artillery Battalion. A Naval Infantry Brigade also has a Battalion of 3 batteries of BM-21 Rocket Launchers.

³⁸ The Soviet Naval Infantry has not yet been equipped with the BTR-80, use only BTR-60 series or BTR-70.

- **Stand Inventory**
 - 1 120mm Mtr
 - 4 Light Trucks
 - 2 81mm Mtr
 - 12 Infantry stands
 - 12 Medium Trucks
 - 1 M41 Walker Bulldog

Cavalry Battalion

- **2 Tank Companies**
 - 3 MBT
- **2 Cavalry Companies**
 - 1 recon LIGHT TANK or 1 recon CFV
 - 2 recon Infantry stands + 2 recon M113
- **Stand Inventory**
 - 3 MBT
 - 2 LIGHT TANK or 2 CFV
 - 4 Infantry stands
 - 4 M113

- **ATGM INFANTRY:**
 - Infantry w/Dragon, Infantry w/Milan, or Infantry w/Cobra
- **CFV:**
 - VEC
- **IFV:**
 - Pizarro AIFV (ASCOD) or M113
- **LIGHT TANK:**
 - AML-90 or M41 Walker Bulldog
- **MBT:**
 - '80-'84: AMX-30E, M47E1, M47E1, M48
 - '85-'01: AMX-30E, M47E1, M47E1, M48E
 - '02+: AMX-30E, M47, M48, or Leopard 2A6
- **SP MORTAR:**
 - M125 SP 81mm Mtr or M125A1 SP120mm Mtr

Attachments

- **Tank Company**
 - 3 MBT
- **Mechanized Company**
 - 3 Infantry stands + 3 APC or 3 IFV
- **Motorized Infantry Company [one of the following lines]**
 - [APC-Based] 3 Infantry stands + 3 APC
 - [Truck-Based] 3 Infantry stands + 3 Medium Trucks
- **Cavalry Company**
 - 1 recon LIGHT TANK or 1 recon CFV; 2 recon Infantry stands + 2 recon M113
- **AT Company**
 - 3 Jeep w/106mm RR or 3 Jeep w/TOW
- **AA Unit [one of the following lines]**
 - [max 3] '80+: (2 Towed 40mm AA Guns + 2 Medium Trucks)
 - [max 2] '88+: 1 Roland SP SAM
 - [max 3] '88+: 1 Mistral Team stand + 1 Jeep

Artillery Support Groups

- **Armored Cavalry Artillery Battalion [Armored Cavalry Brigade only]**
 - 3 M108 SP 105mm How
- **Field Artillery Battalion [one of the following lines]**
 - 3 M109A1-4 SP 155mm How; [optional 1 FO + 1 Jeep]
 - 3 M44 SP 155mm How; [optional 1 FO + 1 Jeep]
 - 3 M114 155mm How + 3 Medium Trucks; [optional 1 FO + 1 Jeep]
 - [Motorized Brigade only] 3 M101 105mm How + 3 Light Trucks; [optional 1 FO + 1 Jeep]
- **Heavy Artillery Battery [max 3, one of the following lines]**
 - [availability modifier -2]; 1 M110 SP 203mm How; [optional 1 FO + 1 Jeep]
 - [availability modifier -2]; 1 M107 SP 175mm How; [optional 1 FO + 1 Jeep]
 - [availability modifier -2]; 1 M115 203mm How + 1 Heavy Truck; [optional 1 FO + 1 Jeep]
- **MRL Battery [max 4]**
 - 1 Teruel MRL

Equipment Notes

- **APC:**
 - M113 or BMR-600

Swedish Army 1963–2000+

Quality

1963+: 20% Marginal; 45% Fair; 25% Average; 10% Good

Artillery Accuracy & Friction Response

1963-1984: Artillery Accuracy 4+; Response 2+

1985-2000: Artillery Accuracy 3+; Response 2+

2001+: Artillery Accuracy 2+; Response 2+

Combat Formations

Armored Battalion 1963 – 1985

- **2 Tank Companies**
 - 3 MBT
 - 1 Infantry stand + 1 IFV
- **2 Mech Infantry Companies**
 - 3 Infantry stands + 3 IFV
 - 1 Jeep w/90mm RR
- **1 Howitzer Battery [see Artillery Support Groups]**
- **Stand Inventory**
 - 6 MBT
 - 8 Infantry stands
 - 8 IFV
 - 2 Jeep w/90mm RR

Armored Battalion 1986 – 1992

- **2 Tank Companies**
 - 3 MBT
- **2 Mech Infantry Companies**
 - 4 Infantry stands + 4 IFV
- **1 Howitzer Battery [see Artillery Support Groups]**
- **Stand Inventory**
 - 6 MBT
 - 8 Infantry stands
 - 8 IFV

Armored Battalion 1993 – 2000

- **2 Tank Companies**
 - 3 MBT
- **2 Mech Infantry Companies**
 - 3 Infantry stands + 3 NEW IFV
- **1 Howitzer Battery [see Artillery Support Groups]**
- **Stand Inventory**
 - 6 MBT
 - 6 Infantry stands
 - 6 NEW IFV

Mechanized Battalion 1993+

- **Base**
 - 1 120mm Mtr + 1 IFV
- **2 Tank Companies**
 - 3 MBT
- **2 Mech Infantry Companies**
 - 4 Infantry stands + 4 IFV
- **Stand Inventory**
 - 1 120mm Mtr
 - 6 MBT
 - 8 Infantry stands
 - 9 IFV

Infantry Battalion 1977 – 1997

- **Base**
 - 1 recon Jeep w/LMG
 - 1 Jeep w/90mm RR
 - 1 Jeep w/106mm RR
 - 1 120mm Mtr + 1 Light Truck
- **3 Infantry Companies**
 - 3 Infantry stands + 3 Light Trucks
- **Stand Inventory**
 - 1 recon Jeep w/LMG
 - 1 Jeep w/90mm RR
 - 1 Jeep w/106mm RR
 - 1 120mm Mtr
 - 9 Infantry stands
 - 10 Light Trucks

Infantry Battalion 1998+

- **Base**
 - 1 recon Jeep w/LMG
 - 1 Jeep w/90mm RR
 - 1 Jeep w/106mm RR
 - 1 120mm Mtr + 1 APC
- **3 Infantry Companies**
 - 3 Infantry stands + 3 APC
- **Stand Inventory**
 - 1 recon Jeep w/LMG
 - 1 Jeep w/90mm RR
 - 1 Jeep w/106mm RR
 - 1 120mm Mtr
 - 9 Infantry stands
 - 10 APC

Attachments

- **AA Battery**
 - '63-'92: 1 Towed 40mm AA Gun + 1 Light Truck
 - '93+: 1 Lvk 90 SP AAG
- **AT Company**
 - [Armored/Mech, max 1] '63-'93: 1 Jeep w/90mm RR; 1 AT Team stand + 1 Jeep; 1 Infantry stand + 1 Light Truck
 - [Armored/Mech, max 1] '86+: 1 Prvb 551; 1 AT Team stand + 1 IFV
 - [Infantry, max 1] '77+: 1 Jeep w/90mm RR; 1 Infantry stand + 1 Light Truck
 - [Infantry, max 1] '77+: 3 Ikv-91 Tank Destroyers; 1 Infantry stand + 1 Light Truck
- **Recon Company**
 - [Armored/Mech] '63-'92: Infantry stands + 2 IFV; 2 Jeep w/ LMG; 1 Jeep w/90mm RR
 - [Armored/Mech] '93+: 2 Infantry stands + 2 IFV; 2 Jeep w/ LMG
 - [Infantry] '77+: 4 Infantry stands + 4 Light Trucks
- **SAM Battery**
 - [Armored/Mech] '84+: 1 Lrvbv 701 SP SAM

Artillery Support Groups

- **Howitzer Battery [availability -2]**
 - 1 Type 4140 How + 1 Light Truck
- **Brigade Artillery Battalion [one of the following lines]**
 - 3 Type 4140 How + 3 Light Trucks
- **Divisional Artillery Battalion**
 - '50-'78: 3 OB-155-50BF + 3 Light Trucks
 - '79+: 3 FH-77 How + 3 Medium Trucks

Equipment Notes

- **IFV:**
 - '63-'00: Pbv 302 series
 - '01+: Strf 9040 series or Pbv 302 series
- **NEW IFV:**
 - Strf 9040 series
- **APC:**
 - '98-'06: BMP-1 or MTLB
 - '07+: Pbv 302 series

Syrian Army 1967

Quality

1965-1972: 60% Poor; 20% Marginal; 5% Fair; 15% Average

Artillery Accuracy & Friction Response

Artillery Accuracy 5+; Response 3+

Combat Formations

Infantry Brigade

- **Base**
 - 1 recon Infantry stand
 - 1 Light Truck
 - 2 recon Jeeps
 - 1 ZPU-4 AAG + 1 Light Truck
 - 1 120mm Mtr + 1 Light Truck
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Medium Trucks
- **3 Infantry Battalions [choose one type]**
 - **Truck-Based**
 - (1 82mm Mtr + 1 Light Truck)
 - 1 AT GUN + 1 Light Truck
 - 9 Infantry stands + 9 Light Trucks
 - **APC-Based**
 - (1 82mm Mtr + 1 APC)
 - 1 AT GUN + 1 APC
 - 9 Infantry stands + 9 APC
- **1 Tank Battalion**
 - 6 MBT
- **Stand Inventory**
 - 2 Jeeps
 - 1 ZPU-4 AAG
 - 1 120mm Mtr
 - 3 Engineer stands
 - 3 82mm Mtr
 - 3 AT GUNS
 - 28 Infantry stands
 - 6 MBT
 - 3 Light Trucks
 - 3 APC or 3 Medium Trucks
 - If Truck-Based:
 - 33 Light Trucks
 - If APC-Based:
 - 33 APC

Mechanized Infantry Brigade

- **Base**
 - 2 recon BRDM-1
 - 1 ZPU-4 AAG + 1 Light Truck
 - 1 120mm Mtr + 1 Light Truck
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Medium Trucks
- **3 Infantry Battalions [choose one type]**
 - **Truck-Based**
 - (1 82mm Mtr + 1 Light Truck)
 - 1 AT GUN + 1 Light Truck
 - 9 Infantry stands + 9 Light Trucks
 - **APC-Based**
 - (1 82mm Mtr + 1 APC)
 - 1 AT GUN + 1 APC

- 9 Infantry stands + 9 APC

■ 1 Tank Battalion

- 6 MBT

■ Stand Inventory

- 2 BRDM-1
- 1 ZPU-4 AAG
- 1 120mm Mtr
- 3 Engineer stands
- 27 Infantry stands
- 3 82mm Mtr
- 3 AT GUN
- 6 MBT
- 2 Light Trucks
- 3 APC or 3 Medium Trucks
- If Truck-Based:
 - 33 APC
- If APC-Based:
 - 33 APC

Armored Brigade

■ Base

- 1 recon PT-76 series
- 1 recon BRDM-1
- 1 ZU-23/2 AAG + 1 Light Truck

■ 1 Brigade Engineer Company

- 3 Engineer stands + 3 APC or 3 Medium Trucks

■ 3 Tank Battalions

- 6 MBT

■ 1 Mechanized Infantry Battalion [choose one type]

■ Truck-Based

- (1 82mm Mtr + 1 Light Truck)
- 1 AT GUN + 1 Light Truck
- 9 Infantry stands + 9 Light Trucks

■ APC-Based

- (1 82mm Mtr + 1 APC)
- 1 AT GUN + 1 APC
- 9 Infantry stands + 9 APC

■ Stand Inventory

- 1 PT-76 series
- 1 BRDM-1
- 1 ZU-23/2 AAG
- 3 Engineer stands
- 18 MBT
- 1 82mm Mtr
- 1 AT GUN
- 9 Infantry stands
- 1 Light Truck
- 3 APC or 3 Medium Trucks
- If Truck-Based:
 - 11 Light Trucks
- APC-Based:
 - 11 APC

Parachute Brigade

■ Base

- 1 recon Infantry stand + 1 Light Truck
- 2 recon Jeeps
- 1 ZPU-4 AAG + 1 Light Truck

■ 1 Parachute Brigade Engineer Company

- 3 Engineer stands

■ 3 Parachute Infantry Battalions

- (1 82mm Mtr)
- 1 B-10 82mm RR
- 2 Parachute MG Team stands
- 9 Infantry stands

■ Stand Inventory

- 1 Infantry stand
- 2 Jeeps
- 1 ZPU-4 AAG
- 2 Light Trucks
- 3 Engineer stands
- 3 82mm Mtr
- 3 B-10 82mm RR
- 6 Parachute MG Teams
- 18 Infantry stands

Commando Group

■ Base

- 1 recon Infantry stand + 1 Light Truck,
- 2 recon Jeeps
- 1 ZPU-4 AAG + 1 Light Truck

■ 5 Commando Battalions

- (9 Infantry stands)

■ Stand Inventory

- 1 Infantry stand
- 2 Light Trucks
- 2 Jeeps
- 1 ZPU-4 AAG
- 45 Infantry stands

Attachments

■ Tank Battalion

- 6 MBT

■ Infantry or Mechanized Infantry Battalion

- [APC-Based]: (1 82mm Mtr + 1 APC; 1 AT GUN + 1 APC); 9 Infantry stands + 9 APC
- [Truck-Based]: (1 82mm Mtr + 1 Light Truck; 1 AT GUN + 1 Light Truck); 9 Infantry stands + 9 Light Trucks

■ Commando Battalion

- (9 Infantry stands)

■ AT Gun Battalion [max one per 4 combat formations]

- 4 D-44 AT Gun + 2 BS-3 AT Gun + 6 Medium Truck

■ Recon Battalion [max one per 4 combat formations]

- 2 MBT; 2 PT-76; 3 Infantry stand + 3 APC

■ Engineer Battalion [max one per 4 combat formations]

- 9 Engineer stands + 9 APC or +9 Medium Trucks

■ Army AAA Battalion [max one, one of the following lines]

- (3 ZU-23/2 AAG + 3 Light Trucks)
- (3 S-60 AAG + 3 Light Trucks)

■ Army AAA Battery [max three, one of the following lines]

- (1 ZU-23/2 AAG + 1 Light Truck)
- (1 S-60 AAG + 1 Medium Truck)

Artillery Support Groups

■ Artillery Battalion

- 3 M-30 122mm How or 3 M1931/37 122mm FG + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]

■ Mortar Battalion [max one per 4 combat formations]

- 2 M-160 160mm Mtr + 2 Light Trucks; 2 B8 240mm Mtr + 2 Medium Trucks [optional 1 FO + 1 Jeep or 1 BTR-152]

■ Army Artillery Battalion [max one, one of the following lines]

- 3 M-46 130mm FG + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
- 3 D-1 152mm How or 3 D-20 152mm How, + 3 Medium Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
- 3 S-23 180mm FG + 3 Medium Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]

Equipment Notes

- **AT Gun:**
 - B-10 82mm RR or B-11 107mm RR
- **MBT:**
 - T-34/85, Panzer IV [German WW2], T-55A, or T-54B
- **APC:**
 - BTR-152, BTR-40, or BTR-50PK

Syrian Army 1973

Quality

1973-1979: 75% Poor; 5% Marginal; 5% Fair; 15% Average

Artillery Accuracy & Friction Response

Artillery Accuracy 5+; Response 2+

Combat Formations

Infantry Brigade

- **Base**
 - 1 recon Infantry stand
 - 1 Light Truck
 - 2 recon Jeeps
 - 1 ZSU23/4
 - 2 SA-7 Team stands + 2 Jeeps
 - 1 120mm Mtr + 1 Light Truck
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Medium Trucks
- **3 Infantry Battalions [choose one type]**
 - **APC-Based**
 - (1 82mm Mtr + 1 APC)
 - 1 AT GUN + 1 APC
 - 1 Sagger Team stand + 1 APC
 - 9 Infantry stands + 9 APC
 - **Truck-Based**
 - (1 82mm Mtr + 1 Light Truck)
 - 1 AT GUN + 1 Light Truck
 - 1 Sagger Team stand + 1 Light Truck
 - 9 Infantry stands + 9 Light Trucks
- **1 Tank Battalion**
 - 6 MBT
- **Stand Inventory**
 - 2 Jeeps
 - 1 ZSU23/4
 - 2 SA-7 Team stands
 - 2 Jeeps
 - 1 120mm Mtr
 - 3 Engineer stands
 - 3 82mm Mtr
 - 3 AT GUNS
 - 3 Sagger Team stand
 - 6 MBT
 - 28 Infantry stands
 - 2 Light Trucks
 - 3 APC or 3 Medium Trucks
 - *If APC-Based:*
 - 36 APC
 - *If Truck-Based:*
 - 36 Light Trucks

Mechanized Infantry Brigade

- **Base**
 - 2 recon BRDM-1
 - 1 ZSU-23/4
 - 2 SA-7 Team stands + 2 Jeeps
 - 1 120mm Mtr + 1 Light Truck
- **1 Brigade Engineer Company**
 - 3 Engineer stands + 3 APC or 3 Medium Trucks

<ul style="list-style-type: none"> ▪ 3 Infantry Battalions [choose one type] <ul style="list-style-type: none"> ▪ APC-Based <ul style="list-style-type: none"> • (1 82mm Mtr + 1 APC) • 1 AT GUN + 1 APC • 1 Sagger Team stand + 1 APC • 9 Infantry stands + 9 APC ▪ Truck-Based <ul style="list-style-type: none"> • (1 82mm Mtr + 1 Light Truck) • 1 AT GUN + 1 Light Truck • 1 Sagger Team stand + 1 Light Truck • 9 Infantry stands + 9 Light Trucks ▪ 1 Tank Battalion <ul style="list-style-type: none"> • 6 MBT ▪ Stand Inventory <ul style="list-style-type: none"> • 2 BRDM-1 • 1 ZSU-23/4 • 2 SA-7 Team stands • 2 Jeeps • 1 120mm Mtr • 3 Engineer stands • 3 82mm Mtr • 3 AT GUNS • 3 Sagger Team stands • 6 MBT • 27 Infantry stands • 3 APC or 3 Medium Trucks • 1 Light Truck • If APC-Based: <ul style="list-style-type: none"> • 36 APC • If Truck-Based: <ul style="list-style-type: none"> • 36 Light Trucks 	<ul style="list-style-type: none"> • 11 Light Trucks <p>Parachute Brigade</p> <ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 recon Infantry stand + 1 Light Truck • 2 recon Jeeps • 1 ZPU-4 AAG + 1 Light Truck • 2 SA-7 Team stand ▪ 1 Parachute Brigade Engineer Company <ul style="list-style-type: none"> • 3 Engineer stands ▪ 3 Parachute Infantry Battalions <ul style="list-style-type: none"> • (1 82mm Mtr) • 1 B-10 82mm RR • 2 Parachute MG Team stands • 9 Infantry stands ▪ Stand Inventory <ul style="list-style-type: none"> • 1 Infantry stand • 2 Light Trucks • 2 Jeeps • 1 ZPU-4 AAG • 2 SA-7 Team stands • 3 Engineer stands • 3 82mm Mtr • 3 B-10 82mm RR • 6 Parachute MG Team stands • 27 Infantry stands
<p>Armored Brigade</p> <ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 recon PT-76 series • 1 recon BRDM-1 • 1 ZSU-23/4 • 2 SA-7 Team stands + 2 Jeeps ▪ 1 Brigade Engineer Company <ul style="list-style-type: none"> • 3 Engineer stands + 3 APC or 3 Medium Trucks ▪ 3 Tank Battalions <ul style="list-style-type: none"> • 6 MBT ▪ 1 Mechanized Infantry Battalion [choose one type] <ul style="list-style-type: none"> ▪ APC-Based <ul style="list-style-type: none"> • (1 82mm Mtr + 1 APC) • 1 AT GUN + 1 APC • 9 Infantry stands + 9 APC ▪ Truck-Based <ul style="list-style-type: none"> • (1 82mm Mtr + 1 Light Truck) • 1 AT GUN + 1 Light Truck • 9 Infantry stands + 9 Light Trucks ▪ Stand Inventory <ul style="list-style-type: none"> • 1 PT-76 series • 1 BRDM-1 • 1 ZSU-23/4 • 2 SA-7 Team stands • 2 Jeeps • 3 Engineer stands • 3 APC or 3 Medium Trucks • 18 MBT • 1 82mm Mtr • 1 AT GUN • 9 Infantry stands • If APC-Based: <ul style="list-style-type: none"> • 11 APC • If Truck-Based: <ul style="list-style-type: none"> • 11 Light Trucks 	<p>Commando Group</p> <ul style="list-style-type: none"> ▪ Base <ul style="list-style-type: none"> • 1 recon Infantry stand + 1 Light Truck • 2 recon Jeeps • 2 SA-7 Team stands ▪ 5 Commando Battalions <ul style="list-style-type: none"> • (1 SA-7 Team stand) • (3 Sagger Team stands) • (9 Infantry stands) ▪ Stand Inventory <ul style="list-style-type: none"> • 1 Light Truck • 2 Jeeps • 7 SA-7 Team stands • 15 Sagger Team stands • 46 Infantry stands <p>Attachments</p> <ul style="list-style-type: none"> ▪ Tank Battalion <ul style="list-style-type: none"> • 6 MBT ▪ Mechanized Infantry Battalion <ul style="list-style-type: none"> • [APC-Based]: (1 82mm Mtr + 1 APC); 1 AT GUN + 1 APC; 9 Infantry stands + 9 APC • [Truck-Based]: (1 82mm Mtr + 1 Light Truck); 1 AT GUN + 1 Light Truck; 9 Infantry stands + 9 Light Trucks ▪ Infantry Battalion <ul style="list-style-type: none"> • [APC-Based]: (1 82mm Mtr + 1 APC); 1 AT GUN + 1 APC; 9 Infantry stands + 9 APC • [Truck-Based]: (1 82mm Mtr + 1 Light Truck); 1 AT GUN + 1 Light Truck; 1 Sagger Team stand + 1 Light Truck; 9 Infantry stands + 9 Light Trucks ▪ Commando Battalion <ul style="list-style-type: none"> • (1 SA-7 Team stand; 3 Sagger Team stands; 9 Infantry stands) ▪ AT Gun Battalion [max one per 4 combat formations] <ul style="list-style-type: none"> • [Armored Division]: 2 D-44 AT Gun + 1 BS-3 Field Gun + 3 Light Trucks • [Infantry Division]: 3 BRDM-2 AT-3b; 2 B-11 107mm RR + 2 Light Trucks

- **AT Missile Battalion [max one per 4 combat formations]**
 - 3 BRDM-2 AT-3b
- **Recon Battalion [max one per 4 combat formations]**
 - 2 MBT; 2 PT-76; 3 Infantry stands + 3 APC
- **Engineer Battalion [max one per 4 combat formations]**
 - 9 Engineer stands + 9 APC
- **Army AAA Battalion [max one, one of the following lines]**
 - (3 ZU-23/2 AAG + 3 Light Trucks)
 - (3 S-60 AAG + 3 Medium Trucks)
- **Army AAA Battery [max three, one of the following lines]**
 - (1 ZU-23/2 AAG + 1 Light Truck)
 - (1 S-60 AAG + 1 Medium Truck)

Artillery Support Groups

- **Artillery Battalion**
 - 3 M-30 122mm How or 3 D-30 122mm FG or 3 D-74 122mm FG, + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
- **Mortar Battalion [max one per 4 combat formations]**
 - 2 M-160 160mm Mtr + 2 Light Trucks; 2 B8 240mm Mtr + 2 Medium Trucks [optional 1 FO + 1 Jeep or 1 BTR-152]
- **Army Artillery Battalion [max one, one of the following lines]**
 - 3 M-46 130mm FG + 3 Light Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
 - 3 D-1 152mm How or 3 D-20 152mm How, + 3 Medium Trucks; [optional 1 FO + 1 Jeep or 1 BTR-152]
 - 3 S-23 180mm FG + 1 Medium Truck; [optional 1 FO + 1 Jeep or 1 BTR-152]
- **Army MRL Battalion [max one]**
 - 3 BM-21 Grad MRL; [optional 1 FO + 1 Jeep or 1 BTR-152]
- **Army MRL Battery [max three]**
 - 1 BM-21 Grad MRL; [optional 1 FO + 1 Jeep or 1 BTR-152]

Equipment Notes

- **AT GUN:**
 - B-10 82mm RR or B-11 107mm RR
- **MBT:**
 - T-55A or T-62
- **APC:**
 - BTR-60PB, BMP-1, or BTR-50PK

U.S. Army 1950–1973

Since World War II, the US Army has been the world's most technologically advanced and lavishly equipped army. In the period represented by this game, the US Army has reached the heights of military excellence and plumbed the depths of military incompetence. Perhaps more than any other army in the world, the US Army has reflected the society that created it.

The US Army ended World War 2 as one of the most potent fighting forces in history. Fighting the Germans and Japanese had hardened its soldiers and ruthlessly culled inferior leaders. It was large (8 million strong; nearly 100 divisions plus hundreds of subunits), highly trained, experienced, and extremely well-led. But immediately after hostilities ended, the US government initiated the swiftest and most extensive liquidation of an army in modern history. Within five months of V-J Day, 65% of American servicemen had been mustered out. By 1947, the US Army numbered only 700,000, with only two deployable full divisions.

When this force was committed to the Korean War in 1950, the results were predictable. Task Force Smith, a microcosm of the ill-equipped and poorly trained 1950 US Army, was routed from the field.

It entered the 1960s fully prepared to defend the West against Soviet hordes storming though the Fulda Gap. Unfortunately, its test came not in Europe, but in the steaming jungles of Southeast Asia. And as long as the American people felt that they could win the war, the US Army fought well, virtually annihilating the Viet Cong. The casualties suffered by American enemies are highly instructive—the North Vietnamese admit to losing 20 men for every American soldier they killed. That ratio has been remarkably consistent since the end of World War II. And it implies a tremendous destructive potential, even in wars that the US failed to win. But as the American people lost faith in the nation's ability to win the war, the US Army's performance sagged. By the early 1970s, the US Army was at its nadir.

Quality

1950: 15% Marginal; 25% Fair; 50% Average; 5% Good; 5% Excellent
 1951–1953: 15% Fair; 25% Average; 45% Good; 10% Excellent; 5% Superb
 1954–1969: 30% Fair; 40% Average; 10% Good; 10% Excellent; 10% Superb
 1970–1973: 10% Marginal; 35% Fair; 45% Average; 5% Good; 5% Excellent

Artillery Accuracy & Friction Response

1950–1973: Artillery Accuracy 4+; Response 2+

Combat Formations

Tank Battalion 1950 – 1956

- **Base**
 - 0-1 107mm Mtr + 0-1 M59
 - 1 recon LIGHT TANK
- **3 Tank Companies**
 - 4 MBT
- **Stand Inventory**
 - 0-1 107mm Mtr
 - 0-1 M59
 - 1 LIGHT TANK
 - 12 MBT

Tank Battalion, Penticom 1957 – 1963

- **Base**
 - 1 M84 107mm SP Mtr

- 2 recon Jeep w/HMG
- **3-5 Tank Companies³⁹**
 - 3 MBT
- **Stand Inventory**
 - 1 M84 107mm SP Mtr
 - 2 Jeep w/HMG
 - 9-15 MBT

Tank Battalion 1963 – 1973

- **Base**
 - 1 M106 107mm SP Mtr
 - 1 AVLB
 - 2 recon SCOUT VEHICLES
- **3 Tank Companies**
 - 3 MBT
- **Stand Inventory**
 - 1 M106 107mm SP Mtr
 - 1 AVLB
 - 2 SCOUT VEHICLES
 - 9 MBT

Mechanized Infantry Battalion [M75] 1950 – 1957

- **Base**
 - 2 recon Jeep w/HMG
 - 1 107mm Mtr + 1 M75
- **3 Mechanized Infantry Companies**
 - 3 Mech Infantry stands + 3 M75
 - 1 Jeep w/106mm RR [1956-1957 only]
- **Stand Inventory**
 - 2 Jeep w/HMG
 - 1 107mm Mtr
 - 9 Mech Infantry stands
 - 10 M75
 - 3 Jeep w/106mm RR [1956-1957 only]

Mechanized Infantry Battalion [M59] 1950 – 1957

- **Base**
 - 2 recon Jeep w/HMG
 - 1 M84 107mm SP Mtr
- **3 Mechanized Infantry Companies**
 - 3 Mech Infantry stands + 3 M59
 - 1 Jeep w/106mm RR [1956-1957 only]
- **Stand Inventory**
 - 2 Jeep w/HMG
 - 1 M84 107mm SP Mtr
 - 9 Mech Infantry stands
 - 9 M59
 - 3 Jeep w/106mm RR [1956-1957 only]

Mechanized Infantry Battle Group, Penticom 1957 – 1963

- **Base**
 - 2 recon Jeep w/HMG
 - 1 M84 107mm SP Mtr
- **4-5 Mechanized Infantry Companies**
 - 4 Mech Infantry stands + 4 M59
 - 1 LIGHT AT VEHICLE
 - 1 81mm Mtr + 1 M59
- **Stand Inventory**
 - 2 Jeep w/HMG
 - 1 M84 107mm SP Mtr
 - 16-20 Mech Infantry stands

- 20-25 M59
- 4-5 LIGHT AT VEHICLES
- 4-5 81mm Mtr

Mechanized Infantry Battalion 1963 – 1973

- **Base**
 - 1 LIGHT AT VEHICLE
 - 2 M125 81mm SP Mtr⁴⁰
 - 1 M106 107mm SP Mtr
 - 2 recon M114
- **3 Mechanized Infantry Companies**
 - 3 Mech Infantry stands + 3 M113

[Vietnam Notes:

Some formations replaced the Jeep w/106mm RR with 1 M132 Zippo armored flamethrower.

Some formations deleted 1 or both of the M125s.

Some formations replaced the M125s with two Infantry Rifle stands + 2 M113.

The M114 was quickly replaced by M113 ACAV.

Some formations replaced the Jeep w/106mm with an Infantry Rifle stand + 1 M113. This is added to any infantry company.]

[Other Notes:

National Guard and low readiness units may have the M59 in place of the M113 and the M84 instead of the M106. Each M114 is replaced by a Jeep w/HMG. They will also replace each M125 with 1 81mm Mtr + 1 M59. Some may even have the M75 in place of the M113, in which case each M125 is replaced by 1 81mm Mtr + 1 M75 and the M106 is replaced by 1 107mm Mtr + 1 M75.]

- **Stand Inventory**
 - 1 LIGHT AT VEHICLE
 - 2 M125 81mm SP Mtr
 - 1 M106 107mm SP Mtr
 - 2 M114
 - 9 Infantry Rifle stands
 - 9 M113

Infantry Battalion 1950 – 1957

- **Base**
 - 1 81mm Mtr + 1 Medium Truck
 - 1 Infantry Weapons stand + 1 Medium Truck
- **3 Infantry Companies**
 - 3 Infantry Rifle stands [optional + 3 Medium Trucks]

[Rarely, an infantry battalion might be equipped with enough transport helicopters to lift the whole battalion. The Medium Trucks would be left behind. Helicopters would typically be H-25 (1950-57), CH-21 (1953-57), CH-37 (1956-57), UH-34 (1956-57)]

- **Stand Inventory**
 - 1 81mm Mtr
 - 2 Medium Trucks
 - [optional 9 Medium Trucks]
 - 1 Infantry Weapons stand
 - 9 Infantry Rifle stand

Infantry Battle Group, Penticom 1957 – 1963

- **Base**
 - 1 recon Jeep w/HMG
 - 1 recon M41
 - 1 M16 MGMC
 - 2 LIGHT AT VEHICLES

³⁹ Tank battalions in Penticom Infantry Divisions had 4 (later 5) tank companies. Tank battalions in Penticom Armored Divisions had 3 tank companies.

⁴⁰ Actually, 3 mortars are in each infantry company, which works out to 9 total – 2 stands in FFT3

- 1 Infantry Engineer stand + 1 Medium Truck
- 2 107mm Mtr + 1 Medium Truck
- **4-5 Infantry Companies**
 - 4 Infantry Rifle stands
 - 1 81mm Mtr
 - [optional + 5 M59 or + 5 Medium Trucks or + 5 UH-1⁴¹]
- **0-1 Tank Company⁴²**
 - 3 MBT [M47, M48 series or M103]
- **Stand Inventory**
 - 1 Jeep w/HMG
 - 2 LIGHT AT VEHICLES
 - 1 M16 MGMC
 - 1 M41
 - 0 or 3 MBT
 - 2 107mm Mtr
 - 1 Infantry Engineer stand
 - 16 or 20 Infantry Rifle stands
 - 4-5 81mm Mtr
 - 2 Medium Trucks
 - [optional 20-25 Medium Trucks]
 - [optional 20-25 M59]
 - [optional 5 UH-1]

Infantry Battalion 1963 – 1973

- **Base**
 - 1 LIGHT AT VEHICLE
 - 1 107mm Mtr + 1 Medium Truck
 - 1 recon Jeep w/HMG
 - 1 recon Infantry Rifle stand + 1 Medium Truck
- **3 Infantry Companies**
 - 3 Infantry Rifle stands [optional + 3 Medium Trucks]

[Vietnam Notes:

Some formations replaced the Jeep w/106mm and/or the recon Jeep w/HMG with Infantry Rifle stands (with Medium Trucks if desired). These stands are added to existing infantry companies. If both Jeep stands are replaced with infantry stands, they form a new infantry company, with the recon Infantry Rifle stand constituting the third stand. The new company can have Medium Trucks if desired.

Some formations replaced the 107mm Mtr stand with an 81mm Mtr stand.

In 1966, a 4th infantry company was added. Battalions of the 9th division didn't get a 4th company until 1968. Formations outside Vietnam did not get the 4th company and formations returning from Vietnam lost the 4th company.

The formation can replace all trucks with UH-1s. The two Jeeps can be transported by 2 CH-47 or 2 CH-21B, or the Jeeps can be deleted.]

- **Stand Inventory**
 - 1 LIGHT AT VEHICLE
 - 1 107mm Mtr
 - 1 Jeep w/HMG
 - 10 Infantry Rifle Stands
 - 0 or 3 81mm Mtr
 - 2 Medium Trucks
 - [optional 9 or 12 Medium Trucks]

-
- 41 The Penticom division did not have sufficient mechanized transport to transport all of its infantry companies. The trucks are not officially on the TO&E, but would be available. Only 1 company can have helicopters.
- 42 The Penticom division had 1 tank battalion of 5 tank companies. One company would typically be parceled out to each battlegroup, so this is shown as an option.

Airborne Infantry Battalion 1950 – 1957

- **Base**
 - 1 81mm Mtr [optional + 1 Medium Truck]
 - 1 Infantry Weapons stand [optional + 1 Medium Truck]
- **3 Infantry Companies**
 - 3 Infantry Rifle stands [optional + 3 Medium Trucks]

[Rarely, an airborne infantry battalion might be equipped with enough transport helicopters to lift the whole battalion. No Medium Trucks would be used. Helicopters would typically be H-25 (1950-57), CH-21 (1953-57), CH-37 (1956-57), UH-34 (1956-57)]

- **Stand Inventory**
 - 1 81mm Mtr
 - 1 Infantry Weapons stand
 - 9 Infantry Rifle stands
 - [optional 11 Medium Trucks]

Airborne Battle Group, Penticom 1957 – 1963

- **Base**
 - 2 recon Jeep w/HMG [optional + 1 CH-21]
 - 3 LIGHT AT VEHICLES [optional + 3 CH-21]
 - 1 Infantry Rifle stand [optional + 1 Medium truck or 1 UTILITY HELO]
 - 1 Infantry Engineer stand [optional + 1 Medium Truck or 1 UTILITY HELO]
 - 2 107mm Mtr [optional + 1 Medium Truck or 1 UTILITY HELO]
- **4-5 Infantry Companies**
 - 4 Infantry Rifle stands
 - 1 81mm Mtr
 - [optional + 5 Medium Trucks or +5 UTILITY HELOS]
- **Stand Inventory**
 - 2 Jeep w/HMG
 - 3 LIGHT AT VEHICLES
 - 1 Infantry Engineer stand
 - 2 107mm Mtr
 - 17-21 Infantry Rifle stands
 - 4-5 81mm Mtr
 - [optional 23-28 Medium Trucks or 23-28 UTILITY HELOS]
 - [optional 4 CH-21]

Light Infantry Battalion / Airborne Battalion 1963 – 1973

- **Base**
 - 3 81mm Mtr⁴³ [optional + 3 Medium Trucks]
 - 1 LIGHT AT VEHICLE
 - 1 recon Infantry Rifle stand [optional + 1 Medium Truck]
- **3 Infantry Companies^{44, 45}**
 - 3 Infantry Rifle stands [optional + 3 Medium Trucks]

[Vietnam Notes:

Many formations only had 1 81mm Mtr stand [optional + 1 Medium Truck].

The Jeep w/106mm RR was usually replaced with 1 Infantry Rifle stand (added to an existing company).

Or a new company could be formed consisting of 3 Infantry Rifle stands [optional + 3 Medium Trucks], in which case the formation

43 Actually, 3 mortars are in each infantry company, plus 4 in the base, which works out to 13 total – 3 stands in FFT3.

44 From 1967, infantry and airmobile battalions in Vietnam added a 4th infantry company.

45 The official TO&E for the light infantry and airmobile battalions includes one 81mm Mortar + 1 Medium Truck, but this was seldom actually present in Vietnam. Typically, there were only enough mortars to add 1 extra 81mm Mortar + 1 truck to the battalion base.

loses 3 of the following stands: 81mm Mtr (max 2 stands lost), Jeep w/106mm RR or recon Infantry stand.

Airborne infantry battalions can be air-dropped.

Medium Trucks can be replaced by UH-1s. The Jeep w/106mm RR is either deleted or carried by 1 CH-47 or CH21B.]

▪ **Stand Inventory**

- 3 81mm Mtr
- 1 LIGHT AT VEHICLE
- 10 Infantry Rifle stands
- [optional 13 Medium Trucks]

Airmobile Infantry Battalion 1963 – 1973

▪ **Base**

- 3 81mm Mtr⁴⁶ [optional + 3 UH-1]
- 1 LIGHT AT VEHICLE [optional + 1 CH47 or CH21B]
- 1 recon Infantry Rifle stand [optional + 1 UH-1]

▪ **3 Airmobile Infantry Companies^{47,48}**

- 3 Infantry Rifle stands [optional + 3 UH-1]

[Vietnam Notes:

Many formations only had 1 81mm Mtr stand [optional + 1 UH-1].

The Jeep w/106mm RR was usually replaced with 1 Infantry Rifle stand (added to an existing company).

Or a new company could be formed consisting of 3 Infantry Rifle stands [optional + 3 UH-1], in which case the formation loses 3 of the following stands: 81mm Mtr (max 2 stands lost), Jeep w/106mm RR or recon Infantry stand.]

▪ **Stand Inventory**

- 3 81mm Mtr
- 1 LIGHT AT VEHICLE
- 10 Infantry Rifle stands
- [optional 16 UH-1]
- [optional 2 CH-37 or CH21B]

Armored Cavalry Squadron 1948 – 1956

▪ **Base**

- 2 81mm Mtr + 2 Jeep w/LMG

▪ **3 Armored Cavalry Troops**

- **'50-'54**
 - 2 recon M8 Greyhound
 - 1 recon Mech Infantry stand + 1 Medium Truck or 1 APC
 - 1 recon LIGHT TANK
- **'55-'56**
 - 2 recon Jeep w/HMG
 - 1 recon Mech Infantry stand + 1 Medium Truck
 - 1 recon LIGHT TANK

▪ **1 Tank Company**

- 3 MBT

▪ **1 ACR Artillery Battery [Armored Cavalry Regiments only, see the Artillery Support Groups]**

▪ **Stand Inventory**

- 2 81mm Mtr + 2 Jeeps w/LMG
- 3 Mech Infantry stands
- 3 LIGHT TANKS

⁴⁶ Actually, 3 mortars are in each infantry company, plus 4 in the base, which works out to 13 total – 3 stands in FFT3.

⁴⁷ From 1967, infantry and airmobile battalions in Vietnam added a 4th infantry company.

⁴⁸ The official TO&E for the light infantry and airmobile battalions includes 1 81mm Mtr + 1 Medium Truck, but this was seldom actually present in Vietnam. Typically, there were only enough mortars to add 1 extra 81mm Mtr + 1 Medium truck to the battalion base.

- 3 Medium Trucks or 3 APC
- 3 MBT
- If '50-'54:
 - 6 M8 Greyhound
- If '54-'56:
 - 6 Jeep w/HMG

Armored Cavalry Squadron, Pentomic Armored Division/Armored Cavalry Regiment 1957 – 1963

▪ **3 Armored Cavalry Troops**

- 2 recon Jeep w/HMG
- 1 recon Mech Infantry stand + 1 M59
- 1 recon M41 Walker Bulldog
- 1 recon 107mm Mtr + 1 M59

▪ **1 Aviation Company**

- 5 recon OH-13 Sioux
- 1 recon H-19 Chickasaw

▪ **1 Engineer Company**

- 3 Infantry Engineer stands + 3 M59
- 1 Bulldozer

▪ **Stand Inventory**

- 6 Jeep w/HMG
- 3 Mech Infantry stands
- 9 M59
- 3 M41
- 3 107mm Mtr
- 5 OH-13 Sioux
- 1 H-19 Chickasaw
- 3 Infantry Engineer stands
- 1 Bulldozer

Armored Cavalry Squadron, Pentomic Infantry Division 1957 – 1963

▪ **3 Cavalry Squadrons**

- 2 recon Jeep w/HMG
- 1 recon Mech Infantry stand + 1 M59
- 1 recon M41 Walker Bulldog
- 1 recon 107mm Mtr + 1 M59

▪ **Stand Inventory**

- 6 Jeep w/HMG
- 3 Mech Infantry stands
- 6 M59
- 3 M41 Walker Bulldog
- 3 107mm Mtr

Armored Cavalry Squadron [Infantry, Mechanized and Armored Divisions] 1963 – 1973

▪ **Base**

- 2 M106 SP 107mm Mtr⁴⁹

▪ **3 Armored Cavalry Troops**

- 2 recon SCOUT VEHICLES
- 2 LIGHT TANKS
- 1 recon Mech Infantry stand + 1 M113

▪ **1 Air Cavalry Troop**

- 3 recon OBSERVATION HELOS
- 2 GUNSHIP HELOS
- 1 Mech Infantry stand + 1 UH-1

[In Vietnam, the M114 was quickly replaced by M113 ACAV, and the M41 was often replaced by M113 ACAV or M551 or M48A3. Sometimes 1 M132 Zippo was added to the Base troops.]

⁴⁹ There are 3 M106s per armored cavalry troop for a total of 2 FFT stands. We chose to represent them as part of the squadron base because (a) it provides an accurate number of stands and (b) in reality many units removed the M106s from the troops and placed them under squadron control.

- **Stand Inventory**
 - 2 M106 SP 107mm Mtr
 - 6 SCOUT VEHICLES
 - 6 LIGHT TANKS
 - 4 Mech Infantry stands
 - 3 M113
 - 3 OBSERVATION HELOS
 - 2 GUNSHIP HELOs
 - 1 UH-1

Armored Cavalry Squadron [Armored Cavalry Regiment] 1963 – 1973

- **Base**
 - 2 M106 107mm SP Mtr⁵⁰
- **3 Armored Cavalry Troops**
 - 3 recon SCOUT VEHICLES
 - 1 LIGHT TANK or 1 MBT
 - 1 recon Mech Infantry stand + 1 M113
- **1 Tank Company**
 - 3 MBT

[MBTs will be M47 or M48A1. In 1968, 1 Scout Vehicle and the light tank/MBT in each armored cavalry troop can be replaced with 2 M551s.

National Guard or low readiness units may replace each M114, M113, and M113 ACAV with M59. They will replace each M106 with an M84.]

- **Stand Inventory**
 - 2 M106 107mm SP Mtr
 - 9 SCOUT VEHICLES
 - 3 LIGHT TANK or 3 MBT
 - 3 MBT
 - 3 Mech Infantry stand
 - 3 M113

Armored Cavalry Squadron [Vietnam, Armored Cavalry Regiment] 1963 – 1973

- **Base**
 - 2 M106 107mm SP Mtr⁵¹
 - 0-1 M132 Zippo
- **3 Armored Cavalry Troops [select one type]**
 - **Option A**
 - 4 recon M113 ACAV
 - 1 recon Mech Infantry stand + 1 M113
 - **Option B**
 - 3 recon M113 ACAV
 - 2 recon Mech Infantry stand + 2 M113
- **1 Tank Company**
 - 3 MBT
- **1 ACR Artillery Battery [see the Artillery Support Groups]**

[MBTs will be M47 or M48A1. In 1968, 1 Scout Vehicle and the light tank/MBT in each armored cavalry troop can be replaced with 2 M551s.

National Guard or low readiness units may replace each M114, M113, and M113 ACAV with M59. They will replace each M106 with an M84.]

- **Stand Inventory**
 - 2 M106 107mm SP Mtr

- 50 Actually there are 3 M106s in each armored cavalry troop, which is 2 FFT3 stands.
- 51 Actually there are 3 M106s in each armored cavalry troop, which is 2 FFT3 stands.

- 0-1 M132 Zippo
- 3 MBT
- *If Option A:*
 - 12 M113 ACAV
 - 3 Mech Infantry stand
 - 3 M113
- *If Option B:*
 - 9 M113 ACAV
 - 6 Mech Infantry stand
 - 6 M113

Armored Cavalry Squadron [Airborne Division] 1963 – 1973

- **Base**
 - 3 81mm Mtr + 3 Jeeps w/LMG
- **3 Armored Cavalry Troops**
 - 2 recon Jeep w/HMG
 - 1 LIGHT AT VEHICLE
 - 1 recon Mech Infantry stand + 1 Light Truck
- **1 Air Cavalry Troop**
 - 1 recon OBSERVATION HELO
 - 1 GUNSHIP HELO
 - 1-2 Mech Infantry stands + 1-2 UH-1
- **Stand Inventory**
 - 3 81mm Mtr
 - 3 Jeep w/LMG
 - 6 Jeep w/HMG
 - 3 LIGHT AT VEHICLES
 - 4-5 Mech Infantry stands
 - 3 Light Trucks
 - 1 OBSERVATION HELO
 - 1 GUNSHIP HELO
 - 1-2 UH-1

Air Cavalry Squadron [Airmobile Division] 1963 – 1973

- **Base**
 - 3 81mm Mtr + 0 or 3 UH-1
- **1 Armored Cavalry Troop**
 - 2 recon Jeep w/HMG + 2 CH-47
 - 1 LIGHT AT VEHICLE + 1 CH-47
 - 1 recon Infantry Rifle stand + 1 UH-1
- **3 Air Cavalry Troops**
 - 1 recon OBSERVATION HELO
 - 1 GUNSHIP HELO
 - 1-2 Infantry Rifle stands + 1-2 UH-1
- **Stand Inventory**
 - 3 81mm Mtr
 - 2 Jeep w/HMG
 - 1 LIGHT AT VEHICLE
 - 3 CH-47
 - 3 OBSERVATION HELOS
 - 3 GUNSHIP HELOs
 - 4-7 Infantry Rifle stands
 - 4-10 UH-1

Attachments

- **Tank Company**⁵²
 - 3 MBT
- **Light Tank Company**
 - 3 LIGHT TANKS
- **Mechanized Infantry Company**
 - '50-'55: 3 Mech Infantry stands + 3 APC
 - '56-'57: 3 Mech Infantry stands + 3 APC; 1 Jeep w/106mm RR
 - '57-'63: 4 Mech Infantry stands + 4 APC; 1 LIGHT AT VEHICLE; 1 81mm Mtr + 1 APC

52 M60 was not used in Vietnam. Maximum 1 company of M103.

<ul style="list-style-type: none"> • '63-'73: 3 Mech Infantry stands + 3 APC Infantry Company <ul style="list-style-type: none"> • '50-'57: 3 Infantry Rifle stands [optional + 3 Medium Trucks] • '57-'63: 4 Infantry Rifle stands; 1 81mm Mtr [optional + 4 Medium Trucks] • '63-'57: 3 Infantry Rifle stands [optional + 3 Medium Trucks] Air Cavalry Troop <ul style="list-style-type: none"> • '63-'73: 1 recon OBSERVATION HELO; 1 GUNSHIP HELO; 1-2 Infantry Rifle stands + 1-2 UH-1 Armored Cavalry Troop <ul style="list-style-type: none"> • '50-'54: 2 recon M8 Greyhound; 1 recon Mech Infantry stand + 1 Medium Truck or 1 APC; 1 recon LIGHT TANK • '55-'56: 2 recon Jeep w/HMG; 1 recon Mech Infantry stand + 1 Medium Truck; 1 recon LIGHT TANK • '57-'63: 2 recon Jeep w/HMG; 1 recon Mech Infantry stand + 1 M59; 1 recon M41 Walker Bulldog; 1 recon 107mm Mtr + 1 M59 • [Infantry/Mech/Armored Division] '63-'73: 2 recon SCOUT VEHICLES; 2 LIGHT TANKS; 1 recon Mech Infantry stand + 1 M113 • [Armored Cavalry Regiment] '63-'73: 3 recon SCOUT VEHICLES; 1 LIGHT TANK or 1 MBT; 1 recon Mech Infantry stand + 1 M113 • [Vietnam, Armored Cav. Regt. Option A] '63-'73: 4 recon M113 ACAV; 1 recon Mech Infantry stand + 1 M113 • [Vietnam, Armored Cav. Regt. Option B] '63-'73: 3 recon M113 ACAV; 2 recon Mech Infantry stands + 2 M113 • [Airborne Division] '63-'73: 2 recon Jeep w/HMG; 1 LIGHT AT VEHICLE; 1 recon Mech Infantry stand + 1 Light Truck • [Airmobile Division] '63-'73: 2 recon Jeep w/HMG + 2 CH-47; 1 LIGHT AT VEHICLE + 1 CH-47; 1 recon Infantry Rifle stand + 1 UH-1 Airmobile Infantry Company <ul style="list-style-type: none"> • '63-'73: 3 Infantry Rifle stands [optional + 3 UH-1] Air Defense Platoon [max 3] <ul style="list-style-type: none"> • 1 SP AA GUN or 1 TOWED AA GUN + 1 Light Truck Airborne Tank Company <ul style="list-style-type: none"> • '53-'69: 3 M56 Scorpion SP ATG • [only in Vietnam] '65-'71: 1 M56 Scorpion SP ATG; 2 Infantry Rifle + 2 M113 [one M113 be M113 w/90mm RR] • '69-'71: M551 Sheridan • '72-'73: M551A1 Sheridan Airmobile Division Aerial Rocket Artillery Company <ul style="list-style-type: none"> • '63-'73: 2 OBSERVATION HELOS; 3 GUNSHIP HELOS • [Can be added to combat formation base or can be divided among different companies.] Assault Helicopter Company <ul style="list-style-type: none"> • '65-'73: 5 UH-1; 0-1 GUNSHIP HELO • [Can be added to combat formation base or can be divided among different companies.] Aviation General Support Company <ul style="list-style-type: none"> • '61-'73: 1 recon OBSERVATION HELO; 2 UH-1 • [Can be added to combat formation base or can be divided among different companies.] Attack Helicopter Company <ul style="list-style-type: none"> • '62-'73: 2 recon OBSERVATION HELOS; 4 GUNSHIP HELOS • [Can be added to combat formation base or can be divided among different companies.] Assault Support Helicopter Company <ul style="list-style-type: none"> • '63-'73: 3 CH-47 • [Can be added to combat formation base or can be divided among different companies.] Heavy Helicopter Company <ul style="list-style-type: none"> • '62-'73: 2 CH-54 Tarhe 	<ul style="list-style-type: none"> • [Can be added to combat formation base or can be divided among different companies.] AVLB Platoon <ul style="list-style-type: none"> • '58-'73: 1 M48 AVLB Engineer Company <ul style="list-style-type: none"> • 3 Infantry Engineer stands + 3 Trucks or 3 APC; 0-1 Bulldozer <h3>Artillery Support Groups</h3> <ul style="list-style-type: none"> ACR Artillery Battery [availability modifier -2] <ul style="list-style-type: none"> • '50-'56: 1 M37 HMC • '63-'73: 1 M109 SP 155mm How Light Artillery Battalion <ul style="list-style-type: none"> • '50-'56: 3 M101 105mm How + 3 Light Trucks • '64-'73: 3 M102 105mm How + 3 Light Trucks Light Artillery Battery [availability modifier -2] <ul style="list-style-type: none"> • '50-'56: 1 M101 105mm How + 1 Light Truck • '64-'73: 1 M102 105mm How + 1 Light Truck Armored Light Artillery Battalion <ul style="list-style-type: none"> • '50-'53: 3 M7 HMC Priest or 3 M37 HMC • '54: 3 M37 HMC • '55-'56: 3 M52 SP 105mm How or 3 M37 HMC • '63-'67: 3 M108 SP 105mm How Armored Light Artillery Battery [availability modifier -2] <ul style="list-style-type: none"> • '50-'53: 1 M7 HMC Priest or 1 M37 HMC • '54: 1 M37 HMC • '55-'56: 1 M52 SP 105mm How or 1 M37 HMC • '63-'67: 1 M108 SP 105mm How Field Artillery Battalion <ul style="list-style-type: none"> • '50-'56: 3 M114 155mm How + 3 Light Trucks • '64-'73: 3 M114 155mm How + 3 Light Trucks Armored Field Artillery Battalion <ul style="list-style-type: none"> • '50-'52: 3 M40 GMC • '53-'56: 3 M44 SP 155mm How • '63-'73: 3 M109 SP 155mm How Armored Field Artillery Battery [availability modifier -2] <ul style="list-style-type: none"> • '50-'52: 1 M40 GMC • '53-'56: 1 M44 SP 155mm How • '63-'73: 1 M109 SP 155mm How Pentomic Artillery Battalion [max 2] <ul style="list-style-type: none"> • '57-'58 [availability modifier +2]: 5 M52 SP 105mm How Pentomic Light Artillery Battery [max 5, availability modifier -2] <ul style="list-style-type: none"> • '57-'63: 1 M52 SP 105mm How or 1 M101 105mm How + 1 Light Truck Pentomic Medium Artillery Battery [availability modifier -2] <ul style="list-style-type: none"> • '57-'58 [max 2]: 1 M44 SP 155mm How or 1 M114 155mm How + 1 Light Truck • '59-'63 [max 5]: 1 M44 SP 155mm How or 1 M114 155mm How + 1 Light Truck Pentomic Heavy Artillery Battery [max 1, availability modifier -2] <ul style="list-style-type: none"> • '57-'63: 1 M43 GMC or 1 M115 203mm Towed How + 1 Medium Truck Heavy Artillery Battalion <ul style="list-style-type: none"> • '50-'56: 3 M115 203mm Towed How + 3 Medium Truck • '64-'73: 3 M115 203mm Towed How + 3 Medium Truck Heavy Artillery Battery [availability modifier -2] <ul style="list-style-type: none"> • '50-'56: 1 M115 203mm Towed How + 1 Medium Truck • '64-'73: 1 M115 203mm Towed How + 1 Medium Truck Armored Heavy Artillery Battalion <ul style="list-style-type: none"> • '50-'56: 3 M43 GMC • '63-'73: 3 M110 SP 203mm How
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- **Armored Heavy Artillery Battery** [availability modifier -2]
 - '50-'56: 1 M43 GMC
 - '63-'73: 1 M110 SP 203mm How

Equipment Notes

- **APC:**
 - '45-'52: M39
 - '53: M39 or M75
 - '54: M75
 - '55-'59: M59 or M75
 - '60-'63: M113 or M59
 - '64-'73: M113
- **GUNSHIP HELO:**
 - '62-'64: UH-1
 - '65-'73: UH-1 or AH-1F/G
- **LIGHT AT VEHICLE:**
 - '52-'54: Jeep w/105mm RR
 - '55: Jeep w/106mm RR or Jeep w/105mm RR
 - '56-'59: Jeep w/106mm RR
 - '60-'62: Jeep w/106mm RR or [rarely] Jeep w/SS-11
 - '63-'64: Jeep w/106mm RR, Jeep w/ENTAC, or [rarely] Jeep w/ SS-11
 - '65-'68: Jeep w/106mm RR or Jeep w/ENTAC
 - '69: Jeep w/106mm RR, or [National Guard only] Jeep w/ENTAC
 - '70-'72: Jeep w/TOW, Jeep w/106mm RR, or [National Guard only] Jeep w/ENTAC
 - '73: Jeep w/TOW, or [National Guard only] Jeep w/106mm RR
- **LIGHT TANK:**
 - '50-'67: M41 Walker Bulldog
 - '68-'73: M551 or M41 Walker Bulldog
- **MBT⁵³:**
 - '50-'51: M46, M26, or M4A3(76) Sherman
 - '52-'53: M47, M46, M26, or M4A3(76) Sherman
 - '54: M47 or M46
 - '55-'56: M47
 - '57-'58: M47 or M103 [max 1 company]
 - '59: M48A1, M47, or M103 [max 1 company]
 - '60-'63: M60, M48A1, or M103 [max 1 company]
 - '64-'73: M60A1, M60, or M48A3
- **OBSERVATION HELO:**
 - '61-'68: OH-6
 - '69-'73: OH-58 or OH-6
- **SCOUT VEHICLE:**
 - '62-'65: M114
 - '66-'68: M114 or M113 ACAV
 - '69-'70: M114, M114A2 (M139), or M113 ACAV
- **SP AA GUN:**
 - '50-'54: M16 MGMC, M19 GMC or M42 Duster
 - '55-'58: M16 MGMC or M42 Duster
 - '59-'62: M42 Duster
 - '63-'73: Chaparral (on M730), M163 Vulcan, or M35 w/Quad AAG [Vietnam only]
- **TOWED AA GUN:**
 - '50-'62: M55 Quad AAG
 - '63-'73: M167 Vulcan, Chaparral (Towed), or M55 Quad AAG
- **UTILITY HELO:**
 - '52-'58: CH-37 Mojave
 - '59-'67: UH-1 or CH-37 Mojave
 - '68-'73: UH-1

⁵³ The M60 series tanks were not used in Vietnam.

U.S. Army 1973+

The US Army that entered the 1970s had been ground down by a decade of attrition warfare and political unwillingness to mobilize the reserves. Keeping the Vietnam War going forced the Army to cannibalize units outside of Vietnam. This disrupted and gutted those formations and destroyed unit cohesion. In addition, the Army battled the same problems—racism, drug abuse, and apathy—that plagued American society as a whole. The Arab oil embargo, a pacifistic and isolationist political leadership, and general economic stagnation prevented the Army from upgrading its equipment to fight its renewed mission—the Soviet Threat. US Army seemed to be unable to assess what the future would require. Ill-conceived weapons programs like the MBT-70 and AH-56 wasted scarce development resources and were cancelled. New weapons systems fielded in the late 1960s and early 1970s, like the M60A2 and the M551 Sheridan were equally underwhelming. So while the US Army had the largest number of combat veterans in the world in the early 1970s, insiders considered it an aimless “hollow force”.

Despite these problems, the US Army transformed itself into a modern, well trained, highly professional fighting force. A detailed account of this unprecedented transformation is outside the scope of these notes, but the key issues and developments can be summarized.

Recognizing its problems, the Army empowered a cadre of dedicated officers to transform it into a modern, professional army capable of beating the Soviets. These officers, led by Gen. William DePuy, used the 1973 Yom Kippur War as a blueprint for future wars. They drew two main conclusions from that war. The first was that modern warfare consumes munitions at a far greater rate than WWII. The second was that modern wars were so expensive, and modern weapons so destructive, that any future war would be short. The US would not have time to mobilize its reserves and build a huge army. The war would be over long before then.

With these facts in mind, DePuy and his subordinates developed the US Army's doctrine for winning a modern mechanized war and published it as “Active Defense” in 1976. Though derided by critics as overly dependent on defensive firepower, “Active Defense” had the virtue of emphasizing American strengths and exploiting Soviet weaknesses. And more importantly, it contained the core elements of AirLand Battle, the future doctrine that turned the US Army into an aggressive, capable fighting force. DePuy's cogitations also defined the weapons systems needed. Weapon systems deployed in the late 1970s/early 1980s—the M1 Abrams, the AH-64, the A-10—proved to be far more capable and useful than those fielded a decade earlier.

By 1980, Soviet arrogance, aided by the Iranian hostage crises, helped oust Jimmy Carter and refocus the American people on foreign affairs. Ronald Reagan took office in 1981, with a mandate to rebuild the US military, a task he relished. In the 1980s, the US Army was lavishly re-equipped with a new generation of military hardware, manned by well-trained professional soldiers, with an aggressive doctrine aimed squarely at the Soviets' weaknesses. This force fought the Gulf War and annihilated the Iraqi Army in just 72 hours.

Its performance in the 1991 Gulf War was a first in American military history: this was the first time in American history that the US Army won its first battle. In that battle, the US Army annihilated the Iraqi Army and suffered fewer than 100 casualties.

The implications of this performance should have been very sobering to former Soviet commanders. The US Army of the 1980s would have been a potent adversary indeed.

The 1990s weren't as kind, however. The disintegration of its chief rival left the Army without a well-defined opponent, and ended the days of lavish defense spending. The Army deactivated many formations and scaled back many new weapons programs. It began a gradual shift from heavy mechanized operations to infantry-based counterinsurgency

operations and humanitarian operations. This operational shift further reduced funds for new weapons systems.

Despite the changes in the 1990s, the 2000s confirmed that the US Army is still one of the world's preeminent fighting forces. Forming the core of the expeditionary force that overran Iraq in 2003, the US Army demonstrated that it could succeed with lean, medium-weight forces. The Stryker medium brigades gave the Army a very effective medium-weight motorized infantry capability. The Army capitalized on an influx of recruits who were raised playing console "shooter" videogames and led the world in leveraging high technology on the battlefield. In countless battles with jihadis, US soldiers proved their professional competence over and over. By any reasonable measure, the US Army is now among the best-trained armies in history. It is certainly the best-equipped fighting force ever. These two factors make it a fearsome opponent today.

Quality

1973-1976: 10% Marginal; 35% Fair; 45% Average; 5% Good; 5% Excellent
 1977-1980: 30% Fair; 45% Average; 15% Good; 10% Excellent
 1981-1987: 55% Average; 35% Good; 10% Excellent
 1988+: 25% Average; 35% Good; 20% Excellent; 20% Superb

Artillery Accuracy & Friction Response

1973-1979: Artillery Accuracy 4+; Response 2+
 1980-1995: Artillery Accuracy 3+; Response 2+
 1996+: Artillery Accuracy 2+; Response 2+

Combat Formations

Tank Battalion 1971 – 1983

- **Base**
 - 1 M106 107mm SP Mtr
 - 2 recon CFV
 - 1 Redeye Team stand + 1 Jeep
- **3 Tank Companies**
 - 3 MBT
- **Stand Inventory**
 - 1 M106 107mm SP Mtr
 - 2 SCOUT VEHICLES
 - 1 Redeye Team stand + 1 Jeep
 - 9 MBT

Tank Battalion 1983+

- **Base**
 - 1 recon CFV
 - 1 SP MORTAR
- **4 Tank Companies**
 - 3 MBT
- **Stand Inventory**
 - 1 CFV
 - 1 SP MORTAR
 - 12 MBT

Mechanized Infantry Battalion 1973 – 1983

- **Base**
 - 1 Jeep w/106mm RR or 1 M113 w/TOW
 - 2 M125 81mm SP Mtr⁵⁴
 - 1 M106 107mm SP Mtr
 - 1 Redeye Team stand + 1 Jeep
 - 2 recon CFV

▪ 3 Mechanized Infantry Companies

- 3 Infantry Rifle stands + 3 M113

▪ 1 AT Company⁵⁵

- 3 M113 TOW (M150) or 3 Jeep w/106mm RR

▪ Stand Inventory

- 1 Jeep w/106mm RR or 1 M113 w/TOW
- 2 M125 81mm SP Mtr
- 1 M106 107mm SP Mtr
- 1 Redeye Team stand
- 1 Jeep
- 2 SCOUT VEHICLES
- 9 Infantry Rifle stands
- 9 M113

Mechanized Infantry Battalion 1983+

▪ Base

- 1 recon CFV
- 1 SP MORTAR

▪ 1 AT Company⁵⁶

- 3 M901 ITV

▪ 4 Mech Infantry Companies

- 3 Mech Infantry stands + 3 IFV

▪ Stand Inventory

- 1 CFV
- 1 SP MORTAR
- 3 M901 ITV
- 12 Mech Infantry stands
- 12 IFV

Armored Cavalry Squadron [Armored Cavalry Regiment] 1973 – 1983

▪ Base

- 1 M106 SP 107mm Mtr

▪ 3 Armored Cavalry Troops

▪ '73-'75

- 1 Infantry Rifle stand + 1 M113
- 2 M551A1 Sheridan
- 2 recon M114 or 2 recon M113 ACAV

▪ '76-'80

- 2 M551A1 Sheridan
- 2 recon M114 or 2 recon M113 ACAV

▪ '80-'83

- 2 MBT
- 2 recon M114 or 2 recon M113 ACAV

▪ 1 Tank Company

- 3 MBT

▪ Stand Inventory

- 1 M106 SP 107mm Mtr
- 3 MBT
- 6 M114 or 6 M113 ACAV
- If '73-'75:
 - 3 Infantry Rifle stands
 - 3 M113
 - 6 M551A1 Sheridan
- If '76-'80:
 - 6 M551A1 Sheridan
- If '80-'83:
 - 6 MBT

⁵⁵ The AT Co in the mechanized infantry battalion can be divided among the other companies as the owning player sees fit, or the AT Co may be used as a normal unit in the battalion.

⁵⁶ The AT Co in the mechanized infantry battalion can be divided among the other companies as the owning player sees fit, or the AT Co may be used as a normal unit in the battalion.

54 Actually, 3 mortars are in each infantry company, which works out to 9 total – 2 stands in FFT3

Armored Cavalry Squadron [Armored, Mechanized and Infantry Divisions] 1973 – 1983

- **Base**
 - 1 M106 SP 107mm Mtr
 - **3 Armored Cavalry Troops**
 - **'73-'75**
 - 2 recon M114 or 2 recon M113 ACAV
 - 2 M551A1 Sheridan
 - 1 Infantry Rifle stand + 1 M113
 - **'76-'80**
 - 2 recon M114 or 2 recon M113 ACAV
 - 2 M551A1 Sheridan
 - **'80-'83**
 - 2 recon M114 or 2 recon M113 ACAV
 - 2 MBT
 - **1 Air Cavalry Troop**
 - 2 recon OBSERVATION HELOS
 - 2 ATTACK HELOS
 - 1 Infantry Rifle stand + 1 UTILITY HELO
 - **Stand Inventory**
 - 1 M106 SP 107mm Mtr
 - 2 OBSERVATION HELOS
 - 2 ATTACK HELOS
 - 1 Infantry Rifle stand
 - 1 UTILITY HELO
 - 6 M114 or 6 M113 ACAV
 - If '73-'75:
 - 6 M551A1 Sheridan
 - 3 Infantry Rifle stand
 - 3 M113
 - If '76-'80:
 - 6 M551A1 Sheridan
 - If '80-'83:
 - 6 MBT
-

Armored Cavalry Squadron [Airborne Division] 1973 – 1983

- **Base**
 - 1 Redeye Team stand + 1 Jeep w/LMG
 - 1 81mm Mtr + 1 Jeep w/LMG
 - **2 Armored Cavalry Troops**
 - 1 Jeep w/106mm RR
 - 2 recon Jeep w/HMG
 - 1 recon Infantry Rifle stand + 2 Jeep w/LMG
 - **1 Air Cavalry Troop**
 - 1 recon OBSERVATION HELO
 - 1 ATTACK HELO
 - 1-2 Infantry Rifle stands + 1-2 UTILITY HELOS
 - **Stand Inventory**
 - 1 Redeye Team stand
 - 1 Jeep w/LMG
 - 1 81mm Mtr
 - 5 Jeep w/LMG
 - 2 Jeep w/106mm RR
 - 4 Jeep w/HMG
 - 1 OBSERVATION HELO
 - 1 ATTACK HELO
 - 3-4 Infantry Rifle stands
 - 1-2 UTILITY HELOS
-

Air Cavalry Squadron [Airmobile Division] 1973 – 1983

- **Base**
 - 1 81mm Mtr [optional + 1 UTILITY HELO]
 - 1 Redeye Team stand
-

- **1 Armored Cavalry Troop**
 - 1 Jeep w/106mm RR [optional + 1 CH-47]
 - 2 recon Jeep w/HMG [optional + 2 CH-47]
 - 1 recon Infantry Rifle stands [optional + 1 UTILITY HELO]
 - **3 Air Cavalry Troops**
 - 1 recon OBSERVATION HELO
 - 1 ATTACK HELO
 - 1-2 Infantry Rifle stands + 1-2 UTILITY HELOS
 - **Stand Inventory**
 - 1 81mm Mtr
 - 1 Redeye Team stand
 - 1 Jeep w/106mm RR
 - 2 Jeep w/HMG
 - 3 OBSERVATION HELOS
 - 3 ATTACK HELOS
 - 4-7 Infantry Rifle stands
 - 3-6 UTILITY HELOS
 - [optional 2 UTILITY HELOS]
 - [optional 3 CH-47]
-

Armored Cavalry Squadron 1983+

- **Base**
 - 1 SP MORTAR
 - **3 Armored Cavalry Troops**
 - 3 recon CFV
 - 2 MBT
 - **1 Tank Company**
 - 3 MBT
 - **1 ACR Artillery Battery [see Artillery Support Groups]**
 - **Stand Inventory**
 - 1 SP MORTAR
 - 9 CFV
 - 9 MBT
-

Divisional Cavalry Squadron 1983s+⁵⁷

- **Base**
 - 1 recon CFV
 - 2 recon M113
 - **1 Attack Helicopter Company**
 - 2 ATTACK HELOS
 - 1 OBSERVATION HELO
 - **2 Ground Troops**
 - 1 M125 SP 81mm Mtr
 - 4 recon CFV
 - **Stand Inventory**
 - 9 CFV
 - 2 M113
 - 2 ATTACK HELOS
 - 1 OBSERVATION HELO
 - 2 M125 SP 81mm Mtr
-

Infantry Battalion 1973 – 1983

- **Base**
 - 1 107mm Mtr + 1 Jeep
 - 2 81mm Mtr + 2 Jeeps⁵⁸
 - 2 Jeep w/TOW or 2 Jeep w/106mm RR
 - 1 Redeye Team stand + 1 Jeep
 - **3 Infantry Companies**
 - 3 Infantry Rifle stands [optional + 6 Jeeps or + 3 Medium Trucks]
-

⁵⁷ Only one divisional cavalry squadron is allowed.

⁵⁸ Actually, 3 mortars are in each infantry company, which works out to 9 total – 2 stands in FFT3.

[This battalion can be made airmobile by (a) lifting each Jeep w/TOW and each Jeep w/106mm RR in a CH-47; and (b) transporting each remaining stand in a Utility Helo.]

▪ **Stand Inventory**

- 1 107mm Mtr
- 4 Jeeps
- 2 81mm Mtr
- 2 Jeep w/TOW or 2 Jeep w/106mm RR
- 1 Redeye Team stand
- 9 Infantry Rifle stands
- [optional 6 Jeeps or 3 Medium Trucks]

Airborne Infantry Battalion 1973 – 1983

▪ **Base**

- 1 recon Jeep w/HMG [optional +1 CH-47]
- 1 107mm Mtr [optional +1 Medium Truck or 1 Jeep or 1 UTILITY HELO]
- 1 Jeep w/TOW [optional +1 CH-47]
- 2 81mm Mtr [optional +1 Medium Truck or 2 Jeeps or 1 UTILITY HELO]

▪ **3 Infantry Companies**

- 3 Infantry Rifle Squads [optional +3 Medium Trucks or 6 Jeeps or 3 UTILITY HELO]

▪ **Stand Inventory**

- 1 Jeep w/HMG
- 1 107mm Mtr
- 1 Jeep w/TOW
- 2 81mm Mtr
- 9 Infantry Rifle Squads
- [optional 11 Medium Trucks or 21 Jeeps or 11 UTILITY HELO]
- [optional 2 CH-47]

Airmobile Infantry Battalion 1973 – 1983

▪ **Base**

- 1 recon Jeep w/HMG
- 1 107mm Mtr + 1 Medium Truck
- 1 Jeep w/TOW
- 2 81mm Mtr + 2 Jeeps

▪ **3 Infantry Companies**

- 3 Infantry Rifle stands

[The formation may replace its transport trucks and jeeps with sufficient transport helicopters to lift the entire battalion. The Jeep w/HMG and Jeep w/TOW are lifted by CH-47. This is equivalent to attaching an Assault Support Helicopter Company and an Assault Helicopter Company.]

▪ **Stand Inventory**

- 1 Jeep w/HMG
- 1 107mm Mtr
- 1 Medium Truck
- 1 Jeep w/TOW
- 2 81mm Mtr
- 2 Jeeps
- 9 Infantry Rifle stands

Light Infantry Battalion/Airborne Infantry Battalion 1983+

▪ **Base**

- 1 81mm Mtr + 1 LIGHT VEHICLE
- 1 recon Infantry Rifle stand + 2 LIGHT VEHICLES
- 1 LIGHT AT VEHICLE

▪ **3 Light Infantry Companies**

- 3 Infantry Rifle stands [optional + 6 LIGHT VEHICLES]

▪ **Stand Inventory**

- 1 81mm Mtr
- 1 LIGHT AT VEHICLE
- 10 Infantry Rifle stands
- 3 LIGHT VEHICLES

- [optional 18 LIGHT VEHICLES]

Infantry Brigade Combat Team Infantry Battalion 2003+

▪ **Base**

- 1 81mm Mtr + 1 LIGHT VEHICLE or 1 120mm Mtr + 1 LIGHT VEHICLE
- 1 recon Infantry Rifle stand + 2 LIGHT VEHICLES
- 2 LIGHT AT VEHICLES or 2 Dismounted TOW Team stands + 2 LIGHT VEHICLES
- 1 HMG Team stand + 1 LIGHT VEHICLE
- 1 Mk 19 AGL + 1 LIGHT VEHICLE

▪ **3 Light Infantry Companies**

- 3 Infantry Rifle stands [optional + 6 LIGHT VEHICLES]

▪ **Stand Inventory**

- 1 81mm Mtr or 1 120mm Mtr
- 2 LIGHT AT VEHICLES or 2 Dismounted TOW Team stands + 2 LIGHT VEHICLES
- 1 HMG Team stand
- 1 Mk 19 AGL
- 10 Infantry Rifle stands
- 5 LIGHT VEHICLES
- [optional 18 LIGHT VEHICLES]

Stryker Brigade Combat Team Infantry Battalion 2003-2006

▪ **Base**

- 1 recon LIGHT VEHICLE
- 2 M1129 Stryker SP Mtr
- 1 M1134 Stryker AT

▪ **3 Stryker Brigade Infantry Companies**

- 3 Mech Infantry stands + 3 M1126 Stryker ICV w/HMG or M1126 Stryker ICV w/AGL [can be mixed]

▪ **Stand Inventory**

- 1 LIGHT VEHICLE
- 2 M1129 Stryker SP Mtrs
- 1 M1134 Stryker AT
- 9 Mech Infantry stands
- 9 M1126 Stryker ICV w/HMG or M1126 Stryker ICV w/AGL

Stryker Brigade Combat Team Infantry Battalion 2007+

▪ **Base**

- 1 recon LIGHT VEHICLE
- 2 M1129 Stryker SP Mtr
- 1 M1134 Stryker AT

▪ **3 Stryker Brigade Infantry Companies**

- 1 M1128 Stryker MGS
- 3 Mech Infantry stands + 3 M1126 Stryker ICV w/HMG or M1126 Stryker ICV w/AGL [can be mixed]

▪ **Stand Inventory**

- 1 LIGHT VEHICLE
- 2 M1129 Stryker SP Mtr
- 1 M1134 Stryker AT
- 9 Mech Infantry stands
- 9 M1126 Stryker ICV w/HMG or M1126 Stryker ICV w/AGL
- 3 M1128 Stryker MGS

Stryker Brigade Combat Team Cavalry Squadron 2003+

▪ **Base**

- 1 M1129 Stryker SP Mtr

▪ **3 Stryker Brigade Cavalry Troops**

- 3 recon M1127 Stryker RV w/HMG or M1127 Stryker RV w/AGL [can be mixed]

▪ **Stand Inventory**

- 1 M1129 Stryker SP Mtr
- 9 recon M1127 Stryker RV w/HMG or M1127 Stryker RV w/AGL [can be mixed]

Heavy Brigade Combat Team Combined Arms Battalion 2003+

- **Base**
 - 1 recon CFV
 - 1 M1064 SP 120mm Mtr
 - **2 Mech Infantry Companies**
 - 3 Mech Infantry stands + 3 IFV
 - **2 Tank Companies**
 - 3 MBT
 - **Stand Inventory**
 - 1 CFV
 - 1 M1064 SP 120mm Mtr
 - 6 Mech Infantry stands
 - 6 IFV
 - 6 MBT
-

Heavy Brigade Combat Team Cavalry Squadron 2003+

- **Base**
 - 1 recon CFV
 - 1 M1064 SP 120mm Mtr
 - **3 Cavalry Troops**
 - 1 recon CFV
 - 2 recon M1114 HMMWV HMG
 - **Stand Inventory**
 - 4 CFV
 - 1 M1064 SP 120mm Mtr
 - 6 M1114 HMMWV HMG
-

Attachments

- **Tank Company**
 - 3 MBT
- **Mech Infantry Company**
 - '73-'82: 3 Mech Infantry stands + 3 M113
 - '83+: 3 Mech Infantry stands + 3 IFV
- **Armored Cavalry Troop**
 - 3 recon CFV; 2 MBT
- **Light Infantry Company**
 - 3 Infantry Rifle stands [optional + 6 LIGHT VEHICLES]
- **Stryker Brigade Infantry Company [only to other Stryker Brigade battalions]**
 - '03-'06: 3 Mech Infantry stands + 3 M1126 Stryker ICV w/ HMG or M1126 Stryker ICV w/AGL [can be mixed]
 - '07+: 1 M1128 Stryker MGS; 3 Mech Infantry stands + 3 M1126 Stryker ICV w/HMG or M1126 Stryker ICV w/AGL [can be mixed]
- **Stryker Brigade Cavalry Troop [only to other Stryker Brigade battalions]**
 - '03+: 3 recon M1127 Stryker RV w/HMG or M1127 Stryker RV w/AGL [can be mixed]
- **Air Defense Platoon [max 3]**
 - '73-'80: 1 M163 Vulcan or 1 Chapparal (on M730) or 1 M42 Duster
 - '81-'90: 1 M163 Vulcan or 1 Chapparal (on M730) or 1 Stinger Team stand + 1 LIGHT VEHICLE
 - '91-'97: 1 Avenger or 1 Stinger Team stand + 1 LIGHT VEHICLE or 1 M163 Vulcan or 1 Chapparal (on M730)
 - '98-'15: 1 M6 Bradley Linebacker or 1 Avenger or 1 Stinger Team stand + 1 LIGHT VEHICLE
- **Attack Helicopter Company**
 - 2 ATTACK HELOS; 1 OBSERVATION HELO
- **Air Cavalry Troop**
 - 1 ATTACK HELO; 2 OBSERVATION HELOS

▪ **Transport Helicopter Company**

- '73-'77: 3 UH-1
- '78-'80: 3 UH-60 or 3 UH-1
- '81+: 3 UH-60

▪ **Assault Helicopter Company**

- 5 UTILITY HELOS; 0-1 GUNSHIP HELO
- [Can be added to combat formation base or can be divided among different companies.]

▪ **Assault Support Helicopter Company**

- 3 CH-47
- [Can be added to combat formation base or can be divided among different companies.]

▪ **Engineer Company**

- '73-'00: 3 Infantry Engineer stands + 3 M113; 1 M728 CEV; 1 AVLB
 - '01+: 3 Infantry Engineer stands + 3 M113; 1 AVLB
-

Artillery Support Groups

▪ **ACR Artillery Battery [availability modifier -1]**

- '63-'73: 2 M109 SP 155mm How
- '74+: 2 M109A1-4 SP 155mm How

▪ **Light/Airborne Light Artillery Battalion [max 2, supports only light/airborne infantry battalions]**

- '70-'89: 3 M102 105mm How + 3 Light Trucks
- '90-'02: 3 M119 105mm How + 3 Light Trucks

▪ **Light/Airborne General Support Artillery Battalion [max 1, supports only light/airborne infantry battalions]**

- '70-'89: 3 M114 155mm How + 3 Light Trucks
- '90-'02: 3 M198 155mm How + 3 Light Trucks

▪ **Infantry BCT Artillery Battalion [max 3, availability modifier -1]**

- '03+: 2 M119 105mm How + 2 Light Trucks

▪ **Stryker BCT Artillery Battalion**

- '03-'04: 3 M198 155mm How + 3 Light Trucks; [optional 1 M1131 Stryker FO veh.]
- '05+: 3 M777 w/Excalibur + 3 Light Trucks; [optional 1 M1131 Stryker FO veh.]

▪ **Heavy BCT Artillery Battalion [availability modifier +1]**

- '03+: 4 M109A6 w/Excalibur

▪ **Field Artillery Battalion**

- '70-'73: 3 M109 SP155mm How
- '74-'83: 3 M109A1-4 SP 155mm How

▪ **Field Artillery Battalion [availability modifier +3]**

- '83-'92: 6 M109A1-4 SP 155mm How
- '93-'06: 6 M109A6 SP 155mm How
- '07+: 6 M109A6 w/Excalibur

▪ **Field Artillery Battery [availability modifier -2]**

- '70-'73: 1 M109 SP155mm How
- '74-'83: 1 M109A1-4 SP 155mm How

▪ **Field Artillery Battery [availability modifier -1]**

- '83-'92: 2 M109A1-4 SP 155mm How
- '93-'06: 2 M109A6 SP 155mm How
- '07+: 2 M109A6 w/Excalibur

▪ **Heavy Artillery Battalion**

- '70-'99: 3 M110 SP 203mm How

▪ **Heavy Artillery Battery [availability modifier -2]**

- '70-'99: 1 M110 SP 203mm How

▪ **MLRS Battalion**

- '84-'15: 8 M270 MLRS
- '05-'15: 8 M270 MLRS w/GMLRS

▪ **MLRS Battery**

- '83-'15: 2 M270 MLRS

- '05-'15: 2 M270 MLRS w/GMLRS

Equipment Notes

- **ATTACK HELO:**
 - '73-'85: AH-1F/G
 - '86-'99: AH-1F/G or AH-64
 - '00+: AH-64
- **CFV:**
 - '70-'84: M113 ACAV
 - '85+: M3 CFV series
- **IFV:**
 - M113 series or M2 Bradley series
- **LIGHT AT VEHICLE:**
 - '70-'89: Jeep w/TOW
 - '90-'93: M220 TOW HMMWV
 - '94-'95: M220 TOW HMMWV or M966 TOW HMMWV
 - '96+: M220 TOW HMMWV, M966 TOW HMMWV, or M1121 TOW HMMWV
- **LIGHT VEHICLE:**
 - '70-'84: Jeep w/LMG
 - '85-'93: M998 HMMWV LMG
 - '94-'95: M998 HMMWV LMG or M1025 HMMWV LMG
 - '96+: M998 HMMWV LMG, M1025 HMMWV LMG, or M1114 HMMWV LMG
- **MBT:**
 - M48 series, M60 series, M1 series, M551 series
- **OBSERVATION HELO:**
 - '73-'84: OH-58 or OH-6
 - '85- OH-58, OH-58D
- **SP MORTAR:**
 - '70-'90: M106 SP 107mm Mtr
 - '91+: M1064 SP 120mm Mtr
- **UTILITY HELO:**
 - '73-'78: UH-1
 - '79-'90: UH-60 or UH-1
 - '10+: UH-60
- **Generic Wheeled APC:**
 - HMMWV, Jeep
- **Generic Tracked APC:**
 - M113

U.S. Marine Corps 1950–2015

Marines ferociously task organize. Therefore any company can have any stand (from the formation base or from another company in the formation) attached to it, without giving up a stand in exchange. A Marine company can have a maximum of 5 stands (not including Amphibious Transports/IFV/APC/Trucks/Jeeps/transport helicopters). The formation base can have a maximum of 7 stands, not including Amphibious Transports/IFV/APC/Trucks/Jeeps/transport helicopters.

Quality

1950-1969: 55% Good; 30% Excellent; 15% Superb
 1970-1976: 30% Average; 40% Good; 20% Excellent; 10% Superb
 1977-1980: 20% Average; 40% Good; 25% Excellent; 15% Superb
 1981-1987: 35% Good; 50% Excellent; 15% Superb
 1988+: 30% Good; 55% Excellent; 15% Superb

Artillery Accuracy & Friction Response

1950-1979: Artillery Accuracy 4+; Response 2+
 1980-1995: Artillery Accuracy 3+; Response 2+
 1996+: Artillery Accuracy 2+; Response 2+

Combat Formations

Marine Amphibious Unit [Infantry Bn] 1950 – 1962

- **Base**
 - 1 81mm Mtr M1
- **3-5 Combat Attachments [Maximum 1 Tank Company]**
- **0-2 Support Attachments**
- **0-2 Artillery Support Groups**

Marine Amphibious Unit [Infantry Bn] 1963 – 1973

- **Base**
 - 2 81mm Mtr
 - 2 Jeep w/106mm RR
 - 1 Marine HMG stand
- **3-5 Combat Attachments [Maximum 1 Tank Company]**
- **0-2 Support Attachments**
- **0-2 Artillery Support Groups**

Marine Amphibious Unit [Infantry Bn] 1963 – 1980

- **Base**
 - 2 81mm Mtr.
 - 2 Jeep w/106mm RR
 - 1 Marine Rifle stand
 - 1 Marine HMG stand
- **3-5 Combat Attachments [Maximum 1 Tank Company]**
- **0-2 Support Attachments**
- **0-2 Artillery Support Groups**

Marine Amphibious Unit [Infantry Bn] 1981 – 1983

- **Base**
 - 2 81mm Mtr.
 - 2 Jeep w/106mm RR or 2 LIGHT AT VEHICLES
 - 1 Marine Rifle stand
 - 1 Marine HMG stand

- 3-5 Combat Attachments [Maximum 1 Tank Company]
- 0-2 Support Attachments
- 0-2 Artillery Support Groups

Marine Amphibious Unit [Infantry Bn] 1983+

- Base
 - 2 81mm Mtr
 - 2 LIGHT AT VEHICLES or 2 Dismounted TOW Team stands + 2 LIGHT VEHICLES
 - 1 Marine HMG stand
 - 1 Mk 19 AGL
 - [optional 3 AAVP7A1 or 6 LIGHT VEHICLES]
- 3-5 Combat Attachments [Maximum 1 Tank Company]
- 0-2 Support Attachments
- 0-2 Artillery Support Groups

Light Armored Infantry Battalion 1985+

- Base
 - 1 SP MORTAR
 - 4 MEDIUM AT VEHICLES
- 3 Light Armored Infantry Companies
 - 2 Marine Rifle stands + 2 LAV-25
- Stand Inventory
 - 1 SP MORTAR
 - 4 MEDIUM AT VEHICLES
 - 6 Marine Rifle stands
 - 6 LAV-25

Light Armored Recon Battalion⁵⁹ 1985+

- Base
 - 6 LIGHT AT VEHICLES
- 3 Light Armored Recon Companies
 - 3 recon LAV-25
 - 1 MEDIUM AT VEHICLE
- Stand Inventory
 - 6 LIGHT AT VEHICLES
 - 9 recon LAV-25
 - 3 MEDIUM AT VEHICLES

Marine Tank Battalion Task Force 1960-1969

- Base
 - 2 M67 Zippo
 - 4 M50A1 Ontos
- 2 Tank Companies
 - 3 MBT
- 1-3 Combat Attachments (Maximum 1 additional Tank Company)
- 0-2 Support Attachments
- 0-2 Artillery Support Groups

Marine Tank Battalion Task Force 1970-1973

- Base
 - 2 M67 Zippo
 - 3 Jeep w/106mm RR
- 2 Tank Companies
 - 3 MBT

- 1-3 Combat Attachments (Maximum 1 additional Tank Company)
- 0-2 Support Attachments
- 0-2 Artillery Support Groups

Marine Tank Battalion Task Force 1974-1980

- Base
 - 3 Jeep w/106mm RR
- 2 Tank Companies
 - 3 MBT
- 1-3 Combat Attachments (Maximum 1 additional Tank Company)
- 0-2 Support Attachments
- 0-2 Artillery Support Groups

Marine Tank Battalion Task Force 1980-1988

- Base
 - 3 Jeep w/TOW
- 2 Tank Companies
 - 3 MBT
- 1-3 Combat Attachments (Maximum 1 additional Tank Company)
- 0-2 Support Attachments
- 0-2 Artillery Support Groups

Marine Tank Battalion Task Force 1988+

- Base
 - 6 LIGHT AT VEHICLES
- 2 Tank Companies
 - 3 MBT
- 1-3 Combat Attachments (Maximum 1 additional Tank Company)
- 0-2 Support Attachments
- 0-2 Artillery Support Groups

Combat Attachments

- Attack Helicopter Squadron
 - '71-'74: 10:1-4 AH-1W
 - '75-'78: 1-4 AH-1Z or 1-4 AH-1W
- Heavy Helicopter Squadron
 - '79-'82: 1-4 CH-53E
- Medium Helicopter Squadron
 - '79-'82: 1-3 MEDIUM HELOS
- AA Platoon
 - '68-'70: 1 Redeye Team + 1 LIGHT VEHICLE
 - '71-'73: 1 Stinger Team + 1 LIGHT VEHICLE
 - '74-'76: 1 LAV-AD or 1 Stinger Team + 1 LIGHT VEHICLE
- Rifle Company
 - '50-'62: 3 Marine Rifle stands; 1 Marine MMG stand
 - '63-'89: 3 Marine Rifle stands
 - '89-'91: 3 Marine Rifle stands
- Tank Platoon*
 - 1 MBT
- Tank Company
 - 3 MBT
- Light Armored Infantry Company
 - '85-'91: 2 Marine Rifle stands + 2 LAV-25
- AT Platoon*
 - '50-'56: 1 LIGHT AT VEHICLE
 - '57-'69: 1 M50A1 Ontos or 1 LIGHT AT VEHICLE
 - '70-'72: 1 LIGHT AT VEHICLE

⁵⁹ Only one of these units is available.

<ul style="list-style-type: none"> ▪ AT Company <ul style="list-style-type: none"> • '50-'56: 3 LIGHT AT VEHICLE • '57-'69: 3 M50A1 Ontos or 3 LIGHT AT VEHICLE • '70+: 3 LIGHT AT VEHICLE ▪ Recon Platoon* [Max 1 per formation] <ul style="list-style-type: none"> • 1 recon Marine Rifle stands ▪ Recon Company [Max 1 per formation] <ul style="list-style-type: none"> • 3 recon Marine Rifle stands ▪ Light Armored Recon Company <ul style="list-style-type: none"> • '85+: 3 recon LAV-25; 1 MEDIUM AT VEHICLE <p>* Counts as ½ of a combat attachment. Can be attached to the base or to any company in the formation.</p>	<ul style="list-style-type: none"> • '93-'06 [availability modifier -1]: 2 M109A6 SP 155mm How • '07+ [availability modifier -1]: 2 M109A6 w/Excalibur ▪ General Support Heavy Artillery Battery [max 2, availability modifier -2] <ul style="list-style-type: none"> • '50-'78: 1 M115 203mm How +1 Medium Truck • '78-'99: 1 M110 SP 203mm How ▪ General Support Rocket Battery [max 3] <ul style="list-style-type: none"> • '05+: 1 HIMARS or 1 HIMARS w/GMLRS ▪ Towed Mortar Battery <ul style="list-style-type: none"> • '50-'61: 1 107mm Mtr • '62-'70: M98 107mm Howtar or 1 107mm Mtr • '71-'90: 1 107mm Mtr • '91-'15: 1 107mm Mtr or 1 120mm Mtr ▪ Naval Gunfire Support Unit <ul style="list-style-type: none"> • 1 Destroyer, 1 Cruiser, or 1 Battleship
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Support Attachments

<ul style="list-style-type: none"> ▪ Engineering Platoon <ul style="list-style-type: none"> • 1 Marine Engineer; 0-1 Bulldozer ▪ Engineering Company <ul style="list-style-type: none"> • 3 Marine Engineer; 0-2 Bulldozers ▪ Amphibious Tractor (Amtrac) Unit <ul style="list-style-type: none"> • Up to 10 AMPHIBIOUS TRACTORS ▪ Motorized Transport Unit <ul style="list-style-type: none"> • Sufficient Medium Trucks or LIGHT VEHICLES to equip all soft stands in the formation (1 or 2 stands per medium truck). ▪ Helicopter Transport Unit <ul style="list-style-type: none"> • Sufficient helicopters (UH-34, UH-1, CH47 or CH53) load all soft stands in the formation.
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Artillery Support Groups

<ul style="list-style-type: none"> ▪ Light Artillery Battalion [max 2] <ul style="list-style-type: none"> • '50-'90: 3 M101 105mm How + 3 Light Trucks • '90+: 3 M119 105mm How + 3 Light Trucks ▪ Light Artillery Battery [max 1, availability modifier -2] <ul style="list-style-type: none"> • '50-'90: 1 M101 105mm How + 1 Light Trucks • '90+: 1 M119 105mm How + 1 Light Trucks ▪ Direct Support Artillery Battalion [max 2] <ul style="list-style-type: none"> • '50-'83: 3 M114 155mm How + 3 Light Trucks • '83-'04 [availability modifier +3]: 6 M198 155mm How + 6 Light Trucks • '05-'06 [availability modifier +3]: 6 M777 155mm How + 6 Light Trucks • '07+ [availability modifier +3]: 6 M777 w/Excalibur + 6 Light Trucks ▪ Direct Support Artillery Battery [max 3] <ul style="list-style-type: none"> • '50-'83 [availability modifier -2]: 1 M114 155mm How + 1 Light Trucks • '83-'04 [availability modifier -1]: 2 M198 155mm How + 2 Light Trucks • '05-'06 [availability modifier -1]: 2 M777 155mm How + 2 Light Trucks • '07+ [availability modifier -1]: 2 M777 w/Excalibur + 2 Light Trucks ▪ General Support Artillery Battalion [max 1] <ul style="list-style-type: none"> • '63-'73: 3 M109 SP 155mm How • '74-'83: 3 M109A1-4 SP 155mm How • '84-'92 [availability modifier +3]: 6 M109A1-4 SP 155mm How • '93-'06 [availability modifier +3]: 6 M109A6 SP 155mm How • '07+ [availability modifier +3]: 6 M109A6 w/Excalibur ▪ General Support Artillery Battery [max 3] <ul style="list-style-type: none"> • '63-'73 [availability modifier -2]: 1 M109 SP 155mm How • '74-'83 [availability modifier -2]: 1 M109A1-4 SP 155mm How • '84-'92 [availability modifier -1]: 2 M109A1-4 SP 155mm How

Equipment Notes

<ul style="list-style-type: none"> ▪ AMPHIBIOUS TRACTOR: <ul style="list-style-type: none"> • '50-'55: LVT-3C • '56-'60: LVTP-5 or LVT-3C • '61-'70: LVTP-5 • '71-'78: AAV-7A1 (LVTP-7) or LVTP-5 • '79-'15: AAV-7A1 (LVTP-7) ▪ LIGHT AT VEHICLE: <ul style="list-style-type: none"> • '55-'74: Jeep w/106mm RR • '75-'90: Jeep w/TOW • '90-'93: M220 TOW HMMWV • '94-'95: M220 TOW HMMWV or M966 TOW HMMWV • '96+: M220 TOW HMMWV, M966 TOW HMMWV, or M1121 TOW HMMWV ▪ LIGHT VEHICLE: <ul style="list-style-type: none"> • '50-'89: Jeep w/LMG • '90-'93: M998 HMMWV LMG • '94-'95: M998 HMMWV LMG or M1025 HMMWV LMG • '96+: M998 HMMWV LMG, M1025 HMMWV LMG, or M1114 HMMWV LMG ▪ MBT: <ul style="list-style-type: none"> • '50-'51: M46 • '52-'53: M47 or M46 • '54-'56: M47 • '57-'59: M47, or M103 [maximum 1 company] • '59-'63: M48A1, or M103 [maximum 1 company] • '64-'70: M48A3, or M103 [maximum 1 company] • '70-'73: M48A5, or M103 [maximum 1 company] • '74-'85: M48A5 • '86-'90: M60A3 • '91+: M1A1HA ▪ MEDIUM AT VEHICLE <ul style="list-style-type: none"> • '90-'07: LAV-AT • '08+: LAV-A2-AT ▪ MEDIUM HELO: <ul style="list-style-type: none"> • '52-'55: CH-21B/C Shawnee • '56-'63: CH-37 Mohave or CH-21B/C Shawnee • '64-'67: CH-46 Sea Knight, CH-37 Mohave or CH-21B/C Shawnee • '68-'69: CH-46 Sea Knight or CH-37 Mohave • '70-'15: CH-46 Sea Knight ▪ SP Mortar: <ul style="list-style-type: none"> • '88-'07: LAV-M • '08+: LAV-A2-M ▪ Generic Wheeled APC: <ul style="list-style-type: none"> • M998 HMMWV, Jeep w/LMG
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- **Generic Tracked APC:**

- '50-'60: LVT-3C
- '56-'78: LVT-5
- '72+: AAVP7A1

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Appendix F: Data Charts

1950 Onward

Although extensive and detailed, the Data Charts are not comprehensive. We hope that most gamers will never find any vehicles missing that they need. The infantry data is representative, but won't reflect all available armament combinations from any given period, for any of the armies listed. Similarly, the artillery lists cover most weapon types, but some specialized weapons may be missing. The goal is to get players up and playing, and as they grow comfortable with the system and want to tackle more obscure scenarios that may require a vehicle or other equipment we've missed, they can begin to tinker on their own. To that end we provided a lot of the tools needed for tinkering in Appendix B.

To find in the Data Charts the data for the vehicle, anti-tank gun, anti-aircraft gun, and infantry stands listed in an Army List, first look under the country the army is from. If you don't find the stand type listed there, look under the country in which it is manufactured (the U.S., Russia, France, Germany, and the U.K. are likely places). If you still don't find it, then look in the Generic lists of equipment included at the end of each chart.

A small number of vehicles have a second main gun or second missile type. In these cases the extra weapon will be listed on an additional row below the rest of the vehicle's data for that time range.

Within a country, items are listed in the following order, by availability date:

- Tanks [light+heavy]
- Infantry Fighting Vehicles (IFVs) & Armored Personnel Carriers (APCs) [tracked then wheeled]
- Light Recon Vehicles
- Antitank [self-propelled then towed]
- Antiaircraft [self-propelled then towed]
- Engineer vehicles
- Miscellaneous Vehicles (mainly soft vehicles)

For the artillery list, the sequence is:

- Field Guns [self-propelled then towed]
- Mortars [self-propelled then towed]
- MRLs [self-propelled then towed]

F.1 Vehicle, Antitank Gun, and Antiaircraft Gun Data Chart, 1950 Onward

See end of chart for Generic vehicles and guns, and for explanation of notations.

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire				Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	
Argentina																	
TAM Tank	76-79	189	12t	6 A 3	11/11h	3	16	-1	-	-	-	-	-	s,i	-	105mm/L51 R (Germany)	
	80-93	203	12t	6 A 3	13	3	16	-1	-	-	-	-	-	s,i	-		
	94-15	210	12t	6 A 3	14	3	16	-1	-	-	-	-	-	s,i	-		
VCTP	76-15	91	12t	6 - 3	2	4	10	0	-	-	-	-	-	i	1	20mm	
Australia																	
Leopard AS 1	73-79	234	9t	9 A 6	11/11h	3	20	-1	-	-	-	-	-	s,n	-	105mm/L51 R (Germany)	
	80-93	257	9t	9 A 6	13	3	20	-1	-	-	-	-	-	s,n,i	-		
	94-15	264	9t	9 A 6	14	3	20	-1	-	-	-	-	-	s,n,i	-		
M1A1 AIM	06-15	433	12t	14 D 9	18	3	24	-1	-	-	-	-	-	ss,2,n,v	-	120mm/L44 SB (US)	
ASLAV-25	96-05	89	9wa	2 - 1	6	4	12	0	-	-	-	-	-	s,t,n	-	25mm R (US)	
	06-12	126	9wa	2 E 1	6	4	14	0	-	-	-	-	-	s,2,n	-		
	13-15	163	9wa	5 D 4	6	4	14	0	-	-	-	-	-	s,2,n,v	-		
ASLAV-PC w/MG	96-02	19	9wa	2 - 1	1	1	6	-1	-	-	-	-	-	t,n	1	12.7mm HMG	
	03-05	20	9wa	2 - 1	1	1	6	-1	-	-	-	-	-	s,t,n	1		
	06-12	28	9wa	2 E 1	1	1	6	-1	-	-	-	-	-	s,2,n	1		
	13-15	58	9wa	5 D 4	1	1	6	-1	-	-	-	-	-	s,2,n,v	1		
ASLAV-PC w/AGL	06-12	69	9wa	2 E 1	3he	3	8	0	-	-	-	-	-	s,2,n	1	40mm AGL	
	13-15	105	9wa	5 D 4	3he	3	8	0	-	-	-	-	-	s,2,n,v	1		
Bushmaster APC	04-07	15	7w	1 C 0	-	1	6	-1	-	-	-	-	-	s,i	1	7.62mm MG	
	08-15	15	7w	1 C 0	-	1	6	-1	-	-	-	-	-	s,t	1		
M113 APC	65-07	18	9ta	2 C 1	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG	
M113 FSV	65-79	64	8ta	3 A 2	9h	3	6	-1	-	-	-	-	-	-	-	76mm/L28 R (UK)	
M113 LRV	65-15	20	9ta	2 C 1	1	1	6	-1	-	-	-	-	-	-	-	12.7mm HMG	
M113 MRV	78-15	83	8ta	4 B 3	9h	3	6	-1	-	-	-	-	-	i	-	76mm/L28 R (UK)	
M113AS4	08-15	42	9t	5 C 4	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG	
Land Rover	50-15	1	9wp	s	-	-	-	-	-	-	-	-	-	-	½		
Land Rover w/106mm RR	55-94	37	8wp	s	11h	3	8	-1	-	-	-	-	-	-	-	106mm RR (US)	
	95-15	50	8wp	s	14h	3	8	-1	-	-	-	-	-	-	-		
LRPV	87-15	2	8wp	s	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG	
ATV	50-15	1	8wp	s	-	-	-	-	-	-	-	-	-	-	½		
Austria																	
SK 105	72-15	166	9t	4 - 2	11h	3	18	-1	-	-	-	-	-	s,i	-	105mm/L44 R (France)	

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire						
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
Steyr 4K 4FA G1	61-15	24	10t	3 A 1	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
Steyr 4K 4FA G2	61-15	54	9t	3 A 3	2	4	10	0	-	-	-	-	-	-	1	20mm
Steyr 4K 7FA G127	77-15	26	10t	4 - 1	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
Ulan AIFV (ASCOD)	00-15	134	11t	3 - 1	8	4	14	0	-	-	-	-	-	s,n,i	1	30mm
Pandur APC	95-15	12	9w	1 - 0	1	1	6	-1	-	-	-	-	-	-	-	12.7mm HMG
Belgium																
Leopard 1 BE	68-70	195	10t	8 - 5	11/11h	3	16	-1	-	-	-	-	-	n,i	-	105mm/L51 R (Germany)
Leopard 1 BE upgraded	75-79	231	12t	8 - 5	11/11h	3	20	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Germany)
	80-87	246	12t	8 - 5	13	3	20	-1	-	-	-	-	-	s,n,i	-	
	88-93	254	12t	8 - 5	13	3	20	-1	-	-	-	-	-	s,n,t	-	
	94-95	262	12t	8 - 5	14	3	20	-1	-	-	-	-	-	s,n,t	-	
	96-15	262	12t	8 - 5	14	3	20	-1	-	-	-	-	-	s,n,t	-	
Leopard 1 BE modernized	98-15	279	12t	9 A 6	14	3	20	-1	-	-	-	-	-	s,n,t	-	105mm/L51 R (Germany)
AIFV-B	80-15	30	9ta	5 C 4	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG
AIFV-B HMG	80-15	42	9ta	5 C 4	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
AIFV-B 25mm	80-15	133	9ta	5 C 4	6	4	12	0	-	-	-	-	-	n,i	1	25mm/L80 R (Switzerland)
BDX APC	78-15	10	7wa	1 - 1	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG
CATI	52?-59	50	8t	0 - s	9h	3	10	-1	-	-	-	-	-	o	-	90mm/L28-36 R (Belgium)
	60-68?	55	8t	0 - s	10h	3	10	-1	-	-	-	-	-	o	-	
M113A1-B-MIL	87-96	74	9ta	2 C 1	1	1	6	-1	17h ²	1	1-20	-	-	t	-	Milan 2/3; 12.7mm HMG
Brazil																
M3 Stuart Upgrade	42-15	67	12t	4 - 3	5	3	8	-2	-	-	-	-	-	-	-	37mm/L53 R (US)
X1A Stuart	78-79	114	9t	5 - 3	10h	3	10	-1	-	-	-	-	-	-	-	90mm/L33 SB (France)
	80-15	119	9t	5 - 3	11h	3	10	-1	-	-	-	-	-	-	-	
X1A2 Stuart	79	143	9t	5 B 3	10h	3	14	-1	-	-	-	-	-	-	-	90mm/L33 SB (France)
	80-15	150	9t	5 B 3	11h	3	14	-1	-	-	-	-	-	-	-	
M41B Walker Bulldog	52-69	93	12t	4 - 3	9	3	8	-1	-	-	-	-	-	i	-	76mm/L55 R (US)
	70-86	98	12t	4 - 3	10	3	8	-1	-	-	-	-	-	i	-	
	87-15	107	12t	4 - 3	12	3	8	-1	-	-	-	-	-	i	-	
M41C Walker	60-79	111	12t	4 - 3	10h	3	10	-1	-	-	-	-	-	i	-	90mm/L33 SB (France)
	80-15	116	12t	4 - 3	11h	3	10	-1	-	-	-	-	-	i	-	
EE-11 Urutu	74-15	24	8wa	3 A 2	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
EE-3 Scout Car	70-15	24	7	3 A 2	1	1	6	-1	-	-	-	-	-	i	1	12.7mm HMG
EE-9 Cascavel AC	74-79	99	8w	3 A 2	10h	3	10	-1	-	-	-	-	-	i	-	90mm/L33 SB (France)
	80-15	104	8w	3 A 2	11h	3	10	-1	-	-	-	-	-	i	-	

Name	Period	Points	Move	Armor	----- Gun -----			----- Msl -----			Indirect Fire					
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	
Bulgaria																
BMP-23	86-15	57	10ta	3 A 2	2	4	10	0	11h ¹	1	5-30	-	-	n,i	1	AT-3b; 23mm
	86-15	80	10ta	3 A 2	2	4	10	0	12h ²	1	5-30	-	-	n,i	1	AT-3c
	86-15	98	10ta	3 A 2	2	4	10	0	15h ²	1	1-30	-	-	n,i	1	AT-3d
BMP-23A	86-15	66	10ta	3 A 2	2	4	10	0	11h ²	1	1-20	-	-	n,i	1	AT-4; 23mm
	86-15	78	10ta	3 A 2	2	4	10	0	12h ²	1	1-25	-	-	n,i	1	AT-4b
	86-15	82	10ta	3 A 2	2	4	10	0	13h ²	1	1-25	-	-	n,i	1	AT-4c
BMP-30	89?-90?	107	10ta	3 A 2	5	4	12	0	13h ²	1	1-40	-	-	n,i	1	AT-5; 30mm R (Russia)
	91?-15	107	10ta	3 A 2	6	4	12	0	13h ²	1	1-40	-	-	n,i	1	
	89?-90?	120	10ta	3 A 2	5	4	12	0	16h ²	1	1-40	-	-	n,i	1	AT-5M
	91?-15	120	10ta	3 A 2	6	4	12	0	16h ²	1	1-40	-	-	n,i	1	
Canada																
Leopard C1	78-79	221	9t	9 A 6	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Germany)
	80-93	235	9t	9 A 6	13	3	16	-1	-	-	-	-	-	s,n,i	-	
	94-15	242	9t	9 A 6	14	3	16	-1	-	-	-	-	-	s,n,i	-	
Leopard C1A1	95?-15	311	9t	14 C 8	14	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Germany)
Leopard C2	00-15	273	9t	9 A 6	14	3	20	-1	-	-	-	-	-	s,n,t	-	105mm/L51 R (Germany)
Leopard C2 uparmored	00-15	344	9t	14 C 8	14	3	20	-1	-	-	-	-	-	s,n,t	-	105mm/L51 R (Germany)
Grizzly	76-15	24	8wa	3 A 2	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
Bison	90-15	14	9wa	2 - 1	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG
LAV III 25mm	99-15	138	9wa	4 B 3	7	4	12	0	-	-	-	-	-	s,n,t	1	25mm/L80 R (Switzerland)
LAV III 25mm uparmored	99-15	159	9wa	5 D 4	7	4	12	0	-	-	-	-	-	s,n,t	1	25mm/L80 R (Switzerland)
M113A3	01-15	23	10t	2 C 1	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
M113A3 uparmored	01-15	39	10t	4 E 4	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
LAV III TOW	99-15	147	9wa	4 B 3	-	1	6	-1	19h ²	1	1-38	-	-	n,t	1	TOW-2A; 7.62mm MG
	99-15	132	9wa	4 B 3	-	1	6	-1	15h ² †	1	1-38	-	-	n,t	1	TOW-2B
LAV III TOW uparmored	99-15	167	9wa	5 D 4	-	1	6	-1	19h ²	1	1-38	-	-	n,t	1	TOW-2A; 7.62mm MG
	99-15	152	9wa	5 D 4	-	1	6	-1	15h ² †	1	1-38	-	-	n,t	1	TOW-2B
Cougar	76-15	73	10wa	3 A 2	9h	3	6	-1	-	-	-	-	-	n,i	½	76mm/L28 R (UK)
Lynx	68-87	20	12ta	2 C 1	1	1	6	-1	-	-	-	-	-	-	-	12.7mm HMG
	88-95	21	12ta	2 C 1	1	1	6	-1	-	-	-	-	-	i	-	12.7mm HMG
Coyote	96-15	103	7w	2 A 1	7	4	12	0	-	-	-	-	-	s,n,i	1	25mm
ADATS SP SAM	89-15	297	6t	2 C 1	-	-	-	-	16h ²	1	5-80	-	-	n,t	-	u ADATS
Chile																
M24 Chaffee	50-15	76	5t	4 - 3	6	3	10	-1	-	-	-	-	-	-	-	75mm/L37 R (US)
M24 Chaffee Mod	90-99	115	5t	4 - 3	11	3	12	-2	-	-	-	-	-	-	-	60mm/L70 SB (Israel)

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire			
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
China																
Type 59 MBT	63-67	135	7t	8 A 7	9/11h	2	10	-1	-	-	-	-	-	-	-	100mm/L56 R (China)
	68-79	135	7t	8 A 7	10/11h	2	10	-1	-	-	-	-	-	-	-	
	80-15	139	7t	8 A 7	12/11h	2	10	-1	-	-	-	-	-	-	-	
Type 59-I MBT	83-15	165	7t	8 A 7	12/11h	2	12	-1	-	-	-	-	-	s,i	-	100mm/L56 R (China)
Type 59-II MBT	83-94	213	7t	8 A 7	14	3	14	-1	-	-	-	-	-	s,i	-	105mm/L51 R (China)
	95-15	232	7t	8 A 7	15	3	16	-1	-	-	-	-	-	s,i	-	
Type 69-II MBT (export)	82-15	165	7t	8 A 7	12/11h	2	12	-1	-	-	-	-	-	s,n,i	-	100mm/L56 R (China)
Type 79 MBT	84-94	213	7t	8 A 7	14	3	14	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (China)
	95-15	240	7t	8 A 7	15	3	16	-1	-	-	-	-	-	s,n,t	-	
Type 88 MBT	88-94	229	9t	9 A 7	14	3	14	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (China)
	95-15	248	9t	9 A 7	15	3	16	-1	-	-	-	-	-	s,n,i	-	
Type 88B MBT	94-15	248	9t	9 A 7	15	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (China)
Type 88A MBT	95-15	275	9t	10 C 8	16	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L58 R (China)
Type 85-IIIM MBT (export)	94-96	232	8t	11 B 8	15	2	14	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (China)
	97-15	237	8t	11 B 8	16	2	14	-1	-	-	-	-	-	s,n,i	-	
Type 85-IIAP MBT (export)	97-15	244	12t	11 B 8	16	2	14	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (China)
Type 96 MBT	97-15	259	11t	12 C 8	16	2	14	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (China)
Type 99 MBT	01-15	321	14t	15 D 10	17	2	14	-1	15h ²	1	1-50	-	-	s,n,t	-	AT-11; 125mm/L48m SB (China)
Type 99 MBT no ERA	01-15	312	14t	15 B 10	17	2	14	-1	15h ²	1	1-50	-	-	s,n,t	-	AT-11; 125mm/L48m SB (China)
Type 63A APC	68-15	13	10ta	0 B 0	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
Type 63C APC	83-15	13	12ta	0 B 0	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
Type 77 APC	80-15	15	10ta	1 - 0	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
WZ 523 APC	82-15	15	7wa	1 - 0	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
Type 85 APC (export)	85-15	23	11ta	3 - 2	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
Type 89 APC	98-15	23	11ta	3 - 2	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
Type 86 IFV	87-15	80	10ta	3 A 2	10h	2	6	-1	12h ²	1	5-30	-	-	n,i	1	Red Arrow 73C; 73mm/L32 Rckt Gun (China)
Type 92 IFV	95-15	105	8wa	3 - 2	7	4	12	0	-	-	-	-	-	n,i	1	25mm
Type 92A APC	97-15	23	8wa	3 - 2	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
Type 97 IFV	04-15	153	14ta	5 B 3	5he 5	2 4	14	+1	13h ²	1	1-40	-	-	s,n,t	1	AT-10; 100mm/L22? R (China) 30mm R (China)
Airborne FAV	01-15	7	9wp	s	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
ZBD2000 Airborne IFV	04-15	90	14tap	1 - 0	7	4	12	0	12h ²	1	5-30	-	-	n,t	1	Red Arrow 73C; 25mm
Type 62 Light Tank	63-69	87	10t	4 - 3	9	3	8	-1	-	-	-	-	-	-	-	85mm/L55 R (China)

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Notes			
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	
	70-15	92	10t	4 - 3	9/10h	3	8	-1	-	-	-	-	-	-	-	-	
Type 62-I Light Tank	79-15	104	10t	4 - 3	9/10h	3	10	-1	-	-	-	-	-	-	-	-	85mm/L55 R (China)
Type 62G Light Tank	00-15	193	10t	5 B 3	15	3	16	-1	-	-	-	-	-	i	-	-	105mm/L51 R (China)
Type 63 Light Tank	63-69	75	10ta	3 - 1	9	3	8	-1	-	-	-	-	-	n	-	-	85mm/L55 R (China)
	70-74	80	10ta	3 - 1	9/10h	3	8	-1	-	-	-	-	-	n	-	-	
	75-15	97	10ta	3 - 1	9/10h	3	10	-1	-	-	-	-	-	n,i	-	-	
Type 63-I Light Tank	93-94	142	9ta	3 - 1	14	3	14	-1	-	-	-	-	-	n,i	-	-	105mm/L51 R (China)
	95-15	160	9ta	3 - 1	15	3	16	-1	-	-	-	-	-	n,i	-	-	
Type 63A Light Tank	98-15	177	14ta	3 - 2	15	3	16	-1	13h ²	1	1-40	-	-	s,n,i	-	-	AT-10; 105mm/L51 R (China)
BJ2020SJ AT	85-89	41	9wp	s	-	-	-	-	12h ²	1	1-30	-	-	-	-	u	Red Arrow 8A
	90-94	45	9wp	s	-	-	-	-	13h ²	1	1-30	-	-	-	-	u	Red Arrow 8C
	95-00	63	9wp	s	-	-	-	-	13h ²	1	1-40	-	-	-	-	u	Red Arrow 8E
	01-15	68	9wp	s	-	-	-	-	14h ²	1	1-40	-	-	-	-	u	Red Arrow 8L
WZ 550 AT w/RA8	95-00	113	8wa	3 - 2	-	-	-	-	13h ²	1	1-40	-	-	n,i	-	u	Red Arrow 8E
	01-15	118	8wa	3 - 2	-	-	-	-	14h ²	1	1-40	-	-	n,i	-	u	Red Arrow 8L
WZ 550 AT w/RA9	98?-15	151	8wa	3 - 2	-	-	-	-	16h ²	1	1-50	-	-	n,t	-	u	Red Arrow 9
ZBD2000 Airborne AT	04-15	84	14tap	1 - 0	-	-	-	-	14h ²	1	1-40	-	-	n,t	-	-	Red Arrow 8L
PL-9 (DK-9) SP SAM	86?-15	160	8wa	s	-	-	-	-	2 ^A	1	10-100	-	-				PL-9
FM-90 SP SAM	98-15	164	8w	0 - 0	-	-	-	-	2 ^A	1	7-100	-	-	i	-	-	FM-90
PZG95 SP AAG	96-15	127	8t	1 - 0	3	10 ²	20 ²	0	2 ^A	1	5-40	-	-	i	-	-	QW-2; 4x25mm R AA
PL-9 (DK-9) SAM	86?-15	175	0x	3 - 2	-	-	-	-	2 ^A	1	10-100	-	-	n,i	1	-	PL-9
Type 57 AAG	43-15	10	1x	s	1	1 ²	16 ²	-1	-	-	-	-	-	1	1	2x14.5mm HMG	
Type 64/75 AAG	64-15	19	0x	s	3	2 ²	16 ²	0	-	-	-	-	-	1	1	37mm/L70 R AA (Russia)	
Type 59 AAG	65-15	43	0x	s	6	2 ²	28 ²	-2	-	-	-	-	-	1	1	57mm/L71 R (Russia)	
Type 87 AAG	87-15	28	0x	s	3	5 ²	20 ²	0	-	-	-	-	i	1	1	2x25mm R AA	
BJ212 Jeep	65-15	1	9wp	s	-	-	-	-	-	-	-	-	-	½			
BJ2020SAJ Lt. Truck	83-15	2	9wp	s	-	-	-	-	-	-	-	-	-	1			
Czechoslovakia (Former)																	
OT-62B	64-15	15	10ta	2 A 0	-	1	6	-1	-	-	-	-	-	n	1	-	7.62mm MG
OT-62C	64-15	20	10ta	2 A 0	1	1	8	-1	-	-	-	-	-	n	1	-	14.5mm HMG
OT-64A SKOT	64-15	10	8wa	1 - 0	-	1	6	-1	-	-	-	-	-	n	1	-	7.62mm MG
OT-64B SKOT-2	64-15	14	8wa	1 - 0	1	1	6	-1	-	-	-	-	-	n	1	-	12.7mm HMG
OT-64C SKOT-2A	64-15	15	8wa	1 - 0	1	1	8	-1	-	-	-	-	-	n	1	-	14.5mm HMG
M53/59 SP AA Gun	58-15	40	7w	0 - 0	3	4 ²	24 ²	0	-	-	-	-	-	-	-	-	2x30mm

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire						
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
M53 AA Gun	50-15	29	0x	s	3	4 [@]	24 [@]	0	-	-	-	-	-	-	1	2x30mm
Denmark																
Centurion Mk 5	55-15	163	6t	8 A 6	9	3	12	-1	-	-	-	-	-	s	-	83.4mm/L64 R 20-pdr (UK)
Centurion Mk 5/2	65-82	197	6t	8 A 6	11/11h	3	16	-1	-	-	-	-	-	s	-	105mm/L51 R (UK)
	83-15	210	6t	8 A 6	13/12h	3	16	-1	-	-	-	-	-	s	-	
Centurion Mk 5/2 Dk	85-15	231	6t	8 A 6	13/12h	3	20	-1	-	-	-	-	-	s	-	105mm/L51 R (UK)
M41 (Denmark)	80-86	119	12t	4 D 5	10	3	8	-1	-	-	-	-	-	n,t	-	76mm/L55 R (US)
	87-15	128	12t	4 D 5	12	3	8	-1	-	-	-	-	-	n,t	-	
Egypt																
T-55 w/105mm	85-15	196	8t	8 A 7	11/11h	3	16	-1	-	-	-	-	-	n,i	-	105mm/L51 R (UK)
M1A1	93-15	373	14t	12 E 8	15	3	24	-1	-	-	-	-	-	ss,t,n	-	120mm/L44 SB (Germany)
Walid APC	65-15	10	6w	1 - 0	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG
Fahd APC	86-15	10	7w	1 - 1	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG
Fahd 30	92-94	99	6w	3 - 0	6	4	12	0	13h ²	1	1-40	-	-	n,i	1	AT-5; 30mm R (Russia)
	95-15	111	6w	3 - 0	6	4	12	0	16h ²	1	1-40	-	-	n,i	1	AT-5M
BTR-152 SP AA Gun	57-15	19	7w	1 - 0	1	2 [@]	12 [@]	-1	-	-	-	-	-	o	-	4x12.7mm HMG
Finland																
XA-180	83-15	17	8wa	2 - 1	0	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
XA-185	92-15	17	9wa	2 - 1	0	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
XA-203	98-15	25	7wa	4 - 3	0	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
XC-360P IFV	04-15	155	9wa	5 B 3	8	4	14	0	-	-	-	-	-	n,i	1	30mm R (US)
XC-360P APC	04-15	18	11wa	2 - 0	0	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
XA-180 SAM	83-15	132	8wa	2 - 1	0	1	6	-1	2 ^A	1	5-72	-	-	n,i	1	12.7mm HMG
France																
ARL 44	50-53	138	6t	7 - 5	9	3	12	-1	-	-	-	-	-	-	-	90mm/L? R (France)
AMX-13 75mm	52-15	95	8t	4 - 2	8	3	10	-1	-	-	-	-	-	i	-	75mm/L62 R (France)
AMX-13 SS-11	58-15	95	8t	4 - 2	8	3	10	-1	13h ¹	1	5-30	-	-	i	-	SS-11; 75mm/L62 R (France)
AMX-13 90mm	80-84	101	8t	4 - 2	11h	2	12	-1	-	-	-	-	-	i	-	90mm/L50-52 SB (France)
	85-15	101	8t	4 - 2	11/11h	2	12	-1	-	-	-	-	-	i	-	
AMX-13 Export 105mm	85-15	110	8t	4 - 2	11h	2	14	-1	-	-	-	-	-	i	-	105mm/L44 R (France)
AMX-30	67-15	199	10t	8 A 4	11h	3	16	-1	-	-	-	-	-	n,i	-	105mm/L56 R (France)
AMX-30 B2	81-88	253	9t	9 - 5	12	3	20	-1	-	-	-	-	-	s,n,t	-	105mm/L56 R (France)
	89-95	269	9t	9 - 5	2	4	20	0	-	-	-	-	-	s,n,t	-	20mm

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire				Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	
AMX-30 B2 w/ERA	95-99	276	9t	9 - 5	2 15 2	4 3 4	20 20 20	0 -1 0	-	-	-	-	-	s,n,t	-		
	00-15	276	9t	9 - 5	15 2	3 4	20 20	-1 0	-	-	-	-	-	s,n,t	-		
	89-95	298	9t	10 D 5	14 2 15 2	3 4 3 4	20 20 20 20	-1 0 -1 0	-	-	-	-	-	s,n,t	-	105mm/L56 R (France) 20mm	
Leclerc	95-99	306	9t	10 D 5	15 2	3 4	20 20	-1 0	-	-	-	-	-	s,n,t	-		
	04-15	396	9t	10 D 5	15 2	3 4	20 20	-1 0	-	-	-	-	-	s,n,t	-		
	94	381	14t	16 C 9	15	2	24	-1	-	-	-	-	-	ss,t,n,c	-	120mm/L52 SB (France)	
AMX VCI	95-03	388	14t	16 C 9	16	2	24	-1	-	-	-	-	-	ss,t,n,c	-		
	04-15	396	14t	16 D 9	16	2	24	-1	-	-	-	-	-	ss,t,n,c,v	-		
	57-15	26	8t	4 - 2	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG	
AMX VCI M56	83?-15	70	8t	4 - 2	3	4	10	0	-	-	-	-	-	-	1	20mm	
Panhard M3	71-15	9	6wa	1 - 0	-	1	6	-1	-	-	-	-	-	n,i	½	7.62mm MG	
Panhard Buffalo	90?-15	13	6wa	2 - 1	-	1	6	-1	-	-	-	-	-	n,i	½	7.62mm MG	
VXB-170	73-15	10	6wa	1 - 0	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG	
AMX-10P	73-81	79	8ta	5 A 2	2	4	10	0	-	-	-	-	-	n,i	1	20mm	
	82-06	89	8ta	5 A 2	3	4	10	0	-	-	-	-	-	n,i	1		
	07-15	117	8ta	6 E 4	3	4	10	0	-	-	-	-	-	n,i	1		
VAB 4x4	76-15	22	7wa	3 - 1	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG	
VAB 4x4 w/applique	02-15	33	7wa	4 D 4	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG	
VAB 6x6	76-15	23	8wa	3 - 1	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG	
VAB 6x6 w/applique	02-15	38	8wa	4 E 4	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG	
VAB 6x6 w/20mm	76-81	52	8wa	3 - 1	2	4	10	0	-	-	-	-	-	n,i	1	20mm	
	82-15	62	8wa	3 - 1	3	4	10	0	-	-	-	-	-	n,i	1		
VAB 6x6 w/20mm w/applique	02-15	93	8wa	4 E 4	3	4	10	0	-	-	-	-	-	n,i	1	20mm	
VCR	79-15	15	8wa	1 - 0	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG	
VBCI/VCI	09-15	183	9w	6 F 4	7	4	14	0	-	-	-	-	-	n,t,v	1	25mm	
VBCI/VPC	09-15	70	9w	6 F 4	1	1	6	-1	-	-	-	-	-	n,t,v	1	12.7mm HMG	
EBR	62-79	95	9w	3 A 2	10h	3	10	-1	-	-	-	-	-	-	-	90mm/L33 SB (France)	
	80-15	100	9w	3 A 2	11h	3	10	-1	-	-	-	-	-	-	-		
AML-90	65-79	74	7w	1 A 0	10h	3	10	-1	-	-	-	-	-	n,i	-	90mm/L33 SB (France)	
	80-15	80	7w	1 A 0	11h	3	10	-1	-	-	-	-	-	n,i	-		
ERC-90	79	103	9wa	3 - 1	10h	3	12	-1	-	-	-	-	-	-	-	90mm/L50-52 SB (France)	
	80-84	108	9wa	3 - 1	11h	3	12	-1	-	-	-	-	-	-	-		

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
	85-15	108	9wa	3 - 1	11/11h	3	12	-1	-	-	-	-	-	-	-	-
TPK 4.20 VSC	80-15	8	7w	0 - 0	1	1	6	-1	-	-	-	-	-	-	-	12.7mm HMG
VBC-90	81-84	133	8w	3 - 2	11h	3	16	-1	-	-	-	-	-	n,i	-	90mm/L50-52 SB (France)
	85-15	133	8w	3 - 2	11/11h	3	16	-1	-	-	-	-	-	n,i	-	
AMX-10RC	82-86	147	8wa	3 A 2	11h	3	18	-1	-	-	-	-	-	n,i	-	105mm/L48 SB (France)
	87-90	154	8wa	3 A 2	12/11h	3	18	-1	-	-	-	-	-	n,i	-	
	91-15	160	8wa	3 A 2	12/11h	3	18	-1	-	-	-	-	-	n,t	-	
AMX-10RC w/applique	91-05	184	8wa	4 D 2	12/11h	3	18	-1	-	-	-	-	-	n,t	-	105mm/L48 SB (France)
	06-15	216	8wa	6 F 4	12/11h	3	18	-1	-	-	-	-	-	n,t	-	
VBL Reco 12.7	85-15	12	9wa	1 - 0	1	1	6	-1	-	-	-	-	-	n,i	-	12.7mm HMG
AMX VCI SS-11	57-15	62	8t	4 - 2	1	1	6	-1	13h ¹	1	5-30	-	-	-	-	SS-11; 12.7mm HMG
AMX VCI ENTAC	57-15	50	8t	4 - 2	1	1	6	-1	14h ¹	1	4-20	-	-	-	-	ENTAC; 12.7mm HMG
AMX VCI TOW	72-15	101	8t	4 - 2	1	1	6	-1	13h ²	1	1-30	-	-	-	-	TOW; 12.7mm HMG
	78-15	116	8t	4 - 2	1	1	6	-1	13h ²	1	1-38	-	-	-	-	TOW-ER
	82-15	126	8t	4 - 2	1	1	6	-1	13h ²	1	1-38	-	-	t	-	TOW-ER
	84-15	131	8t	4 - 2	1	1	6	-1	14h ²	1	1-38	-	-	t	-	ITOW
	86-15	135	8t	4 - 2	1	1	6	-1	15h ²	1	1-38	-	-	t	-	TOW-2
	89-15	153	8t	4 - 2	1	1	6	-1	19h ²	1	1-38	-	-	t	-	TOW-2A
	94-15	135	8t	4 - 2	1	1	6	-1	15h ² t	1	1-38	-	-	t	-	TOW-2B
Jeep w/Milan	75-84	29	8wp	s	-	1	6	-1	14h ²	1	1-20	-	-	-	-	Milan; 7.62mm MG
	85-15	40	8wp	s	-	1	6	-1	17h ²	1	1-20	-	-	t	-	Milan 2/3
AMX VCI Milan	75-84	82	8t	4 - 2	-	1	6	-1	14h ²	1	1-20	-	-	-	-	Milan; 7.62mm MG
	85-15	100	8t	4 - 2	-	1	6	-1	17h ²	1	1-20	-	-	t	-	Milan 2/3
VCAC Milan (VAB)	76-84	74	7wa	3 - 1	-	-	-	-	14h ²	1	1-20	-	-	n,i	-	Milan
	85-15	87	7wa	3 - 1	-	-	-	-	17h ²	1	1-20	-	-	n,t	-	Milan 2/3
VCAC Milan w/applique	02-15	119	7wa	4 E 4	-	-	-	-	17h ²	1	1-20	-	-	n,t	-	Milan 2/3
VCAC HOT (VAB)	77-15	121	7wa	3 - 1	-	-	-	-	15h ²	1	1-40	-	-	n,i	-	HOT 1
	83-15	126	7wa	3 - 1	-	-	-	-	16h ²	1	1-40	-	-	n,i	-	HOT 2
	90-15	135	7wa	3 - 1	-	-	-	-	18h ²	1	1-40	-	-	n,i	-	HOT 2T
	97-15	139	7wa	3 - 1	-	-	-	-	19h ²	1	1-40	-	-	n,i	-	HOT 3
VCAC HOT w/applique	02-15	170	7wa	4 E 4	-	-	-	-	19h ²	1	1-40	-	-	n,i	-	HOT 3
AMX-10P HOT	77-15	150	8a	5 A 2	-	-	-	-	15h ²	1	1-40	-	-	n,i	-	HOT 1
	83-15	154	8a	5 A 2	-	-	-	-	16h ²	1	1-40	-	-	n,i	-	HOT 2
	90-15	163	8a	5 A 2	-	-	-	-	18h ²	1	1-40	-	-	n,i	-	HOT 2T
	97-15	167	8a	5 A 2	-	-	-	-	19h ²	1	1-40	-	-	n,i	-	HOT 3
VCR/TH (export)	80?-15	99	8wa	1 - 0	-	1	6	-1	15h ²	1	1-40	-	-	n,i	-	HOT 1; 7.62mm MG
VBL Milan	85-15	52	9wa	1 - 0	-	-	-	-	14h ²	1	1-20	-	-	n,i	-	Milan
	85-15	65	9wa	1 - 0	-	-	-	-	17h ²	1	1-20	-	-	t,n	-	Milan 2/3
AMX-10 PAC 90	82-84	139	8ta	5 A 2	11h	3	12	-1	-	-	-	-	-	n,i	-	90mm/L50-52 SB (France)

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
	85-15	139	8ta	5 A 2	11/11h	3	12	-1	-	-	-	-	-	n,i	-	
AMX-13 DCA SP AA Gun	69-15	85	7t	4 - 2	3	4 ²	24 ²	0	-	-	-	-	-	-	-	2x30mm
M3/VDA SP AA Gun	75-15	33	6wa	1 - 0	2	4 ²	20 ²	0	-	-	-	-	-	i	-	2x20mm
Crotale SP SAM	63-15	119	8w	0 - 0	-	-	-	-	2 ^A	1	5-72	-	-	i	-	Crotale
AMX-30 Roland SP SAM	78-00	114	10t	8 A 4	-	-	-	-	2 ^A	1	5-42	-	-	n	-	u Roland
AMX-30 Shahine SP SAM	80-15	162	10t	8 A 4	-	-	-	-	2 ^A	1	5-72	-	-	n	-	Shahine
Germany																
Leopard 1	65-70	195	10t	8 - 5	11/11h	3	16	-1	-	-	-	-	-	n,i	-	105mm/L51 R (Germany)
Leopard 1A1	70-77	200	10t	8 - 5	11/11h	3	16	-1	-	-	-	-	-	s,n	-	105mm/L51 R (Germany)
Leopard 1A1A1	74-79	214	9t	9 A 6	11/11h	3	16	-1	-	-	-	-	-	s,n	-	105mm/L51 R (Germany)
Leopard 1A1A2	80-93	235	9t	9 A 6	13	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Germany)
	94-95	242	9t	9 A 6	14	3	16	-1	-	-	-	-	-	s,n,i	-	
Leopard 1A2	72-79	214	9t	9 A 6	11/11h	3	16	-1	-	-	-	-	-	s,n	-	105mm/L51 R (Germany)
Leopard 1A2A1	80-93	235	9t	9 A 6	13	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Germany)
	94-15	242	9t	9 A 6	14	3	16	-1	-	-	-	-	-	s,n,i	-	
Leopard 1A3	73-79	214	9t	9 A 6	11/11h	3	16	-1	-	-	-	-	-	s,n	-	105mm/L51 R (Germany)
Leopard 1A3A1	80-93	235	9t	9 A 6	13	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Germany)
	94-15	242	9t	9 A 6	14	3	16	-1	-	-	-	-	-	s,n,i	-	
Leopard 1A4	74-79	221	9t	9 A 6	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Germany)
	80-93	235	9t	9 A 6	13	3	16	-1	-	-	-	-	-	s,n,i	-	
Leopard 1A5	87-93	265	9t	9 A 6	13	3	20	-1	-	-	-	-	-	s,n,t	-	105mm/L51 R (Germany)
	94-15	279	12t	9 A 6	14	3	20	-1	-	-	-	-	-	s,n,t	-	
M48A2G2	78-79	199	8t	7 B 5	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Germany)
	80-93	213	8t	7 B 5	13	3	16	-1	-	-	-	-	-	s,n,i	-	
	94-15	219	8t	7 B 5	14	3	16	-1	-	-	-	-	-	s,n,i	-	
Leopard 2A1-2A3	81-82	323	14t	13 B 8	14	3	20	-1	-	-	-	-	-	ss,n	-	120mm/L44 SB (Germany)
	83-85	343	14t	13 B 8	14	3	20	-1	-	-	-	-	-	ss,t,n	-	
	86-95	373	14t	13 B 8	15	3	24	-1	-	-	-	-	-	ss,t,n	-	
	96-15	390	14t	13 B 8	17	3	24	-1	-	-	-	-	-	ss,t,n	-	
Leopard 2A4	85	378	14t	14 B 8	14	3	24	-1	-	-	-	-	-	ss,t,n	-	120mm/L44 SB (Germany)
	86-95	386	14t	14 B 8	15	3	24	-1	-	-	-	-	-	ss,t,n	-	
	96-15	403	14t	14 B 8	17	3	24	-1	-	-	-	-	-	ss,t,n	-	
Leopard 2A5	98-15	437	14t	16 B 10	17	3	24	-1	-	-	-	-	-	ss,t,n,c	-	120mm/L44 SB (Germany)
Leopard 2A6	01-15	445	14t	16 c 10	17	3	24	-1	-	-	-	-	-	ss,t,n,c,v	-	120mm/L55 SB (Germany)
SPz 12-3 IFV (HS.30)	58-74	60	7t	4 - 2	2	4	10	0	-	-	-	-	-	-	1	20mm R (Germany)
UR-416	69-15	10	7w	1 - 0	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
Marder 1	71-79	75	8t	5 - 4	2	4	10	0	-	-	-	-	-	n,i	1	20mm R (Germany)	
Marder 1 (with Milan)	77-81	92	8t	5 - 4	2	4	10	0	14h ²	1	1-20	-	-	n,i	1	Milan; 20mm R (Germany)	
	82	92	8t	5 - 4	3	4	10	0	14h ²	1	1-20	-	-	n,i	1		
Marder 1A1(-)	79-81	92	8t	5 - 4	2	4	10	0	14h ²	1	1-20	-	-	n,i	1	Milan; 20mm R (Germany)	
	82-84	92	8t	5 - 4	3	4	10	0	14h ²	1	1-20	-	-	n,i	1		
	85-87	104	8t	5 - 4	3	4	10	0	17h ²	1	1-20	-	-	n,t	1	Milan 2/3	
	88-91	104	8t	5 - 4	4	4	10	0	17h ²	1	1-20	-	-	n,t	1		
Marder 1A1(+)	79	96	8t	5 - 4	2	4	10	0	14h ²	1	1-20	-	-	n,t	1	Milan; 20mm R (Germany)	
	82-84	96	8t	5 - 4	3	4	10	0	14h ²	1	1-20	-	-	n,t	1		
	85-87	104	8t	5 - 4	3	4	10	0	17h ²	1	1-20	-	-	n,t	1	Milan 2/3	
	88-91	104	8t	5 - 4	4	4	10	0	17h ²	1	1-20	-	-	n,t	1		
Marder 1A2	84	92	8t	5 - 4	3	4	10	0	14h ²	1	1-20	-	-	n,i	1	Milan; 20mm R (Germany)	
	85-87	104	8t	5 - 4	3	4	10	0	17h ²	1	1-20	-	-	t,n	1	Milan 2/3	
	88-98	104	8t	5 - 4	4	4	10	0	17h ²	1	1-20	-	-	t,n	1		
Marder 1A3	88-15	140	8t	7 C 5	4	4	10	0	17h ²	1	1-20	-	-	t,n	1	Milan 2/3; 20mm R (Germany)	
TPZ-1 Fuchs	79-15	19	8wa	3 A 2	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG	
TM-170	79-15	10	7wa	1 - 0	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG	
TM-170 w/20mm	79-81	30	7wa	1 - 0	2	4	10	0	-	-	-	-	-	n,i	1	20mm R (Germany)	
	82-87	38	7wa	1 - 0	3	4	10	0	-	-	-	-	-	n,i	1		
	88-15	47	7wa	1 - 0	4	4	10	0	-	-	-	-	-	n,i	1		
Condor	80-15	10	6wa	1 - 0	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG	
Condor w/20mm	80-81	30	6wa	1 - 0	2	4	10	0	-	-	-	-	-	n,i	1	20mm R (Germany)	
	82-87	38	6wa	1 - 0	3	4	10	0	-	-	-	-	-	n,i	1		
	88-15	46	6wa	1 - 0	4	4	10	0	-	-	-	-	-	n,i	1		
TPz ATF Dingo	00-15	10	9w	1 - 0	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG	
Boxer	10-15	118	9w	6 F 4	3he	3	8	0	-	-	-	-	-	n,2	1	40mm AGL	
Puma Level A	10-15	204	11t	7 C 6	8	4	12	0	-	-	-	-	-	s,n,2,c	1	30mm	
Puma Level C	10-15	239	8t	9 F 8	8	4	12	0	-	-	-	-	-	s,n,2,c	1	30mm	
SPz 11-2 Kurz	58-74	29	10t	1 A 0	2	4	10	0	-	-	-	-	-	n,i	-	20mm R (Germany)	
Luchs	75-81	77	9wa	5 B 4	2	4	10	0	-	-	-	-	-	n,i	-	20mm R (Germany)	
	82-85	87	9wa	5 B 4	3	4	10	0	-	-	-	-	-	n,i	-		
	86-87	91	9wa	5 B 4	3	4	10	0	-	-	-	-	-	n,t	-		
	88-15	100	9wa	5 B 4	4	4	10	0	-	-	-	-	-	n,t	-		
Fennek	04-15	40	8w	2 A 1	3he	3	8	0	-	-	-	-	-	n,2,v	-	+1 to terrain save; 40mm AGL	
Wiesel 1 20mm	89-15	42	14tp	1 - 0	4	4	10	0	-	-	-	-	-	-	-	20mm R (Germany)	
HS.30 106mm RR	58-15	100	7t	4 - 2	11h	3	8	-1	-	-	-	-	-	-	1	106mm RR (US)	
JPZ Rakete	61-83	45	9t	4 - 3	-	1	6	-1	13h ¹	1	5-30	-	-	n,i	-	+1 to terrain save; SS-11; 7.62mm MG	

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
JgPz Kanone	66-15	114	10t	4 - 3	9/10h	3	12	-1	-	-	-	-	-	n,f	-	90mm/L40 R (Germany)
Kraka w/20mm	74-81	19	8wp	s	2	4	10	0	-	-	-	-	-	-	-	20mm R (Germany)
	82-89	23	8wp	s	3	4	10	0	-	-	-	-	-	-	-	
Kraka PzAbw TOW	74-75	30	8wp	s	-	-	-	-	13h ²	1	1-30	-	-	-	-	TOW
	76-79	42	8wp	s	-	-	-	-	13h ²	1	1-38	-	-	-	-	TOW-ER
	80-81	47	8wp	s	-	-	-	-	13h ²	1	1-38	-	-	t	-	TOW-ER
	82-83	52	8wp	s	-	-	-	-	14h ²	1	1-38	-	-	t	-	ITOW
	84-86	56	8wp	s	-	-	-	-	15h ²	1	1-38	-	-	t	-	TOW-2
	87-89?	71	8wp	s	-	-	-	-	19h ²	1	1-38	-	-	t	-	TOW-2A
Kraka PzAbw Milan	75-84	25	8wp	s	-	-	-	-	14h ²	1	1-20	-	-	-	-	Milan
	85-89?	29	8wp	s	-	-	-	-	17h ²	1	1-20	-	-	t	-	Milan 2/3
Kraka PzAbwLG	75-84	37	8wp	s	11h	3	8	-1	-	-	-	-	-	-	-	106mm RR (US)
Jaguar-1	78-82	167	9t	6 B 5	-	1	6	-1	15h ²	1	1-40	-	-	n,i	-	u +1 to terrain save; HOT 1; 7.62mm MG
	83-89	171	9t	6 B 5	-	1	6	-1	16h ²	1	1-40	-	-	n,i	-	u +1 to terrain save; HOT 2
	90-96	180	9t	6 B 5	-	1	6	-1	18h ²	1	1-40	-	-	n,i	-	u +1 to terrain save; HOT 2T
	97-15	184	9t	6 B 5	-	1	6	-1	19h ²	1	1-40	-	-	n,i	-	u +1 to terrain save; HOT 3
Jaguar-2	85-87	169	9t	6 B 5	-	1	6	-1	15h ²	1	1-38	-	-	t,n	-	u +1 to terrain save; TOW-2; 7.62mm MG
	88-92	187	9t	6 B 5	-	1	6	-1	19h ²	1	1-38	-	-	t,n	-	u +1 to terrain save; TOW-2A
	93-15	169	9t	6 B 5	-	1	6	-1	15h ² †	1	1-38	-	-	t,n	-	u +1 to terrain save; TOW-2B
Wiesel 1 TOW	89-92	124	14tp	1 - 0	-	-	-	-	19h ²	1	1-38	-	-	t,n	-	u +1 to terrain save; TOW-2A
	93-15	106	14tp	1 - 0	-	-	-	-	15h ² †	1	1-38	-	-	t,n	-	u +1 to terrain save; TOW-2B
Gepard SP AA Gun	76-15	168	8t	6 - 5	7	4 ²	28 ²	0	-	-	-	-	-	n,i	-	2x35mm/L90 R (Switzerland)
Roland SP SAM	81-15	91	10t	5 - 4	-	-	-	-	2 ^A	1	5-42	-	-	n,i	-	u Roland
Wiesel 2 Stinger SP SAM	89-92	60	14tp	1 - 0	-	-	-	-	2 ^A	1	1-32	-	-	t,n	-	u Stinger
20mm AA Gun	70-15	22	0x	s	2	4 ²	20 ²	0	-	-	-	-	-	-	1	2x20mm
Biber AVLB	75-79	35	9t	7 A 6	-	-	-	-	-	-	-	-	-	n	-	
	80-15	38	9t	7 A 6	-	-	-	-	-	-	-	-	-	n,i	-	
PSB 2 AVLB	112-15	133	9t	14 C 8	-	-	-	-	-	-	-	-	-	n,t	-	
India																
Vijayanta	65-90	194	7t	7 A 5	11/11h	3	16	-1	-	-	-	-	-	s,i	-	105mm/L51 R (India)
	91-92	207	7t	7 A 5	13	3	16	-1	-	-	-	-	-	s,i	-	
	93-15	244	7t	10 A 7	13	3	16	-1	-	-	-	-	-	s,i	-	
Arjun Mk 1	08?-15	288	11t	12 C 8	14	3	20	-1	-	-	-	-	-	-	-	120mm/L55 R (India)
Arjun Mk 1 w/ERA	08?-15	300	11t	13 C 8	14	3	20	-1	-	-	-	-	-	-	-	120mm/L55 R (India)
Israel																
Sherman M50 Mk1	56-85?	118	5t	6 - 4	8	3	10	-1	-	-	-	-	-	s	-	75mm/L62 R (France)
Sherman M50 Mk2	61-85?	119	6t	6 - 4	8	3	10	-1	-	-	-	-	-	s	-	75mm/L62 R (France)

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
M1 Super Sherman	56-69	113	6t	6 - 4	9	3	8	-1	-	-	-	-	-	s	-	-	76mm/L55 R (US)
	70-86	118	6t	6 - 4	10	3	8	-1	-	-	-	-	-	s	-	-	
	87-15	127	6t	6 - 4	12	3	8	-1	-	-	-	-	-	s	-	-	
Centurion Mk 5/1	59-67	163	6t	8 A 6	9	3	12	-1	-	-	-	-	-	s	-	-	83.4mm/L64 R 20-pdr (UK)
Sho't Meteor	63-73	204	6t	8 A 6	11/11h	3	16	-1	-	-	-	-	-	s,i	-	-	105mm/L51 R (Israel)
Sho't Kal	70-78	206	7t	8 A 6	11/11h	3	16	-1	-	-	-	-	-	s,i	-	-	105mm/L51 R (Israel)
	79-92	219	7t	8 A 6	13	3	16	-1	-	-	-	-	-	s,i	-	-	
	93-02	248	7t	8 A 6	14	3	20	-1	-	-	-	-	-	s,i	-	-	
Sho't Kal Mk. D	81-92	253	7t	8 D 6	13	3	20	-1	-	-	-	-	-	s,i	-	-	105mm/L51 R (Israel)
	93-02	260	7t	8 D 6	14	3	20	-1	-	-	-	-	-	s,i	-	-	
Sherman M51	65-94?	164	5t	6 - 4	11h	3	14	-1	-	-	-	-	-	s,i	-	-	105mm/L44 R (France)
M48A2 Patton	66-70	171	8t	7 B 5	9/10h	3	12	-1	-	-	-	-	-	s,i	-	-	90mm/L50 R (US)
Magach 3, Magach 5 (upgraded M48A2, M48A5)	68-75	198	7t	7 B 5	11/11h	3	16	-1	-	-	-	-	-	s,i	-	-	105mm/L51 R (Israel)
	76-78	214	7t	8 C 5	11/11h	3	16	-1	-	-	-	-	-	s,i	-	-	
	79-92	227	7t	8 C 5	13	3	16	-1	-	-	-	-	-	s,i	-	-	
	93-15	234	7t	8 C 5	14	3	16	-1	-	-	-	-	-	s,i	-	-	
Tiran 4 (Ti-67)	68-73	160	7t	8 A 7	10/11h	2	12	-1	-	-	-	-	-	s,i	-	-	100mm/L60 R (Russia)
	74-79	180	7t	9 C 7	10/11h	2	12	-1	-	-	-	-	-	s,i	-	-	
	80-85	185	7t	9 C 7	12/11h	2	12	-1	-	-	-	-	-	s,i	-	-	
Tiran 5 (Ti-67)	68-73	207	8t	8 A 7	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-	-	105mm/L51 R (Israel)
	74-78	228	8t	9 C 7	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-	-	
	79-85	241	8t	9 C 7	13	3	16	-1	-	-	-	-	-	s,n,i	-	-	
Magach 6 (M60A1)	70-75	214	7t	6-Sep	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-	-	105mm/L51 R (Israel)
Magach 6A	76?-78	226	7t	9 C 6	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-	-	105mm/L51 R (Israel)
	79-92	239	7t	9 C 6	13	3	16	-1	-	-	-	-	-	s,n,i	-	-	
	93-15	246	7t	9 C 6	14	3	16	-1	-	-	-	-	-	s,n,i	-	-	
Magach 6B Gal	90?-92	261	7t	9 C 6	13	3	20	-1	-	-	-	-	-	s,n,i	-	-	105mm/L51 R (Israel)
	93-15	269	7t	9 C 6	14	3	20	-1	-	-	-	-	-	s,n,i	-	-	
Magach 6B Gal Batash	00?-15	313	8t	11 E 8	14	3	20	-1	-	-	-	-	-	s,t,n	-	-	105mm/L51 R (Israel)
Magach 6C (upgraded M60A3)	81-92	270	7t	9 C 6	13	3	20	-1	-	-	-	-	-	s,t,n	-	-	105mm/L51 R (Israel)
	93-15	277	7t	9 C 6	14	3	20	-1	-	-	-	-	-	s,t,n	-	-	
Magach 7A	95?-15	299	8t	10 D 8	14	3	20	-1	-	-	-	-	-	ss,t,n	-	-	105mm/L51 R (Israel)
Magach 7C	00?-15	316	8t	11 E 8	14	3	20	-1	-	-	-	-	-	ss,t,n	-	-	105mm/L51 R (Israel)
Tiran 6 (T-62)	74-78	207	8t	8 A 7	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-	-	105mm/L51 R (Israel)
	79-85	221	8t	8 A 7	13	3	16	-1	-	-	-	-	-	s,n,i	-	-	
Merkava	79-92	298	7t	12 C 8	13	3	20	-1	-	-	-	-	-	s,n,i	-	-	105mm/L51 R (Israel)
	93-15	305	7t	12 C 8	14	3	20	-1	-	-	-	-	-	s,n,i	-	-	
Merkava 2, 2A	83-85	332	7t	14 C 8	13	3	20	-1	-	-	-	-	-	s,t,n	-	-	105mm/L51 R (Israel)

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire						
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
Merkava 2B	85-92 93-15	332 339	7t 7t	14 C 8 14 C 8	13 14	3 3	20 20	-1 -1	-	-	-	-	-	s,t,n s,t,n	-	105mm/L51 R (Israel)
Merkava 2B Batash	00?-15	356	7t	15 D 8	14	3	20	-1	-	-	-	-	-	s,t,n	-	105mm/L51 R (Israel)
Merkava 3, 3B	90-95	391	9t	15 D 9	15	3	24	-1	-	-	-	-	-	s,t,n	-	120mm/L44 SB (Israel)
Merkava 3B Baz	95-98 99-15	395 410	9t 9t	15 D 9	15 17	3 3	24 24	-1 -1	-	-	-	-	-	ss,t,n ss,t,n	-	120mm/L44 SB (Israel)
Merkava 3B Dor Dalet	00-15	431	9t	16 D 9	17	3	24	-1	-	-	-	-	-	ss,t,n,c	-	120mm/L44 SB (Israel)
Merkava 4	04-15	434	10t	16 D 10	17	3	24	-1	-	-	-	-	-	ss,t,n,c	-	120mm/L44 SB (Israel)
Merkava 4 w/LAHAT	04-15	434	10t	16 D 10	17	3	24	-1	16h ² †	1	1-80	-	-	ss,t,n,c	-	LAHAT; 120mm/L44 SB (Israel)
Sabra	95-98 99-15	347 363	10t 10t	11 E 8	15 17	3 3	24 24	-1 -1	-	-	-	-	-	s,t s,t	-	120mm/L44 SB (Israel)
Sabra II	00-15	375	10t	12 E 9	17	3	24	-1	-	-	-	-	-	s,t	-	120mm/L44 SB (Israel)
M3 Halftrack	55-15	14	8ht	1 - 0	1	1	6	-1	-	-	-	-	-	o	1	12.7mm HMG
M113 Zelda w/HMG	82-15	32	8ta	4 D 4	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
M113 Zelda w/AGL	82-15	72	8ta	4 D 4	3he	3	8	0	-	-	-	-	-	-	1	40mm AGL
NagmaSho't	82-15	67	7t	8 D 5	-	1	6	-1	-	-	-	-	-	n,i	1	Centurion APC, 7.62mm MG
Achzarit Mk 1	89-15	97	7t	11 C 8	-	1	6	-1	-	-	-	-	-	n,i	1	T-55 APC, 7.62mm MG
Achzarit Mk 2	98?-15	99	9t	11 C 8	-	1	6	-1	-	-	-	-	-	n,i	1	T-55 APC, 7.62mm MG
M113 Zelda 2 w/HMG	95?-15	84	8ta	8 F 8	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
M113 Zelda 2 w/AGL	95?-15	125	8ta	8 F 8	3he	3	8	0	-	-	-	-	-	-	1	40mm AGL
Namer	08-15	148	9t	14 C 9	1	1	6	-1	-	-	-	-	-	n,i	1	Merkava APC, 12.7mm HMG
RBY Mk 1	75-15	5	7w	0 - 0	-	1	6	-1	-	-	-	-	-	o	½	7.62mm MG
RAM V-1	80-15	5	8w	0 - 0	-	1	6	-1	-	-	-	-	-	i,o	½	7.62mm MG
M3 Halftrack w/SS.11	62?-80?	23	8ht	1 - 0	1	1	6	-1	13h ¹	1	5-30	-	-	o	-	SS-11; 12.7mm HMG
Jeep w/106mm RR	60-94 95-15	37 50	8wp 8wp	s s	11h 14h	3	8	-1	-	-	-	-	-	-	-	106mm RR (US)
RAM V-1 w/106mm RR	80-94 95-15	51 64	8w 8w	0 - 0 0 - 0	11h 14h	3	8	-1	-	-	-	-	-	i,o i,o	-	106mm RR (US)
RAM V-1 w/TOW	80-15	77	8w	0 - 0	-	1	6	-1	13h ²	1	1-38	-	-	t,o	-	u TOW-ER; 7.62mm MG
	83-15	81	8w	0 - 0	-	1	6	-1	14h ²	1	1-38	-	-	t,o	-	u ITOW
	85-15	86	8w	0 - 0	-	1	6	-1	15h ²	1	1-38	-	-	t,o	-	u TOW-2
	88-15	104	8w	0 - 0	-	1	6	-1	19h ²	1	1-38	-	-	t,o	-	u TOW-2A
	93-15	86	8w	0 - 0	-	1	6	-1	15h ² †	1	1-38	-	-	t,o	-	u TOW-2B
M3 Halftrack w/90mm	65-79 80-15	74 79	8ht	1 - 0	10h 11h	3	10	-1	-	-	-	-	-	o	1	90mm/L33 SB (France)

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
M55 AA Gun	50-15	11	0x	s	1	2 [@]	12 [@]	0	-	-	-	-	-	-	-	4x12.7mm HMG
M16 SP AA Gun	50-15	19	8ht	1 - 0	1	2 [@]	12 [@]	0	-	-	-	-	-	0	-	4x12.7mm HMG
M3 w/TCM-20 SP AA Gun	69-15	43	8ht	1 - 0	3	4 [@]	20 [@]	0	-	-	-	-	-	0	-	2x20mm
RAM w/TCM-20 SP AA Gun	80-15	34	8w	0 - 0	3	4 [@]	20 [@]	0	-	-	-	-	-	i,0	-	2x20mm
Machbet SP AAV	98-15	108	8ta	3 C 1	2	2 [@]	20 [@]	0	2 ^A	1	1-32	-	-	i	-	Stinger; 20mm
TCM-20 AA Gun	69-15	26	0x	s	3	4 [@]	20 [@]	0	-	-	-	-	-	-	1	2x20mm
Puma CEV	91-15	111	9t	11 F 7	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG, 60mm Mortar
Italy																
OF-40	81-84	248	8t	9 C 6	11/11h	3	20	-1	-	-	-	-	-	s,n,i	-	105mm/L52 R (Italy)
	85-93	263	8t	9 C 6	13	3	20	-1	-	-	-	-	-	s,n,i	-	
	94-15	271	8t	9 C 6	14	3	20	-1	-	-	-	-	-	s,n,i	-	
C1 Ariete	98-15	399	11t	14 C 8	17	3	24	-1	-	-	-	-	-	ss,n,t	-	120mm/L44 SB (Germany)
C1 Ariete Mk 2	05?-15	412	11t	15 C 8	17	3	24	-1	-	-	-	-	-	ss,n,t	-	120mm/L55 SB (Germany)
VCC-1 (aka OTOBREDA)	80-15	29	9ta	4 B 3	1	1	6	-1	-	-	-	-	-	i	1	12.7mm HMG
VCC-80	90-93	149	12t	6 C 4	6	4	12	0	-	-	-	-	-	n,i	1	25mm
	94-15	157	12t	6 C 4	7	4	12	0	-	-	-	-	-	n,i	1	
Type 6616 A/C	75-81	27	7wa	1 - 0	2	4	10	0	-	-	-	-	-	n,i	-	20mm R (Germany)
	82-87	31	7wa	1 - 0	3	4	10	0	-	-	-	-	-	n,i	-	
	88-15	40	7wa	1 - 0	4	4	10	0	-	-	-	-	-	n,i	-	
Type 6614 APC	75-15	15	7wa	1 - 0	1	1	6	-1	-	-	-	-	-	i	1	12.7mm HMG
VBM Freccia	08?-15	238	9w	8 D 6	7	4	20	0	-	-	-	-	-	ss,n,t	1	25mm/L80 R (Switzerland)
Puma APC w/MG	03-15	10	9wp	1 - 0	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG
Puma APC w/HMG	03-15	15	9wp	1 - 0	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
Puma Recon w/MG	03-15	8	9wp	1 - 0	-	1	6	-1	-	-	-	-	-	n,i	-	7.62mm MG
Puma Recon w/HMG	03-15	12	9wp	1 - 0	1	1	6	-1	-	-	-	-	-	n,i	-	12.7mm HMG
Puma w/TOW	03-15	92	9wp	1 - 0	-	1	6	-1	19h ²	1	1-38	-	-	n,i	-	TOW-2A; 7.62mm MG
Centauro B1	91-15	250	9w	7 A 4	14	3	20	-1	-	-	-	-	-	ss,n,t	-	105mm/L52 R (Italy)
Centauro B1 uparmored	99?-15	276	9w	8 D 6	14	3	20	-1	-	-	-	-	-	ss,n,t	-	105mm/L52 R (Italy)
VBM Freccia AT	08?-15	231	9w	8 D 6	7	4	20	0	14h ³ †	1	2-40	-	-	ss,n,t	-	Spice-LR (Gil); 25mm/L80 R (Switzerland)
SIDAM 25 SP AA Gun	89-15	119	8t	2 C 1	5	8 [@]	24 [@]	0	-	-	-	-	-	n,i	-	4x25mm
Japan																
Type 61 MBT	64-15	141	8t	6 - 3	9/10h	3	12	-1	-	-	-	-	-	i	-	90mm/L50 R (US)
Type 74 MBT	75-83	209	9t	8 A 5	11/11h	3	16	-1	-	-	-	-	-	s,i	-	105mm/L51 R (Japan)
	84-87	245	9t	8 A 5	13/12h	3	20	-1	-	-	-	-	-	s,i	-	

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo					
	88-15	249	9t	8 B 5	13/12h	3	20	-1	-	-	-	-	-	s,i	-			
Type 90 MBT	92-95	389	14t	13 D 8	15	3	24	-1	-	-	-	-	-	ss,n,t,c	-	120mm/L44 SB (Germany)		
	96-15	406	14t	13 D 8	17	3	24	-1	-	-	-	-	-	ss,n,t,c	-			
Type 60 APC	59-15	23	9t	3 A 1	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG		
Type 73 APC	74-15	24	11ta	3 A 2	1	1	6	-1	-	-	-	-	-	i	1	12.7mm HMG		
Type 82 CCV	83-15	28	11t	3 B 2	1	1	16	-1	-	-	-	-	-	n	1	12.7mm HMG		
Type 89 MICV	92-15	191	11t	7 D 5	7	4	16	0	13h ²	1	1-40	-	-	n,i	1	Type 79; 35mm/L90 R (Switzerland)		
Type 87	90-93	107	8w	3 B 2	6	4	14	0	-	-	-	-	-	i	-	25mm		
	94-15	115	8w	3 B 2	7	4	14	0	-	-	-	-	-	i	-			
Type 96 WAPC w/HMG	96-15	20	10w	2 A 0	1	1	6	-1	-	-	-	-	-	i	1	12.7mm HMG		
Type 96 WAPC w/AGL	96-15	42	10w	2 A 0	3he	3	8	0	-	-	-	-	-	i	1	40mm AGL		
Komatsu LAV w/MG	02-15	10	9w	1 - 0	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG		
Komatsu LAV w/HMG	02-15	15	9w	1 - 0	1	1	6	-1	-	-	-	-	-	i	1	12.7mm HMG		
Type 60 106mm RR	60-94	80	9t	2 A 0	11h	3	8	-1	-	-	-	-	-	i	-	106mm RR (US)		
	95-15	93	9t	2 A 0	14h	3	8	-1	-	-	-	-	-	i	-			
Type SU 60 AT	64-15	29	9t	2 A 0	1	1	6	-1	12h ¹	1	3-18	-	-	-	-	u	Type 64; 12.7mm HMG	
Komatsu LAV w/T87	02-15	41	9w	1 - 0	-	-	-	-	12h ²	1	1-20	-	-	i	1	Type 87		
Komatsu LAV w/LMAT	02-15	66	9w	1 - 0	-	-	-	-	16h ³ †	1	1-20	-	-	i	1	Type 01 LMAT		
Type 96 MPMS	96-15	312	9t	s	-	-	-	-	17h ²	1	5-90n	-	-	-	-	Type 96 NLOS		
Type 81 SP SAM	81-00	110	7w	s	1	1	6	-1	2 ^A	1	5-66	-	-	i	-	SAM-1; 12.7mm HMG		
	01-15	152	7w	s	1	1	6	-1	2 ^A	1	5-92	-	-	t	-	SAM-1C		
Type 93 SP SAM	93-15	51	8w	s	-	-	-	-	2 ^A	1	1-32	-	-	t	-	SAM-3		
Type 87 SP AA Gun	90-15	168	8t	6 - 3	7	4 ^②	28 ^②	0	-	-	-	-	-	n,i	-	2x35mm		
Type 92 Mine Clearer	92-15	8	8t	1 - 0	-	-	-	-	-	-	-	-	-	-	-	Mine clearing FAE Rckt		
Jordan																		
Tariq	80?-82	226	7t	8 A 6	11/11h	3	20	-1	-	-	-	-	-	s,i	-	105mm/L51 R (UK)		
	83-15	241	7t	8 A 6	13/12h	3	20	-1	-	-	-	-	-	s,i	-			
Khalid	81-83	272	10t	11 - 7	12/12h	3	20	-1	-	-	-	-	-	s,n,i	-	120mm/L55 R (Jordan)		
	84-15	287	10t	11 - 7	14	3	20	-1	-	-	-	-	-	s,n,i	-			
Malaysia																		
PT- 91M	06-15	250	10t	10 D 9	15	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB Export (Russia)		
SIBMAS AFSV-90	78-79	110	8wa	4 A 2	10h	3	10	-1	-	-	-	-	-	n,i	-	90mm/L28-36 R (Belgium)		
	80-15	116	8wa	4 A 2	11h	3	10	-1	-	-	-	-	-	n,i	-			

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire				Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	
Netherlands																	
Leopard 1	70-79	198	12t	8 - 5	11/11h	3	16	-1	-	-	-	-	-	n,i	-	105mm/L51 R (UK)	
Leopard 1-V	80-82	247	12t	9 A 6	11/11h	3	20	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (UK)	
	83-94	263	12t	9 A 6	13/12h	3	20	-1	-	-	-	-	-	s,n,i	-		
	95-15	271	12t	9 A 6	13/12h	3	20	-1	-	-	-	-	-	s,n,t	-		
YPR-765	76-81	105	9ta	5 C 4	3	4	12	0	-	-	-	-	-	n,i	1	25mm	
	82-93	133	9ta	5 C 4	6	4	12	0	-	-	-	-	-	n,i	1		
	94-15	141	9ta	5 C 4	7	4	12	0	-	-	-	-	-	n,i	1		
YP-408 PW-GR	64-88	18	8wa	2 - 0	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG	
Boxer	10-15	73	9w	6 F 4	1	1	6	-1	-	-	-	-	-	n,2	1	12.7mm HMG	
Lynx	67-74	20	12ta	2 C 1	1	1	6	-1	-	-	-	-	-	-	-	12.7mm HMG	
	75-81	62	12ta	2 C 1	3	4	12	0	-	-	-	-	-	-	-	25mm	
	82-93	89	12ta	2 C 1	6	4	12	0	-	-	-	-	-	-	-		
	94-15	97	12ta	2 C 1	7	4	12	0	-	-	-	-	-	-	-		
Fennek	04-15	19	8w	2 A 1	1	1	6	-1	-	-	-	-	-	n,2,v	-	+1 to terrain save; 40mm AGL	
YP-408 PW-AT	70?-75	70	8wa	2 - 0	1	1	6	-1	13h ²	1	1-30	-	-	-	1	TOW; 12.7mm HMG	
	76-79	83	8wa	2 - 0	1	1	6	-1	13h ²	1	1-38	-	-	-	1	TOW-ER	
	80-81	83	8wa	2 - 0	1	1	6	-1	13h ²	1	1-38	-	-	-	1	TOW-ER	
	82-83	87	8wa	2 - 0	1	1	6	-1	14h ²	1	1-38	-	-	-	1	ITOW	
	84-86	91	8wa	2 - 0	1	1	6	-1	15h ²	1	1-38	-	-	-	1	TOW-2	
	87-88?	105	8wa	2 - 0	1	1	6	-1	19h ²	1	1-38	-	-	-	1	TOW-2A	
YPR-765 PR-AT	82-84	287	9ta	5 C 4	-	1	6	-1	14h ²	2	1-38	-	-	n,t	-	u +1 to terrain save; ITOW	
	85-87	296	9ta	5 C 4	-	1	6	-1	15h ²	2	1-38	-	-	n,t	-	u +1 to terrain save; TOW 2	
	88-92	332	9ta	5 C 4	-	1	6	-1	19h ²	2	1-38	-	-	n,t	-	u +1 to terrain save; TOW-2A	
	93-15	296	9ta	5 C 4	-	1	6	-1	15h ² †	2	1-38	-	-	n,t	-	u +1 to terrain save; TOW-2B	
Fennek MRAT	04-15	99	8w	2 A 1	-	-	-	-	14h ³ †	1	2-25	-	-	n,2	-	u +1 to terrain save; Spike-MR (Gil)	
Fennek SWP	08-15	65	8w	2 A 1	-	-	-	-	2 ^A	1	1-32	-	-	n,2	-	u +1 to terrain save; FIM-92 Stinger	
North Korea (DPRK)																	
Ch'onma-ho I/I MBT	77?-15	165	7t	8 A 7	11/12h	2	12	-1	-	-	-	-	-	s,n,i		115mm/L55 SB (Russia)	
Ch'onma-ho II(Ga) MBT	80?-15	175	7t	8 A 7	11/12h	2	14	-1	-	-	-	-	-	s,n,i		115mm/L55 SB (Russia)	
Ch'onma-ho III(Da) MBT	85?-15	202	9t	10 A 8	11/12h	2	14	-1	-	-	-	-	-	s,n,i		115mm/L55 SB (Russia)	
Ch'onma-ho IV(Ra) MBT	95?-15	216	9t	10 C 8	13/12h	2	14	-1	-	-	-	-	-	s,n,i		115mm/L55 SB (Russia)	
Ch'onma-ho V(Ma) MBT	95?-15	226	9t	10 C 8	15	2	14	-1	-	-	-	-	-	s,n,i		125mm/L48 SB (Russia)	
M-2002 MBT	93?-15	233	8ta	12 A 9	16	2	12	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (China)	
M-2002 MBT w/ERA	93?-15	249	8ta	13 B 10	16	2	12	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (China)	
VTT-323 APC	85?-15	24	11ta	3 - 2	1	1	8	-1	-	-	-	-	-	n,i	1	14.5mm HMG	
VTT-323 w/AT-3	85?-90	77	11ta	3 - 2	1	1	8	-1	12h ²	1	5-30	-	-	n,i	1	AT-3c; 14.5mm HMG	

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Notes		
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
	91-15	95	11ta	3 - 2	1	1	8	-1	15h ²	1	1-30	-	-	n,i	1	AT-3d
PT-85	85-15	78	8ta	3 - 1	9/10h	3	8	-1	-	-	-	-	-	n	-	85mm/L55 R (China)
M-1992	92-15	13	8wa	1 - 0	1	1	8	-1	-	-	-	-	-	n,i	-	14.5mm HMG
Norway																
NM-116	73-79	123	8t	4 - 3	10h	3	14	-1	-	-	-	-	-	-	-	90mm/L33 SB (France)
	80-93	129	8t	4 - 3	11h	3	14	-1	-	-	-	-	-	-	-	-
CV9030	97-15	194	12t	7 B 3	8	4	14	0	-	-	-	-	-	s,n,i	1	30mm
NM142	83	101	9ta	2 C 1	1	1	6	-1	14h ²	1	1-38	-	-	t,n	-	ITOW; 12.7mm HMG
	84-86	105	9ta	2 C 1	1	1	6	-1	15h ²	1	1-38	-	-	t,n	-	TOW-2
NM142F1	87-91	134	11ta	3 C 1	1	1	6	-1	19h ²	1	1-38	-	-	t,n	-	TOW-2A; 12.7mm HMG
	92-15	119	11ta	3 C 1	1	1	6	-1	15h ² †	1	1-38	-	-	t,n	-	TOW-2B
Poland																
PT-91 w/ERAWA-1	95-96	259	8t	11 D 8	15	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB (Russia)
	97-15	264	8t	11 D 8	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-	
PT-91 w/ERAWA-2	95-96	271	8t	12 D 8	15	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB (Russia)
	97-15	276	8t	12 D 8	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-	
PT-91A w/ERAWA-1	96	263	10t	11 D 8	15	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB (Russia)
	97-15	268	10t	11 D 8	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-	
PT-91A w/ERAWA-2	96	275	10t	12 D 8	15	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB (Russia)
	97-15	280	10t	12 D 8	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-	
T-72M1Z w/ERAWA-1	98-15	268	10t	11 D 8	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB (Russia)
T-72M1Z w/ERAWA-2	98-15	280	10t	12 D 8	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB (Russia)
Rosomak IFV	05-15	155	9wa	5 B 3	8	4	14	0	-	-	-	-	-	n,i	1	30mm R (US)
Rosomak APC	05-15	18	11wa	2 - 0	0	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
Portugal																
Chaimite V-200	68-15	15	10wa	1 - 0	1	1	6	-1	-	-	-	-	-	i	1	12.7mm HMG
Commando Mk II	78-15	14	7w	1 - 0	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
Chaimite V-700	68-15	53	10wa	1 - 0	-	1	6	-1	14h ¹	1	2-40	-	-	i	-	u Swingfire; 7.62mm MG
Russia/Soviet Union/CIS																
T-34/76 m1943	50-59	115	9t	6 - 4	6/8h	3	10	-1	-	-	-	-	-	-	-	76mm/L43 R (Russia)
	60-15	120	9t	6 - 4	6/9h	3	10	-1	-	-	-	-	-	-	-	
T-34/85	50-59	124	7t	7 - 5	8	3	10	-1	-	-	-	-	-	-	-	85mm/L55 R ZIS-S53(Russia)
	60-69	129	7t	7 - 5	9	3	10	-1	-	-	-	-	-	-	-	
	70-15	134	7t	7 - 5	9/10h	3	10	-1	-	-	-	-	-	-	-	
IS-3 / IS-3M	50-67	136	5t	9 - 6	9/10h	2	10	-1	-	-	-	-	-	-	-	122mm/L43 R D-25 (Russia)
	68-15	136	5t	9 - 6	10/10h	2	10	-1	-	-	-	-	-	-	-	

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Notes		
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
IS-4	50-65?	137	6t	9 - 6	9/10h	2	10	-1	-	-	-	-	-	-	-	122mm/L43 R D-25 (Russia)
T-10	54-67	142	7t	9 A 7	9/10h	2	10	-1	-	-	-	-	-	-	-	122mm/L43 R D-25 (Russia)
	68-15	142	7t	9 A 7	10/10h	2	10	-1	-	-	-	-	-	-	-	
T-10A/T-10B	57-67	157	7t	9 A 7	9/10h	2	10	-1	-	-	-	-	-	s,i	-	122mm/L43 R D-25 (Russia)
	68-15	157	7t	9 A 7	10/10h	2	10	-1	-	-	-	-	-	s,i	-	
T-10M	58-67	167	7t	9 A 7	9/10h	2	12	-1	-	-	-	-	-	s,n,i	-	122mm/L43 R D-25 (Russia)
	68-15	167	7t	9 A 7	10/10h	2	12	-1	-	-	-	-	-	s,n,i	-	
T-54	51-59	126	7t	8 A 7	9	2	10	-1	-	-	-	-	-	-	-	100mm/L56 R (Russia)
	60-67	135	7t	8 A 7	9/11h	2	10	-1	-	-	-	-	-	-	-	
	68-79	135	7t	8 A 7	10/11h	2	10	-1	-	-	-	-	-	-	-	
	80-15	139	7t	8 A 7	12/11h	2	10	-1	-	-	-	-	-	-	-	
T-54A	57-59	135	7t	8 A 7	9	2	10	-1	-	-	-	-	-	s	-	100mm/L56 R (Russia)
	60-67	144	7t	8 A 7	9/11h	2	10	-1	-	-	-	-	-	s	-	
	68-79	144	7t	8 A 7	10/11h	2	10	-1	-	-	-	-	-	s	-	
	80-15	149	7t	8 A 7	12/11h	2	10	-1	-	-	-	-	-	s	-	
T-54B	58-59	141	7t	8 A 7	9	2	10	-1	-	-	-	-	-	s,i	-	100mm/L56 R (Russia)
	60-67	150	7t	8 A 7	9/11h	2	10	-1	-	-	-	-	-	s,i	-	
	68-79	150	7t	8 A 7	10/11h	2	10	-1	-	-	-	-	-	s,i	-	
	80-15	154	7t	8 A 7	12/11h	2	10	-1	-	-	-	-	-	s,i	-	
T-55/T-55A	59	142	8t	8 A 7	9	2	10	-1	-	-	-	-	-	s,n,i	-	100mm/L56 R (Russia)
	60-67	151	8t	8 A 7	9/11h	2	10	-1	-	-	-	-	-	s,n,i	-	
	68-73	151	8t	8 A 7	10/11h	2	10	-1	-	-	-	-	-	s,n,i	-	
	74-79	162	8t	8 A 7	10/11h	2	12	-1	-	-	-	-	-	s,n,i	-	
	80-15	166	8t	8 A 7	12/11h	2	12	-1	-	-	-	-	-	s,n,i	-	
T-55M / T-55AM	84-15	189	7t	10 A 8	12/11h	2	12	-1	-	-	-	-	-	s,n,i	-	100mm/L56 R (Russia)
T-55M / T-55AM (with missile)	85-95	189	7t	10 A 8	12/11h	2	12	-1	13h ²	1	1-40	-	-	s,n,i	-	AT-10; 100mm/L56 R (Russia)
	96-98	194	7t	10 A 8	12/11h	2	12	-1	14h ²	1	1-40	-	-	s,n,i	-	AT-10b
	99-15	216	7t	10 A 8	12/11h	2	12	-1	14h ²	1	1-55	-	-	s,n,i	-	AT-10c
T-55M-1 / T-55AM-1	85-15	192	9t	10 A 8	12/11h	2	12	-1	-	-	-	-	-	s,n,i	-	100mm/L56 R (Russia)
T-55M-1 / T-55AM-1 (with missile)	85-95	192	9t	10 A 8	12/11h	2	12	-1	13h ²	1	1-40	-	-	s,n,i	-	AT-10; 100mm/L56 R (Russia)
	96-98	197	9t	10 A 8	12/11h	2	12	-1	14h ²	1	1-40	-	-	s,n,i	-	AT-10b
	99-15	220	9t	10 A 8	12/11h	2	12	-1	14h ²	1	1-55	-	-	s,n,i	-	AT-10c
T-55MV / T-55AMV	85-89	185	7t	9 C 7	12/11h	2	12	-1	-	-	-	-	-	s,n,i	-	100mm/L56 R (Russia)
	90-15	197	7t	10 C 8	12/11h	2	12	-1	-	-	-	-	-	s,n,i	-	
T-55MV / T-55AMV (with missile)	85-89	185	7t	9 C 7	12/11h	2	12	-1	13h ²	1	1-40	-	-	s,n,i	-	AT-10; 100mm/L56 R (Russia)
	90-95	197	7t	10 C 8	12/11h	2	12	-1	13h ²	1	1-40	-	-	s,n,i	-	
	96-98	202	7t	10 C 8	12/11h	2	12	-1	14h ²	1	1-40	-	-	s,n,i	-	AT-10b
	99-15	224	7t	10 C 8	12/11h	2	12	-1	14h ²	1	1-55	-	-	s,n,i	-	AT-10c
T-55MV-1 / T-55AMV-1	85-89	188	9t	9 C 7	12/11h	2	12	-1	-	-	-	-	-	s,n,i	-	100mm/L56 R (Russia)
	90-15	201	9t	10 C 8	12/11h	2	12	-1	-	-	-	-	-	s,n,i	-	

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire				Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	
T-55MV-1 / T-55AMV-1 (with missile)	85-89	188	9t	9 C 7	12/11h	2	12	-1	13h ²	1	1-40	-	-	s,n,i	-	AT-10; 100mm/L56 R (Russia)	
	90-95	201	9t	10 C 8	12/11h	2	12	-1	13h ²	1	1-40	-	-	s,n,i	-		
	96-98	205	9t	10 C 8	12/11h	2	12	-1	14h ²	1	1-40	-	-	s,n,i	-	AT-10b	
	99-15	228	9t	10 C 8	12/11h	2	12	-1	14h ²	1	1-55	-	-	s,n,i	-	AT-10c	
T-55AD (Only used by Naval Infantry)	82-87	165	7t	8 A 7	12/11h	2	12	-1	13h ²	1	1-40	-	-	s,n,i	-	ATGM defenses: +1 to save; AT-10; 100mm/L56 R (Russia)	
T-55AD1 (Only used by Naval Infantry)	85-87	169	10t	8 A 7	12/11h	2	12	-1	13h ²	1	1-40	-	-	s,n,i	-	ATGM defenses: +1 to save; AT-10; 100mm/L56 R (Russia)	
T-62 / T-62A	63-74	165	7t	8 A 7	11/12h	2	12	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
	75-79	175	7t	8 A 7	11/12h	2	14	-1	-	-	-	-	-	s,n,i	-		
	80-84	180	7t	8 A 7	13/12h	2	14	-1	-	-	-	-	-	s,n,i	-		
	85-15	185	7t	8 A 7	14	2	14	-1	-	-	-	-	-	s,n,i	-		
T-62M	84	204	7t	10 A 8	13/12h	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
	85-95	209	7t	10 A 8	14	2	14	-1	13h ²	1	1-40	-	-	s,n,i	-	AT-12	
	96-98	209	7t	10 A 8	14	2	14	-1	14h ²	1	1-40	-	-	s,n,i	-	AT-12b	
	99-15	216	7t	10 A 8	14	2	14	-1	14h ²	1	1-55	-	-	s,n,i	-	AT-12c	
T-62M (no missile ammo)	84	204	7t	10 A 8	13/12h	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
	85-15	209	7t	10 A 8	14	2	14	-1	-	-	-	-	-	s,n,i	-		
T-62M1	84	204	7t	10 A 8	13/12h	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
	85-15	209	7t	10 A 8	14	2	14	-1	-	-	-	-	-	s,n,i	-		
T-62M-1	86-95	213	9t	10 A 8	14	2	14	-1	13h ²	1	1-40	-	-	s,n,i	-	AT-12; 115mm/L55 SB (Russia)	
	96-98	213	9t	10 A 8	14	2	14	-1	14h ²	1	1-40	-	-	s,n,i	-	AT-12b	
	99-15	220	9t	10 A 8	14	2	14	-1	14h ²	1	1-55	-	-	s,n,i	-	AT-12c	
T-62M-1 (no missile ammo)	86-15	213	9t	10 A 8	14	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
T-62M1-1	86-15	213	9t	10 A 8	14	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
T-62M1-2	84	204	7t	10 A 8	13/12h	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
	85-15	209	7t	10 A 8	14	2	14	-1	-	-	-	-	-	s,n,i	-		
T-62M1-2-1	86-15	213	9t	10 A 8	14	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
T-62MV	84	204	7t	9 D 7	13/12h	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
	85-15	209	7t	9 D 7	14	2	14	-1	-	-	-	-	-	s,n,i	-		
T-62MV-1	86-15	213	9t	9 D 7	14	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
T-62MV-3	92-15	221	9t	10 C 8	14	2	14	-1	-	-	-	-	-	s,n,i	-	115mm/L55 SB (Russia)	
T-62D (very few built)	83-84	180	7t	8 A 7	13/12h	2	14	-1	-	-	-	-	-	s,n,i	-	ATGM defenses: +1 to save; 115mm/L55 SB (Russia)	
	85-95	185	7t	8 A 7	14	2	14	-1	13h ²	1	1-40	-	-	s,n,i	-	AT-12	
	96-98	185	7t	8 A 7	14	2	14	-1	14h ²	1	1-40	-	-	s,n,i	-	AT-12b	
	99-15	192	7t	8 A 7	14	2	14	-1	14h ²	1	1-55	-	-	s,n,i	-	AT-12c	
T-62D (no msl ammo, very few built)	83-84	180	7t	8 A 7	13/12h	2	14	-1	-	-	-	-	-	s,n,i	-	ATGM defenses: +1 to save; 115mm/L55 SB (Russia)	
	85-15	185	7t	8 A 7	14	2	14	-1	-	-	-	-	-	s,n,i	-		

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
T-62D-1 (very few built)	86-95	188	9t	8 A 7	14	2	14	-1	13h ²	1	1-40	-	-	s,n,i	-	-	ATGM defenses: +1 to save; AT-12; 115mm/L55 SB (Russia)
	96-98	188	9t	8 A 7	14	2	14	-1	14h ²	1	1-40	-	-	s,n,i	-	-	AT-12b
	99-15	195	9t	8 A 7	14	2	14	-1	14h ²	1	1-55	-	-	s,n,i	-	-	AT-12c
T-62D-1 (no msl ammo, very few built)	86-15	188	9t	8 A 7	14	2	14	-1	-	-	-	-	-	s,n,i	-	-	ATGM defenses: +1 to save; 115mm/L55 SB (Russia)
T-64 (only 600 built)	68-79	192	9t	10 A 7	11/12h	2	12	-1	-	-	-	-	-	s,n,i	-	-	115mm/L55 SB (Russia)
	80-84	197	9t	10 A 7	13/12h	2	12	-1	-	-	-	-	-	s,n,i	-	-	
	85-15	202	9t	10 A 7	14	2	12	-1	-	-	-	-	-	s,n,i	-	-	
T-64A	74-78	197	9t	10 A 7	13/12h	2	12	-1	-	-	-	-	-	s,n,i	-	-	125mm/L48 SB (Russia)
	79-82	202	9t	10 A 7	14/13h	2	12	-1	-	-	-	-	-	s,n,i	-	-	
	83-85	206	9t	10 A 7	15	2	12	-1	-	-	-	-	-	s,n,i	-	-	
	86-96	217	9t	10 A 7	15	2	14	-1	-	-	-	-	-	s,n,i	-	-	
	97-15	222	9t	10 A 7	16/15h	2	14	-1	-	-	-	-	-	s,n,i	-	-	
T-64B	80-85	220	8t	10 B 7	15	2	14	-1	12h ²	1	1-40	-	-	s,n,i	-	-	AT-8; 125mm/L48 SB (Russia)
	86-96	237	12t	10 B 7	15	2	16	-1	12h ²	1	1-40	-	-	s,n,i	-	-	
	97-15	243	12t	10 B 7	16/15h	2	16	-1	12h ²	1	1-40	-	-	s,n,i	-	-	
T-64B (no missile ammo)	80-85	220	8t	10 B 7	15	2	14	-1	-	-	-	-	-	s,n,i	-	-	125mm/L48 SB (Russia)
	86-96	237	12t	10 B 7	15	2	16	-1	-	-	-	-	-	s,n,i	-	-	
	97-15	243	12t	10 B 7	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-	-	
T-64B1	80-85	220	8t	10 B 7	15	2	14	-1	-	-	-	-	-	s,n,i	-	-	125mm/L48 SB (Russia)
	86-96	237	12t	10 B 7	15	2	16	-1	-	-	-	-	-	s,n,i	-	-	
	97-15	243	12t	10 B 7	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-	-	
T-64BV	84-85	240	8t	11 D 8	15	2	14	-1	12h ²	1	1-40	-	-	s,n,i	-	-	AT-8; 125mm/L48 SB (Russia)
	86-96	258	12t	11 D 8	15	2	16	-1	12h ²	1	1-40	-	-	s,n,i	-	-	
	97-15	263	12t	11 D 8	16/15h	2	16	-1	12h ²	1	1-40	-	-	s,n,i	-	-	
T-64BV (no missile ammo)	84-85	240	8t	11 D 8	15	2	14	-1	-	-	-	-	-	s,n,i	-	-	125mm/L48 SB (Russia)
	86-96	258	12t	11 D 8	15	2	16	-1	-	-	-	-	-	s,n,i	-	-	
	97-15	263	12t	11 D 8	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-	-	
T-64BV1	84-85	240	8t	11 D 8	15	2	14	-1	-	-	-	-	-	s,n,i	-	-	125mm/L48 SB (Russia)
	86-96	258	12t	11 D 8	15	2	16	-1	-	-	-	-	-	s,n,i	-	-	
	97-15	263	12t	11 D 8	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-	-	
T-64R	85	217	9t	10 A 7	15	2	14	-1	12h ²	1	1-40	-	-	s,n,i	-	-	AT-8; 125mm/L48 SB (Russia)
	86-96	228	9t	10 A 7	15	2	16	-1	12h ²	1	1-40	-	-	s,n,i	-	-	
	97-15	233	9t	10 A 7	16/15h	2	16	-1	12h ²	1	1-40	-	-	s,n,i	-	-	
T-64R (no missile ammo)	85	217	9t	10 A 7	15	2	14	-1	-	-	-	-	-	s,n,i	-	-	125mm/L48 SB (Russia)
	86-96	228	9t	10 A 7	15	2	16	-1	-	-	-	-	-	s,n,i	-	-	
	97-15	233	9t	10 A 7	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-	-	
T-72	75-78	197	9t	10 A 7	13/12h	2	12	-1	-	-	-	-	-	s,n,i	-	-	125mm/L48 SB (Russia)
	79-82	202	9t	10 A 7	14/13h	2	12	-1	-	-	-	-	-	s,n,i	-	-	
	83-85	206	9t	10 A 7	15	2	12	-1	-	-	-	-	-	s,n,i	-	-	
	86-96	217	9t	10 A 7	15	2	14	-1	-	-	-	-	-	s,n,i	-	-	

Name	Period	Points	Move	Armor	----- Gun -----			----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip				
	97-15	222	9t	10 A 7	16/15h	2	14	-1	-	-	-	-	-	s,n,i	-			
T-72 / T-72M Export	77-78	192	9t	10 A 7	12/12h	2	12	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB Export (Russia)		
	79-85	197	9t	10 A 7	13/12h	2	12	-1	-	-	-	-	-	s,n,i	-			
	86-96	213	9t	10 A 7	14/13h	2	14	-1	-	-	-	-	-	s,n,i	-			
	97-15	217	9t	10 A 7	15	2	14	-1	-	-	-	-	-	s,n,i	-			
T-72A	80-82	217	9t	10 B 7	14/13h	2	14	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (Russia)		
	83-85	221	9t	10 B 7	15	2	14	-1	-	-	-	-	-	s,n,i	-			
	86-87	232	9t	10 B 7	15	2	16	-1	-	-	-	-	-	s,n,i	-			
	88-96	252	9t	11 D 8	15	2	16	-1	-	-	-	-	-	s,n,i	-			
	97-15	258	9t	11 D 8	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-			
T-72M1 Export	82-85	212	9t	10 B 7	13/12h	2	14	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB Export (Russia)		
	86-87	227	9t	10 B 7	14/13h	2	16	-1	-	-	-	-	-	s,n,i	-			
	88-96	247	9t	11 D 8	14/13h	2	16	-1	-	-	-	-	-	s,n,i	-			
	97-15	252	9t	11 D 8	15	2	16	-1	-	-	-	-	-	s,n,i	-			
T-72B	86	252	9t	12 A 9	15	2	16	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (Russia)		
	87	252	9t	12 A 9	15	2	16	-1	15h ²	1	1-40	-	-	s,n,i	-	AT-11		
	88-96	261	9t	12 C 9	15	2	16	-1	15h ²	1	1-40	-	-	s,n,i	-			
	97-15	266	9t	12 C 9	16/15h	2	16	-1	15h ²	1	1-40	-	-	s,n,i	-			
T-72B (no missile ammo)	86-87	252	9t	12 A 9	15	2	16	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (Russia)		
	88-96	261	9t	12 C 9	15	2	16	-1	-	-	-	-	-	s,n,i	-			
	97-15	266	9t	12 C 9	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-			
T-72S Export	87	247	9t	12 A 9	14/13h	2	16	-1	15h ²	1	1-40	-	-	s,n,i	-	AT-11; 125mm/L48 SB Export (Russia)		
	88-96	255	9t	12 C 9	14/13h	2	16	-1	15h ²	1	1-40	-	-	s,n,i	-			
	97-15	261	9t	12 C 9	15	2	16	-1	15h ²	1	1-40	-	-	s,n,i	-			
T-72S Export (no missile ammo)	86-87	247	9t	12 A 9	14/13h	2	16	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB Export (Russia)		
	88-96	255	9t	12 C 9	14/13h	2	16	-1	-	-	-	-	-	s,n,i	-			
	97-15	261	9t	12 C 9	15	2	16	-1	-	-	-	-	-	s,n,i	-			
T-72B1	86-87	252	9t	12 A 9	15	2	16	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (Russia)		
	88-96	261	9t	12 C 9	15	2	16	-1	-	-	-	-	-	s,n,i	-			
	97-15	266	9t	12 C 9	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-			
T-72M1 Export	87	247	9t	12 A 9	14/13h	2	16	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB Export (Russia)		
	88-96	255	9t	12 C 9	14/13h	2	16	-1	-	-	-	-	-	s,n,i	-			
	97-15	261	9t	12 C 9	15	2	16	-1	-	-	-	-	-	s,n,i	-			
T-72BM	90-96	269	9t	13 B 10	15	2	16	-1	15h ²	1	1-40	-	-	s,n,i	-	AT-11; 125mm/L48 SB (Russia)		
	97-15	274	9t	13 B 10	16/15h	2	16	-1	15h ²	1	1-40	-	-	s,n,i	-			
T-72BM (no missile ammo)	90-96	269	9t	13 B 10	15	2	16	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (Russia)		
	97-15	274	9t	13 B 10	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-			
T-80	77-78	200	11t	10 A 7	13/12h	2	12	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (Russia)		
	79-82	205	11t	10 A 7	14/13h	2	12	-1	-	-	-	-	-	s,n,i	-			
	83-85	209	11t	10 A 7	15	2	12	-1	-	-	-	-	-	s,n,i	-			
	86-96	221	11t	10 A 7	15	2	14	-1	-	-	-	-	-	s,n,i	-			
	97-15	226	11t	10 A 7	16/15h	2	14	-1	-	-	-	-	-	s,n,i	-			

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
T-80B	79-80	228	11t	11 A 9	14/13h	2	14	-1	12h ²	1	1-40	-	-	s,n,i	-	AT-8; 125mm/L48 SB (Russia)	
	81-82	230	12t	11 A 9	14/13h	2	14	-1	12h ²	1	1-40	-	-	s,n,i	-		
	83-84	235	12t	11 A 9	15	2	14	-1	12h ²	1	1-40	-	-	s,n,i	-		
	85	239	12t	11 B 9	15	2	14	-1	12h ²	1	1-40	-	-	s,n,i	-		
	86-96	258	12t	12 A 9	15	2	16	-1	12h ²	1	1-40	-	-	s,n,i	-		
	97-15	263	12t	12 A 9	16/15h	2	16	-1	12h ²	1	1-40	-	-	s,n,i	-		
T-80B (no missile ammo)	79-80	228	11t	11 A 9	14/13h	2	14	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (Russia)	
	81-82	230	12t	11 A 9	14/13h	2	14	-1	-	-	-	-	-	s,n,i	-		
	83-84	235	12t	11 A 9	15	2	14	-1	-	-	-	-	-	s,n,i	-		
	85	239	12t	11 B 9	15	2	14	-1	-	-	-	-	-	s,n,i	-		
	86-96	258	12t	12 A 9	15	2	16	-1	-	-	-	-	-	s,n,i	-		
	97-15	263	12t	12 A 9	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-		
T-80U	87-89	279	12t	13 C 10	15	2	16	-1	15h ²	1	1-50	-	-	s,n,i	-	AT-11; 125mm/L48 SB (Russia)	
	90-96	283	14t	13 C 10	15	2	16	-1	15h ²	1	1-50	-	-	s,n,i	-		
	97-15	289	14t	13 C 10	16/15h	2	16	-1	15h ²	1	1-50	-	-	s,n,i	-		
T-80U (no missile ammo)	87-89	279	12t	13 C 10	15	2	16	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (Russia)	
	90-96	283	14t	13 C 10	15	2	16	-1	-	-	-	-	-	s,n,i	-		
	97-15	289	14t	13 C 10	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-		
T-80UM	93-96	292	14t	13 C 10	15	2	16	-1	15h ²	1	1-50	-	-	s,t,n	-	AT-11; 125mm/L48 SB (Russia)	
	97-15	297	14t	13 C 10	16/15h	2	16	-1	15h ²	1	1-50	-	-	s,t,n	-		
T-80UM (no missile ammo)	93-96	292	14t	13 C 10	15	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB (Russia)	
	97-15	297	14t	13 C 10	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-		
T-80UD	89-96	265	11t	12 C 10	15	2	16	-1	15h ²	1	1-50	-	-	s,n,i	-	AT-11; 125mm/L48 SB (Russia)	
	97-15	270	11t	12 C 10	16/15h	2	16	-1	15h ²	1	1-50	-	-	s,n,i	-		
T-80UD (no missile ammo)	89-96	265	11t	12 C 10	15	2	16	-1	-	-	-	-	-	s,n,i	-	125mm/L48 SB (Russia)	
	97-15	270	11t	12 C 10	16/15h	2	16	-1	-	-	-	-	-	s,n,i	-		
T-80U w/Shtora	94-96	292	14t	13 C 10	15	2	16	-1	15h ²	1	1-50	-	-	s,t,n	-	ATGM defenses: +1 to save; AT-11;	
	97-15	297	14t	13 C 10	16/15h	2	16	-1	15h ²	1	1-50	-	-	s,t,n	-	125mm/L48 SB (Russia)	
T-80U w/Shtora (no msl ammo)	94-96	292	14t	13 C 10	15	2	16	-1	-	-	-	-	-	s,t,n	-	ATGM defenses: +1 to save;	
	97-15	297	14t	13 C 10	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB (Russia)	
T-90	95-96	294	9t	14 C 9	15	2	16	-1	15h ²	1	1-50	-	-	s,t,n	-	ATGM defenses: +1 to save; AT-11;	
	97-15	299	9t	14 C 9	16/15h	2	16	-1	15h ²	1	1-50	-	-	s,t,n	-	125mm/L48 SB (Russia)	
T-90 (no missile ammo)	95-96	294	9t	14 C 9	15	2	16	-1	-	-	-	-	-	s,t,n	-	ATGM defenses: +1 to save;	
	97-15	299	9t	14 C 9	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB (Russia)	
T-90A	00-15	320	9t	15 E 9	16/15h	2	16	-1	15h ²	1	1-50	-	-	s,t,n	-	ATGM defenses: +1 to save; AT-11;	
																125mm/L48 SB (Russia)	
T-90A (no missile ammo)	00-15	320	9t	15 E 9	16/15h	2	16	-1	-	-	-	-	-	s,t,n	-	ATGM defenses: +1 to save;	
																125mm/L48 SB (Russia)	
T-90S Export	01-15	277	9t	13 B 9	15	2	16	-1	15h ²	1	1-50	-	-	s,t,n	-	AT-11; 125mm/L48 SB Export (Russia)	
T-90S Export (no msl ammo)	01-15	277	9t	13 B 9	15	2	16	-1	-	-	-	-	-	s,t,n	-	125mm/L48 SB Export (Russia)	

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
BMPT	05-15	283	10t	11 E 7	6 3he	8 3	14 8	0 0	19h ² -	1 -	1-55 -	-	-	s,t,n f	-	AT-14; 30mm R (Russia) 30mm AGS-17 (Russia) can fire at same time as above weapons;
BTR-50P, BTR-50PA	54-15	15	8ta	2 A 0	-	1	6	-1	-	-	-	-	-	o	1	7.62mm MG
BTR-50PK	59-15	15	8ta	2 A 0	-	1	6	-1	-	-	-	-	-	n	1	7.62mm MG
MTLB, MT-LBV, MT-LBT	70-15	12	10ta	1 A 0	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG
MT-LBVM	70-15	16	10ta	1 A 0	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
MTLBu	70-15	12	9ta	1 A 0	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG
BMP-1	70-71	63	11ta	3 A 2	9h	2	6	-1	11h ¹	1	5-30	-	-	n,i	1	AT-3b; 73mm/L32 Rckt Gun (Russia)
	72-79	81	11ta	3 A 2	9h	2	6	-1	12h ²	1	5-30	-	-	n,i	1	AT-3c
	80-89	81	11ta	3 A 2	10h	2	6	-1	12h ²	1	5-30	-	-	n,i	1	
	90-15	99	11ta	3 A 2	11h	2	6	-1	15h ²	1	1-30	-	-	n,i	1	AT-3d
BMP-1D	82-89	93	11ta	4 A 3	10h	2	6	-1	12h ²	1	5-30	-	-	n,i	1	AT-3c; 73mm/L32 Rckt Gun (Russia)
	90-15	111	11ta	4 A 3	11h	2	6	-1	15h ²	1	1-30	-	-	n,i	1	AT-3d
BMP-1P	75-79	66	11ta	3 A 2	9h	2	6	-1	11h ²	1	1-20	-	-	n,i	1	AT-4; 73mm/L32 Rckt Gun (Russia)
	80-84	67	11ta	3 A 2	10h	2	6	-1	11h ²	1	1-20	-	-	n,i	1	
	85-89	79	11ta	3 A 2	10h	2	6	-1	12h ²	1	1-25	-	-	n,i	1	AT-4b
	90	79	11ta	3 A 2	11h	2	6	-1	12h ²	1	1-25	-	-	n,i	1	
	91-15	83	11ta	3 A 2	11h	2	6	-1	13h ²	1	1-25	-	-	n,i	1	AT-4c
BMP-1PD	82-84	79	11ta	4 A 3	10h	2	6	-1	11h ²	1	1-20	-	-	n,i	1	AT-4; 73mm/L32 Rckt Gun (Russia)
	85-89	91	11ta	4 A 3	10h	2	6	-1	12h ²	1	1-25	-	-	n,i	1	AT-4b
	90	91	11ta	4 A 3	11h	2	6	-1	12h ²	1	1-25	-	-	n,i	1	
	91-15	95	11ta	4 A 3	11h	2	6	-1	13h ²	1	1-25	-	-	n,i	1	AT-4c
BMP-2	81-84	116	11ta	3 A 2	3	4	12	0	13h ²	1	1-40	-	-	s,n,i	1	AT-5; 30mm R (Russia)
	85-90	116	11ta	3 A 2	5	4	12	0	13h ²	1	1-40	-	-	s,n,i	1	
	91-94	116	11ta	3 A 2	6	4	12	0	13h ²	1	1-40	-	-	s,n,i	1	
	95-15	129	11ta	3 A 2	6	4	12	0	16h ²	1	1-40	-	-	s,n,i	1	AT-5M
BMP-2 w/AT-4	81-84	82	11ta	3 A 2	3	4	12	0	11h ²	1	1-20	-	-	s,n,i	1	AT-4; 30mm R (Russia)
	85-90	102	11ta	3 A 2	5	4	12	0	12h ²	1	1-25	-	-	s,n,i	1	AT-4b
	91-15	111	11ta	3 A 2	6	4	12	0	13h ²	1	1-25	-	-	s,n,i	1	AT-4c
BMP-3	91-95	153	14ta	5 B 3	5he 6	2	12	-1	13h ²	1	1-40	-	-	s,n,i	1	AT-10; 100mm/L22? R (Russia)
	96-98	153	14ta	5 B 3	5he 6	4	14	0	-	-	-	-	-	s,n,i	1	30mm R (Russia)
	99-15	177	14ta	5 B 3	5he 6	2	12	-1	14h ²	1	1-55	-	-	s,n,i	1	AT-10b
					5he 6	4	14	0	-	-	-	-	-	s,n,i	1	30mm R (Russia)
					5he 6	2	12	-1	14h ²	1	1-55	-	-	s,n,i	1	AT-10c
					5he 6	4	14	0	-	-	-	-	-	s,n,i	1	30mm R (Russia)
BMD-1	70-71	37	14tap	1 - 0	9h	2	6	-1	11h ¹	1	5-30	-	-	n,i	1	AT-3b; 73mm/L32 Rckt Gun (Russia)
	72-79	55	14tap	1 - 0	9h	2	6	-1	12h ²	1	5-30	-	-	n,i	1	AT-3c
	80-89	55	14tap	1 - 0	10h	2	6	-1	12h ²	1	5-30	-	-	n,i	1	
	90-15	74	14tap	1 - 0	11h	2	6	-1	15h ²	1	1-30	-	-	n,i	1	AT-3d
BTR-D	74-15	11	14tap	1 - 0	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire					
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	Notes	
BMD-1P	75-79	40	14tap	1 - 0	9h	2	6	-1	11h ²	1	1-20	-	-	n,i	1	AT-4; 73mm/L32 Rckt Gun (Russia)		
	80-84	41	14tap	1 - 0	10h	2	6	-1	11h ²	1	1-20	-	-	n,i	1			
	85-89	54	14tap	1 - 0	10h	2	6	-1	12h ²	1	1-25	-	-	n,i	1	AT-4b		
	90	54	14tap	1 - 0	11h	2	6	-1	12h ²	1	1-25	-	-	n,i	1			
	91-15	57	14tap	1 - 0	11h	2	6	-1	13h ²	1	1-25	-	-	n,i	1	AT-4c		
BMD-2	86-90	89	14ap	1 - 0	5	4	12	0	13h ²	1	1-40	-	-	s,n,i	1	AT-5; 30mm R (Russia)		
	91-94	89	14ap	1 - 0	6	4	12	0	13h ²	1	1-40	-	-	s,n,i	1			
	95-15	102	14ap	1 - 0	6	4	12	0	16h ²	1	1-40	-	-	s,n,i	1	AT-5M		
BMD-3	90	119	14ap	3 A 2	5	4	12	0	13h ²	1	1-40	-	-	s,n,i	1	AT-5; 30mm R (Russia)		
					3he	3	8	0	-	-	-	-	-			30mm AGS-17 (Russia)		
	91-94	119	14ap	3 A 2	6	4	12	0	13h ²	1	1-40	-	-	s,n,i	1			
					3he	3	8	0	-	-	-	-	-			AT-5M		
BMD-4	95-15	132	14ap	3 A 2	6	4	12	0	16h ²	1	1-40	-	-	s,n,i	1			
	06-15	152	14ap	3 A 2	5he	2	12	-1	14h ²	1	1-55	-	-	s,t,n	1	AT-10c; 100mm/L22? R (Russia)		
					6	4	12	0	16h ²	1	1-40	-	-		1	AT-5M; 30mm R (Russia)		
BTR-40	50-15	10	7w	1 - 0	-	1	6	-1	-	-	-	-	-	0	1	7.62mm MG		
BTR-40B	56-15	10	7w	1 - 0	-	1	6	-1	-	-	-	-	-	1		7.62mm MG		
BTR-152	50-15	10	7w	1 - 0	-	1	6	-1	-	-	-	-	-	0	1	7.62mm MG		
BTR-152V1	57-15	10	7w	1 - 0	-	1	6	-1	-	-	-	-	-	i,o	1	7.62mm MG		
BTR-152K	59-15	10	7w	1 - 0	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG		
BTR-60P	61-15	10	9wa	1 - 0	-	-	-	-	-	-	-	-	-	o	1			
BTR-60PA	64-15	10	9wa	1 - 0	-	-	-	-	-	-	-	-	-	n	1			
BTR-60PB	67-15	16	9wa	1 - 0	1	1	8	-1	-	-	-	-	-	n,i	1	14.5mm HMG		
BTR-70	73-15	16	9wa	1 - 0	1	1	8	-1	-	-	-	-	-	n,i	1	14.5mm HMG		
BTR-80	85-15	16	9wa	1 - 0	1	1	8	-1	-	-	-	-	-	n,i	1	14.5mm HMG		
BTR-80A	93-15	80	9wa	1 - 0	6	4	12	0	-	-	-	-	-	s,n,i	1	30mm R (Russia)		
PT-76	54-59	63	8ta	3 - 1	6/8h	2	10	-1	-	-	-	-	-	-	-		76mm/L43 R (Russia)	
	60-15	67	8ta	3 - 1	6/9h	2	10	-1	-	-	-	-	-	-	-			
PT-76B	63-15	73	8ta	3 - 1	6/9h	2	10	-1	-	-	-	-	-	s,n	-	76mm/L43 R (Russia)		
BRDM-1	59-15	8	7wa	1 - 0	-	1	6	-1	-	-	-	-	-	n	-	-	7.62mm MG	
BRDM-2	66-15	13	8wa	1 - 0	1	1	8	-1	-	-	-	-	-	n,i	-	14.5mm HMG		
BRM-1	70-79	56	11ta	3 A 2	9h	2	6	-1	-	-	-	-	-	n,i	-	73mm/L32 Rckt Gun (Russia)		
	80-89	60	11ta	3 A 2	10h	2	6	-1	-	-	-	-	-	n,i	-			
	90-92	63	11ta	3 A 2	11h	2	6	-1	-	-	-	-	-	n,i	-			
	93-15	67	11ta	3 A 2	11h	2	6	-1	-	-	-	-	-	n,t	-			
1V18 / 1V19 FO Vehicle	67-15	8	9wa	1 - 0	-	-	-	-	-	-	-	-	-	n,i	-	BTR-60PB FO vehicle		

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Notes		
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
1V14 / 1V15 FO Vehicle	70-15	14	10ta	1 A 0	1	1	6	-1	-	-	-	-	-	n,i	-	12.7mm HMG; MT-LB FO Veh.
PRP-3 FO Vehicle	71-15	17	11ta	3 A 2	-	1	6	-1	-	-	-	-	-	n,i	-	7.62mm MG; BMP FO Veh.
PRP-4 FO Vehicle	93-15	18	11ta	3 A 2	-	1	6	-1	-	-	-	-	-	n,t	-	7.62mm MG; BMP FO Veh.
1V118 FO Vehicle	81-15	8	14tap	1 - 0	-	1	6	-1	-	-	-	-	-	n,i	-	7.62mm MG; BMD FO Veh.
IT-1 Tank Destroyer	68-70	130	9t	8 A 7	-	1	6	-1	12h ¹	1	3-33	-	-	s,n,i	-	u 3M7 Drakon; 7.62mm MG
GAZ AT-1	58-15	9	7w	s	-	-	-	-	10h ¹	1	6-20	-	-	r	-	AT-1
BRDM-1 AT-1	58-15	18	7wa	1 - 0	-	-	-	-	10h ¹	1	6-20	-	-	f,i	-	AT-1
BRDM-1 AT-2a	65-15	20	7wa	1 - 0	-	-	-	-	14h ¹	1	10-25	-	-	f,i	-	AT-2a
BRDM-1 AT-2b	65-15	24	7wa	1 - 0	-	-	-	-	14h ¹	1	10-35	-	-	f,i	-	AT-2b
BRDM-1 AT-2c	77-15	58	7wa	1 - 0	-	-	-	-	14h ²	1	10-40	-	-	f,i	-	AT-2c
BRDM-1 AT-3b	63-15	28	7wa	1 - 0	-	-	-	-	11h ¹	1	5-30	-	-	f,i	-	u +1 to terrain save; AT-3b
BRDM-1 AT-3c	72-15	56	7wa	1 - 0	-	-	-	-	12h ²	1	5-30	-	-	f,i	-	u +1 to terrain save; AT-3c
BRDM-1 AT-3d	90-15	76	7wa	1 - 0	-	-	-	-	15h ²	1	1-30	-	-	f,i	-	u +1 to terrain save; AT-3d
BRDM-2 AT-3b	66-15	29	8wa	1 - 0	-	-	-	-	11h ¹	1	5-30	-	-	f,i	-	u +1 to terrain save; AT-3b
BRDM-2 AT-3c	72-15	57	8wa	1 - 0	-	-	-	-	12h ²	1	5-30	-	-	f,i	-	u +1 to terrain save; AT-3c
BRDM-2 AT-3d	90-15	77	8wa	1 - 0	-	-	-	-	15h ²	1	1-30	-	-	f,i	-	u +1 to terrain save; AT-3d
BRDM-2 AT-2a	65-15	20	8wa	1 - 0	-	-	-	-	14h ¹	1	10-25	-	-	f,i	-	+1 to terrain save; AT-2a
BRDM-2 AT-2b	65-15	24	8wa	1 - 0	-	-	-	-	14h ¹	1	10-35	-	-	f,i	-	+1 to terrain save; AT-2b
BRDM-2 AT-2c	77-15	59	8wa	1 - 0	-	-	-	-	14h ²	1	10-40	-	-	f,i	-	+1 to terrain save; AT-2c
BRDM-2 AT-5	77-15	212	8wa	1 - 0	-	-	-	-	13h ²	2	1-40	-	-	f,i	-	u +1 to terrain save; AT-5
BRDM-2 AT-5 M	95-15?	240	8wa	1 - 0	-	-	-	-	16h ²	2	1-40	-	-	f,i	-	u +1 to terrain save; AT-5M
9P149 Tank Destroyer	90-15	120	10ta	1 A 0	-	-	-	-	13h ²	1	1-50	-	-	n,i	1	u +1 to terrain save; AT-6
	95-15	153	10ta	1 A 0	-	-	-	-	16h ²	1	1-60	-	-	n,i	1	u +1 to terrain save; AT-6M1
	95-15	169	10ta	1 A 0	-	-	-	-	16h ²	1	1-70	-	-	n,i	1	u +1 to terrain save; AT-6M2
9P162 Tank Destroyer	952-15	441	14ta	5 B 2	-	-	-	-	19h ²	2	1-55	-	-	s,n,t	1	u +1 to terrain save; AT-14
9P157 Tank Destroyer	04-15	470	14ta	5 B 2	-	-	-	-	19h ³	2	1-50	-	-	s,n,t	1	u +1 to terrain save; AT-15
ISU-152	50-15	83	5t	6 - 5	8	2	8	+0	-	-	-	168	hsc	f	-	152mm/L28 R (Russia)
SU-100	50-59	130	9t	7 - 4	9	3	10	-1	-	-	-	-	-	f	-	100mm/L56 R (Russia)
	60-67	140	9t	7 - 4	9/11h	3	10	-1	-	-	-	-	-	f	-	
	68-79	140	9t	7 - 4	10/11h	3	10	-1	-	-	-	-	-	f	-	
	80-15	145	9t	7 - 4	12/11h	3	10	-1	-	-	-	-	-	f	-	
ASU-57	52-15	38	8tp	0 - 0	9	3	8	-2	-	-	-	-	-	o,f	-	57mm/L73 R (Russia)
ASU-85	61-15	103	7tp	6 - 2	9	2	10	-1	-	-	-	-	-	n,i,f	-	85mm/L74 R (Russia)
2S25 SP 125mm AT Gun	07-15	142	14tap	3 A 2	15/15h	2	14	-1	15h ²	1	1-40	-	-	s,n,t	-	AT-11; 125mm/L48 SB (Russia)

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire					
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	Notes
B-10 82mm RR	50-15	20	4x	s	9h	3	4	-1	-	-	-	-	-	-	½	82mm RR (Russia)	
B-11 107mm RR	55-15	21	2x	s	10h	3	4	-1	-	-	-	-	-	-	½	107mm RR (Russia)	
SPG-9 Rocket Gun	75-79	25	4x	s	9h	3	6	-1	-	-	-	-	-	-	½	73mm/L32 Rckt Gun (Russia)	
	80-89	27	4x	s	10h	3	6	-1	-	-	-	-	-	i	½		
	90-15	28	4x	s	11h	3	6	-1	-	-	-	-	-	i	½		
ZIS-2 AT Gun	50-15	28	0x	s	9	3	8	-2	-	-	-	-	-	f	1	57mm/L73 R (Russia)	
BS-3 Field Gun	50-59	33	0x	s	9	3	10	-1	-	-	-	-	-	f	1	100mm/L60 R (Russia)	
	60-67	43	0x	s	9/11h	3	10	-1	-	-	-	-	-	f	1		
	68-79	43	0x	s	10/11h	3	10	-1	-	-	-	-	-	f	1		
	80-15	48	0x	s	12/11h	3	10	-1	-	-	-	-	-	f	1		
D-44 AT Gun	53-59	30	0x	s	8	3	10	-1	-	-	-	-	-	f	1	85mm/L55 R ZIS-S53(Russia)	
	60-69	33	0x	s	9	3	10	-1	-	-	-	-	-	f	1		
	70-15	38	0x	s	9/10h	3	10	-1	-	-	-	-	-	f	1		
SD-44 AT Gun	54-59	36	2wxp	s	8	3	10	-1	-	-	-	-	-	f	1	85mm/L55 R ZIS-S53(Russia)	
	60-69	42	2wxp	s	9	3	10	-1	-	-	-	-	-	f	1		
	70-15	47	2wxp	s	9/10h	3	10	-1	-	-	-	-	-	f	1		
D-48 AT Gun	53-15	33	0x	s	9	3	10	-1	-	-	-	-	-	f	1	85mm/L74 R (Russia)	
T-12 AT Gun	56-58	54	0x	s	11	3	12	-1	-	-	-	-	-	f	1	100mm/L85 SB (Russia)	
	59-79	54	0x	s	11/11h	3	12	-1	-	-	-	-	-	f	1	Towed by 6x6 Truck	
	80-90	59	0x	s	12/11h	3	12	-1	-	-	-	-	-	f	1		
	91-95	59	0x	s	12/11h	3	12	-1	13h ²	1	1-40	-	-	f	1	AT-10	
	96-98	59	0x	s	12/11h	3	12	-1	14h ²	1	1-40	-	-	f	1	AT-10b	
	99-15	62	0x	s	12/11h	3	12	-1	14h ²	1	1-55	-	-	f	1	AT-10c	
MT-12 AT Gun	72-79	54	0x	s	11/11h	3	12	-1	-	-	-	-	-	f	1	100mm/L85 SB (Russia)	
	80-90	59	0x	s	12/11h	3	12	-1	-	-	-	-	-	f	1	Towed by MT-LB	
	91-95	59	0x	s	12/11h	3	12	-1	13h ²	1	1-40	-	-	f	1	AT-10	
	96-98	59	0x	s	12/11h	3	12	-1	14h ²	1	1-40	-	-	f	1	AT-10b	
	99-15	62	0x	s	12/11h	3	12	-1	14h ²	1	1-55	-	-	f	1	AT-10c	
2A45M AT Gun	87-96	63	2wx	s	15	2	14	-1	15h ²	1	1-40	-	-	-	1	AT-11; 125mm/L48 SB (Russia)	
	97-15	74	2wx	s	16/15h	2	14	-1	15h ²	1	1-40	-	-	t	1		
2A45M AT Gun (no msl ammo)	87-94	63	2wx	s	15	2	14	-1	-	-	-	-	-	-	1	125mm/L48 SB (Russia)	
	95-15	74	2wx	s	16/15h	2	14	-1	-	-	-	-	-	t	1		
BTR-40A SP AAG	50-15	17	7w	1 - 0	1	1 ²	16 ²	-1	-	-	-	-	-	0	-	2x14.5mm HMG	
BTR-152A SP AAG	50-15	17	7w	1 - 0	1	1 ²	16 ²	-1	-	-	-	-	-	0	-	2x14.5mm HMG	
ZSU-57/2 SP AAG	55-15	95	9t	1 A 0	6	3 ²	28 ²	-2	-	-	-	-	-	i	-	2x57mm/L71 R (Russia)	
ZSU-23/4 SP AAG	65-15	50	10ta	1 - 0	2	10 ²	20 ²	0	-	-	-	-	-	n,i	-	23mm R (Russia)	
2S6M Tunguska SP SAM / AAG	86-87	161	11t	1 - 0	3	8 ²	24 ²	0	2 ^A	1	1-52	-	-	s,n,i	-	SA-19; 2x30mm	
	88-15	161	11t	1 - 0	3	8 ²	24 ²	0	2 ^A	1	1-52	-	-	s,n,i	u	SA-19; 2x30mm	
SA-8 SP SAM	67-15	128	8wa	s	-	-	-	-	2 ^A	1	15-80	-	-	-	-	u	SA-8

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	Notes
SA-9 SP SAM	68-15	41	8wa	1 - 0	-	-	-	-	2 ^R	1	8-42	-	-	-	-	u	SA-9
SA-13 SP SAM	75-15	60	9ta	1 A 0	-	-	-	-	2 ^A	1	2-32	-	-	n,i	-	u	SA-13
SA-15 SP SAM	90-15	137	8t	1 A 0	-	-	-	-	2 ^A	2	15-80	-	-	n,i	-	u	SA-15
Pantsir-S1	07-15	134	8w	s	3	8 [@]	24 [@]	0	2 ^A	1	1-52	-	-	s,n,i	-	SA-19; 2x30mm	
12.7mm AAG	38-15	8	4x	s	1	1 [@]	12 [@]	-1	-	-	-	-	-	-	½	12.7mm HMG AA	
M1939 37mm AAG	39-15	19	0x	s	3	2 [@]	16 [@]	0	-	-	-	-	-	-	1	37mm/L70 R AA (Russia)	
ZPU-1 AAG	43-15	10	2x	s	1	1 [@]	16 [@]	-1	-	-	-	-	-	-	1	2x14.5mm HMG	
ZPU-2 AAG	43-15	10	2x	s	1	1 [@]	16 [@]	-1	-	-	-	-	-	-	1	2x14.5mm HMG	
ZPU-4 AAG	43-15	13	0x	s	1	2 [@]	16 [@]	-1	-	-	-	-	-	-	1	4x14.5mm HMG	
S-60 AAG	50-15	43	0x	s	6	2 [@]	28 [@]	-2	-	-	-	-	-	-	1	57mm/L71 R (Russia)	
ZU-23/2 AAG	65-15	23	1x	s	2	5 [@]	20 [@]	0	-	-	-	-	-	-	1	23mm R (Russia)	
AGS-17 AGL	69-15	17	3x	s	3he	3	8	0	-	-	-	-	-	-	½	30mm AGS-17 (Russia)	
AGS-30 AGL	95-15	22	3x	s	3he	3	12	0	-	-	-	-	-	-	½	30mm AGS-30 (Russia)	
MTU-12 AVLB	55-15	41	7t	8 - 6	-	-	-	-	-	-	-	-	-	-	-	-	
MTU-55 AVLB	55-15	45	8t	8 - 6	-	-	-	-	-	-	-	-	-	n,i	-		
MTU-20 AVLB	58-15	41	7t	8 - 6	-	-	-	-	-	-	-	-	-	-	-		
MTU-72 AVLB	88-15	77	9t	10 B 6	-	-	-	-	-	-	-	-	-	n,i	-		
MTU-90 AVLB	98?-15	129	9t	14 B 7	-	-	-	-	-	-	-	-	-	n,t	-		
GMZ Armored Minelayer	68-15	13	10t	1 - 0	1	1	8	-1	-	-	-	-	-	n,i	-	14.5mm HMG	
<i>Singapore</i>																	
AMX-13 75mm	75-15	95	8t	4 - 2	8	3	10	-1	-	-	-	-	-	i	-	75mm/L62 R (France)	
AMX-13 SM 1	88-15	96	9t	4 - 2	8	3	10	-1	-	-	-	-	-	i	-	75mm/L62 R (France)	
M113 Ultra	95-15	49	9ta	2 c 1	3he	3	8	0	-	-	-	-	-	i	1	40mm AGL	
Bionix IFV 25	98-15	124	10t	3 A 2	6	4	14	0	-	-	-	-	-	s,t	1	25mm	
Bionix IFV 40/50	98-15	54	11t	3 A 2	3he	3	8	0	-	-	-	-	-	i	1	40mm AGL	
Bionix II IFV	15-Jan	153	9t	4 A 3	8	4	14	0	-	-	-	-	-	s,t,n	1	30mm	
Spider LSV w/RR	04?-15	91	9w	s	14h	3	14	-1	-	-	-	-	-	-	-	106mm RR (US)	
Spider LSV w/AGL	04?-15	25	9w	s	3he	3	14	0	-	-	-	-	-	-	-	40mm AGL	
Spider LSV w/Milan	04?-15	29	9w	s	-	1	14	-1	17h ²	1	1-20	-	-	t	-	Milan 2/3; 7.62mm MG	
Spider LSV w/TOW	04?-15	56	9w	s	-	1	14	-1	15h ^{2†}	1	1-38	-	-	t	-	TOW-2B; 7.62mm MG	
<i>South Africa</i>																	
Semel	74-80	171	7t	8 A 6	9	3	12	-1	-	-	-	-	-	s,i	-	83.4mm/L64 R 20-pdr (UK)	

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
Olifant 1	78-82 83-15	204 218	6t 6t	8 A 6 8 A 6	11/11h 13/12h	3 3	16 16	-1 -1	-	-	-	-	-	s,i s,i	-	-	105mm/L51 R (UK)
Olifant 1A	85-15	239	6t	8 A 6	13/12h	3	20	-1	-	-	-	-	-	s,i	-	-	105mm/L51 R (UK)
Olifant 1B	91-15	273	7t	9 F 7	13/12h	3	20	-1	-	-	-	-	-	s,i	-	-	105mm/L51 R (UK)
Mamba	70-15	6	7w	0 - 0	-	1	6	-1	-	-	-	-	-	-	1	1	7.62mm MG
Casspir	78-15	6	6w	0 - 0	-	1	6	-1	-	-	-	-	-	-	1	1	7.62mm MG
RG-12	90-15	6	7w	0 - 0	-	-	-	-	-	-	-	-	-	-	1		
Ratel 20	79-15	30	8w	1 - 0	2	4	10	0	-	-	-	-	-	i	1	1	20mm
Ratel ZT3	87-97 98-15	82 143	8w 8w	1 - 0 1 - 0	- -	1 1	6 6	-1 -1	14h ² 19h ³	1 1	1-40 2-50	-	-	i	1 1	1	ZT-3 Swift; 7.62mm MG ZT-3B Ingwe
Hoefyster IFV	13-15	155	9wa	5 B 3	8	4	14	0	-	-	-	-	-	n,i	1	1	30mm R (US)
Eland 90	63-79 80-15	71 76	7w	1 A 0	10h 11h	3	10	-1	-	-	-	-	-	-	-	-	90mm/L33 SB (France)
Ratel 90	79 80-15	71 77	8w 8w	1 - 0 1 - 0	10h 11h	3	10	-1	-	-	-	-	-	i	-	1	90mm/L33 SB (France)
Rooikat	90-15	121	9w	4 - 2	9	3	12	-1	-	-	-	-	-	s,i	-	-	76mm/L46? R (S.Africa)
Hoefyster Fire Spt.	13-15	158	9wa	5 B 3	8	4	16	0	-	-	-	-	-	n,i	-	-	30mm R (US)
Hoefyster Missile	13-15	205	9wa	5 B 3	-	1	6	-1	19h ³	1	2-50	-	-	t,n	1	1	ZT-3B Ingwe; 7.62mm MG
South Korea																	
K1 88 MBT	87-15	306	11t	12 B 7	13/12h	3	20	-1	-	-	-	-	-	ss,n,i	-	-	105mm/L51 R (S. Korea)
K1A MBT	02-15	355	10t	12 C 7	15	3	24	-1	-	-	-	-	-	ss,n,t	-	-	120mm/L44 SB (S. Korea)
K2 Black Panther	11?-15	417	14t	16 D 10	17	2	24	-1	-	-	-	-	-	ss,n,2,c,v	-	-	120mm/L55 SB (Germany)
K200 KIFV	85-94 95-15	43 46	10ta 10ta	5 C 4 5 C 4	1 1	1 1	6 6	-1 -1	-	-	-	-	-	n,i t,n	1 1	1	12.7mm HMG
K200A1 KIFV	92-15	44	12ta	5 C 4	1	1	6	-1	-	-	-	-	-	n,i	1	1	12.7mm HMG
K300 KIFV	08-15	235	14ta	6 C 4	10	4	16	0	14h ³ †	1	2-40	-	-	2,ss,n	1	1	Spike-LR (Gil); 40mm/L70 R (Sweden)
Chun-ma (KSAM)	00-15	144	10t	5 C 4	-	-	-	-	2 ^A	1	5-72	-	-	t	-	-	Crotale-NG
K-30 Biho SP AAG	02-15	129	10t	5 C 4	3	4 ²	28 ²	0	-	-	-	-	-	n,t	-	-	2x30mm AA
Spain																	
M47	55-54 55-90	151 157	8t 8t	7 A 5 7 A 5	9 9/10h	3 3	12 12	-1 -1	-	-	-	-	-	i	-	-	90mm/L50 R (US)
M47E1	75-90	157	8t	7 A 5	9/10h	3	12	-1	-	-	-	-	-	i	-	-	90mm/L50 R (US)
M47E2	75-79 80-90	184 197	8t 8t	7 A 5 7 A 5	11/11h 13	3 3	16 16	-1 -1	-	-	-	-	-	i	-	-	105mm/L51 R (Germany)

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
AMX-30	70-75	199	10t	8 A 4	11h	3	16	-1	-	-	-	-	-	n,i	-	105mm/L56 R (France)
AMX-30E	76-80	199	10t	8 A 4	11h	3	16	-1	-	-	-	-	-	n,i	-	105mm/L56 R (France)
	81-88	206	10t	8 A 4	12	3	16	-1	-	-	-	-	-	n,i	-	
	89-95	249	10t	8 A 4	14	3	20	-1	-	-	-	-	-	n,t	-	
	96-15	258	11t	8 A 4	15	3	20	-1	-	-	-	-	-	n,t	-	EM2 Upgrade
M48E	85?-93	222	8t	7 B 5	13	3	20	-1	-	-	-	-	-	n,i	-	105mm/L51 R (Germany)
	94-15	229	8t	7 B 5	14	3	20	-1	-	-	-	-	-	n,i	-	
Pizarro AIFV (ASCOD)	00-15	138	10t	3 - 1	8	4	14	0	-	-	-	-	-	s,n,t	1	30mm
Pizarro AIFV w/applique	00-15	197	10t	6 E 3	8	4	14	0	-	-	-	-	-	s,n,t	1	30mm
BLR	70-15	6	7w	0 - 0	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG
BMR-600	79-15	19	9wa	2 - 1	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
VEC	79-81	51	8wa	2 - 1	3	4	12	0	-	-	-	-	-	n,i	-	25mm
	82-93	78	8wa	2 - 1	6	4	12	0	-	-	-	-	-	n,i	-	
	94-15	86	8wa	2 - 1	7	4	12	0	-	-	-	-	-	n,i	-	
Sweden																
Strv 81 (Centurion)	53-70	163	6t	8 A 6	9	3	12	-1	-	-	-	-	-	s	-	83.4mm/L64 R 20-pdr (UK)
Strv 101, Strv 102 (Centurion)	60-96	197	6t	8 A 6	11/11h	3	16	-1	-	-	-	-	-	s	-	105mm/L51 R (UK)
Strv 101R, Strv 102R (Centurion)	84-95	231	6t	8 A 6	13/12h	3	20	-1	-	-	-	-	-	s	-	105mm/L51 R (UK)
Strv 104 (Centurion)	84-00	245	7t	8 D 6	13/12h	3	20	-1	-	-	-	-	-	s	-	105mm/L51 R (UK)
Strv 103A (S Tank)	67-72	200	9t	11 B 5	11	2	16	-1	-	-	-	-	-	f	-	+1 to terrain save; 105mm/L62 R (Sweden)
Strv 103B (S Tank)	73-82	200	9t	11 B 5	11	2	16	-1	-	-	-	-	-	f	-	+1 to terrain save; 105mm/L62 R (Sweden)
	83-87	211	9t	11 B 5	13	2	16	-1	-	-	-	-	-	f	-	+1 to terrain save
Strv 103C (S Tank)	86-97	231	9t	11 C 5	13	2	20	-1	-	-	-	-	-	f	-	+1 to terrain save; 105mm/L62 R (Sweden)
Strv 121 (Leopard 2A4)	94-95	386	14t	14 B 8	15	3	24	-1	-	-	-	-	-	ss,t,n	-	120mm/L44 SB (Germany)
	96-15	403	14t	14 B 8	17	3	24	-1	-	-	-	-	-	ss,t,n	-	
Strv 122 (Leopard 2(S))	97-15	445	14t	16 C 10	17	3	24	-1	-	-	-	-	-	ss,t,n,c	-	120mm/L44 SB (Germany)
Pbv 301	61-74	25	6t	0 - 0	2	4	10	0	-	-	-	-	-	-	1	20mm
Pbv 302A	66-15	81	10ta	4 E 2	2	4	10	0	-	-	-	-	-	-	1	20mm
Pbv 302C	99-15	97	10ta	5 F 2	2	4	10	0	-	-	-	-	-	-	1	20mm
Bv 206S	81-15	14	9t	1 - 0	1	1	6	-1	-	-	-	-	-	n	1	12.7mm HMG
CV90 FO Vehicle	93-00	51	12t	7 B 3	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG
Strf 9040 (CV9040)	93-00	175	12t	7 B 3	6	4	16	0	-	-	-	-	-	n,i	1	40mm/L70 R (Sweden)
	01-15	202	12t	7 B 3	9	4	16	0	-	-	-	-	-	n,i	1	
Strf 9040B (CV9040B)	98-00	185	12t	7 B 3	6	4	16	0	-	-	-	-	-	s,n,i	1	40mm/L70 R (Sweden)

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire						
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
	01-15	213	12t	7 B 3	9	4	16	0	-	-	-	-	-	s,n,i	1	
Strf 9040C (CV9040C)	02-15	224	9t	7 F 5	9	4	16	0	-	-	-	-	-	s,n,i	1	40mm/L70 R (Sweden)
CV9035 (export)	06-15	234	12t	7 B 3	9	4	16	0	-	-	-	-	-	s,n,c,2	1	35mm/L63 R (US)
Jeep w/90mm RR	63-76	21	8wp	s	11h	2	5	-	-	-	-	-	-	-	-	90mm RR (Sweden)
	77-83	22	8wp	s	12h	2	5	-	-	-	-	-	-	-	-	90mm RR (Sweden)
	84-15	25	8wp	s	15h	2	5	-	-	-	-	-	-	-	-	90mm RR (Sweden)
Pbv 2062	81-83	29	9t	1 - 0	12h	2	5	-	-	-	-	-	-	n,o	-	90mm RR (Sweden)
	84-15	35	9t	1 - 0	15h	2	5	-	-	-	-	-	-	n,o	-	
Pbv 2063 w/TOW	81-15	89	9t	1 - 0	1	1	6	-1	13h ²	1	1-38	-	-	t,o	-	u TOW-ER; 12.7mm HMG
	82-15	94	9t	1 - 0	1	1	6	-1	14h ²	1	1-38	-	-	t,o	-	u ITOW
	84-15	99	9t	1 - 0	1	1	6	-1	15h ²	1	1-38	-	-	t,o	-	u TOW-2
	87-15	117	9t	1 - 0	1	1	6	-1	19h ²	1	1-38	-	-	t,o	-	u TOW-2A
	92-15	99	9t	1 - 0	1	1	6	-1	15h ² †	1	1-38	-	-	t,o	-	u TOW-2B
Pbv 2063 w/BILL	88-89	42	9t	1 - 0	1	1	6	-1	13h ² †	1	2-20	-	-	n,o	-	u BILL; 12.7mm HMG
	90-15	48	9t	1 - 0	1	1	6	-1	13h ² †	1	2-20	-	-	t,o	-	u
Pbv 2063 w/BILL2	99-15	57	9t	1 - 0	1	1	6	-1	14h ² †	1	2-22	-	-	t,o	-	u BILL 2; 12.7mm HMG
Prvby 551	86-15	114	7t	2 A 1	-	-	-	-	15h ²	1	1-38	-	-	t	-	u TOW-2
	88-15	132	7t	2 A 1	-	-	-	-	19h ²	1	1-38	-	-	t	-	u TOW-2A
	93-15	114	7t	2 A 1	-	-	-	-	15h ² †	1	1-38	-	-	t	-	u TOW-2B
Sav m/43	50-74	75	5t	2 - s	8h	3	12	-1	-	-	-	109	hs	-	-	105mm/L22 R (Sweden)
PvKv m/43	50-74?	75	5t	2 - 0	8	3	12	-1	-	-	-	-	-	-	-	75mm/L50 R (Sweden)
Ikv-91 Tank Destroyer	75-79	140	10t	4 E 2	10h	3	12	-1	-	-	-	-	-	i	-	90mm/L54 SB (Sweden)
	80-15	146	10t	4 E 2	11h	3	12	-1	-	-	-	-	-	i	-	
Lrvbv 701 SP SAM	84-15	54	7t	2 A 1	-	1	6	-1	2 ^A	1	2-26	-	-	-	-	7.62mm MG, RBS-70
Lkv 90 SP AAG	93-00	168	12t	7 B 3	6	2 ²	32 ²	0	-	-	-	-	-	n,i	-	40mm AA
Switzerland																
Pz 61 MBT	61-79	192	8t	8 - 4	11/11h	3	16	-1	-	-	-	-	-	n,i	-	105mm/L51 R (Switzerland)
	80-93	205	8t	8 - 4	13	3	16	-1	-	-	-	-	-	n,i	-	
	94-96	211	8t	8 - 4	14	3	16	-1	-	-	-	-	-	n,i	-	
Pz 68 MBT	71-79	205	9t	8 - 4	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Switzerland)
	80-88	219	9t	8 - 4	13	3	16	-1	-	-	-	-	-	s,n,i	-	
	89-93	241	9t	8 - 4	13	3	20	-1	-	-	-	-	-	s,n,i	-	
	94-00	248	9t	8 - 4	14	3	20	-1	-	-	-	-	-	s,n,i	-	
Roland APC	65-15	10	10wa	1 - 0	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG
Piranha 4x4	76-15	19	9wa	2 - 1	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
Piranha 6x6	76-15	19	10wa	2 - 1	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
Piranha 8x8	76-15	19	11wa	2 - 1	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire							
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	Notes
Eagle	95-15	6	10w	0 - 0	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG	
Piranha 6x6 TOW	00-15	114	10wa	2 - 1	-	1	6	-1	15h ² †	1	1-38	-	-	t,n	-	u	+1 to terrain save; TOW-2B; 7.62mm MG
Piranha 8x8 HOT	78-15	114	11wa	2 - 1	-	1	6	-1	15h ²	1	1-40	-	-	n,i	-	u	HOT 1; 7.62mm MG
	84-15	119	11wa	2 - 1	-	1	6	-1	16h ²	1	1-40	-	-	n,i	-	u	HOT 2
	91-15	128	11wa	2 - 1	-	1	6	-1	18h ²	1	1-40	-	-	n,i	-	u	HOT 2T
	98-15	132	11wa	2 - 1	-	1	6	-1	19h ²	1	1-40	-	-	n,i	-	u	HOT 3
Pak 50 / Pak 57 ATG	50?-83	37	0x	s	9h	3	10	-1	-	-	-	-	-	i	1	90mm/L? SB (Switzerland)	
Taiwan			84-15	47	0x	s	11h	3	10	-1	-	-	-	i	1		
M41 Walker Bulldog	52-69	93	12t	4 - 3	9	3	8	-1	-	-	-	-	-	i	-	76mm/L55 R (US)	
	70-86	98	12t	4 - 3	10	3	8	-1	-	-	-	-	-	i	-		
	87-15	107	12t	4 - 3	12	3	8	-1	-	-	-	-	-	i	-		
M41D Walker Bulldog	85-86	150	12t	5 D 4	10	3	12	-1	-	-	-	-	-	i	-	76mm/L55 R (US)	
	87-15	162	12t	5 D 4	12	3	12	-1	-	-	-	-	-	i	-		
CM-11 (M48H)	90-15	243	7t	7 B 5	13/12h	3	20	-1	-	-	-	-	-	ss,t,n	-	105mm/L51 R (Taiwan)	
CM-11 w/ERA	90-15	264	7t	8 D 5	13/12h	3	20	-1	-	-	-	-	-	ss,t,n	-	105mm/L51 R (Taiwan)	
CM-12 (M48A3 upgd)	90?-15	243	7t	7 B 5	13/12h	3	20	-1	-	-	-	-	-	ss,t,n	-	105mm/L51 R (Taiwan)	
CM-12 w/ERA	90?-15	260	7t	8 C 5	13/12h	3	20	-1	-	-	-	-	-	ss,t,n	-	105mm/L51 R (Taiwan)	
CM-21	82-93	131	7ta	5 C 4	6	4	12	0	-	-	-	-	-	n,i	1	25mm	
	94-15	138	7ta	5 C 4	7	4	12	0	-	-	-	-	-	n,i	1		
CM-32 w/25mm	08-15	111	10w	3 - 1	7	4	12	0	-	-	-	-	-	n,t	1	25mm	
CM-32 w/AGL	08-15	53	10w	3 - 1	3he	3	8	0	-	-	-	-	-	n,t	1	40mm AGL	
CM-32 w/HMG	08-15	23	10w	3 - 1	1	1	6	-1	-	-	-	-	-	n,t	1	12.7mm HMG	
CM-32 w/105mm	08-15	189	10w	3 - 1	13/12h	3	20	-1	-	-	-	-	-	ss,t,n	-	105mm/L51 R (Taiwan)	
CM-25	83	134	7ta	5 C 4	1	1	6	-1	14h ²	1	1-38	-	-	n,t	-	ITOW; 12.7mm HMG	
	84-86	138	7ta	5 C 4	1	1	6	-1	15h ²	1	1-38	-	-	n,t	-	TOW-2	
	87-91	153	7ta	5 C 4	1	1	6	-1	19h ²	1	1-38	-	-	n,t	-	TOW-2A	
	92-15	138	7ta	5 C 4	1	1	6	-1	15h ² †	1	1-38	-	-	n,t	-	TOW-2B	
Thailand																	
Stingray	90-15	207	14t	4 - 3	14	3	20	-1	-	-	-	-	-	s,i	-	105mm/L51 R (US)	
Turkey																	
M48A5T1	85-93	211	7t	7 B 5	13	3	16	-1	-	-	-	-	-	s,n,i	-	105mm/L51 R (Germany)	
	94-15	218	7t	7 B 5	14	3	16	-1	-	-	-	-	-	s,n,i	-		
M48A5T2	95-15	248	7t	7 B 5	14	3	20	-1	-	-	-	-	-	s,t,n	-	105mm/L51 R (Germany)	
Otaker	94-15	6	10w	0 - 0	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG	
AAPC	96-15	44	11ta	5 C 4	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG	

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire					
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	Notes
TIFV	96-15	143	11ta	5 c 4	7	4	12	0	-	-	-	-	-	n,i	1	25mm	
ATV	96-15	164	11ta	5 c 4	-	-	-	-	15h ² †	1	1-38	-	-	t,n	-	u	TOW-2B
AMV SP Mortar	96-15	30	11ta	5 c 4	-	1	6	-1	-	-	-	-	-	n,i	1	81mm Mtr; 7.62mm MG	
United Arab Emirates																	
BMP-3	01-15	177	14ta	5 B 3	5he 6	2 4	12 14	-1 0	14h ²	1	1-55	-	-	s,n,i	1	AT-10c; 100mm/L22? R (Russia)	
United Kingdom																	
Centurion																	
Mk 1	45-15	125	6t	7 A 6	10	3	8	-1	-	-	-	-	-	-	-	76mm/L55 R 17-pdr (UK)	
Mk 2	46-15	136	6t	8 A 6	10	3	8	-1	-	-	-	-	-	-	-	76mm/L55 R 17-pdr (UK)	
Mk 3,5,7,8	49-15	163	6t	8 A 6	9	3	12	-1	-	-	-	-	-	s	-	83.4mm/L64 R 20-pdr (UK)	
Mk 5/1, 7/1, 8/1	55-15	163	6t	8 A 6	9	3	12	-1	-	-	-	-	-	s	-	83.4mm/L64 R 20-pdr (UK)	
Mk 5/2, 7/2, 8/2, 9, 9/2	65-82 83-15	197 210	6t 6t	8 A 6	11/11h 13/12h	3	16	-1	-	-	-	-	-	s	-	105mm/L51 R (UK)	
Mk 9/1	65-82 83-15	204 218	6t 6t	8 A 6	11/11h 13/12h	3	16	-1	-	-	-	-	-	s,i	-	105mm/L51 R (UK)	
Mk 10, 10/2	65-82 83-15	197 210	6t 6t	8 A 6	11/11h 13/12h	3	16	-1	-	-	-	-	-	s	-	105mm/L51 R (UK)	
Mk 10/1, 11, 12, 13	65-82 83-15	204 218	6t 6t	8 A 6	11/11h 13/12h	3	16	-1	-	-	-	-	-	s,i	-	105mm/L51 R (UK)	
Conqueror	56-59 60-66	209 215	6t 6t	9 A 6	10/11h 10/12h	3	16	-1	-	-	-	-	-	s	-	120mm/L60 R (UK)	
Vickers Mk1	65-82 83-15	195 209	8t 8t	7 A 5	11/11h 13/12h	3	16	-1	-	-	-	-	-	s,i	-	105mm/L51 R (UK)	
Vickers Mk3	76-82 83-15	228 243	8t 8t	8 A 7	11/11h 13/12h	3	20	-1	-	-	-	-	-	s,i	-	105mm/L51 R (UK)	
Chieftain																	
Mk 2, 3, 3S, 3/2, 3/3	67-83	243	6t	11 - 7	12/12h	3	16	-1	-	-	-	-	-	s,n,i	-	120mm/L55 R L11 (UK)	
Mk 5, 6, 7, 8	71-83	264	6t	11 - 7	12/12h	3	20	-1	-	-	-	-	-	s,n,i	-	120mm/L55 R L11 (UK)	
Mk 5/3, 6/3, 7/3, 8/3	80-85	283	6t	11 - 7	12/12h	3	24	-1	-	-	-	-	-	s,n,i	-	120mm/L55 R L11 (UK)	
Mk 9	84-88	299	6t	11 - 7	14	3	24	-1	-	-	-	-	-	s,n,i	-	120mm/L55 R L11 (UK)	
Mk 10	86-90	319	6t	12 B 8	14	3	24	-1	-	-	-	-	-	s,n,i	-	120mm/L55 R L11 (UK)	
Mk 11	89-90 91-95	329 337	6t 6t	12 B 8	14 15	3	24	-1	-	-	-	-	-	s,n,t s,n,t	-	120mm/L55 R L11 (UK)	
Challenger 1	84-90	361	9t	13 D 8	14	3	24	-1	-	-	-	-	-	ss,t,n	-	120mm/L55 R L11 (UK)	

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo					
	91-93	369	9t	13 D 8	15	3	24	-1	-	-	-	-	-	ss,t,n	-			
Challenger 1 ODS	91-99	369	9t	13 D 9	15	3	24	-1	-	-	-	-	-	ss,t,n	-	120mm/L55 R L11 (UK)		
	00-03?	377	9t	13 D 9	16	3	24	-1	-	-	-	-	-	ss,t,n	-			
Challenger 2	96-07	429	11t	16 D 9	17	3	24	-1	-	-	-	-	-	ss,t,n	-	120mm/L55 R L30 (UK)		
	08-15	433	11t	16 E 9	17	3	24	-1	-	-	-	-	-	ss,t,n	-			
FV-432	62-74	10	7t	1 - 1	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG		
	75-15	12	7t	1 A 1	-	1	6	-1	-	-	-	-	-	i	1			
Spartan	78-00	24	14ta	4 A 3	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG		
Stormer	81-15	24	11ta	4 A 3	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG		
Warrior	86-04	142	10t	6 B 5	6	4	12	0	-	-	-	-	-	n,i	1	30mm R (UK)		
	05-07	147	10t	6 B 5	6	4	12	0	-	-	-	-	-	t,n	1			
	08-15	165	8t	7 D 7	6	4	12	0	-	-	-	-	-	t,n	1			
Warrior (ODS)	91-15	145	12t	6 B 6	6	4	12	0	-	-	-	-	-	n,i	1	30mm R (UK)		
Desert Warrior	96-15	153	12t	4 B 3	7	4	14	0	15h ² †	1	1-38	-	-	s,t,n	1	TOW-2B; 25mm R (US)		
FV-430 Mk. 3 Bulldog	06-15	51	7t	7 C 6	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG		
Saracen	52-15	10	8w	1 - 0	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG		
S 55 (Shorland)	75-15	6	10w	0 - 0	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG		
Saxon	76-15	10	7w	1 - 0	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG		
Hussar	85-15	6	10w	0 - 0	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG		
Simba	85-15	15	9w	1 - 0	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG		
Tactica	89-15	6	9w	0 - 0	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG		
Comet	45-15	108	8t	6 - 4	9	3	8	-1	-	-	-	-	-	-	-	77mm/L50 R (UK)		
Ferret Scout Car	52-15	12	9w	2 - 0	-	1	6	-1	-	-	-	-	-	-	-	7.62mm MG		
Saladin	59-15	58	5w	3 - 1	9h	3	6	-1	-	-	-	-	-	-	-	76mm/L28 R (UK)		
Shorland AC	65-15	4	10w	0 - 0	-	1	6	-1	-	-	-	-	-	-	-	7.62mm MG		
Scorpion	72-95	83	12t	4 A 3	9h	3	6	-1	-	-	-	-	-	n,i	-	76mm/L28 R (UK)		
Scorpion 90	82-15	120	12t	4 A 3	11h	3	10	-1	-	-	-	-	-	n,i	-	90mm/L28-36 R (Belgium)		
Fox	74-90	92	10wa	3 - 2	6	4	12	0	-	-	-	-	-	i	-	30mm R (UK)		
Scimitar	74-94	109	12t	4 A 3	6	4	12	0	-	-	-	-	-	n,i	-	30mm R (UK)		
	95-15	114	12t	4 A 3	6	4	12	0	-	-	-	-	-	t,n	-			
Sabre	95-15	108	11t	4 A 3	6	4	12	0	-	-	-	-	-	n,i	-	30mm R (UK)		
Charioteer	52-56	121	10t	5 - 4	9	3	12	-1	-	-	-	-	-	-	-	83.4mm/L64 R 20-pdr (UK)		
Hornet Malkara	55-80	49	10wp	1 - 0	-	-	-	-	14h ¹	1	3-40	-	-	-	-	u	Malkara	
Ferret w/Vigilant	63-15	26	9w	2 - 0	-	1	6	-1	12h ¹	1	2-14	-	-	-	-	u	Vigilant; 7.62mm MG	

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire					
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	Notes
L6 Wombat Portee	64-90?	28	8wp	s	12h	2	8	-1	-	-	-	-	-	-	-	u	120mm RR (UK)
FV438 Swingfire	70-91	51	7ta	1 A 1	-	1	6	-1	14h ¹	1	2-40	-	-	n	-	u	+1 to terrain save; Swingfire; 7.62mm MG
	92-07	91	7ta	1 A 1	-	1	6	-1	14h ²	1	2-40	-	-	n	-	u	+1 to terrain save; Swingfire 4
Striker	75-91	92	14t	4 A 3	-	1	6	-1	14h ¹	1	2-40	-	-	n	-	u	+1 to terrain save; Swingfire; 7.62mm MG
	92-15	139	14t	4 A 3	-	1	6	-1	14h ²	1	2-40	-	-	n,i	-	u	+1 to terrain save; Swingfire 4
Spartan w/Milan	78-15	92	14ta	4 A 3	-	1	6	-1	14h ²	1	1-20	-	-	n	-	u	Milan; 7.62mm MG
	85-15	110	14ta	4 A 3	-	1	6	-1	17h ²	1	1-20	-	-	t,n	-	u	Milan 2/3
Warrior Milan	86-95	137	12t	6 B 5	6	4	12	0	14h ²	1	1-20	-	-	n,i	-	u	Milan; 30mm R (UK)
	96-06	143	12t	6 B 5	6	4	12	0	17h ²	1	1-20	-	-	t,n	-	u	Milan 2/3
Warrior Javelin	07-15	147	12t	6 B 5	6	4	12	0	16h ³ †	1	1-20	-	-	t,n	-	u	Javelin; 30mm R (UK)
6-pdr AT Gun	50-15	28	0x	s	9	3	8	-2	-	-	-	-	-	f	1		57mm/L50 R 6-pdr (UK)
17-pdr AT Gun	50-15	29	0x	s	10	3	8	-1	-	-	-	-	-	f	1		76mm/L55 R 17-pdr (UK)
L1 Bat	50-60	23	0x	s	12h	2	6	-1	-	-	-	-	-	f	½		120mm RR (UK)
L4 Mobot	55?-80?	27	1x	s	12h	2	8	-1	-	-	-	-	-	f	½		120mm RR (UK)
L6 Wombat	64-90?	27	2x	s	12h	2	8	-1	-	-	-	-	-	f	½		120mm RR (UK)
L7 Conbat	65?-80?	27	1x	s	12h	2	8	-1	-	-	-	-	-	f	½		120mm RR (UK)
Tracked Rapier SP SAM	83-97	74	7t	0 - 0	-	-	-	-	2 ^A	1	2-44	-	-	-	-	u	Rapier
Stormer Starstreak	97-15	95	11ta	4 A 3	-	-	-	-	2 ^A	1	3-46	-	-	n,i	-		Starstreak
Towed Rapier SAM	71-15	70	0x	s	-	-	-	-	2 ^A	1	2-44	-	-	-	1	u	Rapier
Churchill AVRE	50-53	55	4t	6 A 5	20he	2	C	+0	-	-	-	-	-	-	-		209mm Petard (UK)
	54-64	110	4t	7 A 6	7he	2	12	+0	-	-	-	-	-	-	-		165mm DG (UK)
Churchill AVLB	50-63	32	4t	7 A 6	-	-	-	-	-	-	-	-	-	-	-		
Centurion AVRE	91-94	127	6t	8 B 6	7he	2	12	+0	-	-	-	-	-	-	-		165mm DG (UK)
Centurion AVRE ODS	91-94	140	6t	8 D 6	7he	2	12	+0	-	-	-	-	-	i	-		165mm DG (UK)
Centurion AVLB	63-76	40	6t	8 - 5	-	-	-	-	-	-	-	-	-	-	-		
Chieftain AVRE	87-94	79	7t	11 - 7	-	1	6	-1	-	-	-	-	-	n,i	-		7.62mm MG
Chieftain AVLB	74-06	79	7t	11 - 6	-	-	-	-	-	-	-	-	-	n,i	-		
Titan AVLB	06-15	135	11t	14 C 6	-	-	-	-	-	-	-	-	-	t,n	-		
United States																	
M3 Stuart	50-15	53	10t	3 - 2	5	3	8	-2	-	-	-	-	-	-	-		37mm/L53 R (US)
M3A3 Stuart	50-15	63	8t	4 - 3	5	3	8	-2	-	-	-	-	-	-	-		37mm/L53 R (US)
M5 Stuart	50-15	64	9t	4 - 3	5	3	8	-2	-	-	-	-	-	-	-		37mm/L53 R (US)
M4A2 Sherman	50-15	88	6t	5 - 3	6	3	10	-1	-	-	-	-	-	-	-		75mm/L40 R (US)
M4A4 Sherman	50-15	88	6t	5 - 3	6	3	10	-1	-	-	-	-	-	-	-		75mm/L40 R (US)

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
M4A1(76) Sherman	50-69?	95	7t	5 - 4	9	3	8	-1	-	-	-	-	-	-	-	-	76mm/L55 R (US)
	70?-86	100	7t	5 - 4	10	3	8	-1	-	-	-	-	-	-	-	-	
	87-15	109	7t	5 - 4	12	3	8	-1	-	-	-	-	-	-	-	-	
M4A2(76) Sherman	50-69?	95	7t	5 - 4	9	3	8	-1	-	-	-	-	-	-	-	-	76mm/L55 R (US)
	70?-86	100	7t	5 - 4	10	3	8	-1	-	-	-	-	-	-	-	-	
	87-15	119	6t	6 - 4	12	3	8	-1	-	-	-	-	-	-	-	-	
M4A3(76) Sherman	50-69?	106	7t	6 - 4	9	3	8	-1	-	-	-	-	-	-	-	-	76mm/L55 R (US)
	70?-86	111	7t	6 - 4	10	3	8	-1	-	-	-	-	-	-	-	-	
	87-15	120	7t	6 - 4	12	3	8	-1	-	-	-	-	-	-	-	-	
M4A4(76) Sherman	50-69?	94	6t	5 - 3	9	3	8	-1	-	-	-	-	-	-	-	-	76mm/L55 R (US)
	70?-86	99	6t	5 - 3	10	3	8	-1	-	-	-	-	-	-	-	-	
	87-15	108	6t	5 - 3	12	3	8	-1	-	-	-	-	-	-	-	-	
M4(105) Sherman	50-15	68	6t	5 - 3	6h	3	6	-1	-	-	-	112	hsc	-	-	-	105mm/L23 R (US)
M4A3(105) Sherman	50-15	68	6t	5 - 3	6h	3	6	-1	-	-	-	112	hsc	-	-	-	105mm/L23 R (US)
Sherman VC 17-pdr	50-15	99	6t	5 - 3	10	3	8	-1	-	-	-	-	-	-	-	-	76mm/L55 R 17-pdr (UK)
M24 Chaffee	50-15	79	8t	4 - 3	6	3	10	-1	-	-	-	-	-	-	-	-	75mm/L37 R (US)
M26	50-51	141	5t	7 A 5	9	3	12	-1	-	-	-	-	-	-	-	-	90mm/L50 R (US)
M46	50-55?	146	9t	7 A 5	9	3	12	-1	-	-	-	-	-	-	-	-	90mm/L50 R (US)
M47	51-54	145	8t	7 A 5	9	3	12	-1	-	-	-	-	-	-	-	-	90mm/L50 R (US)
	55-15	157	8t	7 A 5	9/10h	3	12	-1	-	-	-	-	-	i	-	-	
M47M (export only)	70?-15	155	7t	7 A 5	9/10h	3	12	-1	-	-	-	-	-	i	-	-	90mm/L50 R (US)
M41 Walker Bulldog	52-69?	93	12t	4 - 3	9	3	8	-1	-	-	-	-	-	i	-	-	76mm/L55 R (US)
	70?-86	98	12t	4 - 3	10	3	8	-1	-	-	-	-	-	i	-	-	
	87-15	107	12t	4 - 3	12	3	8	-1	-	-	-	-	-	i	-	-	
M41 Walker w/applique	87?-15	135	12t	5 D 4	12	3	8	-1	-	-	-	-	-	i	-	-	76mm/L55 R (US)
M41C Walker 90mm	60-79	111	12t	4 - 3	10h	3	10	-1	-	-	-	-	-	i	-	-	90mm/L33 SB (France)
	80-15	116	12t	4 - 3	11h	3	10	-1	-	-	-	-	-	i	-	-	
M103, M103A1	58-59	198	7t	9 A 5	10/11h	3	16	-1	-	-	-	-	-	-	-	-	120mm/L60 R (US)
	60-74	205	7t	9 A 5	10/12h	3	16	-1	-	-	-	-	-	-	-	-	
M103A2 (USMC only)	64-74	203	6t	9 A 5	10/12h	3	16	-1	-	-	-	-	-	-	-	-	120mm/L60 R (US)
M48 / M48A1	53-54	156	9t	7 B 5	9	3	12	-1	-	-	-	-	-	i	-	-	90mm/L50 R (US)
	55-15	162	9t	7 B 5	9/10h	3	12	-1	-	-	-	-	-	i	-	-	
M48A2	56-15	161	8t	7 B 5	9/10h	3	12	-1	-	-	-	-	-	n,i	-	-	90mm/L50 R (US)
M48A3	68-15	159	7t	7 B 5	9/10h	3	12	-1	-	-	-	-	-	n,i	-	-	90mm/L50 R (US)
M48A5	76-78	186	7t	7 B 5	11/11h	3	16	-1	-	-	-	-	-	n,i	-	-	105mm/L51 R (US)
	79-82	199	7t	7 B 5	13/12h	3	16	-1	-	-	-	-	-	n,i	-	-	
	83-15	205	7t	7 B 5	14	3	16	-1	-	-	-	-	-	n,i	-	-	

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Equip	Cap	Msl	Notes
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo				
M551 Sheridan	67-90	114	11ta	4 - 2	14h	2	10	+0	14h ²	1	10-30	-	-	s,i	-	u	Shillelagh; 152mm/L20 Launcher (US)
M551A1 Sheridan	72-90	126	11ta	4 - 2	14h	2	12	+0	14h ²	1	10-30	-	-	s,i	-	u	Shillelagh; 152mm/L20 Launcher (US)
M551A1 Sheridan	91-15	131	11ta	4 - 2	14h	2	12	+0	14h ²	1	10-30	-	-	s,t	-	u	
M60	61-65?	194	7t	8 A 5	11/11h	3	16	-1	-	-	-	-	-	n,i	-		105mm/L51 R (US)
M60A1	63-71	202	7t	9 - 6	11/11h	3	16	-1	-	-	-	-	-	n,i	-		105mm/L51 R (US)
M60A1	72-78	214	7t	9 - 6	11/11h	3	16	-1	-	-	-	-	-	s,n,i	-		
M60A1	79-82	227	7t	9 - 6	13/12h	3	16	-1	-	-	-	-	-	s,n,i	-		
M60A1	83-89	234	7t	9 - 6	14	3	16	-1	-	-	-	-	-	s,n,i	-		
M60A1	90-15	246	7t	9 C 6	14	3	16	-1	-	-	-	-	-	s,n,i	-		
M60A2	74-80	181	6t	9 - 6	14h	2	12	+0	14h ²	1	10-30	-	-	s,n,i	-	u	Shillelagh; 152mm/L20 Launcher (US)
M60A3	79-82	257	7t	9 - 6	13/12h	3	20	-1	-	-	-	-	-	s,n,t	-		105mm/L51 R (US)
M60A3	83-89	265	7t	9 - 6	14	3	20	-1	-	-	-	-	-	s,n,t	-		
M60A3	90-15	265	7t	9 - 6	14	3	20	-1	-	-	-	-	-	s,n,t	-		
M1	81-82	326	14t	12 C 8	13/12h	3	20	-1	-	-	-	-	-	ss,t,n	-		105mm/L51 R (US)
M1	83-84	334	14t	12 C 8	14	3	20	-1	-	-	-	-	-	ss,t,n	-		
M1 IP	85-89	343	14t	12 E 8	14	3	20	-1	-	-	-	-	-	ss,t,n	-		105mm/L51 R (US)
M1 IP	90-15	350	14t	12 E 8	15	3	20	-1	-	-	-	-	-	ss,t,n	-		
M1A1	86-89	373	14t	12 E 8	15	3	24	-1	-	-	-	-	-	ss,t,n	-		120mm/L44 SB (US)
M1A1	90-94	382	14t	12 E 8	16	3	24	-1	-	-	-	-	-	ss,t,n	-		
M1A1	95-00	390	14t	12 E 8	17	3	24	-1	-	-	-	-	-	ss,t,n	-		
M1A1	01-15	397	14t	12 E 8	18	3	24	-1	-	-	-	-	-	ss,t,n	-		
M1A1HA / M1A1HC	89	390	12t	14 D 9	15	3	24	-1	-	-	-	-	-	ss,t,n	-		120mm/L44 SB (US)
M1A1HA / M1A1HC	90-94	398	12t	14 D 9	16	3	24	-1	-	-	-	-	-	ss,t,n	-		
M1A1HA / M1A1HC	95-00	406	12t	14 D 9	17	3	24	-1	-	-	-	-	-	ss,t,n	-		
M1A1HA / M1A1HC	01-15	413	12t	14 D 9	18	3	24	-1	-	-	-	-	-	ss,t,n	-		
M1A1D	01-15	433	12t	14 D 9	18	3	24	-1	-	-	-	-	-	ss,2,n,v	-		120mm/L44 SB (US)
M1A2	93-94	419	12t	15 D 9	16	3	24	-1	-	-	-	-	-	ss,t,n,c	-		120mm/L44 SB (US)
M1A2	95-00	427	12t	15 D 9	17	3	24	-1	-	-	-	-	-	ss,t,n,c	-		
M1A2	01-15	434	12t	15 D 9	18	3	24	-1	-	-	-	-	-	ss,t,n,c	-		
M1A2 SEP	00	457	11t	16 D 9	17	3	24	-1	-	-	-	-	-	ss,2,n,c,v	-		120mm/L44 SB (US)
M1A2 SEP	01-15	465	11t	16 D 9	18	3	24	-1	-	-	-	-	-	ss,2,n,c,v	-		
M1A2 TUSK	07-15	465	11t	16 D 10	18	3	24	+0	-	-	-	-	-	ss,2,n,c,v	-		
M1A1 Export	93-15	390	14t	12 E 8	17	3	24	-1	-	-	-	-	-	ss,t,n	-		120mm/L44 SB (Germany)
M1A2 Export	96-15	397	14t	12 E 8	17	3	24	-1	-	-	-	-	-	ss,t,n,c	-		120mm/L44 SB (Germany)
M8 AGS Level 1	95-15	256	14tp	4 B 3	15	3	24	-1	-	-	-	-	-	ss,t,n	-		105mm/L51 R (US)
M8 AGS Level 2	95-15	330	14tp	9 D 6	15	3	24	-1	-	-	-	-	-	ss,t,n	-		105mm/L51 R (US)
M8 AGS Level 3	95-15	347	12t	10 F 7	15	3	24	-1	-	-	-	-	-	ss,t,n	-		105mm/L51 R (US)
M1128 Stryker MGS	07-15	335	9w	9 E 6	15	3	24	-1	-	-	-	-	-	ss,2,n	-		105mm/L51 R (US)

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire			
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
LVT-3C	50-54	15	8ta	1 - 0	-	1	6	-1	-	-	-	-	-	-	3	7.62mm MG
M39	50-53	23	14t	3 - 1	1	1	6	-1	-	-	-	-	-	0	1	12.7mm HMG
M75	53-54	20	9t	2 A 1	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
M59	54-65	19	7ta	2 A 1	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
LVTP-5	56-71	33	10ta	3 E 1	-	1	6	-1	-	-	-	-	-	-	4	7.62mm MG
M113, M113A1	61-15	22	9ta	2 C 1	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
M113A2	79-15	22	9ta	2 C 1	1	1	6	-1	-	-	-	-	-	n	1	12.7mm HMG
M113A3	87-15	26	11ta	3 C 1	1	1	6	-1	-	-	-	-	-	n	1	12.7mm HMG
AAV-7A1 (LVTP-7)	71-82	29	8ta	3 A 1	1	1	6	-1	-	-	-	-	-	i	3	12.7mm HMG
	83-86	29	8ta	3 A 2	1	1	6	-1	-	-	-	-	-	i	3	
	87-92	67	8ta	3 A 2	3he	3	8	0	-	-	-	-	-	i	3	40mm AGL
	93-98	96	6ta	4 F 4	3he	3	8	0	-	-	-	-	-	i	3	
	99-15	98	8ta	4 F 4	3he	3	8	0	-	-	-	-	-	i	3	
AIFV	76-81	105	9ta	5 C 4	3	4	12	0	-	-	-	-	-	n,i	1	25mm
	82-93	133	9ta	5 C 4	6	4	12	0	-	-	-	-	-	n,i	1	
	94-15	141	9ta	5 C 4	7	4	12	0	-	-	-	-	-	n,i	1	
M2, M2A1 Bradley	83	149	10ta	4 D 4	6	4	14	0	14h ²	1	1-38	-	-	s,t,n	1	ITOW; 25mm R (US)
	84-86	150	10ta	4 D 4	6	4	14	0	15h ²	1	1-38	-	-	s,t,n	1	TOW-2
	87-91	166	10ta	4 D 4	6	4	14	0	19h ²	1	1-38	-	-	s,t,n	1	TOW-2A
	92-94	150	10ta	4 D 4	6	4	14	0	15h ² †	1	1-38	-	-	s,t,n	1	TOW-2B
	95-15	169	10ta	4 D 4	7	4	16	0	15h ² †	1	1-38	-	-	s,t,n	1	
M2A2 Bradley	88-91	188	11t	6 C 5	6	4	14	0	19h ²	1	1-38	-	-	s,t,n	1	TOW-2A; 25mm R (US)
	92-94	172	11t	6 C 5	6	4	14	0	15h ² †	1	1-38	-	-	s,t,n	1	TOW-2B
	95-15	191	11t	6 C 5	7	4	16	0	15h ² †	1	1-38	-	-	s,t,n	1	
M2A2 Bradley ODS	96-15	193	11t	6 C 5	7	4	16	0	15h ² †	1	1-38	-	-	s,t,n,v	1	TOW-2B; 25mm R (US)
M2A3 Bradley	00-15	206	11t	6 C 5	7	4	16	0	15h ² †	1	1-38	-	-	s,2,n,c,v	1	TOW-2B; 25mm R (US)
M2A3 Bradley w/RA	00-15	243	9t	8 F 7	7	4	16	0	15h ² †	1	1-38	-	-	s,2,n,c,v	1	TOW-2B; 25mm R (US)
EFV (USMC)	15	171	8ta	5 E 4	8	4	14	0	-	-	-	-	-	t,n	1	30mm R (US)
Jeep	50-15	1	9wp	S	-	-	-	-	-	-	-	-	-	½		
LAV-150 w/HMG	63-15	15	7wa	1 - 1	1	1	6	-1	-	-	-	-	-	i	1	12.7mm HMG; Also LAV 100 & 200
LAV-150 w/MG	63-15	10	7wa	1 - 1	-	1	6	-1	-	-	-	-	-	i	1	7.62mm MG; Also LAV 100 & 200
LAV-300	82-15	15	8wa	1 - 1	1	1	6	-1	-	-	-	-	-	n,i	1	12.7mm HMG
LAV-300 w/90mm	82-15	77	8wa	1 - 1	11h	3	10	-1	-	-	-	-	-	n,i	-	90mm/L28-36 R (Belgium)
Ranger APC	78-15	6	9w	0 - 0	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG
Dragoon	82-15	10	8wa	1 - 1	-	1	6	-1	-	-	-	-	-	n,i	1	7.62mm MG

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire						
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
Dragoon 20	82-15	39	8wa	1 - 1	3	4	10	0	-	-	-	-	-	n,i	1	20mm
M998 HMMWV	85-15	1	9wp	s	-	-	-	-	-	-	-	-	-	n	½	
M998 HMMWV LMG	85-15	1	9wp	s	-	1	6	-1	-	-	-	-	-	n	½	7.62mm MG
M1025 HMMWV LMG	94?-15	5	9wp	0 - 0	-	1	6	-1	-	-	-	-	-	n	½	7.62mm MG
M1025 HMMWV HMG	94?-15	9	9wp	0 - 0	1	1	6	-1	-	-	-	-	-	n	½	12.7mm HMG
M1025 HMMWV AGL	94?-15	23	9wp	0 - 0	3he	3	8	0	-	-	-	-	-	n	½	40mm AGL
M1116 HMMWV	96-15	9	9wp	1 - 1	-	-	-	-	-	-	-	-	-	n	½	
M1114 HMMWV LMG	96-15	9	9wp	1 - 1	-	1	6	-1	-	-	-	-	-	n	½	7.62mm MG
M1114 HMMWV HMG	96-15	13	9wp	1 - 1	1	1	6	-1	-	-	-	-	-	n	½	12.7mm HMG
M1114 HMMWV AGL	96-15	27	9wp	1 - 1	3he	3	8	0	-	-	-	-	-	n	½	40mm AGL
LAV-25	84-94	96	9wa	2 - 1	6	4	12	0	-	-	-	-	-	s,t,n	1	25mm R (US)
	95-99	148	8wa	4 B 3	7	4	14	0	-	-	-	-	-	s,t,n	1	
	00-15	164	8wa	5 C 4	7	4	14	0	-	-	-	-	-	s,t,n	1	
LAV III	01-15	14	9wa	2 - 1	-	1	6	-1	-	-	-	-	-	n	1	7.62mm MG
M1126 Stryker ICV w/HMG	03	72	9w	6 C 4	1	1	20	-1	-	-	-	-	-	s,n,i	1	12.7mm HMG
	04-05	80	9w	6 E 4	1	1	20	-1	-	-	-	-	-	s,n,i	1	
	06-15	88	9w	6 F 4	1	1	20	-1	-	-	-	-	-	s,t,n	1	
M1126 Stryker ICV w/AGL	03	141	9w	6 C 4	3he	3	20	0	-	-	-	-	-	s,n,i	1	40mm AGL
	04-05	149	9w	6 E 4	3he	3	20	0	-	-	-	-	-	s,n,i	1	
	06-15	158	9w	6 F 4	3he	3	20	0	-	-	-	-	-	s,t,n	1	
M1117 ASV	03-15	103	7w	4 A 2	3he	3	20	0	-	-	-	-	-	s,t,n	-	40mm AGL
LAV-A2-25	08-15	199	8wa	6 F 4	7	4	16	0	-	-	-	-	-	s,t,n	1	25mm R (US)
M981 FIST-V FO veh.	79-81	16	9ta	2 C 1	-	1	6	-1	-	-	-	-	-	n,i	-	+1 to terrain save; FO vehicle
	82-15	16	9ta	2 C 1	-	1	6	-1	-	-	-	-	-	t,n	-	+1 to terrain save; FO vehicle
M1131 Stryker FO veh.	03	65	9w	6 C 4	1	1	20	-1	-	-	-	-	-	s,n,i	-	12.7mm HMG
	04-05	73	9w	6 E 4	1	1	20	-1	-	-	-	-	-	s,n,i	-	
	06-15	81	9w	6 F 4	1	1	20	-1	-	-	-	-	-	s,t,n	-	
M8 Greyhound	50-54	50	7w	3 - 1	5	3	8	-2	-	-	-	-	-	o	-	37mm/L53 R (US)
Jeep w/LMG	50-15	1	8wp	s	-	1	6	-1	-	-	-	-	-	½	7.62mm MG	
Jeep w/HMG	50-15	6	8wp	s	1	1	6	-1	-	-	-	-	-	½	12.7mm HMG	
M114	62-73	21	8tap	3 A 0	1	1	6	-1	-	-	-	-	-	-	-	12.7mm HMG
M114A2 (M139)	69-73	46	8tap	3 A 0	2	4	10	0	-	-	-	-	-	-	-	20mm
M113 ACAV	66-15	28	9ta	3 C 1	1	2	6	-1	-	-	-	-	-	-	-	12.7mm HMG
Dragoon 90mm	82-15	77	8wa	1 - 1	11h	3	10	-1	-	-	-	-	-	n,i	-	90mm/L28-36 R (Belgium)
Commando Scout	83-15	8	7w	1 - 0	-	1	6	-1	-	-	-	-	-	-	-	7.62mm MG

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire							
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	Notes
M3, M3A1 CFV	85-86	164	10ta	4 D 4	6	4	14	0	15h ²	1	1-38	-	-	s,t,n	-	u	TOW-2; 25mm R (US)
	87-91	182	10ta	4 D 4	6	4	14	0	19h ²	1	1-38	-	-	s,t,n	-	u	TOW-2A
	92-94	164	10ta	4 D 4	6	4	14	0	15h ² †	1	1-38	-	-	s,t,n	-	u	TOW-2B
	95-15	164	10ta	4 D 4	7	4	16	0	15h ² †	1	1-38	-	-	s,t,n	-	u	
M3A2 CFV	88-91	205	11t	6 C 5	6	4	14	0	19h ²	1	1-38	-	-	s,t,n	-	u	TOW-2A; 25mm R (US)
	92-94	186	11t	6 C 5	6	4	14	0	15h ² †	1	1-38	-	-	s,t,n	-	u	TOW-2B
	95-15	186	11t	6 C 5	7	4	16	0	15h ² †	1	1-38	-	-	s,t,n	-	u	
M3A2 CFV ODS	96-15	188	11t	6 C 5	7	4	16	0	15h ² †	1	1-38	-	-	s,t,n,v	-	u	TOW-2B; 25mm R (US)
M3A3 CFV	00-15	201	11t	6 C 5	7	4	16	0	15h ² †	1	1-38	-	-	s,2,n,c,v	-	u	TOW-2B; 25mm R (US)
M3A3 CFV w/RA	00-15	238	9t	8 F 7	7	4	16	0	15h ² †	1	1-38	-	-	s,2,n,c,v	-	u	TOW-2B; 25mm R (US)
M1127 Stryker RV w/HMG	03	73	9w	6 C 4	1	1	20	-1	-	-	-	-	-	s,2,n	-		12.7mm HMG
	04-05	81	9w	6 E 4	1	1	20	-1	-	-	-	-	-	s,2,n	-		
	06-15	86	9w	6 F 4	1	1	20	-1	-	-	-	-	-	s,2,n	-		
M1127 Stryker RV w/AGL	03	145	9w	6 C 4	3he	3	20	0	-	-	-	-	-	s,2,n	-		40mm AGL
	04-05	154	9w	6 E 4	3he	3	20	0	-	-	-	-	-	s,2,n	-		
	06-15	158	9w	6 F 4	3he	3	20	0	-	-	-	-	-	s,2,n	-		
LVT(A)5	50-54	35	7ta	3 - 2	4he	3	6	-1	-	-	-	-	-	0	-		75mm/L16 R (US)
Jeep w/75mm RR	50-75	11	8wp	s	8h	2	2	-1	-	-	-	-	-	-	-	-	75mm RR (US)
Jeep w/105mm RR	52-55	23	8wp	s	11h	3	4	-1	-	-	-	-	-	-	-	-	105mm RR (US)
Jeep w/106mm RR	55-94	37	8wp	s	11h	3	8	-1	-	-	-	-	-	-	-	-	106mm RR (US)
	95-15	50	8wp	s	14h	3	8	-1	-	-	-	-	-	-	-	-	
Jeep w/SS-11	60-64	22	8wp	s	-	1	6	-1	13h ¹	1	5-30	-	-	-	-	u	SS-11; 7.62mm MG
Jeep w/ENTAC	63-72	18	8wp	s	-	1	6	-1	14h ¹	1	4-20	-	-	-	-	u	ENTAC; 7.62mm MG
Jeep w/90mm RR	61-94	8	8wp	s	11h	1	3	-1	-	-	-	-	-	-	-	-	90mm RR (US)
M56 Scorpion SP ATG	53-54	65	14tp	0 - s	9	3	12	-1	-	-	-	-	-	0	-		90mm/L50 R (US)
	55-69	71	14tp	0 - s	9/10h	3	12	-1	-	-	-	-	-	0	-		
M50 Ontos	55-63	60	8tp	1 - 0	11h	3	8	-1	-	-	-	-	-	-	-	-	106mm RR (US)
M50A1 Ontos	64-69	62	10tp	1 - 0	11h	3	8	-1	-	-	-	-	-	-	-	-	106mm RR (US)
LVTH-6	57-71	77	10ta	3 E 1	8h	3	6	-1	-	-	-	112	hsc	-	-		105mm/L? R (US)
M113, M113A1 w/90mm RR	61-94	26	9ta	2 C 1	11h	1	3	-1	-	-	-	-	-	-	1		90mm RR (US)
M113, M113A1 w/106mm RR	61-94	91	9ta	2 C 1	11h	3	8	-1	-	-	-	-	-	-	1		106mm RR (US)
	95-15	104	9ta	2 C 1	14h	3	8	-1	-	-	-	-	-	-	1		
M113A2 w/106mm RR	79-94	91	9ta	2 C 1	11h	3	8	-1	-	-	-	-	-	n	1		106mm RR (US)
M113A3 w/106mm RR	87-94	104	11ta	3 C 1	11h	3	8	-1	-	-	-	-	-	n	1		106mm RR (US)
	95-15	117	11ta	3 C 1	14h	3	8	-1	-	-	-	-	-	n	1		

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	Notes
M113 TOW (M150)	70-75	95	9ta	2 C 1	-	1	6	-1	13h ²	1	1-30	-	-	n,i	-	u	TOW; 7.62mm MG
	76-79	110	9ta	2 C 1	-	1	6	-1	13h ²	1	1-38	-	-	n,i	-	u	TOW-ER
	80-81	115	9ta	2 C 1	-	1	6	-1	13h ²	1	1-38	-	-	t,n	-	u	TOW-ER
	82-83	120	9ta	2 C 1	-	1	6	-1	14h ²	1	1-38	-	-	t,n	-	u	ITOW
	84-86	125	9ta	2 C 1	-	1	6	-1	15h ²	1	1-38	-	-	t,n	-	u	TOW-2
	87-91	142	9ta	2 C 1	-	1	6	-1	19h ²	1	1-38	-	-	t,n	-	u	TOW-2A
	92-15	125	9ta	2 C 1	-	1	6	-1	15h ² †	1	1-38	-	-	t,n	-	u	TOW-2B
Jeep w/TOW	70-75	47	8wp	s	-	1	6	-1	13h ²	1	1-30	-	-	i	-	u	TOW; 7.62mm MG
	76-79	62	8wp	s	-	1	6	-1	13h ²	1	1-38	-	-	i	-	u	TOW-ER
	80-81	62	8wp	s	-	1	6	-1	13h ²	1	1-38	-	-	i	-	u	TOW-ER
	82-83	71	8wp	s	-	1	6	-1	14h ²	1	1-38	-	-	t	-	u	ITOW
	84-86	75	8wp	s	-	1	6	-1	15h ²	1	1-38	-	-	t	-	u	TOW-2
	87-91	93	8wp	s	-	1	6	-1	19h ²	1	1-38	-	-	t	-	u	TOW-2A
	92-15	75	8wp	s	-	1	6	-1	15h ² †	1	1-38	-	-	t	-	u	TOW-2B
M901 ITV	79	233	9ta	2 C 1	-	1	6	-1	13h ²	2	1-38	-	-	n,i	-	u	+1 to terrain save; TOW-ER; 7.62mm MG
	80-81	233	9ta	2 C 1	-	1	6	-1	13h ²	2	1-38	-	-	n,i	-	u	+1 to terrain save; TOW-ER
	82-83	251	9ta	2 C 1	-	1	6	-1	14h ²	2	1-38	-	-	t,n	-	u	+1 to terrain save; ITOW
	84-86	260	9ta	2 C 1	-	1	6	-1	15h ²	2	1-38	-	-	t,n	-	u	+1 to terrain save; TOW-2
	87-91	296	9ta	2 C 1	-	1	6	-1	19h ²	2	1-38	-	-	t,n	-	u	+1 to terrain save; TOW-2A
	92-15	260	9ta	2 C 1	-	1	6	-1	15h ² †	2	1-38	-	-	t,n	-	u	+1 to terrain save; TOW-2B
	88-91	284	9wa	2 - 1	-	1	6	-1	19h ²	2	1-38	-	-	t,n	-	u	+1 to terrain save; TOW-2A; 7.62mm MG
LAV-AT	92-94	248	9wa	2 - 1	-	1	6	-1	15h ² †	2	1-38	-	-	t,n	-	u	+1 to terrain save; TOW-2B
	95-99	278	8wa	4 B 3	-	1	6	-1	15h ² †	2	1-38	-	-	t,n	-	u	+1 to terrain save
	00-15	294	8wa	5 C 4	-	1	6	-1	15h ² †	2	1-38	-	-	t,n	-	u	+1 to terrain save
	08-15	183	8wa	6 F 4	-	1	16	-1	15h ² †	1	1-38	-	-	t,n	-	u	+1 to terrain save; TOW-2B
M220 TOW HMMWV	90-91	65	9wap	s	-	1	6	-1	19h ²	1	1-38	-	-	n	-	u	TOW-2A; 7.62mm MG
	92-15	50	9wap	s	-	1	6	-1	15h ² †	1	1-38	-	-	n	-	u	TOW-2B
M966 TOW HMMWV	94?-15	62	9wap	0 - 0	-	1	6	-1	15h ² †	1	1-38	-	-	n	-	u	TOW-2B; 7.62mm MG
M1121 TOW HMMWV	96-15	73	9wap	1 - 1	-	1	6	-1	15h ² †	1	1-38	-	-	n	-	u	TOW-2B; 7.62mm MG
M1134 Stryker AT	03	164	9w	6 C 4	-	1	20	-1	15h ² †	1	1-38	-	-	s,n,i	1	u	TOW-2B; 7.62mm MG
	04-05	172	9w	6 E 4	-	1	20	-1	15h ² †	1	1-38	-	-	s,n,i	1	u	
	06-15	182	9w	6 F 4	-	1	20	-1	15h ² †	1	1-38	-	-	s,t,n	1	u	
M20 75mm RR	50-75	10	4x	s	8h	2	2	-1	-	-	-	-	-	-	½		75mm RR (US)
M27 105mm RR	52-65?	21	0x	s	11h	3	4	-1	-	-	-	-	-	½		105mm RR (US)	
M40 106mm RR	55-94	32	0x	s	11h	3	8	-1	-	-	-	-	-	½		106mm RR (US)	
	95-15	44	0x	s	14h	3	8	-1	-	-	-	-	-	½			
M16 MGMC	50-58	19	8ht	1 - 0	1	2 ²	12 ²	-1	-	-	-	-	0	-		12.7mm HMG AAx4	
M19 GMC	50-54	94	8t	3 - 3	4	4 ²	28 ²	-1	-	-	-	-	0	-		40mm/L56 R AAx2 (Sweden)	
M42 Duster	51-15	90	11t	2 - 0	4	4 ²	28 ²	0	-	-	-	-	i,o	-		40mm/L56 R AAx2 (Sweden)	
M35 w/Quad AAG	63-73	12	7w	s	1	2 ²	12 ²	-1	-	-	-	-	-	-	-	12.7mm HMG AAx4	

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire							
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	Notes
M163 Vulcan	63-15	57	8ta	3 c 1	2	2 [@]	20 [@]	0	-	-	-	-	-	i	-	20mm	
Chaparral (on M730)	63-77	36	8ta	0 - 0	-	-	-	-	2 ^R	1	2-40	-	-	i	-	u	MIM-72A
	78-83	68	8ta	0 - 0	-	-	-	-	2 ^A	1	2-40	-	-	i	-	u	MIM-72C
	84-87	68	8ta	0 - 0	-	-	-	-	2 ^A	1	2-40	-	-	t	-	u	MIM-72C
	88-98	68	8ta	0 - 0	-	-	-	-	2 ^A	1	2-40	-	-	n,t	-	u	MIM-72C
XMIM-115 Roland	85-88	67	7w	s	-	-	-	-	2 ^A	1	5-42	-	-	n,i	-	u	Roland
Avenger	91-15	56	9wap	s	1	1	6	-1	2 ^A	1	2-32	-	-	s,t	-	u	FIM-92 Stinger; 12.7mm HMG
LAV-AD	98-99	155	9wa	4 B 3	3	3 [@]	24 [@]	0	2 ^A	1	2-32	-	-	s,t,n	-	u	FIM-92 Stinger; 25mm
	00-15	172	9wa	5 C 4	3	3 [@]	24 [@]	0	2 ^A	1	2-32	-	-	s,t,n	-	u	
M6 Bradley Linebacker	98-15	234	10ta	6 C 5	7	4	16	0	2 ^A	1	2-32	-	-	s,t,n	-	u	FIM-92; 25mm R (US)
M55 Quad AAG	50-73	11	0x	s	1	2 [@]	12 [@]	-1	-	-	-	-	-	-	½		12.7mm HMG AAx4
M167 Vulcan	63-15	19	0x	s	2	2 [@]	20 [@]	0	-	-	-	-	-	i	1		20mm
Chaparral (Towed)	63-77	32	0x	s	-	-	-	-	2 ^R	1	2-40	-	-	i	1	u	MIM-72A
	78-83	64	0x	s	-	-	-	-	2 ^A	1	2-40	-	-	i	1	u	MIM-72C
	84-98	64	0x	s	-	-	-	-	2 ^A	1	2-40	-	-	t	1	u	MIM-72C
M48 AVLB	58-15	48	7t	8 A 4	-	-	-	-	-	-	-	-	-	i	-		
M67 Zippo	60-73	61	8t	7 B 5	4he	3	1	+1	-	-	-	-	-	n,i	-		Flamethrower
M132 Zippo	64-15	22	10ta	2 C 1	4he	3	1	+1	-	-	-	-	-	-	-		Flamethrower
M728 CEV	65-00	130	7t	8 A 6	7he	2	12	+0	-	-	-	-	-	n,i	-		165mm DG (UK)
M60 AVLB	87-15	48	7t	8 A 4	-	-	-	-	-	-	-	-	-	n,i	-		
M1059 Smoke Gen.	88-15	22	9ta	2 C 1	1	1	6	-1	-	-	-	-	-	n	1		12.7mm HMG
M1059A3 Smoke Gen.	96-15	26	11a	3 C 1	1	1	6	-1	-	-	-	-	-	n	1		12.7mm HMG
M104 Wolverine AVLB	03-15	138	11t	13 E 6	-	-	-	-	-	-	-	-	-	2,n	-		
M1132 Engineer SV	03	72	9w	6 C 4	1	1	20	-1	-	-	-	-	-	s,n,i	1		12.7mm HMG
	04-05	80	9w	6 E 4	1	1	20	-1	-	-	-	-	-	s,n,i	1		
	06-15	88	9w	6 F 4	1	1	20	-1	-	-	-	-	-	s,t,n	1		
Mk 19 AGL	67-15	17	3x	s	3he	3	8	0	-	-	-	-	-	-	½		40mm AGL
Venezuela																	
AMX-30 upgraded	90-15	226	10t	8 A 4	11h	3	20	-1	-	-	-	-	-	n,t	-		105mm/L56 R (France)
Generic																	
Bulldozer	50-15	15	7t	3 - s	-	-	-	-	-	-	-	-	-	-	-	-	12.7mm HMG
Tracked APC	61-15	18	9ta	2 - 1	1	1	6	-1	-	-	-	-	-	-	1		12.7mm HMG
Wheeled APC	60-15	15	9wa	1 - 0	1	1	6	-1	-	-	-	-	-	n,i	1		12.7mm HMG
Very Light Truck	50-15	1	9wp	s	-	-	-	-	-	-	-	-	-	-	½		i.e., Jeep or GAZ-69
Light Truck	50-15	2	8w	s	-	-	-	-	-	-	-	-	-	-	1		

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire			
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
Light Truck w/MG	50-15	2	8w	s	-	1	6	-1	-	-	-	-	-	-	1	7.62mm MG
Light Truck w/HMG	50-15	7	8w	s	1	1	6	-1	-	-	-	-	-	-	1	12.7mm HMG
Medium Truck	50-15	5	7w	s	-	-	-	-	-	-	-	-	-	-	2	
Medium Truck w/MG	50-15	5	7w	s	-	1	6	-1	-	-	-	-	-	-	2	7.62mm MG
Medium Truck w/HMG	50-15	9	7w	s	1	1	6	-1	-	-	-	-	-	-	2	12.7mm HMG
Heavy Truck	50-15	7	7w	s	-	-	-	-	-	-	-	-	-	-	3	
Jeep	50-15	1	9wp	s	-	-	-	-	-	-	-	-	-	-	½	
Jeep w/LMG	50-15	1	8wp	s	-	1	6	-1	-	-	-	-	-	-	½	7.62mm MG
Jeep w/HMG	50-15	6	8wp	s	1	1	6	-1	-	-	-	-	-	-	½	12.7mm HMG
Jeep w/106mm RR	55-94	37	8wp	s	11h	3	8	-1	-	-	-	-	-	-	-	106mm RR (US)
	95-15	50	8wp	s	14h	3	8	-1	-	-	-	-	-	-	-	
Jeep w/TOW	70-75	47	8wp	s	-	1	6	-1	13h ²	1	1-30	-	-	i	-	u TOW; 7.62mm MG
	76-79	62	8wp	s	-	1	6	-1	13h ²	1	1-38	-	-	i	-	u TOW-ER
	80-81	66	8wp	s	-	1	6	-1	13h ²	1	1-38	-	-	t	-	u TOW-ER
	82-83	71	8wp	s	-	1	6	-1	14h ²	1	1-38	-	-	t	-	u ITOW
	84-86	75	8wp	s	-	1	6	-1	15h ²	1	1-38	-	-	t	-	u TOW-2
	87-91	93	8wp	s	-	1	6	-1	19h ²	1	1-38	-	-	t	-	u TOW-2A
	92-15	75	8wp	s	-	1	6	-1	15h ² t	1	1-38	-	-	t	-	u TOW-2B
Jeep w/Milan	75-84	29	8wp	s	-	1	6	-1	14h ²	1	1-20	-	-	-	-	u Milan; 7.62mm MG
	85-15	40	8wp	s	-	1	6	-1	17h ²	1	1-20	-	-	t	-	u Milan 2/3
Jeep w/SS-11	56-15	22	8wp	s	-	1	6	-1	13h ¹	1	5-30	-	-	-	-	u SS-11; 7.62mm MG
Jeep w/ENTAC	57-15	18	8wp	s	-	1	6	-1	14h ¹	1	4-20	-	-	-	-	u ENTAC; 7.62mm MG
57mm AT Gun	50-15	28	0x	s	9	3	8	-2	-	-	-	-	-	f	1	57mm/L50 R 6-pdr (UK)
76mm AT Gun	50-15	29	0x	s	10	3	8	-1	-	-	-	-	-	f	1	76mm/L55 R 17-pdr (UK)
85mm AT Gun	50-59	30	0x	s	8	3	10	-1	-	-	-	-	-	f	1	85mm/L55 R ZIS-S53(Russia)
	60-69	33	0x	s	9	3	10	-1	-	-	-	-	-	f	1	
	70-15	38	0x	s	9/10h	3	10	-1	-	-	-	-	-	f	1	
12.7mm AAG	50-15	8	4x	s	1	1 ²	12 ²	-1	-	-	-	-	-	½	12.7mm HMG AA	
Quad MG AA Gun	44-15	11	0x	s	1	2 ²	12 ²	-1	-	-	-	-	-	1	12.7mm HMG AAx4	
20mm AA Gun	50-15	21	0x	s	3	2 ²	20 ²	0	-	-	-	-	-	1	20mm AA	
Twin 20mm AA Gun	50-15	26	0x	s	3	4 ²	20 ²	0	-	-	-	-	-	1	20mm AAx2	
Twin 30mm AA Gun	50-15	37	0x	s	3	8 ²	24 ²	0	-	-	-	-	-	1	30mm AAx2	
Twin 35mm AA Gun	50-15	75	0x	s	7	4 ²	28 ²	0	-	-	-	-	-	1	35mm AAx2	
Towed 40mm AA Gun	50-15	29	0x	s	4	2 ²	28 ²	0	-	-	-	-	-	1	40mm AA	

Move Notes:

- t Tracked
- w Wheeled
- ht Half-tracked
- a Amphibious
- x Towed
- p Airmobile
- s Skis
- n Helicopter (nap of earth move rating)

Armor Notes:

- s Soft vehicle, or soft vehicle facing
- no armor modifier vs. h-class weapons
- A +1 armor modifier vs. h-class weapons
- B +2 armor modifier vs. h-class weapons
- C +3 armor modifier vs. h-class weapons
- D +4 armor modifier vs. h-class weapons
- E +5 armor modifier vs. h-class weapons
- F +6 armor modifier vs. h-class weapons

Gun Notes:

- h h-class
- he he-class
- @ Antiaircraft

Missile Notes:

- 1 1st generation missile
- 2 2nd generation missile
- 3 3rd generation missile
- † Top-attack missile
- u Has unlimited missile ammo
- A All-aspect surface-to-air missile
- R Rear-aspect surface-to-air missile

Ind Fire Ammo Notes:

- h Conventional HE ammo
- s Smoke (both normal and incendiary)
- c Chemical
- i ICM (improved conventional munitions)
- l Laser-guided projectiles
- g GPS-guided projectiles
- m Artillery delivered mines

Equipment Notes:

- s Weapon stabilization
- ss Advanced weapon stabilization
- t 1st generation thermal sights
- 2 2nd generation thermal sights
- i Infrared or image intensification sights
- n NBC system
- c CTV
- v IVIS
- o Open-topped vehicle
- f Limited gun traverse - forward firing
- r Limited gun traverse - rearward firing
- d smoke dischargers (pre-1950 only)

F.2 Artillery Point Costs, 1950 Onward

Artillery has two point values, one for direct fire and one for indirect fire. Select which one to use based on how it is being employed in the scenario. Towed artillery used for indirect fire does not pay additional points to get its prime movers, but its prime movers cannot be used to transport other stands.

F.2.1 Guns, and Howitzers

For guns and howitzers, the direct fire point value is the point value listed in the Artillery Data Chart. For the indirect fire (usually off-table) point value, use the following tables to get the base point value.

Caliber	Artillery Type		
	Self-propelled Support Group	Towed Support Group	Battalion Mortar Stand
30-69mm	18	14	11
70-89mm	34	27	18
90-119mm	42	32	20
120-139mm	98	78	52
140-169mm HE only	120	89	55
170+ mm HE only	212	168	129
140-169mm HE + ICM	178	143	129
170+ mm HE + ICM	216	171	137

When you have the base point value, use the following equation to get the final point value.

$$\text{Final PV} = \text{Base PV} \times \text{Accuracy Num Mod} \times \text{Avail Mod}$$

where the Accuracy Number Modifier is:

- 1.22 for a 2+ artillery accuracy number
- 1.11 for a 3+ artillery accuracy number
- 1.00 for a 4+ artillery accuracy number
- 0.88 for a 5+ artillery accuracy number
- 0.77 for a 6+ artillery accuracy number

and the Availability Modifier is:

- 1.67 for a +2 availability modifier
- 1.33 for a +1 availability modifier
- 1.00 for a 0 availability modifier (the normal case)
- 0.67 for a -1 availability modifier
- 0.33 for a -2 availability modifier

F.2.2 Mortars

For mortars, if on-table, compute their direct fire point value (i.e., the vehicle value for SP mortars, zero for towed mortars) and add their indirect fire point values (as computed above for guns and howitzers). For off-table mortars, simply use their indirect fire point value.

F.2.3 Multiple Rocket Launchers

For multiple rocket launchers (MRLs), you need the classification of the system: Light (Lt), Medium (Med), Heavy (Hvy), or Very Heavy (Vry Hvy). You'll also need the number of fire units. This table gives the point cost for *1 fire unit from 1 stand*. You'll need to total the cost of the fire units for each stand.

Point Cost	Lt HE	Med HE	Hvy HE	Vry Hvy HE	Hvy ICM	Vry Hvy ICM	Mines
1 Fire Unit	2	4	23	35	28	103	AP: 156 AT: 380 Mixed: 496

Gun example: a 1980s British Abbot regiment has an accuracy number of 3+ and availability modifier of +2. It is 105mm self-propelled, so the base cost of the regiment is 42 points. The multiplier for the accuracy number is 1.11, and the multiplier for the availability modifier is 1.67. So $42 \times 1.11 \times 1.67 = 77.855$ which rounds up to 78 points for the regiment.

MRL example: A mid-1980s U.S. M270 MLRS battery has two stands, is very heavy and has 2 fire units of ICM per stand. Cost for very heavy ICM is 103 points, so cost for the battery is $103 \times 2 \times 2 = 412$ points.

F.3 Artillery Data Chart, 1950 Onward

See end of chart for Generic vehicles and guns, and for explanation of notations.

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----				Indirect Fire				Notes
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl	
Australia																	
M125AS3 AM	08-15	46	11t	5 C 4	-	-	-	-	-	-	-	56	hs	n,i	-	81mm Mtr (US)	
Austria																	
GHN-45 155mm Gun	82?-15	21	2wx	s	7he	2	8	+0	-	-	-	300	hs	f	1	155mm/L45 R (Austria)	
Brazil																	
ASTROS II w/SS-30	83-15	varies	7w	s	-	-	-	-	-	-	-	90-300	h	f	-	Med, 4 fire units	
ASTROS II w/SS-40	83-15	varies	7w	s	-	-	-	-	-	-	-	150-350	him	f	-	Hvy, 2 fire units	
ASTROS II w/SS-60	83-15	varies	7w	s	-	-	-	-	-	-	-	200-600	him	f	-	Vry Hvy, 1 fire unit	
ASTROS II w/SS-80	83-15	varies	7w	s	-	-	-	-	-	-	-	220-900	him	f	-	Vry Hvy, 1 fire unit	
China																	
Type 54 SP 122mm How	85-15	22	8t	s	7h	3	6	-1	-	-	-	118	hsc	f	-	122mm/L23 R (Russia)	
Type 70-I SP How	70-15	22	8t	s	7h	3	6	-1	-	-	-	118	hsc	f	-	122mm/L23 R (Russia)	
Type 83 SP 152mm How	84?-94 95-15	31 31	8t 8t	1 - 0 1 - 0	8 8	2	8	+0	-	-	-	172	h	-	-	152mm/L29 R (China)	
PLZ45 SP 155mm Gun	88?-15	30	7t	1 A 1	7he	2	8	+0	-	-	-	300	hs	n	-	155mm/L45 R (China)	
PLZ89 SP 155mm Gun	89?-15	67	7t	1 A 1	12h	3	8	-1	-	-	-	153	hs	n	-	122mm/L35 R (China)	
PLZ05 SP 155mm Gun	07?-15	42	10t	2 - 1	7he	2	8	+0	-	-	-	247	hl	n,i	-	152mm/L52 R (China)	
Type 54-I 122mm How	54-15	21	0x	s	7h	3	6	-1	-	-	-	118	hsc	f	1	122mm/L23 R (Russia)	
Type 59 130mm FG	59-15	46	0x	s	11	3	10	-1	-	-	-	275	hs	f,i	1	130mm/L52 R (Russia)	
Type 66 152mm How	66-94 95-15	22 22	0x 0x	s s	8 8	2	8	+0	-	-	-	172	h	f	1	152mm/L29 R (China)	
f	-	-	-	-	-	-	-	-	-	-	-	172	hl	f	1		
Type 86 (W86)	86-15	36	0x	s	12h	3	8	-1	-	-	-	153	hs	-	1	122mm/L35 R (China)	
Type 83 152mm Gun	88?-15	20	0x	s	7he	2	8	+0	-	-	-	300	hs	f	1	152mm/L56 R (China)	
PLL01 155mm Gun	88?-15	21	2wx	s	7he	2	8	+0	-	-	-	300	hs	-	1	155mm/L45 R (China)	
YW381 SP Mtr (export)	70-15 84-15	58 59	10ta 12ta	0 B 0 0 B 0	-	-	-	-	-	-	-	57 77	hs hs	-	-	120mm Mtr (China)	
YW304 SP Mtr (export)	70-15 84-15	24 25	10ta 12ta	0 B 0 0 B 0	-	-	-	-	-	-	-	30 47	hs hs	-	-	82mm Mtr (China)	
PLL05 SP 120mm Gun-Mtr	08-15	61	8wa	2 - 0	13h	2	8	0	-	-	-	88	hs	-	-	120mm Gun-Mtr (China)	
120mm Mtr	50-86 87-15	52 52	2x 2x	s s	-	-	-	-	-	-	-	57 77	hs hs	-	½ ½	120mm Mtr (China)	

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Notes	
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap
82mm Mtr	50-83	18	4x	s	-	-	-	-	-	-	30	hs	-	½	82mm Mtr (China)
	84-15	18	4x	s	-	-	-	-	-	-	47	hs	-	½	
100mm Lt Mtr	71-88	20	2x	s	-	-	-	-	-	-	47	hs	-	½	100mm Mtr (China)
	89-15	20	2x	s	-	-	-	-	-	-	64	hs	-	½	
82mm AutoMtr	00-15	18	1x	s	-	-	-	-	-	-	42	hs	-	1	82mm AutoMtr (China)
Type 63 MRL	63-15	varies	0x	s	-	-	-	-	-	-	21-85	hs	f	1	Light, 2 fire units
Type 70 MRL	71?-15	varies	10ta	s	-	-	-	-	-	-	25-100	h	-	-	Med, 2 fire units
Type 82 MRL	81-15	varies	8w	s	-	-	-	-	-	-	25-100	h	f	-	Med, 2 fire units
Type 81 MRL	82-15	varies	8w	s	-	-	-	-	-	-	50-200	hsc	f	-	Med, 4 fire units
Type 83 MRL	83-15	varies	7t	s	-	-	-	-	-	-	200-400	h	f	-	Med, 4 fire units
Type 89 MRL	90-15	varies	8t	s	-	-	-	-	-	-	50-300	hscim	f	-	Med, 4 fire units
A-100 MRL	01-15	varies	8w	s	-	-	-	-	-	-	400-850	i	-	-	Vry Hvy, 2 fire units
PHL03 MRL	04-15	varies	8w	s	-	-	-	-	-	-	220-900	hi	f	-	Vry Hvy, 2 fire units
Czechoslovakia															
DANA (ShKh-77)	81-15	55	8w	1 - 1	15h	2	8	+0	-	-	185	hs	f,n	-	152mm/L? R (Czech)
RM-70 MRL	72-94	varies	7w	s	-	-	-	-	-	-	50-200	hsc	f	-	Med, 4 fire units
	95-15	varies	7w	s	-	-	-	-	-	-	50-200	hscim	f	-	
France															
Mk 61 SP 105mm How	57?-88?	40	7t	1 - 0	10h	3	6	-1	-	-	150	hs	f	-	105mm/L? (France)
MK F3 SP 155mm Gun	65?-89?	21	7t	s	7he	2	8	+0	-	-	200	hs	f	-	155mm/L33 R (France)
GCT SP 155mm Gun	77-79	110	8t	8 A 4	7he	2	8	+0	-	-	235	hs	n	-	155mm/L40 R (France)
	80-15	110	8t	8 A 4	7he	2	8	+0	-	-	235	hsim	n	-	
CAESAR	05-15	26	7w	s	7he	3	8	+0	-	-	300	hsim	-	-	155mm/L52 R (France)
OB-155-50 BF	50-15	17	0x	s	7he	2	6	+0	-	-	180	hs	f	1	155mm/L22 R (France)
TR 155mm Gun	89-15	20	0x	s	7he	2	8	+0	-	-	235	hsim	f	1	155mm/L40 R (France)
81mm Mtr	50-61	18	4x	s	-	-	-	-	-	-	28	hs	-	½	81mm Mtr (France)
	62-15	18	4x	s	-	-	-	-	-	-	52	hs	-	½	
120mm Mtr	61?-15	52	1x	s	-	-	-	-	-	-	81	hs	-	½	120mm Mtr (France)
Finland															
AMV AMOS	08-15	123	9wa	4 - 3	13h	3	10	-	-	-	100	hs	n,i	-	120mm/L30 GMtr (Finland)
M1940 120mm Mtr	50-15	52	2x	s	-	-	-	-	-	-	65	hs	-	½	120mm Mtr (Finland)
Germany															
PzH 2000	98-15	147	9t	9 A 6	7he	3	8	+0	-	-	300	hsim	t,n	-	155mm/L52 R (Germany)
PzMrs Kurz	60-69	27	10t	1 A 0	-	-	-	-	-	-	45	hs	n,i	-	81mm Mtr (US)

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
SPz 52-3 SP 120mm Mtr	58-69	71	7t	4 - 2	-	-	-	-	-	-	-	65	hs	-	-	120mm Mtr (Finland)
Panzermörser SP 120mm Mtr	69-78	67	9ta	2 c 1	-	-	-	-	-	-	-	65	hs	-	-	120mm Mtr (Finland)
	79-15	67	9ta	2 c 1	-	-	-	-	-	-	-	65	hs	n	-	
Kraka SP 120mm Mtr	74-89?	52	8wp	s	-	-	-	-	-	-	-	65	hs	-	-	120mm Mtr (Finland)
LARS / LARS II MRL	70-79	varies	8w	s	-	-	-	-	-	-	-	35-140	hs	-	-	Med, 4 fire units
	80-15	varies	8w	s	-	-	-	-	-	-	-	35-140	hsim	-	-	
International																
FH-70	78-15	21	2wx	s	7he	2	8	+0	-	-	-	247	hs	-	1	155mm/L38 R (Interntl.)
Archer	10-15	25	7w	0 - 0	7he	2	8	+0	-	-	-	247	ghi	-	-	155mm Excalibur (US)
Iran																
Fajr-3 MRL	91-15	varies	8w	s	-	-	-	-	-	-	-	110-430	h	-	-	Hvy, 2 fire units
Israel																
M-50	63-15	25	6t	1 - 1	7he	2	6	+0	-	-	-	180	hs	f,o	-	155mm/L22 R (France)
L-33	68-15	28	5t	1 - 1	7he	2	8	+0	-	-	-	210	hs	f	-	155mm/L33 R (Israel)
ATMOS 2000	07-15	50	7w	2 - 0	7he	3	8	+0	-	-	-	300	hsim	f	-	155mm/L52 R (Israel)
M-68 155mm Gun	72-15	20	0x	s	7he	2	8	+0	-	-	-	210	hs	f	1	155mm/L33 R (Israel)
M-71 155mm Gun	74-15	20	0x	s	7he	2	8	+0	-	-	-	235	hs	f	1	155mm/L39 R (Israel)
Makmat SP 120mm Mtr	60-15	60	8ht	1 - 0	-	-	-	-	-	-	-	65	hs	f,o	-	120mm Mtr (Israel)
Makmat SP 160mm Mtr	68-15	62	6t	1 - 1	-	-	-	-	-	-	-	96	hs	f,o	-	160mm Mtr (Israel)
K-5 120mm Lt Mtr	?-15	52	2x	s	-	-	-	-	-	-	-	50	hs	-	½	120mm Lt Mtr (Israel)
K-6 120mm Lt Mtr	?-15	52	2x	s	-	-	-	-	-	-	-	72	hs	-	½	120mm Lt Mtr (Israel)
M-65 120mm Mtr	?-15	52	2x	s	-	-	-	-	-	-	-	65	hs	-	½	120mm Mtr (Israel)
A-7 120mm Mtr	?-15	52	2x	s	-	-	-	-	-	-	-	95	hs	-	½	120mm Hvy Mtr (Israel)
M-66 160mm Mtr	?-15	55	0x	s	-	-	-	-	-	-	-	96	hs	f	1	160mm Mtr (Israel)
IMI MRL	72?-15	varies	6t	s	-	-	-	-	-	-	-	100-400	hi	-	-	Vry Hvy, 1 fire unit
Italy																
VBM Freccia SP Mtr	08?-15	116	9w	8 D 6	-	-	20	-	-	-	-	57	hs	n,t	-	120mm Mtr
M56 105mm Pack How	57-15	22	0x	s	8h	3	6	-1	-	-	-	105	hs	f	1	105mm/L14 R (Italy)
Japan																
Type 74 SP 105mm How	74-99	84	9t	3 A 2	8h	3	10	-1	-	-	-	145	hs	-	-	105mm/L30 R (Japan)
Type 75 155mm SP Gun	76-15	29	8t	1 - 0	7he	2	8	+0	-	-	-	190	hs	n	-	155mm/L30 R (Japan)
Type 99 155mm SP Gun	99-15	37	7t	2 - 0	7he	2	8	+0	-	-	-	300	hs	-	-	155mm/L52 R (Japan)
Type 60 SP 81mm Mtr	60?-86	35	9t	3 A 1	-	-	-	-	-	-	-	45	hs	-	-	81mm Mtr (US)

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire				Notes		
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
	87-96	35	9t	3 A 1	-	-	-	-	-	-	-	56	hs	-	-	
Type 60 SP 107mm Mtr	60?-96	37	8t	3 A 1	-	-	-	-	-	-	-	68	hs	-	-	107mm Mtr (Japan)
Type 96 SP 120mm Mtr	96-15	37	8t	3 A 1	-	-	-	-	-	-	-	81	hs	-	-	120mm Mtr (Japan)
Type 67 MRL	68-15	varies	7w	s	-	-	-	-	-	-	-	70-280	h	-	-	Vry Hvy, 1 fire unit
Type 75 MRL	76-15	varies	11ta	3 A 2	-	-	-	-	-	-	-	36-145	h	i	-	Med, 4 fire units
North Korea (DPRK)																
M1975 SP 130mm FG	75?-15	70	6t	1 - 0	11	3	10	-1	-	-	-	275	hs	f	-	130mm/L52 R (Russia)
M1977 SP How	77?-15	84	6t	3 - 2	12h	3	8	-1	-	-	-	153	hsc	o	-	122mm/L35 R (Russia)
M1978/89 KOKSAN	78?-15	28	6t	s	12he	2	8	+0	-	-	-	400	h	f	-	170mm/L? R (N.Korea)
M1981 SP How	81?-15	22	8t	s	7h	3	6	-1	-	-	-	118	hsc	f	-	122mm/L23 R (Russia)
M1991 SP 122mm How	91?-15	60	8t	2 - 0	10	2	10	-1	-	-	-	240	hsc	-	-	122mm/L46 D-74 R (Russia)
M1991 SP 122mm How	91?-15	76	8t	2 - 0	12h	3	8	-1	-	-	-	153	hsc	-	-	122mm/L35 R (Russia)
M1991 SP 130mm FG	91?-15	84	8t	2 - 0	11	3	10	-1	-	-	-	275	hs	-	-	130mm/L52 R (Russia)
M1991 SP 152mm How	91?-15	42	8t	2 - 0	8	2	8	+0	-	-	-	168	hsc	-	-	152mm/L28 R (Russia)
M1985 152mm FG	85?-15	20	0x	s	7he	2	8	+0	-	-	-	300	hs	f	1	152mm/L56 R (China)
BM-11 MRL	?-15	varies	8w	s	-	-	-	-	-	-	-	50-200	hsc	f	-	Med, 4 fire units
M1985 122mm MRL	85?-15	varies	8w	s	-	-	-	-	-	-	-	50-200	hsc	f	-	Med, 4 fire units
M1985 240mm MRL	85?-15	varies	8w	s	-	-	-	-	-	-	-	110-430	h	f	-	Hvy, 2 fire units
M1991 MRL	91?-15	varies	8w	s	-	-	-	-	-	-	-	110-430	h	f	-	Hvy, 3 fire units
Russia / Soviet Union / CIS																
2S1 SP 122mm Gun	72-15	65	9ta	1 - 0	12h	3	8	-1	-	-	-	153	hsc	-	-	122mm/L35 R (Russia)
2S3 SP 152mm How	72-79	32	9t	1 - 0	8	2	8	+0	-	-	-	185	hsc	-	-	152mm/L34 R (Russia)
	80-84	32	9t	1 - 0	8	2	8	+0	-	-	-	185	hsci	-	-	
	85-15	32	9t	1 - 0	8	2	8	+0	-	-	-	185	hscil	-	-	
2S5 SP 152mm Gun	80-84	22	9t	s	7he	2	8	+0	-	-	-	270	hsci	f	-	152mm/L49 R (Russia)
	85-15	22	9t	s	7he	2	8	+0	-	-	-	270	hscil	f	-	
2S7 203mm SP Gun	78?-15	43	9t	s	18he	2	8	+0	-	-	-	375	hci	f	-	203mm/L? R (Russia)
2S19 Msta-S	89-15	42	10t	2 - 1	7he	2	8	+0	-	-	-	247	hscil	n,i	-	152mm/L52 R (Russia)
M1931/37 122mm FG	50-15	13	0x	s	9	1	10	-1	-	-	-	208	hsc	f	1	122mm/L46 A-19 R (Russia)
M-30 122mm How	50-67	21	0x	s	7h	3	6	-1	-	-	-	118	hsc	f	1	122mm/L23 R (Russia)
D-1 152mm How	50-15	20	0x	s	9h	2	6	+0	-	-	-	124	hc	f	1	152mm/L23 R (Russia)
ML-20 152mm How	50-55	22	0x	s	8	2	8	+0	-	-	-	168	hsc	f	1	152mm/L28 R (Russia)
M-46 130mm FG	54-15	46	0x	s	11	3	10	-1	-	-	-	275	hs	f,i	1	130mm/L52 R (Russia)

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
S-23 180mm FG	55-15	27	0x	s	12he	2	8	+0	-	-	-	304	h	f	1	180mm/L? R (Russia)
D-20 152mm How	55-15	22	0x	s	8	2	8	+0	-	-	-	185	hsc	f	1	152mm/L34 R (Russia)
D-74 122mm FG	57-15	27	0x	s	10	2	10	-1	-	-	-	240	hsc	f	1	122mm/L46 D-74 R (Russia)
D-30 122mm FG	67-15	36	0x	s	12h	3	8	-1	-	-	-	153	hsc	-	1	122mm/L35 R (Russia)
M1969 76mm Mtn How	69-15	24	1x	s	9h	3	6	-1	-	-	-	110	hs	f	1	76mm/L14 R (Russia)
2A36 152mm FG	76-79	20	0x	s	7he	2	8	+0	-	-	-	270	hsc	f	1	152mm/L49 R (Russia)
	80-84	20	0x	s	7he	2	8	+0	-	-	-	270	hsci	f	1	
	85-15	20	0x	s	7he	2	8	+0	-	-	-	270	hscil	f	1	
2A65 Msta-B	86?-15	20	0x	s	7he	2	8	+0	-	-	-	247	hscil	f	1	152mm/L52 R (Russia)
2A61 152mm Lt. How	93?-15	18	0x	s	7he	2	6	+0	-	-	-	150	hs	-	1	152mm/L? R (Russia)
2S4 SP 240mm Mtr	73?-15	137	9t	s	-	-	-	-	-	-	-	97	h	r	-	240mm Mtr (Russia)
2S9 SP 120mm GMtr	81-15	53	14ta	1 - 0	13h	2	8	0	-	-	-	87	hs	f,n	-	120mm Gun-Mtr (Russia)
2S23 SP 120mm GMtr	90-15	68	9wa	1 - 0	13h	3	8	0	-	-	-	87	hs	f,n	-	120mm Gun-Mtr (Russia)
Vasilek Portee	80-15	27	10ta	1 A 0	-	-	-	-	-	-	-	42	hs	o	-	82mm AutoMtr (Russia)
82mm Mtr	50-15	18	4x	s	-	-	-	-	-	-	-	30	hs	-	½	82mm Mtr (Russia)
Vasilek 82mm Mtr	73?-15	18	1x	s	-	-	-	-	-	-	-	42	hs	-	1	82mm AutoMtr (Russia)
M-43 120mm Mtr	50-15	52	2x	s	-	-	-	-	-	-	-	57	hs	-	½	120mm Mtr (Russia)
2B11/2S12 120mm Mtr	81-15	52	2x	s	-	-	-	-	-	-	-	71	hs	-	½	120mm Mtr (Russia)
M-43 160mm Mtr	50-15	55	0x	s	-	-	-	-	-	-	-	52	hs	-	1	160mm Mtr (Russia)
M-160 160mm Mtr	55-15	55	0x	s	-	-	-	-	-	-	-	80	hs	-	1	160mm Mtr (Russia)
2B8 240mm Mtr	52-15	137	0x	s	-	-	-	-	-	-	-	97	h	-	1	240mm Mtr (Russia)
BM-13 Katyusha MRL	50-15	varies	7w	s	-	-	-	-	-	-	-	85	hsc	f	-	Med, 2 fire units
BM-24 MRL	52?-15	varies	7w	s	-	-	-	-	-	-	-	25-110	hsc	f	-	Hvy, 2 fire units
BM-14 MRL	59-15	varies	7w	s	-	-	-	-	-	-	-	25-98	hsc	f	-	Med, 2 fire units
BM-21 Grad MRL	63-94	varies	8w	s	-	-	-	-	-	-	-	50-200	hsc	f	-	Med, 4 fire units
	95-15	varies	8w	s	-	-	-	-	-	-	-	50-350	hsc	f	-	Med, 4 fire units
BM-21V MRL	75-15	varies	8wp	s	-	-	-	-	-	-	-	50-200	hsc	f	-	Med, 4 fire units
	95-15	varies	8wp	s	-	-	-	-	-	-	-	50-350	hsc	f	-	Med, 4 fire units
BM-21 Prima MRL	87-94	varies	8w	s	-	-	-	-	-	-	-	50-200	hsc	f	-	Med, 6 fire units
	95-15	varies	8w	s	-	-	-	-	-	-	-	50-350	hsc	f	-	Med, 6 fire units
Uragan MRL	75-15	varies	7w	s	-	-	-	-	-	-	-	100-350	hcim	f	-	Hvy, 2 fire units
Smerch MRL	87-15	varies	8w	s	-	-	-	-	-	-	-	200-700	hi	f	-	Vry Hvy, 2 fire units
RPU-14 MRL	65-15	varies	0x	s	-	-	-	-	-	-	-	25-98	hsc	f	1	Med, 2 fire units
TOS-1 MRL	81-15	varies	9t	11 A 6	-	-	-	-	-	-	-	5-50	h	f	-	Vry Hvy, 4 fire units. Treat as HE, but actu-

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
ally FAE.																
Singapore																
SPPH 1 Primus	04-15	34	9t	1 A 0	7he	2	8	+0	-	-	-	235	hs	n,i	-	155mm/L39 R (Singapore)
FH-88	88-15	20	0x	s	7he	2	8	+0	-	-	-	235	hs	f	1	155mm/L39 R (Singapore)
FH-2000	94?-15	20	1wx	s	7he	2	8	+0	-	-	-	300	hs	f	1	155mm/L52 R (Singapore)
SLWH Pegasus	08?-15	20	0x	s	7he	2	8	+0	-	-	-	190	hs	f	1	155mm/L39 R (Singapore)
South Africa																
G6 SP 155mm Gun	87-15	22	7w	s	7he	2	8	+0	-	-	-	300	hs	f,n,i	-	155mm/L45 R (S.Africa)
G5 155mm Gun	78-15	21	2wx	s	7he	2	8	+0	-	-	-	300	hs	f	1	155mm/L45 R (S.Africa)
Hoefyster SP Mtr	13-15	37	9wa	5 B 3	-	-	-	-	-	-	-	62	hs	n,i	-	60mm Mtr (S.Africa)
Valkiri-22	91-94?	varies	7w	s	-	-	-	-	-	-	-	75-227	h	f	-	Med, 3 fire units
	95?-15	varies	7w	s	-	-	-	-	-	-	-	75-360	h	f	-	Med, 3 fire units
Bataleur	92?-94?	varies	7w	s	-	-	-	-	-	-	-	75-227	h	f	-	Med, 4 fire units
	95?-15	varies	7w	s	-	-	-	-	-	-	-	75-360	h	f	-	Med, 4 fire units
South Korea (ROK)																
K-9 SP 155mm How	99-15	39	10t	2 - 0	7he	2	8	+0	-	-	-	300	hs	-	-	155mm/L52 R (S.Korea)
KH-178 105mm How	80?-15	26	0x	s	8h	3	8	-1	-	-	-	147	hs	f	1	105mm/L? R (S.Korea)
KH-179 155mm How	80?-15	20	0x	s	7he	2	8	+0	-	-	-	220	hs	f	1	155mm/L? R (S.Korea)
K242A1 Mortar Carrier	92-15	47	10ta	5 C 4	-	-	-	-	-	-	-	56	hs	t,n	-	81mm Mtr (US)
K281A1 Mortar Carrier	92-15	49	10ta	5 C 4	-	-	-	-	-	-	-	68	hsc	t,n	-	107mm Mtr (US)
Kooryong MRL	85?-95?	varies	7w	s	-	-	-	-	-	-	-	55-220	h	f	-	Med, 4 fire units
	96?-15	varies	7w	s	-	-	-	-	-	-	-	90-360	h	f	-	Med, 4 fire units
Spain																
M125A1 SP 120mm Mtr	80?-15	67	9ta	2 C 1	-	-	-	-	-	-	-	65	hs	-	-	120mm Mtr (Finland)
Teruel MRL	82?-15	varies	8w	s	-	-	-	-	-	-	-	60-280	hm	-	-	Med, 4 fire units
Sweden																
Bandkanon 1A	67-85	54	2t	2 - 1	7he	4	8	+0	-	-	-	256	h	f	-	155mm/L? R (Sweden)
Bandkanon 1C	85-03	55	3t	2 - 1	7he	4	8	+0	-	-	-	256	h	f	-	155mm/L? R (Sweden)
Type 4140 How	50?-15	24	0x	s	5he	3	10	-1	-	-	-	156	hs	-	1	105mm/L? R (Sweden)
FH-77 How	78-15	21	2wx	s	7he	2	8	+0	-	-	-	220	h	f	1	155mm/L38 R (Sweden)
Taiwan (ROC)																
CM-22	82?-15	47	7ta	5 C 4	-	-	-	-	-	-	-	68	hsc	n,i	-	107mm Mtr (US)
CM-23A1	87?-15	45	7ta	5 C 4	-	-	-	-	-	-	-	56	hs	n,i	-	81mm Mtr (US)

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire						
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
CM-32 SP 120mm Mtr	08-15	68	10w	3 - 1	-	-	-	-	-	-	-	72	hs	n,t	-	120mm Mtr (US)
Kung Feng 3 MRL	78?-82	varies	9ta	2 C 1	-	-	-	-	-	-	-	38-150	h	-	-	Light, 5 fire units
Kung Feng 4 MRL (Army)	82?-15	varies	9ta	2 C 1	-	-	-	-	-	-	-	38-150	h	-	-	Light, 5 fire units
Kung Feng 4 MRL (Marine)	82?-15	varies	10ta	3 E 1	-	-	-	-	-	-	-	38-150	h	-	-	Light, 5 fire units
Kung Feng 6 MRL	90?-15	varies	7w	s	-	-	-	-	-	-	-	38-150	h	-	-	Light, 5 fire units
<i>United Kingdom</i>																
Abbot	65-95	76	7t	1 - 0	11h	3	10	-1	-	-	-	172	hs	n,i	-	105mm/L37 R (UK)
AS-90	93-15	40	7t	2 - 0	7he	2	8	+0	-	-	-	240	hsim	n,i	-	155mm/L39 R (UK)
5.5" FG	50-78?	20	0x	s	7he	2	8	+0	-	-	-	140	h	f	1	140mm/L30 R 5.5" Gun (UK)
105mm Pack How L5	61-75?	22	0x	s	8h	3	6	-1	-	-	-	105	hs	f	1	105mm/L14 R (Italy)
L118 Light Gun	74-15	43	0x	s	11h	3	10	-1	-	-	-	172	hs	f	1	105mm/L37 R (UK)
FV-432 Mortar Carrier	65-74	28	7t	1 - 1	-	-	-	-	-	-	-	56	hs	i	1	81mm Mtr (UK)
	75-15	30	7t	1 A 1	-	-	-	-	-	-	-	56	hs	i	1	
3-inch ML Mtr Mk II	50-65	18	4x	s	-	-	-	-	-	-	-	25	hs	-	½	76mm Mtr (UK)
SB 4.2-inch Mtr	50-55?	20	2x	s	-	-	-	-	-	-	-	36	hs	-	½	107mm Mtr (UK)
81mm Mtr	65-15	18	4x	s	-	-	-	-	-	-	-	56	hs	-	½	81mm Mtr (UK)
LIMAWS(R)	07-15	varies	5w	s	-	-	-	-	-	-	-	75-300	i	f	-	Vry Hvy, 1 fire unit
LIMAWS(R) w/GMLRS	07-15	varies	5w	s	-	-	-	-	-	-	-	150-600	hi	f	-	Hvy, 1 fire unit
<i>United States</i>																
M7 HMC Priest	50-53	55	7t	4 - 2	6h	3	6	-1	-	-	-	112	hsc	f,o	-	105mm/L23 R (US)
M37 HMC	50-56	32	5t	2 - 1	6h	3	6	-1	-	-	-	112	hsc	f,o	-	105mm/L23 R (US)
M41 HMC Gorilla	50-56	25	5t	1 - 0	7he	2	6	+0	-	-	-	145	hsc	f,o	-	155mm/L23 R (US)
M40 GMC	50-55	42	5t	2 - 1	9	2	8	+0	-	-	-	232	hsc	f,o	-	155mm/L45 R (US)
M43 GMC	50-62	57	5t	2 - 1	18he	2	6	+0	-	-	-	168	h	f,o	-	203mm/L25 R (US)
M44 SP 155mm How	53-63	26	10t	1 - 1	7he	2	6	+0	-	-	-	145	hsc	f,o	-	155mm/L23 R (US)
M52 SP 105mm How	55-63	34	10t	1 - 1	8h	3	6	-1	-	-	-	112	hsc	f	-	105mm/L? R (US)
M108 SP 105mm How	63-67?	38	9t	1 A 1	8h	3	6	-1	-	-	-	115	hs	-	-	105mm/L? R (US)
M109 SP 155mm How	63-73	27	8ta	1 A 1	7he	2	6	+0	-	-	-	145	hsc	-	-	155mm/L23 R (US)
M109A1-4 SP 155mm How	73-79	31	8ta	1 A 1	7he	2	8	+0	-	-	-	180	hsc	-	-	155mm/L39 R (US)
	80-83	31	8ta	1 A 1	7he	2	8	+0	-	-	-	180	hscim	-	-	
	84	31	8ta	1 A 1	7he	2	8	+0	-	-	-	180	hscim	n	-	
	85-93	31	8ta	1 A 1	7he	2	8	+0	-	-	-	180	hsciml	n	-	
M109A6 SP 155mm How	93-15	41	7ta	2 A 2	7he	2	8	+0	-	-	-	235	hsciml	n	-	155mm/L39 R (US)

Name	Period	Points	----- Gun -----				----- Msl -----			Indirect Fire						
			Move	Armor	Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
M109A6 w/Excalibur	07-09 10-15	41 41	7ta 7ta	2 A 2 2 A 2	7he 7he	2	8	+0	-	-	-	350 350	gh ghi	n n	-	155mm Excalibur (US)
M107 SP 175mm How	63-78?	28	7t	s	12he	2	8	+0	-	-	-	327	h	f	-	175mm/L? R (US)
M110 SP 203mm How	63-76 77 78-15	29 29 29	7t 7t 7t	s	18he 18he 18he	2	6	+0	-	-	-	168 213 229	h hci hci	f f f	-	203mm/L25 R (US)
M114 155mm How	50-78	17	0x	s	7he	2	6	+0	-	-	-	145	hsc	f	1	155mm/L23 R (US)
M115 203mm How	50-78?	28	0x	s	18he	2	6	+0	-	-	-	168	h	f	1	203mm/L25 R (US)
M101 105mm How	50-15	22	0x	s	8h	3	6	-1	-	-	-	112	hsc	f	1	105mm/L? R (US)
M102 105mm How	64-15	23	0xp	s	8h	3	6	-1	-	-	-	115	hs	-	1	105mm/L? R (US)
M198 155mm How	78-79 80-84 85-15	20 20 20	0x 0x 0x	s	7he 7he 7he	2	8	+0	-	-	-	180 180 180	hsc hscim hsciml	f f f	1 1 1	155mm/L39 R (US)
M198 w/Excalibur	07-09 10-15	20 20	0x 0x	s	7he 7he	2	8	+0	-	-	-	350 350	gh ghi	f f	1 1	155mm Excalibur (US)
M119 105mm How	90-15	30	0x	s	8h	3	10	-1	-	-	-	145	hs	f	1	105mm/L? R (US)
M777 155mm How	05-15	20	0x	s	7he	2	8	+0	-	-	-	180	hsciml	f	1	155mm/L39 R (US)
M777 w/ Excalibur	07-09 10-15	20 20	0x 0x	s	7he 7he	2	8	+0	-	-	-	350 350	gh ghi	f f	1 1	155mm Excalibur (US)
M84 SP 107mm Mtr	57-61	32	6ta	2 A 1	-	-	-	-	-	-	-	68	hsc	r	-	107mm Mtr (US)
M106 SP 107mm Mtr	61-15	32	9ta	2 C 1	-	-	-	-	-	-	-	68	hsc	r	-	107mm Mtr (US)
M125 SP 81mm Mtr	61-86 87-15	33 33	9ta 9ta	2 C 1 2 C 1	-	-	-	-	-	-	-	45 56	hs hs	r r	-	81mm Mtr (US)
LAV-M	88?-94 95-99 00-15	30 41 46	9wa 8wa 8wa	2 - 1 4 B 3 5 C 4	-	-	-	-	-	-	-	56 56 56	hs hs hs	t,n t,n t,n	-	81mm Mtr (US)
M1064 SP 120mm Mtr	91-15	71	9ta	3 C 1	-	-	-	-	-	-	-	72	hs	r	-	120mm Mtr (US)
M1129 Stryker SP Mtr	03 04-05 06-15	90 98 105	9w 9w 9w	6 C 4 6 E 4 6 F 4	-	-	20	-	-	-	-	72 72 72	hs hs hs	s,n,i s,n,i s,t,n	-	120mm Mtr (US)
LAV-A2-M	08-15	100	8wa	6 F 4	-	-	16	-	-	-	-	72	hs	t,n	-	120mm Mtr (US)
81mm Mtr	50-56 57-86 87-15	18 18 18	4x 4x 4x	s	-	-	-	-	-	-	-	30 45 56	hs hs hs	-	½ ½ ½	81mm Mtr (US)
107mm Mtr	50-51 52-90	20 20	2x 2x	s	-	-	-	-	-	-	-	40 68	hsc hsc	-	½ ½	107mm Mtr (US)
M98 Howtar	62-70	20	2x	s	-	-	-	-	-	-	-	55	hsc	-	½	107mm Howtar (US)

Name	Period	Points	Move	Armor	----- Gun -----				----- Msl -----			Indirect Fire				
					Pen	ROF	Rng	AI	Pen	ROF	Rng	Rng	Ammo	Equip	Cap	Msl
120mm Mtr	91-15	52	2x	s	-	-	-	-	-	-	-	72	hs	-	½	120mm Mtr (US)
T66 Honeycomb MRL	50-55?	varies	0x	s	-	-	-	-	-	-	-	12-48	h	f	1	Light, 3 fire units
M270 MLRS	83-15	varies	8t	0 - 0	-	-	-	-	-	-	-	75-300	i	f	-	Very Heavy, 2 fire units
M270 MLRS w/GMLRS	05-15	varies	8t	0 - 0	-	-	-	-	-	-	-	150-600	hi	f	-	Heavy, 2 fire units
HIMARS	05-15	varies	10w	s	-	-	-	-	-	-	-	75-300	i	f	-	Vry Hvy, 1 fire unit
HIMARS w/GMLRS	05-15	varies	10w	s	-	-	-	-	-	-	-	150-600	hi	f	-	Hvy, 1 fire unit
<i>Yugoslavia (former)</i>																
M-77 Oganj MRL	80-15	varies	8w	s	-	-	-	-	-	-	-	22-87	h	f	-	Med, 4 fire units
M-63 Plamen MRL	63?-15	varies	0x	s	-	-	-	-	-	-	-	50-206	h	f	1	Light, 4 fire units
<i>Generic</i>																
105mm How	50-15	71	0x	s	8h	3	6	-1	-	-	-	112	hsc	f	1	105mm/L? R (US)
122mm How	57-15	18	0x	s	10	2	10	-1	-	-	-	240	hsc	f	1	122mm/L46 D-74 R (Russia)
	67-15	18	0x	s	12h	3	8	-1	-	-	-	153	hsc	-	1	122mm/L35 R (Russia)
152mm How	55-15	20	0x	s	8	2	8	+0	-	-	-	185	hsc	f	1	152mm/L34 R (Russia)
155mm How	50-15	20	0x	s	7he	2	6	+0	-	-	-	145	hsc	f	1	155mm/L23 R (US)
SP 81mm Mtr	61-15	33	9ta	2 c 1	-	-	-	-	-	-	-	45	hs	r	-	81mm Mtr
SP 120mm Mtr	61-15	71	9ta	3 c 1	-	-	-	-	-	-	-	57	hs	r	-	120mm Mtr
81mm Mtr	50-15	18	4x	s	-	-	-	-	-	-	-	45	hs	-	½	81mm Mtr
82mm Mtr	50-15	18	4x	s	-	-	-	-	-	-	-	30	hs	-	½	82mm Mtr (Russia)
107mm Mtr	52-15	20	2x	s	-	-	-	-	-	-	-	68	hsc	-	½	107mm Mtr
120mm Mtr	50-15	52	2x	s	-	-	-	-	-	-	-	57	hs	-	½	120mm Mtr
122mm MRL	63-15	varies	8w	s	-	-	-	-	-	-	-	50-200	hsc	f	1	Med, 4 fire units

Move Notes:

- t Tracked
- w Wheeled
- ht Half-tracked
- a Amphibious
- x Towed
- p Airmobile
- s Skis
- n Helicopter (nap of earth move rating)

Armor Notes:

- s Soft vehicle, or soft vehicle facing
- no armor modifier vs. h-class weapons
- A +1 armor modifier vs. h-class weapons
- B +2 armor modifier vs. h-class weapons
- C +3 armor modifier vs. h-class weapons
- D +4 armor modifier vs. h-class weapons
- E +5 armor modifier vs. h-class weapons
- F +6 armor modifier vs. h-class weapons

Gun Notes:

- h h-class
- he he-class
- @ Antiaircraft

Missile Notes:

- 1 1st generation missile
- 2 2nd generation missile
- 3 3rd generation missile
- † Top-attack missile
- u Has unlimited missile ammo
- A All-aspect surface-to-air missile
- R Rear-aspect surface-to-air missile

Ind Fire Ammo Notes:

- h Conventional HE ammo
- s Smoke (both normal and incendiary)
- c Chemical
- i ICM (improved conventional munitions)
- l Laser-guided projectiles
- g GPS-guided projectiles
- m Artillery delivered mines

Equipment Notes:

- s Weapon stabilization
- ss Advanced weapon stabilization
- t 1st generation thermal sights
- 2 2nd generation thermal sights
- i Infrared or image intensification sights
- n NBC system
- c CTV
- v IVIS
- o Open-topped vehicle
- f Limited gun traverse - forward firing
- r Limited gun traverse - rearward firing
- d smoke dischargers (pre-1950 only)

F.4 Infantry Data Chart, 1950 Onward

See end of chart for explanation of notations.

Infantry Stand Type	Period	Points	Move	----Anti-Infantry----			----LAW----			----MAW----			----SAM----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Australia																		
Infantry	50-57	24	4	-1	2 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	58-65	28	4	+1	2 / 4	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-87	25	4	+1	2 / 4	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	88-90	25	4	+0	2 / 7	4	2he	1	C	8h	1	1	-	-	-	i	1	Improvised/M72 LAW
	91-01	29	4	+0	2 / 7	4	2he	1	C	10h	1	2	-	-	-	i	1	Improvised/M72 LAW
	02-15	29	4	+0	2 / 7	4	2he	1	C	10h	1	2	-	-	-	t	1	Improvised/M72 LAW
Infantry w/MAW	66-87	55	4	+1	2 / 4	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	88-90	55	4	+0	2 / 7	4	8h	1	1	11h	2	5	-	-	-	i	1	M72 LAW/Carl Gustaf
	91-93	59	4	+0	2 / 7	4	10h	1	2	11h	2	5	-	-	-	i	1	M72 LAW/Carl Gustaf
	94-01	53	4	+0	2 / 7	4	10h	1	2	13h	2	3	-	-	-	i	1	M72 LAW/Carl Gustaf
	02-15	53	4	+0	2 / 7	4	10h	1	2	13h	2	3	-	-	-	t	1	M72 LAW/Carl Gustaf
DFS Weapons Team	50-57	23	4	+0	(2 / 2)	6	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	58-65	25	4	+1	(2 / 2)	6	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-87	22	4	+1	(2 / 2)	6	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	88-90	22	4	+0	(2 / 3)	6	2he	1	C	8h	1	1	-	-	-	i	1	Improvised/M72 LAW
	91-02	25	4	+0	(2 / 3)	6	2he	1	C	10h	1	2	-	-	-	i	1	Improvised/M72 LAW
	03-15	23	4	+0	(2 / 2)	8	2he	1	C	10h	1	2	-	-	-	t	1	Improvised/M72 LAW
Mech Infantry	76-87	55	4	+1	2 / 4	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	88-90	55	4	+0	2 / 7	4	8h	1	1	11h	2	5	-	-	-	i	1	M72 LAW/Carl Gustaf
	91-93	59	4	+0	2 / 7	4	10h	1	2	11h	2	5	-	-	-	i	1	M72 LAW/Carl Gustaf
	94-01	49	4	+0	2 / 7	4	8h	1	1	13h	2	3	-	-	-	i	1	M72 LAW/Carl Gustaf
	02-15	49	4	+0	2 / 7	4	8h	1	1	13h	2	3	-	-	-	t	1	M72 LAW/Carl Gustaf
Motorized Infantry	76-87	55	4	+1	2 / 4	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	88-90	55	4	+0	2 / 7	4	8h	1	1	11h	2	5	-	-	-	i	1	M72 LAW/Carl Gustaf
	91-93	59	4	+0	2 / 7	4	10h	1	2	11h	2	5	-	-	-	i	1	M72 LAW/Carl Gustaf
	94-01	49	4	+0	2 / 7	4	8h	1	1	13h	2	3	-	-	-	i	1	M72 LAW/Carl Gustaf
	02-15	49	4	+0	2 / 7	4	8h	1	1	13h	2	3	-	-	-	t	1	M72 LAW/Carl Gustaf
Recon Team	50-65	18	4	+0	1 / 1	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-85	15	4	+0	1 / 1	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	86-87	18	4	+0	1 / 2	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	88-90	18	4	+0	1 / 2	4	2he	1	C	8h	1	1	-	-	-	i	1	Improvised/M72 LAW
	91-02	22	4	+0	1 / 2	4	2he	1	C	10h	1	2	-	-	-	i	1	Improvised/M72 LAW
	03-15	22	4	+0	1 / 2	4	2he	1	C	10h	1	2	-	-	-	t	1	Improvised/M72 LAW
Motorcycle Recon Team	50-65	18	8w	+0	1 / 1	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-85	15	8w	+0	1 / 1	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	86-87	18	8w	+0	1 / 2	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	88-90	18	8w	+0	1 / 2	4	2he	1	C	8h	1	1	-	-	-	i	1	Improvised/M72 LAW
	91-02	22	8w	+0	1 / 2	4	2he	1	C	10h	1	2	-	-	-	i	1	Improvised/M72 LAW
	03-15	22	8w	+0	1 / 2	4	2he	1	C	10h	1	2	-	-	-	t	1	Improvised/M72 LAW

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Inf AT Team	50-65	18	4	+0	1 / 1	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-85	45	4	+0	1 / 1	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	86-87	48	4	+0	1 / 2	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	88-90	48	4	+0	1 / 2	4	8h	1	1	11h	2	5	-	-	-	i	1	M72 LAW/Carl Gustaf
	91-93	51	4	+0	1 / 2	4	10h	1	2	11h	2	5	-	-	-	i	1	M72 LAW/Carl Gustaf
	94-02	45	4	+0	1 / 2	4	10h	1	2	13h	2	3	-	-	-	i	1	M72 LAW/Carl Gustaf
	03-15	67	4	+0	1 / 2	4	10h	1	2	16h ^{3†}	1	1-20	-	-	-	2	1	M72 LAW/Javelin
Mech AT Team	76-85	45	4	+0	1 / 1	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	86-90	58	4	+0	1 / 2	4	8h	1	1	17h ²	1	1-20	-	-	-	t	1	M72 LAW/Milan 2/3
	91-93	61	4	+0	1 / 2	4	10h	1	2	17h ²	1	1-20	-	-	-	t	1	M72 LAW/Milan 2/3
	94-02	61	4	+0	1 / 2	4	10h	1	2	17h ²	1	1-20	-	-	-	t	1	M72 LAW/Milan 2/3
	03-15	67	4	+0	1 / 2	4	10h	1	2	16h ^{3†}	1	1-20	-	-	-	2	1	M72 LAW/Javelin
Motorized AT Team	76-85	45	4	+0	1 / 1	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	86-90	58	4	+0	1 / 2	4	8h	1	1	17h ²	1	1-20	-	-	-	t	1	M72 LAW/Milan 2/3
	91-93	61	4	+0	1 / 2	4	10h	1	2	17h ²	1	1-20	-	-	-	t	1	M72 LAW/Milan 2/3
	94-02	61	4	+0	1 / 2	4	10h	1	2	17h ²	1	1-20	-	-	-	t	1	M72 LAW/Milan 2/3
	03-15	67	4	+0	1 / 2	4	10h	1	2	16h ^{3†}	1	1-20	-	-	-	2	1	M72 LAW/Javelin
Commando AT Team	50-65	18	4	+0	1 / 1	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-85	45	4	+0	1 / 1	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	86-90	48	4	+0	1 / 2	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	91-93	51	4	+0	1 / 2	4	10h	1	2	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	94-02	45	4	+0	1 / 2	4	10h	1	2	13h	2	3	-	-	-	-	1	M72 LAW/Carl Gustaf
	03-15	67	4	+0	1 / 2	4	10h	1	2	16h ^{3†}	1	1-20	-	-	-	2	1	M72 LAW/Javelin
Commando	66-87	55	4	+1	2 / 4	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	88-90	54	4	+0	2 / 6	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	91-93	58	4	+0	2 / 6	4	10h	1	2	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	94-01	52	4	+0	2 / 6	4	10h	1	2	13h	2	3	-	-	-	-	1	M72 LAW/Carl Gustaf
	02-15	54	4	+1	2 / 6	4	10h	1	2	13h	2	3	-	-	-	i	1	M72 LAW/Carl Gustaf
Dismount SAS Team	57-65	21	4	+0	1 / 2	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-90	18	4	+0	1 / 2	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	91-15	22	4	+0	1 / 2	4	2he	1	C	10h	1	2	-	-	-	-	1	Improvised/M72 LAW
Mounted SAS Team	57-65	21	4	+0	1 / 2	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-90	48	4	+0	1 / 2	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	91-93	51	4	+0	1 / 2	4	10h	1	2	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	94-02	45	4	+0	1 / 2	4	10h	1	2	13h	2	3	-	-	-	-	1	M72 LAW/Carl Gustaf
	03-15	67	4	+0	1 / 2	4	10h	1	2	16h ^{3†}	1	1-20	-	-	-	-	1	M72 LAW/Javelin
Pioneer / Engineer	50-57	24	4	-1	2 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	58-65	28	4	+1	2 / 4	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-87	25	4	+1	2 / 4	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	88-90	25	4	+0	2 / 7	4	2he	1	C	8h	1	1	-	-	-	i	1	Improvised/M72 LAW
	91-01	29	4	+0	2 / 7	4	2he	1	C	10h	1	2	-	-	-	i	1	Improvised/M72 LAW
	02-15	29	4	+0	2 / 7	4	2he	1	C	10h	1	2	-	-	-	t	1	Improvised/M72 LAW
Redeye Team	74-85	33	4	+0	1 / 1	4	2he	1	C	-	-	-	2 ^R	1	1-30	-	½	Improvised/None

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
RBS 70 Team	86-05 06-15	75 101	4 4	+0 +0	1 / 2 1 / 2	4 4	2he 2he	1 1	C C	8h 8h	1 1	1 1	2 ^A 2 ^A	1 1	1-36 1-52	-	1/2 1/2	Improvised/M72 LAW Improvised/M72 LAW
Belgium																		
Infantry	50-54 55-64 65-69 70-81 82-87 88-90 91-94 95-04 05-15	29 32 34 34 32 21 25 33 33	4 4 4 4 4 4 4 4 4	+0 +0 +0 +0 +0 +0 +0 +0 +0	2 / 4 2 / 4 2 / 4 2 / 4 1 / 4 1 / 4 1 / 4 1 / 4 1 / 4	4 4 4 4 4 4 4 4 4	2he 8h 8h 8h 8h 2he 2he 10h 10h	1 1 1 1 1 1 1 1 1	C C C C C C C 2 2	10h 10h 10h 10h 10h 8h 10h 14h 14h	1 1 1 1 1 1 1 1 1	3 3 4 4 4 1 2 2 2	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -	1 1 1 1 1 1 1 1 1	Improvised/RL-100 NR-415/RL-100 NR-415/RL-83 Blindicide M72 LAW/RL-83 Blindicide M72 LAW/RL-83 Blindicide Improvised/M72 LAW Improvised/M72 LAW M72 LAW/Apilas M72 LAW/Apilas	
Milan Team	75-84 85-15	51 55	4 4	+0 +0	1 / 2 1 / 2	4 4	2he 2he	1 1	C C	14h ² 17h ²	1* 1*	1-20 1-20	- -	- -	- -	t t	1/2 1/2	Improvised/Milan Improvised/Milan 2/3
Mistral Team	90-15	76	4	+0	1 / 2	4	2he	1	C	10h	1	2	2 ^A	1	1-34	-	1/2	Improvised/M72 LAW
Canada																		
Infantry	50-57 58-65 66-69 70-85 86-90 91-93 94-15	24 27 51 54 55 59 53	4 4 4 4 4 4 4	-1 +1 +1 +1 +1 +1 +1	2 / 5 2 / 3 2 / 3 2 / 3 2 / 4 2 / 4 2 / 4	4 4 4 4 4 4 4	2he 2he 2he 8h 8h 10h 10h	1 1 1 1 1 1 1	C C C 1 1 2 2	9h 9h 11h 11h 11h 11h 13h	1 1 2 2 2 2 2	2 2 5 5 5 5 3	- - - - - - -	- - - - - - -	- - - - - - -	1 1 1 1 1 1 1	Improvised/3.5" Bazooka Improvised/3.5" Bazooka Improvised/Carl Gustaf M72 LAW/Carl Gustaf M72 LAW/Carl Gustaf M72 LAW/Carl Gustaf M72 LAW/Carl Gustaf	
Infantry w/MAW+ATGM	94-15	64	4	+1	2 / 4	4	13h	1	3	18h ²	1	1-6	-	-	-	- 1	Carl Gustaf /Eryx	
Infantry w/ATGM	94-15	47	4	+1	2 / 4	4	10h	1	2	18h ²	1	1-6	-	-	-	- 1	M72 LAW/Eryx	
Assault Pioneer	50-57 58-65 66-69 70-85 86-90 91-15	25 28 52 25 26 30	4 4 4 4 4 4	-1 +1 +1 +1 +1 +1	2 / 6 2 / 4 2 / 4 2 / 4 2 / 5 2 / 5	4 4 4 4 4 4	2he 2he 2he 2he 2he 2he	1 1 1 1 1 1	C C C C C C	9h 9h 11h 8h 8h 10h	1 1 2 1 1 1	2 2 5 1 1 2	- - - - - -	- - - - - -	- - - - - -	1 1 1 1 1 1	Improvised/3.5" Bazooka Improvised/3.5" Bazooka Improvised/Carl Gustaf M72 LAW M72 LAW M72 LAW	
Blowpipe Team	76-89	45	4	+0	1 / 1	4	2he	1	C	-	-	-	2 ^A	1	1-22	-	1/2	Improvised/None
Javelin Team	90-02?	70	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	1-36	-	1/2	Improvised/None
Denmark																		
Infantry	50-65 66-74 75-90 91-93 94-95 96-04 05-15	41 39 52 55 50 51 51	4 4 4 4 4 4 4	+1 -1 -1 -1 -1 -1 -1	2 / 3 2 / 6 2 / 6 2 / 6 2 / 6 2 / 6 2 / 6	4 4 4 4 4 4 4	8h 8h 8h 10h 10h 13h 13h	2 2 1 2 2 1 2	2 2 1 2 2 3 2	9h 9h 11h 11h 13h 13h 13h	1 1 2 2 2 2 2	2 2 5 5 3 3 3	- - - - - - -	- - - - - - -	- - - - - - -	1 1 1 1 1 1 1	M20 75mm RR/3.5" Bazooka M20 75mm RR/3.5" Bazooka M72 LAW/Carl Gustaf M72 LAW/Carl Gustaf M72 LAW/Carl Gustaf AT-4/Carl Gustaf AT-4/Carl Gustaf	

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Redeye Team	68-80	36	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^R	1	1-30	-	½	Improvised/None
Stinger Team	81-15	63	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	2-32	-	½	Improvised/None
Egypt																		
Infantry	50-54	26	4	+0	2 / 4	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	55-69	23	4	+0	2 / 4	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
	70-77	28	4	+0	1 / 5	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
	78-88	30	4	+0	1 / 5	4	2he	1	C	12h	1	3	-	-	-	-	1	Improvised/RPG-7
	89-92	28	4	+0	1 / 5	4	2he	1	C	14h	1	2	-	-	-	-	1	Improvised/RPG-7
	93-15	28	4	+0	1 / 5	4	2he	1	C	14h	1	2	-	-	-	-	1	Improvised/Cobra
Sagger Team	70-77	42	4	+0	1 / 2	4	9h	1	3	11h ¹	1*	5-30	-	-	-	-	½	RPG-7/AT-3b
	78-82	44	4	+0	1 / 2	4	12h	1	3	11h ¹	1*	5-30	-	-	-	-	½	RPG-7/AT-3b
	83-88	64	4	+0	1 / 2	4	12h	1	3	12h ²	1*	5-30	-	-	-	-	½	RPG-7/AT-3c
	89-92	62	4	+0	1 / 2	4	14h	1	2	12h ²	1*	5-30	-	-	-	-	½	RPG-7/AT-3c
	93-15	71	4	+0	1 / 2	4	14h	1	2	15h ²	1*	1-30	-	-	-	t	½	Cobra/AT-3d
Parachute MG	50-54	29	4	+1	(3 / 4)	6	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	55-69	26	4	+1	(3 / 4)	6	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
	70-77	31	4	+1	(2 / 4)	6	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
	78-88	32	4	+1	(2 / 4)	6	2he	1	C	12h	1	3	-	-	-	-	1	Improvised/RPG-7
	89-92	31	4	+1	(2 / 4)	6	2he	1	C	14h	1	2	-	-	-	-	1	Improvised/RPG-7
	93-15	31	4	+1	(2 / 4)	6	2he	1	C	14h	1	2	-	-	-	-	1	Improvised/Cobra
Engineer	50-54	26	4	+0	2 / 4	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	55-69	23	4	+0	2 / 4	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
	70-84	28	4	+0	1 / 5	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
	78-88	30	4	+0	1 / 5	4	2he	1	C	12h	1	3	-	-	-	-	1	Improvised/RPG-7
	89-92	28	4	+0	1 / 5	4	2he	1	C	14h	1	2	-	-	-	-	1	Improvised/RPG-7
	93-15	28	4	+0	1 / 5	4	2he	1	C	14h	1	2	-	-	-	-	1	Improvised/Cobra
SA-7 Team	70	33	4	+0	1 / 2	4	2he	1	C	9h	1	3	1 ^R	1	8-24	-	½	Improvised/RPG-7
	70-77	33	4	+0	1 / 2	4	2he	1	C	9h	1	3	1 ^R	1	8-24	-	½	Improvised/RPG-7
	78-88	47	4	+0	1 / 2	4	2he	1	C	12h	1	3	2 ^R	1	5-28	-	½	Improvised/RPG-7
	89-92	46	4	+0	1 / 2	4	2he	1	C	14h	1	2	2 ^R	1	5-28	-	½	Improvised/RPG-7
	93-15	46	4	+0	1 / 2	4	2he	1	C	14h	1	2	2 ^R	1	5-28	-	½	Improvised/Cobra
Stinger Team	93-15	75	4	+0	1 / 2	4	2he	1	C	14h	1	2	2 ^A	1	2-32	-	½	Improvised/Cobra
France																		
Infantry	50-68	27	4	+1	2 / 3	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	69-79	30	4	+1	2 / 3	4	2he	1	C	11h	1	3	-	-	-	-	1	Improvised/LRAC F1
	80-89	29	4	-1	2 / 6	4	2he	1	C	11h	1	3	-	-	-	-	1	Improvised/LRAC F1
	90-96	28	4	-1	2 / 6	4	2he	1	C	14h	1	2	-	-	-	-	1	Improvised/Apilas
	97-15	27	4	-1	2 / 6	4	2he	1	C	13h	1	2	-	-	-	-	1	Improvised/AT-4
Infantry w/Milan	75-79	66	4	+1	2 / 3	4	11h	1	3	14h ²	1*	1-20	-	-	-	t	1	LRAC F1 /Milan
	80-84	64	4	-1	2 / 6	4	11h	1	3	14h ²	1*	1-20	-	-	-	t	1	LRAC F1 /Milan
	85-89	68	4	-1	2 / 6	4	11h	1	3	17h ²	1*	1-20	-	-	-	t	1	LRAC F1 /Milan 2/3
	90-96	67	4	-1	2 / 6	4	14h	1	2	17h ²	1*	1-20	-	-	-	t	1	Apilas/Milan 2/3

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
	97-15	67	4	-1	2 / 6	4	13h	1	2	17h ²	1*	1-20	-	-	-	t	1	AT-4/Milan 2/3
Milan Team	75-84	66	4	+0	1 / 2	4	11h	1	3	14h ²	1*	1-20	-	-	-	t	1	LRAC F1 /Milan
	85-89	68	4	+0	1 / 2	4	11h	1	3	17h ²	1*	1-20	-	-	-	t	1	LRAC F1 /Milan 2/3
	90-96	67	4	+0	1 / 2	4	14h	1	2	17h ²	1*	1-20	-	-	-	t	1	Apilas/Milan 2/3
	97-15	67	4	+0	1 / 2	4	13h	1	2	17h ²	1*	1-20	-	-	-	t	1	AT-4/Milan 2/3
Mistral Team	90-15	66	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	1-34	-	½	Improvised/None
Germany (West / United)																		
Infantry	56-57	26	4	+0	2 / 4	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	58	26	4	+0	1 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	59-62	25	4	-1	2 / 6	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	63-75	26	4	-1	2 / 6	4	2he	1	C	10h	1	2	-	-	-	-	1	Improvised/Pzf 44
	76-91	26	4	-1	2 / 6	4	2he	1	C	11h	1	2	-	-	-	-	1	Improvised/Pzf 44
	92-96	28	4	-1	2 / 6	4	2he	1	C	14h	1	2	-	-	-	i	1	Improvised/Panzerfaust 3
	97-06	28	4	-1	2 / 6	4	2he	1	C	15h	1	2	-	-	-	i	1	Improvised/Panzerfaust 3T
	07-15	34	4	-1	2 / 6	4	2he	1	C	16h	1	4	-	-	-	t	1	Improvised/Panzerfaust 3IT
Cobra Team	60-61	33	4	+0	1 / 2	4	9h	1	2	12h ¹	1*	4-16	-	-	-	-	½	3.5" Bazooka/Cobra 1600
	62	36	4	+0	1 / 2	4	9h	1	2	12h ¹	1*	4-20	-	-	-	-	½	3.5" Bazooka/Cobra 2000
	63	36	4	+0	1 / 2	4	10h	1	2	12h ¹	1*	4-20	-	-	-	-	½	Pzf 44/Cobra 2000
Mamba Team	72-75	37	4	+0	1 / 2	4	10h	1	2	12h ¹	1*	3-20	-	-	-	-	½	Pzf 44/Mamba
	76	37	4	+0	1 / 2	4	11h	1	2	12h ¹	1*	3-20	-	-	-	-	½	Pzf 44/Mamba
Milan Team	77-84	58	4	+0	1 / 2	4	11h	1	2	14h ²	1*	1-20	-	-	-	t	½	Pzf 44/Milan
	85-91	62	4	+0	1 / 2	4	11h	1	2	17h ²	1*	1-20	-	-	-	t	½	Pzf 44/Milan 2/3
	92-96	63	4	+0	1 / 2	4	14h	1	2	17h ²	1*	1-20	-	-	-	t	½	Panzerfaust 3/Milan 2/3
	97-06	63	4	+0	1 / 2	4	15h	1	2	17h ²	1*	1-20	-	-	-	t	½	Panzerfaust 3T/Milan 2/3
	07-15	69	4	+0	1 / 2	4	16h	1	4	17h ²	1*	1-20	-	-	-	t	½	Panzerfaust 3IT/Milan 2/3
Redeye Team	68-80	36	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^R	1	1-30	-	½	Improvised/None
Stinger Team	81-15	63	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	2-32	-	½	Improvised/None
Pioneer	56-57	29	4	+0	2 / 6	4	2he	1	C	4he	3	1	-	-	-	-	1	Improvised/Flamethrower
	58	28	4	-1	2 / 8	4	2he	1	C	4he	3	1	-	-	-	-	1	Improvised/Flamethrower
	59-15	30	4	+0	2 / 7	4	2he	1	C	4he	3	1	-	-	-	-	1	Improvised/Flamethrower
Iraq																		
Infantry	50-59	24	4	-1	2 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	60-69	22	4	-1	2 / 6	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
	70-84	28	4	-1	2 / 6	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
	78-15	29	4	-1	2 / 6	4	2he	1	C	12h	1	3	-	-	-	-	1	Improvised/RPG-7
Engineer	50-59	24	4	-1	2 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	60-69	22	4	-1	2 / 6	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
	70-77	28	4	-1	2 / 6	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
	78-15	29	4	-1	2 / 6	4	2he	1	C	12h	1	3	-	-	-	-	1	Improvised/RPG-7
Sagger Team	70-77	42	4	+0	1 / 2	4	9h	1	3	11h ¹	1*	5-30	-	-	-	-	1	RPG-7/AT-3b
	78-03	35	4	+0	1 / 2	4	12h	1	3	12h	1*	3	-	-	-	-	1	RPG-7/RPG-7

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Milan Team	76-77	59	4	+0	1 / 2	4	9h	1	3	14h ²	1*	1-20	-	-	-	-	1	RPG-7/Milan
	78-84	61	4	+0	1 / 2	4	12h	1	3	14h ²	1*	1-20	-	-	-	-	1	RPG-7/Milan
	85-03	65	4	+0	1 / 2	4	12h	1	3	17h ²	1*	1-20	-	-	-	-	1	RPG-7/Milan 2/3
AT-4 Team	82-84	56	4	+0	1 / 2	4	12h	1	3	11h ²	1*	1-20	-	-	-	-	1	RPG-7/AT-4
	85-03	63	4	+0	1 / 2	4	12h	1	3	12h ²	1*	1-25	-	-	-	-	1	RPG-7/AT-4b
SA-7 Team	75-15	34	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^R	1	5-28	-	1	Improvised/None
SA-14 Team	80-15	57	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	5-28	-	1	Improvised/None
SA-16 Team	85-15	63	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	5-32	-	1	Improvised/None
SA-18 Team	88-15	66	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	5-34	-	1	Improvised/None
Israel																		
Infantry	50-56	26	4	+0	2 / 4	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	57-59	25	4	-1	2 / 6	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	60-14oct73	27	4	+0	2 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	15oct73-74	30	4	+0	2 / 5	4	8h	1	1	9h	1	2	-	-	-	-	1	M72 LAW/3.5" Bazooka
	75-89	54	4	+0	2 / 5	4	8h	1	1	11h	1	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	90-93	59	4	+0	2 / 5	4	14h	1	2	11h	2	5	-	-	-	i	1	RPG-7/Carl Gustaf
	94-04	53	4	+0	2 / 5	4	14h	1	2	13h	2	3	-	-	-	i	1	RPG-7/Carl Gustaf
	05-15	53	4	+0	2 / 5	4	14h	1	2	13h	2	3	-	-	-	t	1	RPG-7/Carl Gustaf
Engineer	50-56	26	4	+0	2 / 4	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	57-59	25	4	-1	2 / 6	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	60-73	27	4	+0	2 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	15oct73-74	30	4	+0	2 / 5	4	8h	1	1	9h	1	2	-	-	-	-	1	M72 LAW/3.5" Bazooka
	75-89	54	4	+0	2 / 5	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	90-93	59	4	+0	2 / 5	4	14h	1	2	11h	2	5	-	-	-	i	1	RPG-7/Carl Gustaf
	94-04	53	4	+0	2 / 5	4	14h	1	2	13h	2	3	-	-	-	i	1	RPG-7/Carl Gustaf
	05-15	53	4	+0	2 / 5	4	14h	1	2	13h	2	3	-	-	-	t	1	RPG-7/Carl Gustaf
Bazooka Team	50-56	18	4	+0	1 / 1	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	57-74	21	4	+0	1 / 2	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
Redeye Team	73-95	36	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^R	1	1-30	-	½	Improvised/None
Stinger Team	85-15	63	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	2-32	-	½	Improvised/None
Italy																		
Infantry	50-58	27	4	+1	2 / 3	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	59-81	25	4	-1	2 / 6	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	82-89	35	4	-1	2 / 6	4	2he	1	C	11h	1	6	-	-	-	-	1	Improvised/Folgore
	90-95	74	4	-1	2 / 6	4	11h	1	6	17h ²	1	1-20	-	-	-	t	1	Folgore/Milan 2/3
	96-06	68	4	-1	2 / 6	4	15h	1	2	17h ²	1	1-20	-	-	-	t	1	Panzerfaust 3T/Milan 2/3
	07-15	74	4	-1	2 / 6	4	16h	1	4	17h ²	1	1-20	-	-	-	t	1	Panzerfaust 3T/Milan 2/3
Stinger Team	83-15	63	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	2-32	-	½	Improvised/None
Jordan																		
Infantry	56-67	21	4	+0	2 / 4	4	2he	1	C	4h	1*	C	-	-	-	-	1	Improvised/AT R-Gr

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Engineer	68-75	25	4	-1	2 / 6	4	2he	1	C	9h	1*	2	-	-	-	-	1	Improvised/3.5" Bazooka
	76-79	28	4	-1	2 / 6	4	8h	1	1	9h	1*	2	-	-	-	-	1	M72 LAW/3.5" Bazooka
	80-15	43	4	-1	2 / 6	4	8h	1	1	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon
HMG Support	56-67	18	4	-1	2 / 4	4	2he	1	C	4h	1*	C	-	-	-	-	1	Improvised/AT R-Gr
	68-75	24	4	+0	1 / 4	4	2he	1	C	9h	1*	2	-	-	-	-	1	Improvised/3.5" Bazooka
	76-15	21	4	+0	1 / 4	4	2he	1	C	8h	1*	1	-	-	-	-	1	Improvised/M72 LAW
Netherlands (Dutch)	56-70	24	4	+1	(3 / 4)	8	2he	1	C	4h	1*	C	-	-	-	-	1	Improvised/AT R-Gr
	70-79	29	4	+1	(3 / 4)	8	2he	1	C	9h	1*	2	-	-	-	-	1	Improvised/3.5" Bazooka
Infantry	50-65	42	4	+1	2 / 4	4	8h	2	2	9h	1	2	-	-	-	-	1	M20 75mm RR/3.5" Bazooka
	66-68	65	4	+0	2 / 5	4	8h	2	2	11h	2	5	-	-	-	-	1	M20 75mm RR/Carl Gustaf
	69-74	51	4	+0	2 / 5	4	2he	1	C	11h	2	5	-	-	-	-	1	Improvised/Carl Gustaf
	75-81	45	4	+0	2 / 5	4	8h	1	1	12h ²	1	1-10	-	-	-	t	1	M72 LAW/Dragon
	82-90	46	4	+1	2 / 4	4	8h	1	1	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon
	91-95	50	4	+1	2 / 4	4	10h	1	2	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon
	96-00	51	4	+1	2 / 4	4	13h	1	2	12h ²	1*	1-10	-	-	-	t	1	AT-4/Dragon
	01-15	78	4	+1	2 / 4	4	13h	1	2	14h ^{3†}	1*	2-25	-	-	-	2	1	AT-4/Spike-MR (Gil)
Stinger Team	81-15	63	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	2-32	-	½	Improvised/None
North Vietnam / Viet Cong																		
NVA Infantry SAR+R2	64-68	23	4	+0	2 / 4	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
NVA Infantry SAR+R7	67-68	28	4	+0	2 / 4	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
NVA Infantry AR+R2	65-74	22	4	-1	2 / 6	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
NVA Infantry AR+R7	67-74	28	4	-1	2 / 6	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
VC Infantry SAR	64-66	22	4	+0	2 / 4	4	2he	1	C	6h	1	C	-	-	-	-	1	Improvised/AT H-Gr
VC Infantry SAR+R2	67-68	23	4	+0	2 / 4	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
VC Infantry SAR+R7	68-68	28	4	+0	2 / 4	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
VC Infantry AR+R2	67-74	22	4	+0	1 / 5	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
VC Infantry AR+R7	68-74	28	4	+0	1 / 5	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
NVA Sapper SAR+R2	64-68	24	4	+0	2 / 5	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
NVA Sapper SAR+R7	67-68	29	4	+0	2 / 5	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
NVA Sapper AR+R2	65-74	22	4	-1	2 / 6	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
NVA Sapper AR+R2	67-74	28	4	-1	2 / 6	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
VC Sapper SAR	64-66	22	4	+0	2 / 4	4	2he	1	C	6h	1	C	-	-	-	-	1	Improvised/AT H-Gr
VC Sapper SAR+R2	67-68	23	4	+0	2 / 4	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2
VC Sapper SAR+R7	68-68	28	4	+0	2 / 4	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
VC Sapper AR+R2	67-74	22	4	+0	1 / 5	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/RPG-2

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
VC Sapper AR+R7	68-74	28	4	+0	1 / 5	4	2he	1	C	9h	1	3	-	-	-	-	1	Improvised/RPG-7
57mm RR Team	64-74	32	4	+0	1 / 2	4	2he	1	C	7h	2	3	-	-	-	-	½	Improvised/M18 57mm RR
Russia / Soviet Union / CIS																		
Category 1 Weapons	50-56	28	4	+1	(3 / 4)	6	6h	1	C	8h	1	1	-	-	-	-	1	AT H-Gr/RPG-2
Category 1 Infantry	50-61	24	4	+0	1 / 5	4	6h	1	C	8h	1	1	-	-	-	-	1	AT H-Gr/RPG-2
	62-70	30	4	+0	1 / 5	4	6h	1	C	9h	1	3	-	-	-	-	1	AT H-Gr/RPG-7
	71-72	32	4	+0	1 / 5	4	6h	1	C	10h	1	4	-	-	-	-	1	AT H-Gr/RPG-16
	73-79	34	4	+0	1 / 5	4	10h	1	1	10h	1	4	-	-	-	-	1	RPG-18/RPG-16
	80	36	4	+0	2 / 6	4	10h	1	1	10h	1	4	-	-	-	-	1	RPG-18/RPG-16
	81-85	36	4	+0	2 / 6	4	11h	1	1	10h	1	4	-	-	-	-	1	RPG-22/RPG-16
	86-89	37	4	+0	2 / 6	4	12h	1	1	10h	1	4	-	-	-	-	1	RPG-26/RPG-16
	90-06	38	4	+0	2 / 6	4	14h	1	1	14h	1	3	-	-	-	-	1	RPG-27/RPG-29
	07-15	38	4	+0	2 / 6	4	17h	1	1	14h	1	3	-	-	-	t	1	RPG-28/RPG-29
Category 1 Infantry w/ATGM	79	44	4	+0	1 / 5	4	10h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-18/AT-7a
	80	46	4	+0	2 / 6	4	10h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-18/AT-7a
	81-85	46	4	+0	2 / 6	4	11h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-22/AT-7a
	86-89	47	4	+0	2 / 6	4	12h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-26/AT-7a
	90-06	59	4	+0	2 / 6	4	14h	1	1	16h ²	1	1-15	-	-	-	-	1	RPG-27/AT-13
	07-15	59	4	+0	2 / 6	4	17h	1	1	16h ²	1	1-15	-	-	-	t	1	RPG-28/AT-13
Category 1 Infantry w/SAM	68-70	39	4	+0	1 / 5	4	6h	1	C	9h	1	3	1 ^R	1	8-24	-	1	AT H-Gr/RPG-7
	71-72	55	4	+0	1 / 5	4	6h	1	C	10h	1	4	2 ^R	1	5-28	-	1	AT H-Gr/RPG-16
	73	56	4	+0	1 / 5	4	10h	1	1	10h	1	4	2 ^R	1	5-28	-	1	RPG-18/RPG-16
	74-79	79	4	+0	1 / 5	4	10h	1	1	10h	1	4	2 ^A	1	5-28	-	1	RPG-18/RPG-16
	80	81	4	+0	2 / 6	4	10h	1	1	10h	1	4	2 ^A	1	5-28	-	1	RPG-18/RPG-16
	81-82	88	4	+0	2 / 6	4	11h	1	1	10h	1	4	2 ^A	1	5-32	-	1	RPG-22/RPG-16
	83-85	91	4	+0	2 / 6	4	11h	1	1	10h	1	4	2 ^A	1	5-34	-	1	RPG-22/RPG-16
	86-89	91	4	+0	2 / 6	4	12h	1	1	10h	1	4	2 ^A	1	5-34	-	1	RPG-26/RPG-16
	90-06	92	4	+0	2 / 6	4	14h	1	1	14h	1	3	2 ^A	1	5-34	-	1	RPG-27/RPG-29
	07-15	93	4	+0	2 / 6	4	17h	1	1	14h	1	3	2 ^A	1	5-34	-	1	RPG-28/RPG-29
Category 1 Missile Team	61	37	4	+0	1 / 2	4	8h	1	1	11h ¹	1*	5-30	-	-	-	½	RPG-2/AT-3b	
	62-70	42	4	+0	1 / 2	4	9h	1	3	11h ¹	1*	5-30	-	-	-	½	RPG-7/AT-3b	
	71	45	4	+0	1 / 2	4	10h	1	4	11h ¹	1*	5-30	-	-	-	½	RPG-16/AT-3b	
	72	64	4	+0	1 / 2	4	10h	1	4	12h ²	1*	5-30	-	-	-	½	RPG-16/AT-3c	
	73-80	50	4	+0	1 / 2	4	10h	1	1	11h ²	1*	1-20	-	-	-	½	RPG-18/AT-4	
	81-84	50	4	+0	1 / 2	4	11h	1	1	11h ²	1*	1-20	-	-	-	½	RPG-22/AT-4	
	85	56	4	+0	1 / 2	4	11h	1	1	12h ²	1*	1-25	-	-	-	½	RPG-22/AT-4b	
	86-89	57	4	+0	1 / 2	4	12h	1	1	12h ²	1*	1-25	-	-	-	½	RPG-26/AT-4b	
	90	57	4	+0	1 / 2	4	14h	1	1	12h ²	1*	1-25	-	-	-	½	RPG-27/AT-4b	
	91-06	59	4	+0	1 / 2	4	14h	1	1	13h ²	1*	1-25	-	-	-	½	RPG-27/AT-4c	
	07-15	60	4	+0	1 / 2	4	17h	1	1	13h ²	1*	1-25	-	-	-	t	½	RPG-28/AT-4c
Category 1 SAM Team (SA-7)	68-70	33	4	+0	1 / 2	4	2he	1	C	9h	1	3	1 ^R	1	8-24	-	½	Improvised/RPG-7
	71-72	48	4	+0	1 / 2	4	2he	1	C	10h	1	4	2 ^R	1	5-28	-	½	Improvised/RPG-16
	73	41	4	+0	1 / 2	4	2he	1	C	10h	1	1	2 ^R	1	5-28	-	½	Improvised/RPG-18

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Category 1 SAM Team (SA-14)	74-80	63	4	+0	1 / 2	4	2he	1	C	10h	1	1	2 ^A	1	5-28	-	1/2	Improvised/RPG-18
Category 1 SAM Team (SA-16)	81-82	70	4	+0	1 / 2	4	2he	1	C	11h	1	1	2 ^A	1	5-32	-	1/2	Improvised/RPG-22
Category 1 SAM Team (SA-18)	83-85	73	4	+0	1 / 2	4	2he	1	C	11h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-22
	86-89	74	4	+0	1 / 2	4	2he	1	C	12h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-26
	90-06	74	4	+0	1 / 2	4	2he	1	C	14h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-27
	07-15	75	4	+0	1 / 2	4	2he	1	C	17h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-28
Category 1 Combat Engineer	50-72	17	4	+0	1 / 4	4	6h	1	C	-	-	-	-	-	-	-	1	AT H-Gr/None
	73-80	19	4	+0	1 / 4	4	10h	1	1	-	-	-	-	-	-	-	1	RPG-18/None
	81-85	19	4	+0	1 / 4	4	11h	1	1	-	-	-	-	-	-	-	1	RPG-22/None
	86-89	19	4	+0	1 / 4	4	12h	1	1	-	-	-	-	-	-	-	1	RPG-26/None
	90-06	20	4	+0	1 / 4	4	14h	1	1	-	-	-	-	-	-	-	1	RPG-27/None
	07-15	21	4	+0	1 / 4	4	17h	1	1	-	-	-	-	-	-	-	1	RPG-28/None
Category 2 Weapons	50-56	28	4	+1	(3 / 4)	6	6h	1	C	8h	1	1	-	-	-	-	1	AT H-Gr/RPG-2
Category 2 Infantry	50-71	24	4	+0	1 / 5	4	6h	1	C	8h	1	1	-	-	-	-	1	AT H-Gr/RPG-2
	72-80	30	4	+0	1 / 5	4	6h	1	C	9h	1	3	-	-	-	-	1	AT H-Gr/RPG-7
	81-82	32	4	+0	1 / 5	4	6h	1	C	10h	1	4	-	-	-	-	1	AT H-Gr/RPG-16
	83-89	34	4	+0	1 / 5	4	10h	1	1	10h	1	4	-	-	-	-	1	RPG-18/RPG-16
	90	36	4	+0	2 / 6	4	10h	1	1	10h	1	4	-	-	-	-	1	RPG-18/RPG-16
	91-95	36	4	+0	2 / 6	4	11h	1	1	10h	1	4	-	-	-	-	1	RPG-22/RPG-16
	96-99	37	4	+0	2 / 6	4	12h	1	1	10h	1	4	-	-	-	-	1	RPG-26/RPG-16
	00-15	38	4	+0	2 / 6	4	14h	1	1	14h	1	3	-	-	-	-	1	RPG-27/RPG-29
Category 2 Infantry w/ATGM	89	44	4	+0	1 / 5	4	10h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-18/AT-7a
	90	46	4	+0	2 / 6	4	10h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-18/AT-7a
	91-95	46	4	+0	2 / 6	4	11h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-22/AT-7a
	96-99	47	4	+0	2 / 6	4	12h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-26/AT-7a
	00-15	59	4	+0	2 / 6	4	14h	1	1	16h ²	1	1-15	-	-	-	-	1	RPG-27/AT-13
Category 2 Infantry w/SAM	78-80	39	4	+0	1 / 5	4	6h	1	C	9h	1	3	1 ^R	1	8-24	-	1	AT H-Gr/RPG-7
	81-82	55	4	+0	1 / 5	4	6h	1	C	10h	1	4	2 ^R	1	5-28	-	1	AT H-Gr/RPG-16
	83	56	4	+0	1 / 5	4	10h	1	1	10h	1	4	2 ^R	1	5-28	-	1	RPG-18/RPG-16
	84-89	79	4	+0	1 / 5	4	10h	1	1	10h	1	4	2 ^A	1	5-28	-	1	RPG-18/RPG-16
	90	81	4	+0	2 / 6	4	10h	1	1	10h	1	4	2 ^A	1	5-28	-	1	RPG-18/RPG-16
	91-92	88	4	+0	2 / 6	4	11h	1	1	10h	1	4	2 ^A	1	5-32	-	1	RPG-22/RPG-16
	93-95	91	4	+0	2 / 6	4	11h	1	1	10h	1	4	2 ^A	1	5-34	-	1	RPG-22/RPG-16
	96-99	91	4	+0	2 / 6	4	12h	1	1	10h	1	4	2 ^A	1	5-34	-	1	RPG-26/RPG-16
	00-15	92	4	+0	2 / 6	4	14h	1	1	14h	1	3	2 ^A	1	5-34	-	1	RPG-27/RPG-29
Category 2 Missile Team	71	37	4	+0	1 / 2	4	8h	1	1	11h ¹	1*	5-30	-	-	-	1/2	RPG-2/AT-3b	
	72-80	42	4	+0	1 / 2	4	9h	1	3	11h ¹	1*	5-30	-	-	-	1/2	RPG-7/AT-3b	
	81	45	4	+0	1 / 2	4	10h	1	4	11h ¹	1*	5-30	-	-	-	1/2	RPG-16/AT-3b	
	82	64	4	+0	1 / 2	4	10h	1	4	12h ²	1*	5-30	-	-	-	1/2	RPG-16/AT-3c	
	83-90	50	4	+0	1 / 2	4	10h	1	1	11h ²	1*	1-20	-	-	-	1/2	RPG-18/AT-4	
	91-94	50	4	+0	1 / 2	4	11h	1	1	11h ²	1*	1-20	-	-	-	1/2	RPG-22/AT-4	
	95	56	4	+0	1 / 2	4	11h	1	1	12h ²	1*	1-25	-	-	-	1/2	RPG-22/AT-4b	
	96-99	57	4	+0	1 / 2	4	12h	1	1	12h ²	1*	1-25	-	-	-	1/2	RPG-26/AT-4b	
	00	57	4	+0	1 / 2	4	14h	1	1	12h ²	1*	1-25	-	-	-	1/2	RPG-27/AT-4b	

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
	01-15	59	4	+0	1 / 2	4	14h	1	1	13h ²	1*	1-25	-	-	-	-	1/2	RPG-27/AT-4c
Category 2 SAM Team (SA-7)	78-80	33	4	+0	1 / 2	4	2he	1	C	9h	1	3	1 ^R	1	8-24	-	1/2	Improvised/RPG-7
	81-82	48	4	+0	1 / 2	4	2he	1	C	10h	1	4	2 ^R	1	5-28	-	1/2	Improvised/RPG-16
	83	41	4	+0	1 / 2	4	2he	1	C	10h	1	1	2 ^R	1	5-28	-	1/2	Improvised/RPG-18
Category 2 SAM Team (SA-14)	84-90	63	4	+0	1 / 2	4	2he	1	C	10h	1	1	2 ^A	1	5-28	-	1/2	Improvised/RPG-18
Category 2 SAM Team (SA-16)	91-92	70	4	+0	1 / 2	4	2he	1	C	11h	1	1	2 ^A	1	5-32	-	1/2	Improvised/RPG-22
Category 2 SAM Team (SA-18)	93-95	73	4	+0	1 / 2	4	2he	1	C	11h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-22
	96-99	74	4	+0	1 / 2	4	2he	1	C	12h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-26
	00-15	74	4	+0	1 / 2	4	2he	1	C	14h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-27
Category 2 Combat Engineer	50-82	17	4	+0	1 / 4	4	6h	1	C	-	-	-	-	-	-	-	1	AT H-Gr/None
	83-90	19	4	+0	1 / 4	4	10h	1	1	-	-	-	-	-	-	-	1	RPG-18/None
	91-95	19	4	+0	1 / 4	4	11h	1	1	-	-	-	-	-	-	-	1	RPG-22/None
	96-99	19	4	+0	1 / 4	4	12h	1	1	-	-	-	-	-	-	-	1	RPG-26/None
	00-15	20	4	+0	1 / 4	4	14h	1	1	-	-	-	-	-	-	-	1	RPG-27/None
Category 3 Weapons	50-56	28	4	+1	(3 / 4)	6	6h	1	C	8h	1	1	-	-	-	-	1	AT H-Gr/RPG-2
Category 3 Infantry	50-76	24	4	+0	1 / 5	4	6h	1	C	8h	1	1	-	-	-	-	1	AT H-Gr/RPG-2
	77-85	30	4	+0	1 / 5	4	6h	1	C	9h	1	3	-	-	-	-	1	AT H-Gr/RPG-7
	86-87	32	4	+0	1 / 5	4	6h	1	C	10h	1	4	-	-	-	-	1	AT H-Gr/RPG-16
	88-94	34	4	+0	1 / 5	4	10h	1	1	10h	1	4	-	-	-	-	1	RPG-18/RPG-16
	95	36	4	+0	2 / 6	4	10h	1	1	10h	1	4	-	-	-	-	1	RPG-18/RPG-16
	96-00	36	4	+0	2 / 6	4	11h	1	1	10h	1	4	-	-	-	-	1	RPG-22/RPG-16
	01-04	37	4	+0	2 / 6	4	12h	1	1	10h	1	4	-	-	-	-	1	RPG-26/RPG-16
	05-15	38	4	+0	2 / 6	4	14h	1	1	14h	1	3	-	-	-	-	1	RPG-27/RPG-29
Category 3 Infantry w/ATGM	94	44	4	+0	1 / 5	4	10h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-18/AT-7a
	95	46	4	+0	2 / 6	4	10h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-18/AT-7a
	96-00	46	4	+0	2 / 6	4	11h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-22/AT-7a
	01-04	47	4	+0	2 / 6	4	12h	1	1	12h ²	1	1-10	-	-	-	-	1	RPG-26/AT-7a
	05-15	59	4	+0	2 / 6	4	14h	1	1	16h ²	1	1-15	-	-	-	-	1	RPG-27/AT-13
Category 3 Infantry w/SAM	83-85	39	4	+0	1 / 5	4	6h	1	C	9h	1	3	1 ^R	1	8-24	-	1	AT H-Gr/RPG-7
	86-87	55	4	+0	1 / 5	4	6h	1	C	10h	1	4	2 ^R	1	5-28	-	1	AT H-Gr/RPG-16
	88	56	4	+0	1 / 5	4	10h	1	1	10h	1	4	2 ^R	1	5-28	-	1	RPG-18/RPG-16
	89-94	79	4	+0	1 / 5	4	10h	1	1	10h	1	4	2 ^A	1	5-28	-	1	RPG-18/RPG-16
	95	81	4	+0	2 / 6	4	10h	1	1	10h	1	4	2 ^A	1	5-28	-	1	RPG-18/RPG-16
	96-97	88	4	+0	2 / 6	4	11h	1	1	10h	1	4	2 ^A	1	5-32	-	1	RPG-22/RPG-16
	98-00	91	4	+0	2 / 6	4	11h	1	1	10h	1	4	2 ^A	1	5-34	-	1	RPG-22/RPG-16
	01-04	91	4	+0	2 / 6	4	12h	1	1	10h	1	4	2 ^A	1	5-34	-	1	RPG-26/RPG-16
	05-15	92	4	+0	2 / 6	4	14h	1	1	14h	1	3	2 ^A	1	5-34	-	1	RPG-27/RPG-29
	76	37	4	+0	1 / 2	4	8h	1	1	11h ¹	1*	5-30	-	-	-	1/2	RPG-2/AT-3b	
Category 3 Missile Team	77-85	42	4	+0	1 / 2	4	9h	1	3	11h ¹	1*	5-30	-	-	-	1/2	RPG-7/AT-3b	
	86	45	4	+0	1 / 2	4	10h	1	4	11h ¹	1*	5-30	-	-	-	1/2	RPG-16/AT-3b	
	87	64	4	+0	1 / 2	4	10h	1	4	12h ²	1*	5-30	-	-	-	1/2	RPG-16/AT-3c	
	88-95	50	4	+0	1 / 2	4	10h	1	1	11h ²	1*	1-20	-	-	-	1/2	RPG-18/AT-4	
	96-99	50	4	+0	1 / 2	4	11h	1	1	11h ²	1*	1-20	-	-	-	1/2	RPG-22/AT-4	

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
	00	56	4	+0	1/2	4	11h	1	1	12h ²	1*	1-25	-	-	-	-	1/2	RPG-22/AT-4b
	01-04	57	4	+0	1/2	4	12h	1	1	12h ²	1*	1-25	-	-	-	-	1/2	RPG-26/AT-4b
	05	57	4	+0	1/2	4	14h	1	1	12h ²	1*	1-25	-	-	-	-	1/2	RPG-27/AT-4b
	06-15	59	4	+0	1/2	4	14h	1	1	13h ²	1*	1-25	-	-	-	-	1/2	RPG-27/AT-4c
Category 3 SAM Team (SA-7)	83-85	33	4	+0	1/2	4	2he	1	C	9h	1	3	1 ^R	1	8-24	-	1/2	Improvised/RPG-7
	86-87	48	4	+0	1/2	4	2he	1	C	10h	1	4	2 ^R	1	5-28	-	1/2	Improvised/RPG-16
	88	41	4	+0	1/2	4	2he	1	C	10h	1	1	2 ^R	1	5-28	-	1/2	Improvised/RPG-18
Category 3 SAM Team (SA-14)	89-95	63	4	+0	1/2	4	2he	1	C	10h	1	1	2 ^A	1	5-28	-	1/2	Improvised/RPG-18
Category 3 SAM Team (SA-16)	96-97	70	4	+0	1/2	4	2he	1	C	11h	1	1	2 ^A	1	5-32	-	1/2	Improvised/RPG-22
Category 3 SAM Team (SA-18)	98-00	73	4	+0	1/2	4	2he	1	C	11h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-22
	01-04	74	4	+0	1/2	4	2he	1	C	12h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-26
	05-15	74	4	+0	1/2	4	2he	1	C	14h	1	1	2 ^A	1	5-34	-	1/2	Improvised/RPG-27
Category 3 Combat Engineer	50-87	17	4	+0	1/4	4	6h	1	C	-	-	-	-	-	-	-	1	AT H-Gr/None
	88-95	19	4	+0	1/4	4	10h	1	1	-	-	-	-	-	-	-	1	RPG-18/None
	96-00	19	4	+0	1/4	4	11h	1	1	-	-	-	-	-	-	-	1	RPG-22/None
	01-04	19	4	+0	1/4	4	12h	1	1	-	-	-	-	-	-	-	1	RPG-26/None
	05-15	20	4	+0	1/4	4	14h	1	1	-	-	-	-	-	-	-	1	RPG-27/None
Spain																		
Infantry	80-85	28	4	-1	2/6	4	2he	1	C	10h	1	3	-	-	-	-	1	Improvised/M-65
	86-98	27	4	-1	2/6	4	2he	1	C	12h	1	2	-	-	-	-	1	Improvised/C-90
	99-15	32	4	-1	2/6	4	2he	1	C	13h	1	4	-	-	-	-	1	Improvised/Alcotan
Infantry w/Cobra	80-85	43	4	-1	2/6	4	10h	1	3	12h ¹	1	4-20	-	-	-	-	1	M-65/Cobra 2000
	86-90	41	4	-1	2/6	4	12h	1	2	12h ¹	1	4-20	-	-	-	-	1	C-90/Cobra 2000
Infantry w/Dragon	80-85	49	4	-1	2/6	4	10h	1	3	12h ²	1	1-10	-	-	-	-	1	M-65/Dragon
	86-90	47	4	-1	2/6	4	12h	1	2	12h ²	1	1-10	-	-	-	-	1	C-90/Dragon
Infantry w/Milan	80-84	64	4	-1	2/6	4	10h	1	3	14h ²	1	1-20	-	-	-	-	1	M-65/Milan
	85	68	4	-1	2/6	4	10h	1	3	17h ²	1	1-20	-	-	-	-	1	M-65/Milan 2/3
	86-98	66	4	-1	2/6	4	12h	1	2	17h ²	1	1-20	-	-	-	-	1	C-90/Milan 2/3
	99-15	72	4	-1	2/6	4	13h	1	4	17h ²	1	1-20	-	-	-	-	1	Alcotan/Milan 2/3
Mistral Team	88-15	66	4	+0	1/2	4	2he	1	C	-	-	-	2 ^A	1	1-34	-	1/2	Improvised/None
Sweden																		
Infantry	50-59	35	4	+0	1/4	4	8h	1	C	8h	2	3	-	-	-	-	1	Pskott m/46/Carl Gustaf
	60-67	38	4	+0	1/4	4	8h	1	C	8h	2	3	-	-	-	-	1	Pskott m/46/Carl Gustaf
	68-85	53	4	+0	1/5	4	10h	1	1	11h	2	5	-	-	-	-	1	Miniman /Carl Gustaf
	86-93	56	4	+0	1/5	4	11h	1	2	11h	2	5	-	-	-	-	1	AT-4/Carl Gustaf
	94	50	4	+0	1/5	4	11h	1	2	13h	2	3	-	-	-	-	1	AT-4/Carl Gustaf
	95-15	51	4	+0	1/5	4	13h	1	2	13h	2	3	-	-	-	-	1	AT-4/Carl Gustaf
AT Team	63-67	31	4	+0	1/2	4	2he	1	C	12h ¹	1*	3-20	-	-	-	-	1/2	Improvised/Bantam
	68-85	34	4	+0	1/2	4	10h	1	1	12h ¹	1*	3-20	-	-	-	-	1/2	Miniman /Bantam
	86-87	37	4	+0	1/2	4	11h	1	2	12h ¹	1*	3-20	-	-	-	-	1/2	AT-4/Bantam
	88-94	55	4	+0	1/2	4	11h	1	2	13h2†	1*	2-20	-	-	-	t	1/2	AT-4/BILL

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
RBS 69 (Redeye) Team	95-98	56	4	+0	1 / 2	4	13h	1	2	13h2†	1*	2-20	-	-	-	t	½	AT-4/BILL
	99-15	60	4	+0	1 / 2	4	13h	1	2	14h2†	1*	2-22	-	-	-	2	½	AT-4/BILL 2
RBS 70 Team	68-95	36	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^R	1	1-30	-	½	Improvised/None
RBS 70 Team	86-05	70	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	1-36	-	½	Improvised/None
	06-15	95	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	1-52	-	½	Improvised/None
Syria																		
Infantry	50-51	18	4	-1	2 / 4	4	2he	1	C	4h	1*	C	-	-	-	-	1	Improvised/AT R-Gr
	52-57	21	4	+0	2 / 4	4	2he	1	C	4h	1*	C	-	-	-	-	1	Improvised/AT R-Gr
	58-68	22	4	+0	1 / 5	4	2he	1	C	8h	1*	1	-	-	-	-	1	Improvised/RPG-2
	69-77	28	4	+0	1 / 5	4	2he	1	C	9h	1*	3	-	-	-	-	1	Improvised/RPG-7
	78-88	30	4	+0	1 / 5	4	2he	1	C	12h	1*	3	-	-	-	-	1	Improvised/RPG-7
	89-90	28	4	+0	1 / 5	4	2he	1	C	14h	1*	2	-	-	-	-	1	Improvised/RPG-7
	91-94	51	4	+0	1 / 5	4	14h	1	3	12h ²	1*	1-10	-	-	-	-	1	RPG-29/AT-7a
	95-15	63	4	+0	1 / 5	4	14h	1	3	16h ²	1*	1-15	-	-	-	-	1	RPG-29/AT-13
Engineer	50-51	18	4	-1	2 / 4	4	2he	1	C	4h	1*	C	-	-	-	-	1	Improvised/AT R-Gr
	52-57	21	4	+0	2 / 4	4	2he	1	C	4h	1*	C	-	-	-	-	1	Improvised/AT R-Gr
	58-68	22	4	+0	1 / 5	4	2he	1	C	8h	1*	1	-	-	-	-	1	Improvised/RPG-2
	69-77	28	4	+0	1 / 5	4	2he	1	C	9h	1*	3	-	-	-	-	1	Improvised/RPG-7
	78-88	30	4	+0	1 / 5	4	2he	1	C	12h	1*	3	-	-	-	-	1	Improvised/RPG-7
	89-90	28	4	+0	1 / 5	4	2he	1	C	14h	1*	2	-	-	-	-	1	Improvised/RPG-7
	91-15	31	4	+0	1 / 5	4	2he	1	C	14h	1*	3	-	-	-	-	1	Improvised/RPG-29
Parachute MG	50-51	22	4	+1	(2 / 3)	6	2he	1	C	4h	1*	C	-	-	-	-	1	Improvised/AT R-Gr
	52-57	23	4	+1	(3 / 3)	6	2he	1	C	4h	1*	C	-	-	-	-	1	Improvised/AT R-Gr
	58-68	25	4	+1	(2 / 4)	6	2he	1	C	8h	1*	1	-	-	-	-	1	Improvised/RPG-2
	69-77	31	4	+1	(2 / 4)	6	2he	1	C	9h	1*	3	-	-	-	-	1	Improvised/RPG-7
	78-88	32	4	+1	(2 / 4)	6	2he	1	C	12h	1*	3	-	-	-	-	1	Improvised/RPG-7
	89-90	31	4	+1	(2 / 4)	6	2he	1	C	14h	1*	2	-	-	-	-	1	Improvised/RPG-7
	91-15	33	4	+1	(2 / 4)	6	2he	1	C	14h	1*	3	-	-	-	-	1	Improvised/RPG-29
Sagger Team	72-77	42	4	+0	1 / 2	4	9h	1	3	11h ¹	1*	5-30	-	-	-	½	RPG-7/AT-3b	
	78-84	42	4	+0	1 / 2	4	9h	1	3	11h ¹	1*	5-30	-	-	-	½	RPG-7/AT-3b	
	85-88	64	4	+0	1 / 2	4	12h	1	3	12h ²	1*	5-30	-	-	-	½	RPG-7/AT-3c	
	89-90	62	4	+0	1 / 2	4	14h	1	2	12h ²	1*	5-30	-	-	-	½	RPG-7/AT-3c	
	91-15	74	4	+0	1 / 2	4	14h	1	3	15h ²	1*	1-30	-	-	-	½	RPG-29/AT-3d	
AT-4 Team	82-89	56	4	+0	1 / 2	4	12h	1	3	11h ²	1*	1-20	-	-	-	½	RPG-7/AT-4	
	89-90	54	4	+0	1 / 2	4	14h	1	2	11h ²	1*	1-20	-	-	-	½	RPG-7/AT-4	
	91-15	65	4	+0	1 / 2	4	14h	1	3	13h ²	1*	1-25	-	-	-	½	RPG-29/AT-4c	
Milan Team	83-84	61	4	+0	1 / 2	4	12h	1	3	14h ²	1*	1-20	-	-	-	t	½	RPG-7/Milan
	85-88	65	4	+0	1 / 2	4	12h	1	3	17h ²	1*	1-20	-	-	-	t	½	RPG-7/Milan 2/3
	89-90	63	4	+0	1 / 2	4	14h	1	2	17h ²	1*	1-20	-	-	-	t	½	RPG-7/Milan 2/3
	91-15	66	4	+0	1 / 2	4	14h	1	3	17h ²	1*	1-20	-	-	-	t	½	RPG-29/Milan 2/3
AT-14 Team	96-15	104	4	+0	1 / 2	4	14h	1	3	19h ²	1*	1-55	-	-	-	t	½	RPG-29/AT-14
SA-7 Team	72-77	46	4	+0	1 / 2	4	2he	1	C	9h	1*	3	2 ^R	1	5-28	-	½	Improvised/RPG-7

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
SA-14 Team	78-88	47	4	+0	1 / 2	4	2he	1	C	12h	1*	3	2 ^R	1	5-28	-	½	Improvised/RPG-7
	89-90	46	4	+0	1 / 2	4	2he	1	C	14h	1*	2	2 ^R	1	5-28	-	½	Improvised/RPG-7
	91-15	49	4	+0	1 / 2	4	2he	1	C	14h	1*	3	2 ^R	1	5-28	-	½	Improvised/RPG-29
SA-16 Team	80-88	70	4	+0	1 / 2	4	2he	1	C	12h	1*	3	2 ^A	1	5-28	-	½	Improvised/RPG-7
	89-90	68	4	+0	1 / 2	4	2he	1	C	14h	1*	2	2 ^A	1	5-28	-	½	Improvised/RPG-7
	91-15	71	4	+0	1 / 2	4	2he	1	C	14h	1*	3	2 ^A	1	5-28	-	½	Improvised/RPG-29
United Kingdom																		
Infantry	50-57	24	4	-1	2 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	58-65	27	4	+1	2 / 3	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-69	35	4	+1	2 / 3	4	2he	1	C	11h	2	5	-	-	-	-	1	Improvised/Carl Gustaf
	70-85	37	4	+1	2 / 3	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	86	35	4	-1	2 / 6	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	87-93	33	4	-1	2 / 6	4	2he	1	C	14h	1	4	-	-	-	i	1	Improvised/LAW-80
	94-02	33	4	-1	2 / 6	4	2he	1	C	14h	1	4	-	-	-	i	1	Improvised/LAW-80
	03-08	27	4	-1	2 / 6	4	2he	1	C	13h	1	2	-	-	-	t	1	Improvised/AT-4
	09-15	40	4	-1	2 / 6	4	2he	1	C	14h ^{3†}	1	0-6	-	-	-	t	1	Improvised/MBT LAW
	50-57	25	4	-1	2 / 6	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
Assault Pioneer	58-65	28	4	+1	2 / 4	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	66-69	36	4	+1	2 / 4	4	2he	1	C	11h	2	5	-	-	-	-	1	Improvised/Carl Gustaf
	70-85	39	4	+1	2 / 4	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	86	36	4	-1	2 / 7	4	8h	1	1	11h	2	5	-	-	-	-	1	M72 LAW/Carl Gustaf
	87-93	33	4	-1	2 / 7	4	2he	1	C	14h	1	4	-	-	-	i	1	Improvised/LAW-80
	94-02	33	4	-1	2 / 7	4	2he	1	C	14h	1	4	-	-	-	i	1	Improvised/LAW-80
	03-08	28	4	-1	2 / 7	4	2he	1	C	13h	1	2	-	-	-	t	1	Improvised/AT-4
	09-15	41	4	-1	2 / 7	4	2he	1	C	14h ^{3†}	1	0-6	-	-	-	t	1	Improvised/MBT LAW
Milan Team	75-85	48	4	+0	1 / 1	4	2he	1	C	14h ²	1*	1-20	-	-	-	t	½	Improvised/Milan
	86-15	55	4	+0	1 / 2	4	2he	1	C	17h ²	1*	1-20	-	-	-	t	½	Improvised/Milan 2/3
Blowpipe Team	76-85	45	4	+0	1 / 1	4	2he	1	C	-	-	-	2 ^A	1	1-22	-	½	Improvised/None
Javelin Team	85	67	4	+0	1 / 1	4	2he	1	C	-	-	-	2 ^A	1	1-36	-	½	Improvised/None
	86-15	70	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	1-36	-	½	Improvised/None
Starstreak Team	00-15	86	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	3-46	-	½	Improvised/None
United States																		
Infantry Weapons	50-56	38	4	+1	(3 / 4)	6	4h	1	C	8h	2	2	-	-	-	-	1	AT R-Gr/M20 75mm RR
Infantry Rifle	50-56	29	4	+1	2 / 4	4	4h	1	C	9h	1	2	-	-	-	-	1	AT R-Gr/3.5" Bazooka
	57-60	42	4	+1	2 / 4	4	9h	1	2	8h	2	2	-	-	-	-	1	3.5" Bazooka/M20 75mm RR
	61	38	4	+1	2 / 4	4	9h	1	2	11h	1	3	-	-	-	-	1	3.5" Bazooka/M67 90mm RR
	62-64	38	4	+1	2 / 4	4	9h	1	2	11h	1	3	-	-	-	-	1	3.5" Bazooka/M67 90mm RR
	65-74	32	4	+0	1 / 5	4	8h	1	1	11h	1	3	-	-	-	-	1	M72 LAW/M67 90mm RR
	75-85	43	4	-1	2 / 6	4	8h	1	1	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon

Infantry Stand Type	Period	Points	Move	---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
				AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
Infantry Engineer	86-89	47	4	-1	2 / 6	4	11h	1	2	12h ²	1*	1-10	-	-	-	t	1	M136 (AT-4)/Dragon
	90-95	51	4	+1	2 / 5	4	11h	1	2	12h ²	1*	1-10	-	-	-	t	1	M136 (AT-4)/Dragon
	96-00	76	4	+1	2 / 5	4	11h	1	2	16h ^{3†}	1*	1-20	-	-	-	2	1	M136 (AT-4)/Javelin
	01-15	77	4	+1	2 / 5	4	13h	1	2	16h ^{3†}	1*	1-20	-	-	-	2	1	M136 (AT-4)/Javelin
	50-62	24	4	-1	2 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	63-64	27	4	+0	1 / 8	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
Mech Infantry	65-74	24	4	+0	1 / 8	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	75-85	43	4	-1	2 / 7	4	8h	1	1	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon
	86-95	50	4	+0	2 / 6	4	11h	1	2	12h ²	1*	1-10	-	-	-	t	1	M136 (AT-4)/Dragon
	96-15	74	4	+0	2 / 6	4	11h	1	2	16h ^{3†}	1*	1-20	-	-	-	2	1	M136 (AT-4)/Javelin
	50-57	28	4	+0	2 / 5	4	4h	1	C	9h	1	2	-	-	-	-	1	AT R-Gr/3.5" Bazooka
	58-61	29	4	+1	2 / 4	4	4h	1	C	9h	1	2	-	-	-	-	1	AT R-Gr/3.5" Bazooka
Marine Rifle	62-64	36	4	+0	2 / 5	4	9h	1	2	11h	1	3	-	-	-	-	1	3.5" Bazooka/M67 90mm RR
	65-74	34	4	+0	2 / 6	4	8h	1	1	11h	1	3	-	-	-	-	1	M72 LAW/M67 90mm RR
	75-77	45	4	+0	2 / 6	4	8h	1	1	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon
	78-82	44	4	+0	1 / 6	4	8h	1	1	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon
	83-85	47	4	+1	2 / 5	4	8h	1	1	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon
	86-95	51	4	+1	2 / 5	4	11h	1	2	12h ²	1*	1-10	-	-	-	t	1	M136 (AT-4)/Dragon
	96-00	76	4	+1	2 / 5	4	11h	1	2	16h ^{3†}	1*	1-20	-	-	-	2	1	M136 (AT-4)/Javelin
	01-15	77	4	+1	2 / 5	4	13h	1	2	16h ^{3†}	1*	1-20	-	-	-	2	1	M136 (AT-4)/Javelin
	50-62	43	4	+1	2 / 5	4	9h	1	2	8h	2	2	-	-	-	-	1	3.5" Bazooka/M20 75mm RR
	63-64	29	4	+1	2 / 5	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
Marine LMG Team	65-74	26	4	+1	2 / 5	4	2he	1	C	8h	1	1	-	-	-	-	1	Improvised/M72 LAW
	75-79	47	4	+1	2 / 5	4	8h	1	1	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon
	80-84	44	4	+0	1 / 6	4	8h	1	1	12h ²	1*	1-10	-	-	-	t	1	M72 LAW/Dragon
	85-94	53	4	+1	2 / 5	4	11h	1	3	12h ²	1*	1-10	-	-	-	t	1	SMAW/Dragon
	95-99	55	4	+1	3 / 6	4	11h	1	3	12h ²	1*	1-10	-	-	-	t	1	SMAW/Dragon
	00-15	80	4	+1	3 / 6	4	11h	1	3	16h ^{3†}	1*	1-20	-	-	-	2	1	SMAW/Javelin
Marine MMG Team	50-62	25	4	+1	2 / 2	4	2he	1	C	9h	1	2	-	-	-	-	½	Improvised/3.5" Bazooka
Marine HMG	50-62	26	4	+1	(3 / 2)	6	2he	1	C	9h	1	2	-	-	-	-	½	Improvised/3.5" Bazooka
Marine Engineer	85-15	47	4	+1	(3 / 4)	8	8h	1	1	12h ²	1	1-10	-	-	-	t	1	M72 LAW/Dragon
TOW Team	50-62	25	4	-1	2 / 6	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	63-72	27	4	-1	2 / 9	4	2he	1	C	9h	1	2	-	-	-	-	1	Improvised/3.5" Bazooka
	73-84	33	4	+1	2 / 5	4	2he	1	C	11h	1	3	-	-	-	-	1	Improvised/M67 90mm RR
	85-90	29	4	-1	2 / 7	4	2he	1	C	11h	1	3	-	-	-	-	1	Improvised/SMAW
	91-15	31	4	+0	2 / 6	4	2he	1	C	11h	1	3	-	-	-	-	1	Improvised/SMAW
[w/TOW-2A]	70-75	59	4	+0	1 / 2	4	2he	1	C	13h ²	1	1-30	-	-	-	t	½	Improvised/TOW
	76-79	66	4	+0	1 / 2	4	2he	1	C	13h ²	1	1-38	-	-	-	t	½	Improvised/TOW-ER
	80-81	66	4	+0	1 / 2	4	2he	1	C	13h ²	1	1-38	-	-	-	t	½	Improvised/TOW-ER
	82-83	68	4	+0	1 / 2	4	2he	1	C	14h ²	1	1-38	-	-	-	t	½	Improvised/ITOW
	84-86	70	4	+0	1 / 2	4	2he	1	C	15h ²	1	1-38	-	-	-	t	½	Improvised/TOW-2
	87-01	78	4	+0	1 / 2	4	2he	1	C	19h ²	1	1-38	-	-	-	t	½	Improvised/TOW-2A
[w/TOW-2B]	02-15	78	4	+0	1 / 2	4	2he	1	C	19h ²	1	1-38	-	-	-	2	½	Improvised/TOW-2A
	92-01	70	4	+0	1 / 2	4	2he	1	C	15h2†	1	1-38	-	-	-	t	½	Improvised/TOW-2B

Infantry Stand Type				---Anti-Infantry---			-----LAW-----			-----MAW-----			-----SAM-----			Equip	Cap	Notes (LAW/MAW)
	Period	Points	Move	AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
	02-15	70	4	+0	1 / 2	4	2he	1	C	15h2†	1	1-38	-	-	-	2	½	Improvised/TOW-2B
HMG Team	50-62	16	4	+1	(2 / 2)	8	2he	1	C	-	-	-	-	-	-	-	½	Improvised/None
	63-15	16	4	+0	(2 / 3)	8	2he	1	C	-	-	-	-	-	-	-	½	Improvised/None
Redeye Team	68-95	36	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^R	1	1-30	-	½	Improvised/None
Stinger Team	81-15	63	4	+0	1 / 2	4	2he	1	C	-	-	-	2 ^A	1	2-32	-	½	Improvised/None

General Infantry Notes:

An infantry stand whose ROF is listed in parenthesis has its ROF halved (round down) if it moves in the same turn it fires. For example: (2 / 3)

A LAW or MAW whose ROF is followed by an asterisk is a missile. Apply the normal missile generation restrictions for movement. For example: 1*

Move Notes:

- t Tracked
- w Wheeled
- ht Half-tracked
- a Amphibious
- x Towed
- p Airmobile
- s Skis
- n Helicopter (nap of earth move rating)

Gun Notes:

- h h-class
- he he-class
- ® Antiaircraft

Missile Notes:

- 1 1st generation missile
- 2 2nd generation missile
- 3 3rd generation missile
- † Top-attack missile
- u Has unlimited missile ammo
- A All-aspect surface-to-air missile
- R Rear-aspect surface-to-air missile

Equipment Notes:

- s Weapon stabilization
- ss Advanced weapon stabilization
- t 1st generation thermal sights
- 2 2nd generation thermal sights
- i Infrared or image intensification sights
- n NBC system
- c CTV
- v IVIS
- o Open-topped vehicle
- f Limited gun traverse - forward firing
- r Limited gun traverse - rearward firing
- d smoke dischargers (pre-1950 only)

Armor Notes:

- s Soft vehicle, or soft vehicle facing
- no armor modifier vs. h-class weapons
- A +1 armor modifier vs. h-class weapons
- B +2 armor modifier vs. h-class weapons
- C +3 armor modifier vs. h-class weapons
- D +4 armor modifier vs. h-class weapons
- E +5 armor modifier vs. h-class weapons
- F +6 armor modifier vs. h-class weapons

Ind Fire Ammo Notes:

- h Conventional HE ammo
- s Smoke (both normal and incendiary)
- c Chemical
- i ICM (improved conventional munitions)
- l Laser-guided projectiles
- g GPS-guided projectiles
- m Artillery delivered mines

F.5 Aircraft Data Chart, 1950 Onward

See end of chart for explanation of notations.

Aircraft	Avail Date	Load Rating	GP Bombs	Cluster Bombs	Rockets	Missiles	MG Strafe	Cannon Strafe	A-10 Strafe	Armored
Australia										
Mirage IIIO	63+	2	X	X	X				1	
F-111C Aardvark	79+	9	X							
Canada										
CF-18 Hornet	83+	6	X	X	X	X			1	
China										
Shenyang J-2	51+	1	X		X				1	
Shenyang J-5A	56+	1	X		X				1	
Nanchang Q-5 Fantan	65+	2	X	X	X				1	
Shenyang J-6B / F-6B	77+	3	X	X	X				1	
Chengdu J-7H	79+	2	X	X					1	
Shenyang J-8	81+	3	X	X	X				1	
Chengdu J-7 IIA / F-7M	84+	1	X	X	X				1	
Shenyang J-11	92+	7	X	X	X				1	
Su-30MK Flanker-H	01+	8	X	X	X	X			1	
Jian H-7A Flounder	04+	5	X	X	X	X			1	
Chengdu J-10A	05+	5	X	X	X	X			1	
Finland										
F-18L Hornet	95+	6	X	X	X	X			1	
France										
MD450 Ouragan	52+	1	X		X				1	
MD454 Mystere IV	52+	1	X		X				1	
SMB.2 Super Mystere	57+	1	X		X				1	
Mirage III	58+	2	X	X	X	X			1	
Vautour II	58+	4	X	X	X	X			1	
F-8E Crusader	64+	2	X	X	X	X			1	
Etendard IV	64+	1	X	X	X	X			1	
Mirage V	67+	4	X	X	X	X			1	
Mirage F1	73+	4	X	X	X	X			1	
SEPECAT Jaguar A	73+	5	X	X	X	X			1	
Alpha Jet E	77+	2	X	X	X	X			1	
Super Etandard	77+	2	X	X	X	X			1	
Mirage 2000	78+	1	X	X	X	X			1	
Rafale	02+	6	X	X	X	X			1	
Germany										
F-104G Starfighter	61+	2	X		X				1	
F-4F Phantom II	73+	8	X	X	X	X			1	
Alpha Jet A	77+	2	X	X	X	X			1	
Tornado	79+	9	X	X	X	X			1	
Typhoon	05+	7	X	X	X	X			1	

Aircraft	Avail Date	Load Rating	GP Bombs	Cluster Bombs	Rockets	Missiles	MG Strafe	Cannon Strafe	A-10 Strafe	Armored
India										
HF-24 Marut	67+	2	X	X	X				1	
Jaguar International IS Shamsher	79+	5	X	X	X	X			1	
Mirage 2000H Vajra	85+	6	X	X	X	X			1	
Iraq										
Mirage F1EQ	80+	4	X	X	X	X			1	
Israel										
Shahak (Mirage IIICJ)	58+	2	X		X				1	
A-4H Skyhawk	67+	4	X	X	X	X			1	
IAI Nesher	72+	2	X	X	X	X			1	
A-4N Skyhawk	73+	5	X	X	X	X			1	
IAI Kfir C2	76+	4	X	X	X	X			1	
IAI Kfir C7	83+	6	X	X	X	X			1	
IAI Kurnass F-4/2000	89+	8	X	X	X	X			1	
F-15I Ra'am	95+	12	X	X		X			1	
Italy										
F-104S Starfighter	69+	3	X		X				1	
Aermacchi MB-326K	70+	2	X		X				1	
Tornado	81+	9	X	X	X	X			1	
Japan										
Mitsubishi F-1	78+	3	X	X	X	X			1	
Mitsubishi F-2	01+	8	X	X		X			1	
Kuwait										
KF-18C Hornet	87+	6	X	X	X	X			1	
Malaysia										
F-18L Hornet	95+	6	X	X	X	X			1	
Netherlands										
Hawker Hunter F.51	56+	2	X		X				1	
Pakistan										
A-5C Fantan	70+	2	X	X	X				1	
F-7 Skybolt	88+	1	X		X				1	
Peru										
Hawker Hunter F.52	54+	2	X		X				1	
Mirage 2000P	86+	6	X	X	X	X			1	
Romania										
IAR-93A	81+	1	X		X				1	
IAR-93B	82+	3	X		X				1	
MiG-21 LanceR-A	95+	2	X	X	X	X			1	
Russia / Soviet Union / CIS										
MiG-15 Fagot	51+	1	X		X				1	
MiG-17 Fresco	52+	1	X		X				1	
MiG-19 Farmer	55+	2	X		X				1	
MiG-21 Fishbed-C	58+	1	X	X					1	
Su-7 Fitter	61+	2	X	X	X				1	

Aircraft	Avail Date	Load Rating	GP Bombs	Cluster Bombs	Rockets	Missiles	MG Strafe	Cannon Strafe	A-10 Strafe	Armored
MiG-21 Fishbed-D	62+	1	X	X						
Yak-28I Brewer-C	65+	1	X							
Yak-28R Brewer-D	66+	3	X							
MiG-21MF Fishbed-J	68+	2	X	X		X		1		
MiG-17F Fresco-C Modified	70+	2	X		X			1		
Su-17 Fitter	72+	4	X	X	X	X		1		
Su-20 Fitter	72+	4	X	X	X	X		1		
MiG-23MF Flogger-B	73+	2	X	X	X	X		1		
MiG-27 Flogger	73+	4	X	X	X	X		1		
Su-24 Fencer	74+	11	X	X	X	X		1		
Yak-38 Forger	76+	1	X		X					
Su-17M3 Fitter-H	78+	5	X	X	X	X		1		
Su-22 Fitter	78+	5	X	X	X	X		1		
MiG-23BN Flogger-H	81+	3	X	X	X	X		1		
Su-25 Frogfoot	81+	5	X	X	X	X		1		X
MiG-29 Fulcrum-A	83+	3	X	X	X			1		
Su-27 Flanker	84+	7	X	X	X	X		1		
MiG-29SM Fulcrum-C	86+	4	X	X	X	X		1		
Su-33 Flanker-D	91+	8	X	X	X	X		1		
Su-35 Flanker-E	92+	8	X	X	X	X				
Su-30 Flanker-C	94+	8	X	X	X	X		1		
MiG-29SMT Fulcrum-F	98+	5	X	X	X	X		1		
MiG-35 Fulcrum	11+?	5	X	X	X	X		1		
South Africa										
Mirage F1AZ	75+	4	X	X	X	X		1		
South Korea										
F-15K Slam Eagle	06+	12	X	X	X	X		1		
Sweden										
Hawker Hunter F.50	54+	2	X		X			1		
J-35 Draken	61+	2	X		X			1		
AJ-37 Viggen	72+	6	X		X			1		
JAS-39 Gripen	95+	5	X	X	X	X		1		
Switzerland										
Mirage IIIS	64+	2	X	X	X			1		
Hawker Hunter F.58A	82+	2	X	X		X		1		
United Kingdom										
Meteor	49+	1			X			1		
Hawker Hunter	56+	2	X		X			1		
BAC Lightning	60+	1	X		X			1		
BAC Lightning F.6 & F.35	64+	3	X		X			1		
BAC Buccaneer S.2B	64+	8	X		X			1		
BAC 167 Strikemaster	68+	1	X		X		2			
F-4 Phantom II	68+	8	X	X	X	X				
Harrier GR.3	69+	2	X	X	X			1		

Aircraft	Avail Date	Load Rating	GP Bombs	Cluster Bombs	Rockets	Missiles	MG Strafe	Cannon Strafe	A-10 Strafe	Armored
SEPECAT Jaguar GR.1	72+	5	X	X	X	X		1		
Hawk	77+	3	X	X	X			1		
Sea Harrier	78+	2	X	X	X			1		
Tornado	79+	9	X	X	X	X		1		
Harrier GR.5	87+	3	X	X	X	X		1		
Harrier GR.7	91+	3	X	X	X	X				
Harrier GR.9	04+	3	X	X	X	X				
Typhoon	05+	7	X	X	X	X		1		
F-35B Lightning II (internal only)	12+	1	X	X		X		1		
F-35B Lightning II (external)	12+	6	X	X		X		1		
United States										
F-80 Shooting Star	45+	1	X		X		1			
F-86 Sabre	48+	1	X		X		1			
AD-1, AD-2, AD-3 Skyraider	48+	1	X		X			1		
F9F-2 Panther	49+	1	X		X			1		
F-84 Thunderjet	50+	2	X		X		1			
AD-4 Skyraider	51+	4	X		X			1		
F9F-5 Panther	52+	1	X		X			1		
F-9 Cougar	54+	1	X		X			1		
A-1E, A-1H Skyraider	56+	4	X		X			1		
A-4 Skyhawk	56+	3	X		X	X		1		
F-100 Super Sabre	56+	3	X			X		1		
F-5A Freedom Fighter	59+	3	X		X			1		
F-4 Phantom II	61+	8	X	X	X	X				
F-105 Thunderchief	61+	3	X			X		1		
A-4E Skyhawk	62+	4	X	X	X	X		1		
A-6A Intruder	63+	7	X	X	X	X				
A-7A Corsair II	66+	5	X	X	X	X		1		
A-37B Dragonfly	67+	3	X	X	X		X			
F-4E Phantom II	67+	8	X	X	X	X		1		
F-111 Aardvark	67+	9	X							
A-7B Corsair II	68+	7	X	X	X	X		1		
AV-8A Harrier	69+	2	X	X	X			1		
A-4M Skyhawk	70+	5	X	X	X	X		1		
A-6E Intruder	71+	8	X	X	X	X				
F-5E Tiger II	72+	3	X	X	X	X		1		
A-10 Thunderbolt II	76+	6	X	X	X	X			2	
F-16 Fighting Falcon	80+	6	X	X	X	X		1		
F/A-18 Hornet	83+	6	X	X		X		1		
AV-8B Harrier II	85+	3	X	X	X	X		1		
F-15E Strike Eagle	89+	12	X	X		X		1		
F-14 Tomcat (Iron Bombs)	92+	5	X	X				1		
F-14 Tomcat (Upgrade)	96+?	5	X	X		X		1		
F/A-18 Super Hornet	01+	8	X	X		X		1		

Aircraft	Avail Date	Load Rating	GP Bombs	Cluster Bombs	Rockets	Missiles	MG Strafe	Cannon Strafe	A-10 Strafe	Armored
F-22 Raptor	05+	2		X		X		1		
F-35A Lightning II (internal only)	11+	1		X		X		1		
F-35A Lightning II (external)	11+	6	X	X		X		1		
F-35B Lightning II (internal only)	12+	1		X		X		1		
F-35B Lightning II (external)	12+	6	X	X		X		1		
F-35C Lightning II (internal only)	15+	1		X		X		1		
F-35C Lightning II (external)	15+	6	X	X		X		1		
Yugoslavia										
J-22A Orao	81+	1	X	X	X	X		X		
J-22B Orao	82+	3	X	X	X	X		X		

Notes:

- x the aircraft can use this weapon type or has this property
- 1 the aircraft can make one strafing attack of this type
- 2 the aircraft can make two strafing attacks of this type

F.6 Helicopter Data Chart, 1950 Onward

Helicopter	Year	PV	Base										
			Move	Armor	Pen	ROF	Rng	AI	Cap	Equip	Pods	Options	
France													
Alouette II	55-15	126	18n	s	-	-	-	-	-	1	MG, 20mm cannon, SS-11		
Alouette III	59-15	126	18n	s	-	-	-	-	-	1	MG, 20mm cannon, SS-11, SS-12, rocket		
Super Frelon	62-15	126	18n	s	-	-	-	-	3	-			
Gazelle	68-15	140	20n	s	-	1	6	-1	-	1	MG, 20mm cannon, SS-11, HOT, TOW, AT-3 Sagger, rocket		
Dauphin/Panther	75-15	140	20n	s	-	-	-	-	1	2	MG, 20mm cannon, HOT, rocket		
Fennec	74-15	140	20n	s	-	-	-	-	-	1	MG, 20mm cannon, TOW, rocket		
Puma	68-15	140	20n	s	-	-	-	-	2	1	MG, 20mm cannon, AT-3 Sagger, rocket		
Super Puma/Cougar	78-15	154	22n	s	-	-	-	-	3	1	MG, 20mm cannon, missile, rocket		
Germany													
B0105	67-15	126	18n	s	-	-	-	-	-	1	MG, 20mm cannon, HOT, TOW, rocket		
International													
Tiger	01-15	182	26n	0	-	-	-	-	-	t	4	MG, 20mm or 30mm cannon, missile, rocket	
NH90	06-15	182	26n	s	-	-	-	-	2	2	missile		
Italy													
Agusta A 109	75-15	140	20n	s	-	-	-	-	-	1	MG, rocket, 20mm cannon, TOW		
Mongoose	90-15	168	24n	0	-	-	-	-	-	t	4	MG, rocket, 20mm cannon, TOW, HOT	
Japan													
OH-1	98-15	140	20n	s	-	-	-	-	-	2	MG, rocket, 20mm cannon, missile		
Russia													
Mi-1 "Hare"	51-83	112	16n	s	-	-	-	-	-	-	-		
Mi-4 "Hound"	52-75	112	16n	s	-	-	-	-	1	-			
Mi-4M "Hound-C"	68-75	112	16n	s	-	1	6	-1	½	2	rockets		
Mi-6 "Hook"	57-15	126	18n	s	-	1	6	-1	6	-			
Mi-8 "Hip"	61-15	126	18n	s	-	1	6	-1	3	2	MG, rocket, 20mm cannon, AT-2 Swatter, AT-3 Sagger, AT-6 Spiral, AT-16		
Mi-2 "Hoplite"	65-15	126	18n	s	-	-	-	-	1	2	MG, rocket, 20mm cannon, Sagger		
Mi-8MT / Mi-17	75-15	126	18n	s	-	-	-	-	3	2	MG, rocket, 20mm cannon, AT-2 Swatter, AT-3 Sagger, AT-6 Spiral, AT-16		
Mi-24 "Hind"	74-15	302	28n	0	2	4	10	0	1	4	MG, rocket, 20mm cannon, AT-2 Swatter, AT-3 Sagger, AT-6 Spiral, AT-16		
Mi-26 "Halo"	85-15	140	20n	s	-	1	6	-1	9	-	-		
Mi-28 "Havoc"	85-15	274	24n	0	2	4	10	0	-	t	4	MG, rocket, 20mm cannon, AT-6 Spiral, AT-16	
KA-29 "Helix-B"	88-15	142	18n	s	-	2	6	-1	1	4	MG, rocket, 20mm cannon, AT-6 Spiral (maximum 2 AT-6 pods)		
Ka-50/52 "Hokum"	00-15	154	22n	0	-	-	-	-	-	t	4	MG, rocket, 20mm cannon, AT-6 Spiral; AT-16	

Base													
Helicopter	Year	PV	Move	Armor	Pen	ROF	Rng	AI	Cap	Equip	Pods	Options	
South Africa													
CSH-2 Rooivalk	99-15	288	26n	0	2	4	10	0	-	t	4	MG, rocket, ZT-3 Swift	
Oryx	99-15	274	24n	s	2	4	10	0	-	t	2	MG, rocket, ZT-3 Swift	
United Kingdom													
Scout	63-94	126	18n	s	-	-	-	-	-	-	2	MG, rocket, 20mm cannon, SS-11	
Lynx	68-15	140	20n	s	-	1	6	-1	1	-	2	MG, rocket, TOW, HOT, Hellfire	
United States													
OH-13 Sioux	48-70	98	14n	s	-	-	-	-	-	-	1	MG	
OH-23 Raven	49-70	84	12n	s	-	-	-	-	-	-	1	MG	
H-25	49-64	98	14n	s	-	-	-	-	-	½	-	-	
H-19 Chickasaw	50-70	98	14n	s	-	-	-	-	1	-	-	-	
CH-21B/C Shawnee	52-67	112	16n	s	-	1	6	-1	2	-	-	-	
CH-37 Mohave	56-69	126	18n	s	-	-	-	-	2	-	-	-	
UH-1	59-15	126	18n	s	-	1	6	-1	1	2	MG, rocket, 20mm cannon, TOW		
UH-1E	75-15	232	18n	s	2	4	10	0	1	2	MG, rocket, 20mm cannon, TOW		
UH-34 Choctaw	59-73	112	16n	s	-	-	-	-	1	2	MG, rocket		
CH-57	61-15	140	20n	s	-	1	6	-1	6	-	-	-	
OH-6	61-15	126	18n	s	-	-	-	-	-	1	MG, rocket, 20mm cannon, TOW		
Hughes 500 Defender	61-15	126	18n	s	-	-	-	-	-	1	MG, rocket, 30mm cannon, TOW		
CH-54 Tarhe	62-93	140	20n	s	-	-	-	-	1	-	-	-	
CH-47	63-15	154	22n	s	-	-	-	-	3	-	-	-	
ACH-47A	63-15	201	22n	s	1	2	6	-1	2	2	MG, rocket, 20mm cannon		
CH-53	64-15	126	18n	s	-	-	-	-	4	-	-	-	
CH-46 Sea Knight	64-15	178	22n	s	1	1	6	-1	2	-	-	-	
AH-1F/G	65-15	246	20n	s	2	4	10	0	-	t	4	Rocket, TOW (maximum 2 TOW pods)	
AH-1W	71-15	274	24n	s	2	4	10	0	-	t	4	Rocket, TOW, Hellfire (maximum 2 missile pods)	
AH-1Z	10-15	274	24n	s	2	4	10	0	-	2	4	Rocket, TOW, Hellfire	
OH-58	69-15	126	18n	s	-	-	-	-	-	-	-	-	
OH-58D	85-15	154	22n	s	-	-	-	-	-	t	-	-	
OH-58D (Warrior)	91-15	154	22n	s	-	-	-	-	-	t	1	MG, rocket, 20mm cannon, TOW, Hellfire, Stinger	
UH-60	78-15	156	20n	0	-	2	6	-1	1	-	2	Rocket, Hellfire, TOW, Stinger	
AH-64	84-15	336	26n	0	4h	4	12	0	-	t	4	Rocket, Hellfire, Stinger	
AH-64D	97-15	336	26n	0	4h	4	12	0	-	2	4	Rocket, Hellfire, Hellfire-L, Stinger	
V-22 Osprey	01-15	240	32n	0	-	2	6	-1	3	t	-	-	

F.5.1 Helicopter Weapons Systems Charts

F.5.1.1 Helicopter MG, Cannon, and Rockets

System	Period	PV Per Pod	Pen	ROF	Rng	AI
MG	60-10	16	-	2	6	-1
20mm Cannon	60-10	106	2	4	10	0
30mm Cannon	70-10	154	4h	4	12	0
HE Rockets	60-10	4	1 fire unit of Heli HE Rckt; range is 30. (See Rule 17.7 for helicopter rocket rules.)			
SBM Rockets	60-10	12	1 fire unit of Heli SBM Rckt; range is 30. (See Rule 17.7 for helicopter rocket rules.)			

F.5.1.2 Helicopter Missiles

System	Period	PV for # of Pods			Pen	ROF	Rng	Notes
		1	2 to 3	4				
Antitank								
AT-2								
AT-2b Swatter	67-10	52	130	190	14h ¹	1	10-35	
AT-2c Swatter-M	77-10	105	262	307	14h ²	1	10-40	
AT-3								
AT-3b Sagger	61-10	46	115	168	11h ¹	1	5-30	
AT-3c Sagger	72-10	88	219	257	12h ²	1	5-30	
AT-3d Sagger	90-10	106	266	312	15h ²	1	1-30	
AT-6								
AT-6 Spiral	78-10	132	330	387	13h ²	1	1-50	
AT-6 Spiral-M1	89-10	163	407	477	16h ²	1	1-60	
AT-6 Spiral-M2	90-10	178	444	520	16h ²	1	1-70	
AT-9 Kokon	90-10	183	458	536	17h ²	1	1-70	
AT-16 Vikhr	92-10	231	578	653	17h ³	1	1-80	
Hellfire								
Hellfire-A,B,C	85-10	220	550	622	19h ³	1	15-80	
Hellfire-F	92-10	206	515	583	20h ³	1	15-70	
Hellfire-K	95-10	269	672	759	20h ³	1	1-90	
Hellfire-L Longbow	98-10	269	672	759	20h ³	2	1-90	
Hellfire-M	01-10	37	93	117	12he ³	2	1-90	A hit on soft causes a QC, target gets terrain save.
Hellfire-N	02?-10	47	117	140	15he ³	2	1-90	A hit on soft causes a QC, no terrain save.
HOT								
HOT 1	77-10	126	314	367	15h ²	1	1-40	
HOT 2	83-10	130	324	380	16h ²	1	1-40	
HOT 2T	90-10	138	345	404	18h ²	1	1-40	
HOT 3	97-10	142	355	415	19h ²	1	1-40	
Spike-ER	99-15	208	519	587	14h ³ †	1	2-80	
SS-11	60-10	50	125	183	13h ¹	1	5-30	
SS-12	75-10	78	194	284	13h ¹	1	4-60	Mainly used for anti-ship and anti-fortification attacks
TOW								
TOW	70-10	99	248	290	13h ²	1	1-30	
TOW-ER	76-10	113	283	332	13h ²	1	1-38	
ITOW	82-10	118	294	344	14h ²	1	1-38	
TOW 2	84-10	122	305	357	15h ²	1	1-38	
TOW-2A	87-10	138	344	403	19h ²	1	1-38	
TOW-2B	92-10	122	305	357	15h ² †	1	1-38	
ZT-3 Swift								
ZT-3	87-10	121	303	355	14h ²	1	1-40	
ZT-3B	98-10	186	466	526	19h ³	1	2-50	
Air-to-Air								
Igla	85?-15	265 per pod			2 ^A	2	5-32	One shot per pod. Maximum 4 pods.
Stinger	88-15	265 per pod			2 ^A	2	2-32	One shot per pod. Maximum 2 pods.

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Scenario Data Sheet A

Vehicles, AT Guns, AA Guns, and On-Table Artillery

Infantry

Infantry Stand Type	Points	Move	---Anti-Infantry---			---LAW---			---MAW---			---SAM---			Equip	Cap	Notes (LAW/MAW)
			AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
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Artillery Support Groups

A Fistful of TOWs 3

Scenario Data Sheet B

Vehicles, AT Guns, AA Guns, and On-Table Artillery

Infantry

Infantry Stand Type	Points	Move	---Anti-Infantry---			----LAW----			----MAW----			----SAM----			Equip	Cap	Notes (LAW/MAW)
			AI	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng	Pen	ROF	Rng			
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Artillery Support Groups

Helicopters

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Anti-Vehicle (AV) and Anti-Infantry (AI) Fire																				
To Hit		Die Roll Modifiers For AV & AI Fire																		
Guns	To Hit	? Firer's quality to-hit modifier (5.2) -2 Firer is soft and suppressed -1 Firer is armored and suppressed -1 Firing overwatch during enemy movement except for shoot-and-scoot (12.6) -1 Firer using thermal sights through normal smoke (10.8.1) -2 Firer using thermal sights through incendiary smoke (10.8.1)																		
Short	3+	+1 Target using strategic movement (6.6) -1 Night and firer lacks thermal sights (18.2) -1 Firer using chemical protective gear (23.5.1) ? Firer's anti-infantry modifier [AI fire only] (14.3) -1 Infantry firing AI from vehicle [AI fire only] (12.11)																		
Effective	4+																			
Long	5+																			
Missiles: Unlimited Ammo	To Hit																			
1 st Gen.	5+																			
2 nd Gen.	3+																			
3 rd Gen.	2+																			
Missiles: Limited Ammo	To Hit	Gun Penetration Modifiers For Range <table border="1"> <thead> <tr> <th>Range</th> <th>Modifier</th> </tr> </thead> <tbody> <tr> <td>Short</td> <td>+2</td> </tr> <tr> <td>Long</td> <td>-2</td> </tr> </tbody> </table>			Range	Modifier	Short	+2	Long	-2										
Range	Modifier																			
Short	+2																			
Long	-2																			
1 st Gen.	6+																			
2 nd Gen.	4+																			
3 rd Gen.	3+																			
Quality Chart																				
Troop Type	Quality Number	Cohesion Distance	To Hit Modifier	Gun ROF Modifier																
Poor	7+	2"	-3	-2																
Marginal	7+	2"	-2	-1																
Fair	6+	4"	-1	0																
Average	5+	4"	0	0																
Good	4+	6"	+1	0																
Excellent	3+	6"	+1	+1																
Superb	2+	8"	+1	+1																
Quality Check Modifiers: -1 Hit by AV or AI fire while using strategic movement (6.6) -1 Unit's formation HQ has been eliminated (6.8) +2 For infantry—only Poor, Marginal, or in the open—to fire first if an armored vehicle is starting close combat with them. Do only once prior to first round.																				
Target Priority																				
Must shoot at nearest enemy stand at moment of fire except: <ul style="list-style-type: none"> Can ignore enemy stands already shot at this phase Can ignore infantry for vehicles or vice versa Can ignore a target in cover or behind obstacle for one in open Can ignore light vehicles for heavy armored vehicles (compare front armor) Helicopters prioritized as if armored vehicles with '0' front armor, but AA stands can always ignore other stands to target helicopters Target priority does not apply to indirect area fire.																				
Airstrikes																				
Airstrike Arrival (roll 1 die)		Arrival die roll modifiers: +1 for dedicated ground attack aircraft +1 for friendly air superiority -2 for enemy air superiority																		
1	Strike aborts/is destroyed																			
2	Strike delayed, roll next turn																			
3+	Strike arrives																			
Bombs/ Rockets (Area Fire, 3+ To Hit)																				
Type	Fire Zone Radius	Fire Index	<table border="1"> <thead> <tr> <th>Type</th> <th>Pen</th> <th>ROF</th> <th>AI</th> </tr> </thead> <tbody> <tr> <td>MG</td> <td>2</td> <td>3</td> <td>-1</td> </tr> <tr> <td>Cannon</td> <td>6</td> <td>3</td> <td>0</td> </tr> <tr> <td>A-10</td> <td>9</td> <td>3</td> <td>0</td> </tr> </tbody> </table>		Type	Pen	ROF	AI	MG	2	3	-1	Cannon	6	3	0	A-10	9	3	0
Type	Pen	ROF	AI																	
MG	2	3	-1																	
Cannon	6	3	0																	
A-10	9	3	0																	
Lt. GP Bomb	1"	5	Missile: 2 shots within 4" of marker, 2+ to hit, Pen 18h																	
Med. GP Bomb	1"	15	Guided Bomb: 1 shot w/in 4" of marker, 2+ to hit, a hit destroys the target stand																	
Hvy. GP Bomb	1"	23																		
Lt. Cluster Bomb	2"	12	Napalm: 4" x 2" template, soft hit on 2+ to eliminate, AFV hit on 6+ to QC																	
Hvy. Cluster Bomb	2"	18																		
Lt. Rocket	0.5"	7																		
Hvy. Rocket	1"	12																		
To Hit modifiers (apply once each strike): -1 if AA Gun in range of flight path, -2 if SAM in range of flight path.																				
SAMs, AAMs, & AA Guns vs. Helicopters (17.5)																				
Range	To Hit																			
Short	5+																			
Effective	5+																			
Long	6+																			
Firer quality modifier is the only to-hit modifier. <i>If hit, do a standard AV penetration roll.</i>																				
Non-AA Weapons vs. Helicopters (17.4)																				
No-to-hit modifiers are used; for guns, target must be within effective range. Guns with ROF 4 or more: 6+ To Hit Guns with ROF 3 or less: 6+ To Hit, treat ROF as 1 Missiles (2 nd or 3 rd Gen.): 6+ To Hit, target must be within 1/2 of maximum range Integral machineguns: Pen 1, ROF 1, Rng 10" <i>If hit, do a standard AV penetration roll.</i>																				
Spotting Chart																				
Target Type	Target Status																			
	Moving In Open or Firing	Moving In Cover	Stationary In Cover	Stationary in Open																
Vehicle	Vis. Limit	20"	10"	45"																
Towed Wpn	Vis. Limit	15"	5"	25"																
Personnel	15"	10"	1" *	5"																
Modifiers: • Must have LOS to the target • All targets are auto spotted at 1"** • All targets are auto spotted at 10" range or less if spotter is using thermal sights* <i>Modifiers:</i> • Spotter Poor or Fair -5" • Spotter Excellent or Superb +5" • Spotter is Recon Stand..... +5"																				
<i>Visibility Limits:</i> Day - Good 70" Day - Moderate... 30" Day - Bad 15" Night 8" IR/II/ 1 st Gen TI.. 20" 2 nd Gen TI 40" In terrain 2"																				
Strategic Movement • Double movement allowance • Lasts until start of next friendly movement phase • Can't fire, can't take Hold Fire/Overwatch • Can't start or move within 10" of enemy • Incoming AV/AI fire at +1 To Hit • QCs from AV/AI fire at -1 • Fights normally in Close Combat																				
Helicopters • Rockets have 30" range • Move 1/2 and fire 1 st gen missiles • Move full and fire 2 nd or 3 rd gen missiles • No artillery barrages allowed within 20" of friendly helicopters • Can use Strategic Movement																				
Engineering																				
Obstacle	To create 1"	To breach 1"	Minefields Antipersonnel (AP), Anti-tank (AT), Mixed (M):																	
Abatis	5+	3+																		
Anti-tank Ditch	5+	3+																		
Barbed Wire	4+	3+																		
Minefield, Buried	5+	3+																		
Minefield, Surface	auto	3+																		
Road Crater	5+	3+																		
Entrenchment Terrain Save Cover Create by Engineer / Other																				
Hasty Infantry		4+	light	auto* / 3+ *																
Deliberate Infantry		2+	heavy	not allowed																
Hasty Vehicle		5+	light	6+ two bulldozers / n.a.																
Deliberate Vehicle		3+	heavy	not allowed																
Fortification		2+ vs AI	heavy	not allowed																
*Success roll 5+ if engineer or other is suppressed. Costs 2 movement points to occupy entrenchment if not the creator.																				

Terrain Effects Chart

Terrain	Saving Throw	Cover Type	Height, Block LOS?	Movement Cost					
				Tracked	Halftrack	Wheeled	Leg	Towed	Helicopter
Clear	-	None	0	1	1	1	1	1	1
Bad Going	-	None	0	2	3	3	1	2	1
Sand or Snow	-	None	0	1	3	3	1	2	1
Low Crops	6+ (Inf. only)	Light (Infantry only)	0	1	1	1	1	1	1
High Crops	6+	Light	1 Blk	1	1	1	1	1	1
Light Woods	5+ [4+ Msl]	Light	1 Blk	1	1	1	1	1	1
Heavy Woods	5+ [4+ Msl]	Light	1 Blk	2	2	2	1	2	1
Forest	4+ [3+ Msl]	Light	1 Blk	P	P	P	1	P	1
Rough	5+	Light	1 Blk	2	3	3	1	2	1
Swamp	5+ [4+ Msl]	Light	1 Blk	4	4	4	2	4	1
Town	4+ [3+ Msl]	Heavy	1 Blk	2	2	2	1	2	1
Road	As surrounding terrain	As surrounding terrain	0	1/2	1/2	1/4	1	1/2	-
Path									
River/Canal-Fordable	4+	Spot & LOS	0	2	2	2	2	2	1
River/Canal-Impassable	4+	Spot & LOS	0	P (4 amphib.)	P (4 amphib.)	P (4 amphib.)	P ²	P	1
Linear Obstacles									
Stream	4+	Spot & LOS	0	2	2	2	-	2	-
Cliff	-	None	0	P	P	P	P ¹ or 1	P	-
Ridgeline	4+	Spot & LOS	0 Blk	-	-	-	-	-	-
Abatis	-	None	0	P	P	P	P	P	-
Anti-tank Ditch	- ³	None ³	0	P	P	P	-	P	-
Dragons Teeth	-	None	0	P	P	P	-	-	-
Barbed Wire	-	None	0	-	P for soft only	P for soft only	P	P	-
Low Embankment	4+	Spot & LOS	0	-	-	-	-	-	-
Low Stone Wall									
Low Stone Fence									
High Embankment	4+	Spot & LOS	1 Blk	2	2	2	2	2	-
High Stone Wall									
High Stone Fence									
Hedgerow									
High Hedge	5+	Spot & LOS	1 Blk	2	2	2	2	2	-
Dense Wind Break									
Low Hedge	5+	Spot & LOS	0	-	-	-	-	-	-
Low Earthen Berm	4+ inf. 6+ veh.& tow.	Spot & LOS	0	-	-	-	-	-	-
Planted Low Earthen Berm	4+ inf. 5+ veh.& tow.	Spot & LOS	1 Blk	-	-	-	-	-	-
Small Canal/Large Ditch	-	None	0	P	P	P	P ⁴	P	1
Causeway/Dike	4+ (Inf. only)	Spot & LOS (Infantry only)	1 Blk	See 7.21.8	See 7.21.8	See 7.21.8	-	-	-

P = Prohibited - = No Effect A number indicates how many inches of movement it costs to move one inch through that type of terrain.

Linear Obstacles: If target is behind and touching obstacle, and LOS/fire crosses the obstacle, then cover and saving throw applies, otherwise use surrounding terrain.

¹ Light infantry stands may cross a cliff by spending an entire movement phase beside the cliff. See 7.18 for optional rules.

² At referee's discretion, infantry stands may cross with rubber rafts at 1" per turn; they cannot fire while in the water.

³ Infantry may occupy and treat as Hasty Infantry Entrenchment.

⁴ At referee's discretion infantry stands may cross with rubber rafts. The stands must start the movement phase in contact with the ditch/canal and expend their entire movement to cross.

Terrain Saving Throw Die Roll Modifiers

- +1 Target is in smoke and firer lacks Thermal Sights
- +1 If attacked by missile and target has ATGM Point Defense System

Friction Response Die Roll Modifiers (X)

- 1 Poor/Fair quality unit
- 1 Excellent or Superb quality unit
- 1 Unit's formation HQ is eliminated
- 1 At night or in bad weather
- 1 Enemy is using EW

A Fistful of TOWs 3

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① Artillery Availability Table

Western-style Artillery			
Modified Roll	# of Fire Units		
	Self-prop.	Towed	Bn Mortar
1 or less	0	0	0
2	1	0	0
3	1	1	1
4	2	1	1
5	2	2	1
6	3	3	1

Russian-style Artillery			
Modified Roll	# of Fire Units		
	Self-prop.	Towed	Bn Mortar
1 or less	0	0	0
2	0	0	0
3	1	0	1
4	2	1	1
5	3	3	1
6	3	3	1

② Area Fire Zone Size Table

Guns, Howitzers, Mortars, AGLs and Helo Rockets					Multiple Rocket Launchers		
# of Fire Units	HE Fire Zone Radius	ICM/Mines Fire Zone Radius	Helo HE Rocket Radius	Helo SBM Rocket Radius	# of Fire Units	HE Fire Zone Radius	ICM/Mines Fire Zone Radius
1-4	1"	1.5"			1-2	2"	3"
5-13	1.5"	2"	1"	1.5"	3-4	2.5"	4"
14+	2"	3"			5+	3"	5"

③ Area Fire Accuracy Roll

- Roll accuracy number or higher for each barrage:
+ observer quality "to hit" modifier
-1 if observer is suppressed
- Success:** all fire zone markers in the barrage have full effectiveness.
- Failure:** If a "1" is rolled, go to *Indirect Fire Problems Table*. Otherwise all fire zone markers have reduced effectiveness (subtract 5 from the Fire Index Number).

④ Area Fire Index Table

Guns, Howitzers, Mortars, AGLs, and Helo Rockets										Multiple Rocket Launcher							
# of Fire Units	HE 30-69	HE 70-89	HE 90-119	HE 120-139	HE 140-169	HE 170+	ICM 140-169	ICM 170+	Helo HE Rckt	Helo SBM Rckt	# of Fire Units	Lt HE	Med HE	Hvy HE	Very Hvy HE	Hvy ICM	Very Hvy ICM
1	1	3	3	8	8	14	14	15	3	8	1	1	1	8	12	7	21
2	2	4	5	10	12	16	15	16	5	14	2	1	1	12	15	12	22
3	3	7	8	14	14	18	16	18	8	16	3	1	2	15	17	15	24
4	4	8	9	15	16	19	16	19	9	18	4	1	4	16	18	16	25
5	5	9	11	16	17	21	17	21	11	18	5	1	5	18	19	16	25
6-7	6	10	14	18	18	21	18	21	14	19	6	1	6	19	21	16	25
8-10	8	15	15	19	20	22	21	22	15	21	7	2	8	19	21	18	25
11-13	10	16	16	21	21	24	21	22	16	22	8	2	8	21	22	18	25
14-16	14	16	18	21	22	25	22	24	21	24	9	3	9	21	22	19	25
17+	15	18	18	22	23	25	23	25	21	25	10	3	10	21	22	21	26

For "reduced effectiveness" fire subtract 5 from Fire Index number listed.

⑤ Area Fire Resolution Chart (Roll 1 die Per Affected Stand)

Fire Index Number	Soft in Open	Soft in Lt. Cover AFV* in Open	Soft in Hvy. Cover AFV* in Cover	Fire Index Number	Soft in Open	Soft in Lt. Cover AFV* in Open	Soft in Hvy. Cover AFV* in Cover
1	-- 2+ S	-- 5+ S	-- 6+ S	14	S 2+ Q	S 5+ Q	S 6+ Q
2	S 6+ Q	-- 4+ S	-- 5+ S	15	Q 6+ D	S 5+ Q	S 6+ Q
3	S 6+ Q	-- 3+ S	-- 5+ S	16	Q 6+ D	S 4+ Q	S 6+ Q
4	S 5+ Q	-- 2+ S	-- 4+ S	17	Q 6+ D	S 4+ Q	S 5+ Q
5	S 5+ Q	S 6+ Q	-- 4+ S	18	Q 6+ D	S 3+ Q	S 5+ Q
6	S 5+ Q	S 6+ Q	-- 3+ S	19	Q 6+ D	S 2+ Q	S 5+ Q
7	S 4+ Q	S 6+ Q	-- 4+ S	20	Q 6+ D	S 2+ Q	S 4+ Q
8	S 4+ Q	S 6+ Q	-- 3+ S	21	Q 5+ D	Q 6+ D	S 4+ Q
9	S 4+ Q	S 6+ Q	-- 2+ S	22	Q 5+ D	Q 6+ D	S 3+ Q
10	S 3+ Q	S 6+ Q	-- 2+ S	23	Q 5+ D	Q 6+ D	S 2+ Q
11	S 3+ Q	S 6+ Q	S 6+ Q	24	Q 4+ D	Q 6+ D	S 2+ Q
12	S 3+ Q	S 5+ Q	S 6+ Q	25/Nuc-C	Q 4+ D	Q 5+ D	Q 6+ D
13	S 2+ Q	S 5+ Q	S 6+ Q	26/Nuc-B	Q 2+ D	Q 4+ D	Q 6+ D

*Open-topped AFVs never count as in cover and get a +1 modifier to the die roll

If you roll less than the listed number, apply the first result listed. Otherwise apply the second result listed.

Results: '-' = no effect 'S' = suppressed 'Q' = quality check (suppressed if passed, eliminated if failed) 'D' = destroyed

Indirect Area Fire Procedure

Number in grey indicates which chart to use.

- Roll for available Fire Units ①
 - Designate Barrages and identify observer for each Barrage
 - Place Fire Zone Marker(s) for each Barrage
 - Allocate Fire Units to each Fire Zone Marker
- For each Barrage:
- Roll for accuracy ③

For each Fire Zone Marker:

 - Determine Fire Index Number ④
 - Roll for effect ⑤ on each stand within the Fire Zone Marker's radius ②

Area Fire Problems Table (Roll 1 die, use the to-hit modifier for the observer's quality)

Modified Roll	Effect
0 or less	Roll on Indirect Area Fire SNAFU Table.
1	Scatters 3", fire has <i>reduced effectiveness</i> .
2	Scatters 2", fire has <i>reduced effectiveness</i> .
3	Roll on Indirect Area Fire SNAFU Table.
4	Counterbattery: additional permanent -1 to participating battalions' availability modifiers. On-table loses 1 firing stand per support group. Fire has full effectiveness.
5 or higher	Fire has <i>reduced effectiveness</i> .

Area Fire SNAFU Table (Roll 3 dice and add together)

Modified Roll	Effect
5 or less	Observer gave own coordinates. Place barrage on observing stand, centering barrage on it. Fire lands with full effectiveness.
6	Observer gave coordinates of nearest friendlies. Place barrage on friendly unit nearest to the target, centering barrage on it. Fire has full effectiveness.
7	Target location error. Move barrage 10" randomly due east, north, south, or west.* Fire has full effectiveness.
8	Target location error. Move barrage 10" randomly due east, north, south, or west.* Fire has reduced effectiveness.
9	Map confusion. If any of the target stands that would be affected by the barrage are in trees or buildings, move the marker to the terrain feature of the same type that is closest to the feature the target is in (e.g., if in buildings, move barrage to next town closest to the buildings target is in), and place it in the same relative position on the feature. If there is no other feature of that type on the table, the fire lands off-table. If the target is not located in trees, buildings, or on a hill, the fire scatters 5".
10	Observer range measurement error. Move barrage away from observer one quarter of the observer target range.* Fire lands with reduced effectiveness.
11	Observer range measurement error. Move barrage toward observer one quarter of the observer-target range.* Fire lands with reduced effectiveness.
12	Barrage cancelled due to uncertainty over location of friendly units. Remove barrage, no fire lands.
13	Target location error. Move barrage 5" randomly due south, north, east or west.* Fire has reduced effectiveness.
14	Target location error. Move barrage 5" randomly due south, north, east or west.* Fire has full effectiveness.
15	Counterbattery or AAA disaster. Fire lands with full effectiveness. Then artillery randomly selects one of the participating support groups—it is eliminated and cannot fire anymore in the game (if on-table, all the support group's stands are eliminated). Airstrike is shot down.
16 or higher	Fire mission cancelled due to communications problem. Remove barrage, no fire lands.

*If barrage is an airstrike, place it on the stand nearest this point (regardless if the stand is friendly or enemy).

Turn Sequence

Attacker Turn

Command Phase (No overwatch)

1. The Attacker places reinforcements on the board

Area Fire Phase (No overwatch)

1. Remove Defender's suppressed-A markers
2. Remove Attacker's sustained barrages, Attacker's smoke, & Attacker's irritant chems.
3. Attacker places airstrike barrage markers, rolls for arrival and resolves
4. Attacker rolls for available fire units from artillery support groups and on-table mortar stands
5. Attacker places barrages, designates as fire blow or sustained, places fire zone markers for each barrage and allocates fire units to each fire zone marker. All barrages should be placed before any are resolved (including indirect and direct area fire from on-table stands)
6. Resolve Attacker's barrages and chemical zone attacks
7. Remove Attacker's fire blows, leave sustained barrages in place

Overwatch First Phase (Defender)

Movement Phase

1. The Attacker moves
2. Defender may conduct overwatch fire or shoot-and-scoot at any time
3. Defender's stands pivot, if eligible
4. Quality checks are taken. No overwatch activity is allowed during this sub-phase

Close Combat Phase

1. Defender fires
2. Attacker takes quality checks due to close combat.
3. Defender pivots
4. Attacker fires
5. Defender takes quality checks due to close combat
6. Attacker pivots
7. Reduce remaining movement by one movement point
8. Repeat steps 1-7 until there are no enemy within close combat range
9. Complete movement. Resolve additional close combats

Overwatch Last Phase (Defender)

Fire Phase (All fire in phase is simultaneous. Results take effect after all firing is done.)

1. Remove Defender's suppressed-B markers
2. Attacker fires
3. Defenders with hold fire markers fire
4. Remove destroyed stands
5. Resolve quality checks
6. Attacker places overwatch markers on stands that did not move or fire

Final Phase (No overwatch)

1. Resolve any housekeeping chores
2. Make quality checks for unit losses

Defender Turn — follow same sequence but reverse the roles.