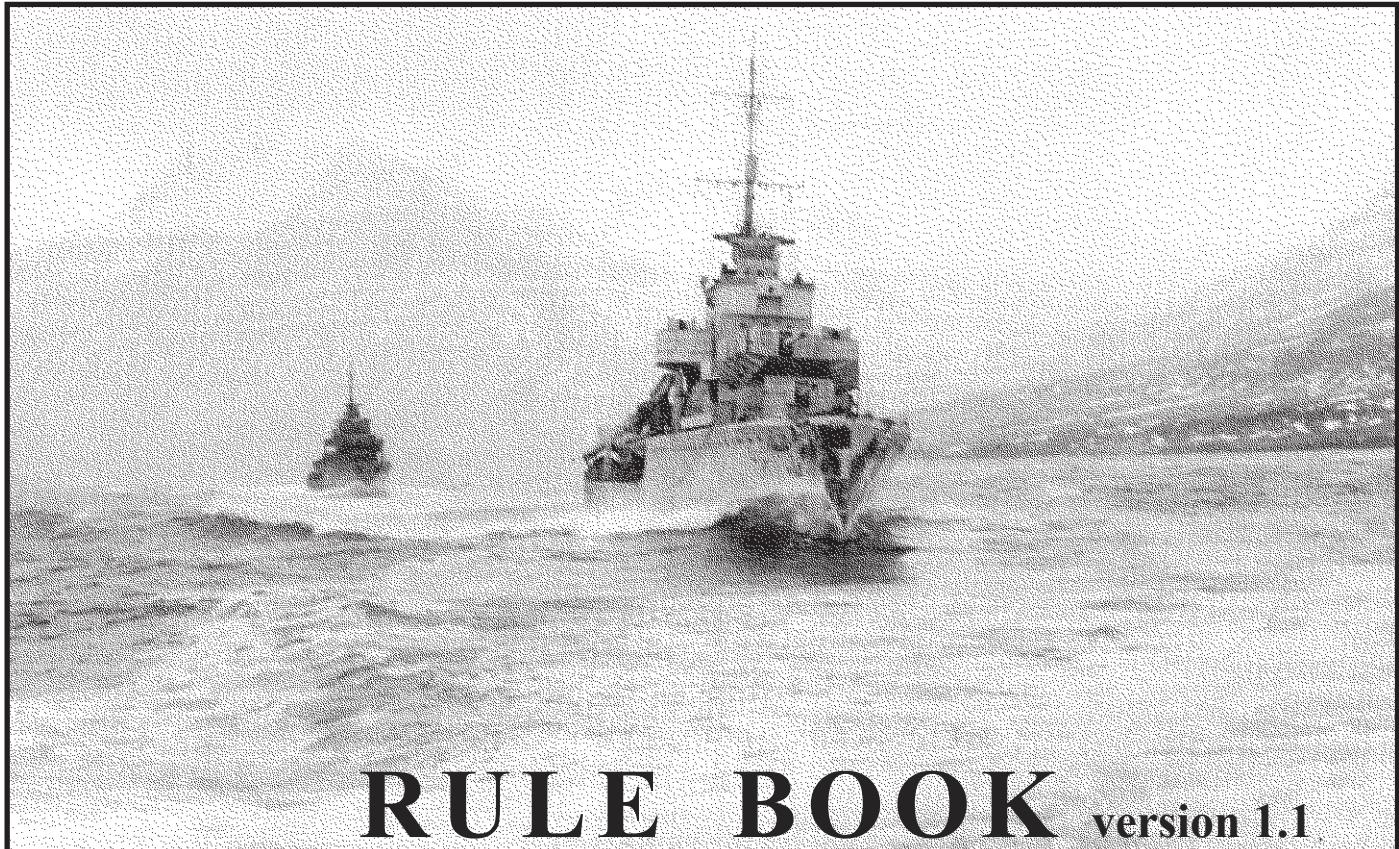


# PQ-17

## Arctic Naval Operations, 1941-43

### Decision at Sea Series, Volume I



## RULE BOOK version 1.1

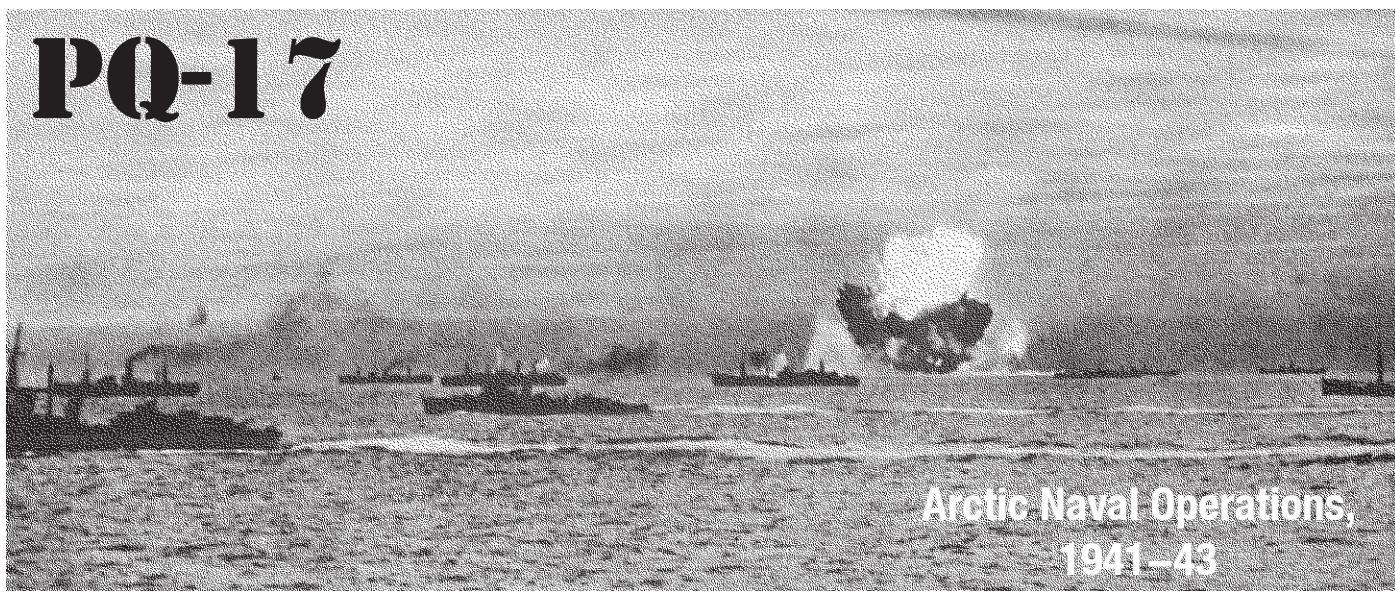
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## INTRODUCTION

**PQ-17** is a two-player game of WWII naval-air conflict in Arctic waters. The Allied player moves convoys of much-needed war material to the Soviet ports of Murmansk and Archangelsk, while the Axis player seeks to interrupt this traffic. Most Operation scenarios depict the voyage of a historical convoy, usually with a convoy of empty merchantmen returning from North Russia as well. The Campaign Scenario allows players to re-create the critical period of March 1942 through the end of the year.

### Rules Format

Changes from the original Rule Book are in **blue text**. Rules are numbered so they may be easily cross-referenced (in [brackets]).

### Optional Rules

Any or all rules noted as Optional (highlighted with gray shading) may be used if both players agree before starting the game. Most add realism at the cost of slightly increased complexity.

## 1. COMPONENTS

### 1.1 Map

The map depicts the area of operations in the Norwegian and Barents Seas, from Iceland and the British Isles in the west to Novaya Zemlya in the east, and from Schleswig in the south to Svalbard in the north. A hexagonal grid overlays the map to regulate movement and the advance and retreat of the polar ice pack. Each hex on the mapboard is approximately 96 nautical miles (178 km/110.5 statute miles) across. Players may use the oversize hex with the “PQ-17” logo near the Key as an “off-map” holding area for a hex with multiple blocks. Symbols on the map show the location of key ports and airbases; where both are in the same hex, an airbase holding box is nearby to avoid crowding. Displays for environmental conditions and other key information are also on the map.

**1.1.1 Temporary Ports:** Some ports effectively do not exist in every scenario, but only when indicated in the scenario Forces section or a Special Condition [12]. Lerwick is always a port, but only for Allied submarines.

**1.1.2 Interceptors:** Some airbase boxes include graphic depictions of Fighter units. These units are always **available to Scramble** [7.2.1] in addition to any scenario forces listed. If an arrow is shown with a date, operations on or after that date use the unit to the right of the arrow.

**1.1.3 Friendly Shorelines:** Some shoreline hexes (sea hexes including some land) are considered “friendly” for reconnaissance purposes [6.2] to one side or the other:

- **Allied:** United Kingdom (including Northern Ireland);
- **Axis:** Denmark, Germany, and Norway.

**Design Note:** Other land areas, such as Iceland and the Soviet Union, were too sparsely populated or lacked communications to provide meaningful reconnaissance assistance.

### 1.2 Naval Forces

Before playing the first time, apply the blue and red stickers to one side of the wooden four-sided blue blocks, and the gray stickers to gray blocks. The sticker sheet includes 14 Spares to replace any that are lost or damaged.

These **blue Allied** and **gray Axis** wooden four-sided blocks are used only on the mapboard, where they represent forces of warships, merchant ships, and/or submarines. One block may represent any number of ships of the above types, or none at all (a Dummy [1.3]). Each force block has a corresponding space in an off-map Force Display where the actual ships in that force are shown. The numbers 0 through 3 around the perimeter of force blocks do NOT denote Combat Strength (CS) as in many other “block” games. Instead, the number at the top of a block denotes the Identification Level (ID) of that force when it lies face-up. The number of blocks included in the game is an absolute limit.

*Do not use blocks whose spaces on the Force Displays are shown with a dashed (rather than solid) outline in PQ-17. They are included only for a future 1940 expansion.*

**1.2.1 Task Forces and Convoys:** Most forces with surface warships are Task Forces (TFs). Any force including merchant ships is a Convoy, with a distinctive block. Allied Convoys may include submarines (maximum 2CS), and may never include more than 4CS of Escorts (Type ES). They may be Dispersed by Gales [9.3.2] or Scatter [5.5]. For identification purposes [6.2.1], Convoys are either Large (11 or more Convoy Ships) or Small (10 or less Convoy Ships).

**1.2.2 Wolfpacks:** Wolfpacks include only submarines, and may not contain more than 4CS each. Allied subs must be in blocks with matching-colored Wolfpack labels.

**1.2.3 Splitting Forces:** A force may split into two or more forces during a player's own Naval Movement Segment by placing additional blocks in the same hex and moving one or more warship or sub units into each new force's box on the Force Display. TFs and Wolfpacks created in this manner share the same ID and Fuel Status as the original force. Merchant ships may **never** voluntarily split from their Convoys. See also 6.3.3.

**1.2.4 Combining Forces:** Forces ending a Surface Combat Segment in the same hex may combine into a single force with the **highest** ID of its components, subject to weather effects [9.4]. Dummies in the same hex **must** combine (unless they fail to locate one another when using Optional Rule 9.4).

**1.2.5 Swapping Forces:** Forces in the same hex during a Combine Forces Segment may swap some units between them to avoid fuel penalties (see 11.1.1). This is allowed.

### 1.3 Dummies

Each player may have Dummy blocks in play up to the specified scenario limits. Create a Dummy unit when a Convoy or Task Force's ID decreases below ID0 [6.6] or when a TF (*not* a Convoy or Dummy) enters port. **Wolfpacks never generate Dummies.** Only one Dummy may be created in a given port hex per turn. Players may voluntarily eliminate their own Dummies at any time. Players **must** eliminate all but one Dummy if more than one is in a hex during a Combine Forces Segment [1.2.4].

### 1.4 Ships

Ships are described by type and category [see the Unit Chart]. Battleship (BB), battlecruiser (BC), and fleet carrier (CV) types are categorized as Capital Ships. Fleet and escort carrier (CVE) types are (also) categorized as Carriers. Heavy (CA), light (CL), and antiaircraft (CLAA) cruiser, cruiser minelayer (CM), and German *Panzerschiff* (CB) types are all categorized as Cruisers. Capital Ships, Carriers, and Cruisers are all considered Heavy Ships, with one silhouette on each counter. Destroyer (DD), torpedo boat (TB), and escort (ES) types are categorized as Light Ships, with two silhouettes on their counters. Submarines (SS) are their own type and category. Auxiliary (AX) and merchant ship (MX) types are

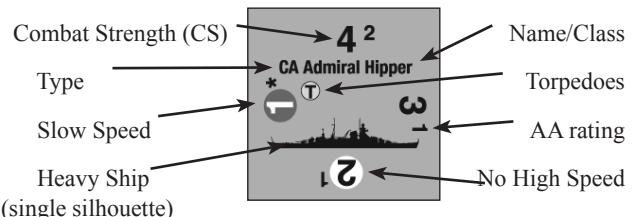
categorized as Convoy Ships, which are not considered warships for reconnaissance purposes [6.2.1].

All types of ships are represented by large square cardboard counters. The background color of a counter determines its nationality:

Background	Nationality
Medium Blue	British
Light Blue	US
Blue/Red	British 1/6 MF*
Red	Soviet
Gray	German

\* Must observe Soviet command restrictions [4.3.2, 15.8]

Each counter represents 1 battleship, battlecruiser, carrier, or cruiser, 1-4 destroyers or auxiliaries, 1-8 torpedo boats, submarines, or merchant ships, and 1-16 antisubmarine escorts. Ship counters **never** appear on the mapboard; instead, they remain on players' Force Displays ([hidden from the opponent](#)) or on the Battle Display.



Each ship unit includes one to five steps, shown by the large CS numbers adjacent and perpendicular to the edges. **Whether shown on the counter or not, all Heavy Ships and named Fleet Auxiliaries have a "0\*" CS step.** The current CS of a unit is the number at the top of the counter from the owner's point of view.

Most ships are capable of moving at High Speed [5.1] when unhit. A white circled CS indicates the ship may not move at High Speed [5.1] if that strength. Red-circled CS ships may only move at Slow Speed. Adjacent small (superscript) numbers are anti-aircraft strength (AA). A circled 'T' (T) indicates the unit may attack with torpedoes [7.3]. A boxed number on a carrier is its aircraft capacity [1.5.1].

- **Battleships (BB)** — 4-5 CS each, 1 per counter.
- **Battlecruisers (BC)** — 3 CS each, 1 per counter.
- **Fleet Carriers (CV)** — 3-4 CS each, 1 per counter.
- **Escort Carriers (CVE)** — 1-2 CS each, 1 per counter.
- **Cruisers (CA/CB/CL/CLAA/CM)** — 1-4 CS each, 1 per counter.
- **Destroyers (DD)** — 1 per CS, 1-4 per counter.
- **Torpedo Boats (TB)** — 1-2 per CS, 1-8 per counter.
- **Escorts (ES)** — 2 destroyer escorts or frigates/3-4 corvettes, minesweepers, or antisubmarine trawlers per CS, 2-16 per counter.

**Design Note:** Any destroyers with guns smaller than 115mm (4.5") are classified as either Escorts or Torpedo Boats for game purposes. Escorts are Moderate Speed and Torpedo Boats are High Speed, regardless of

how many torpedo tubes they mount.

- Submarines (SS)** — 1-2 per CS, 1-8 per counter.
- Fleet Auxiliaries (collectively AX)** — 1-2 CS each, 1 per counter. Includes antiaircraft ships (AA), oilers (AO), and other specialized ships.
- Merchant Ships (collectively MX)** — Each CS represents approximately 5000 GRT of merchant shipping, generally one ship. Includes catapult merchant ships (CAMs, type MC), merchant oilers (MO), and cargo vessels (MV). **Note:** **MVs count as one ship per CS when determining the number of ships in a Convoy [2.1.2, 6.2.1, 9.3.1, 9.3.2].**

Counters of the same class can be combined or broken down as TFs split or combine, like “making change,” as long as the total CS does not change. **Important:** Within a force, Light Ships of the same type and class **must** combine into the minimum possible number of counters unless Optional Rule 7.9 allows otherwise. For example, 3CS of Hunt II class torpedo boats can only steam together in one 3CS counter, not one 2CS and one 1CS counter or three 1CS counters in the same force.

**Design Note:** Although classes (and often individual ships within a class) of any given type varied widely, there are generally sufficient similarities in capability to treat submarines and many of a nation’s Light Ships of a given type as roughly equivalent.

**1.4.1 Submarines:** When a submarine unit expends its torpedoes in combat [7.3.2], flip it to its back side (with CS circled).

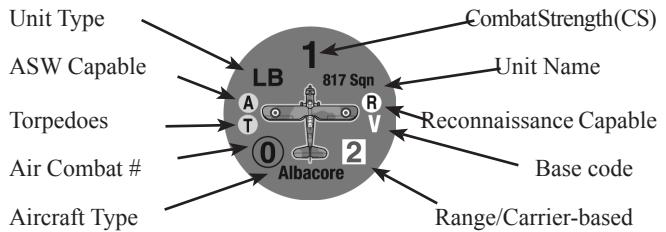
**1.4.2 Oilers:** Oilers (AO or MO) may be used for Refueling at Sea (RAS) [11.3.2]. Once flipped to their back sides, they may no longer conduct RAS until they refuel in port.

**1.4.3 CAMs:** CAMs (MC) may be used once per operation if weather is Fair or Reduced Visibility to modify a single AA Defense die roll or negate an enemy Reconnaissance draw [6.2.2]. Once used, flip the CAM counter to its back side to show that it may not be used again.

## 1.5 Aircraft

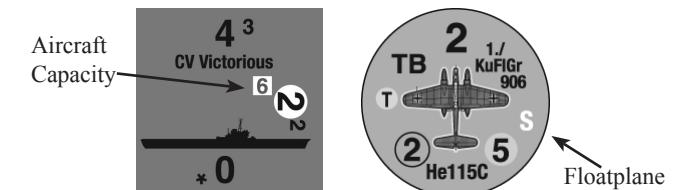
Aircraft are represented by circular cardboard counters. Each counter represents approximately 4-15 fighters (F), photo reconnaissance (P), dive bombers (DB), light bombers (LB), medium bombers (MB), torpedo bombers (TB), or heavy bombers (HB), very roughly 6 per step. Several are carrier based (with their range boxed); a few are floatplanes (with their ranges in light blue circles). Some are capable of attacking with torpedoes (marked **T**) or of making antisubmarine warfare (ASW) attacks (marked **A**); some may conduct reconnaissance (marked **R**).

**Design Note:** Many reconnaissance aircraft are abstracted into the air radii and air search sectors.



Each aircraft unit includes one or two steps of 1CS each. 2-step air units are 1CS on their back sides. Air counters use the same color scheme as ships [1.4]; Soviet VVS-SN (naval) aircraft have their Unit Name in white to distinguish them from air force units. They are used mainly on the mapboard, but move to the Battle Display when resolving air attacks. Most counters have a code matching the airfield or carrier where they are (usually) based.

**1.5.1 Stacking:** No more than 20 steps of aircraft (in any combination) may stack at any airbase, including Interceptors [1.1.2]. Carrier counters show their individual aircraft capacity (in CS).



**1.5.2 Floatplanes:** Floatplanes base at ports rather than airfields, but otherwise function the same as all other aircraft.

**1.5.3 Interceptors:** Any counter of the same Air Combat Rating and CS may be used to resolve air combat if these units Scramble in response to an air attack [7.2.1].

## 1.6 Markers



Assorted markers allow players to track the status of their units and various conditions during the game.

DAY	Reduced			Fog/ Gale
	Fair	Vis	Storm	
Force	-	-	-	-
Air	U	U	U	U
Both	S	+	-	-
ID:	+3	+2	+1	+1
Photo:	ID4	ID4	ID4	-

NIGHT	Reduced			Fog/ Gale
	Fair	Vis	Storm	
Force	-	-	-	-
Air	U	U	U	U
Both	-	-	-	-
ID:	+3	+1	+1	+1

DAMAGE	D
1 Hvy Ship, 1 DD/TB, 2+2 AX/MX	40

## 1.7 Cards

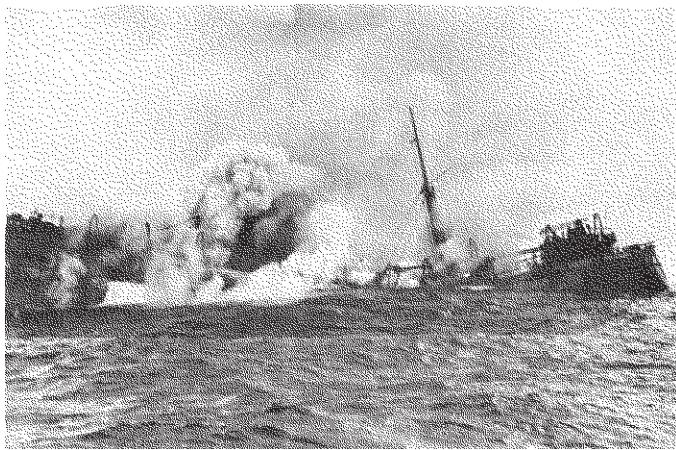
Each player has a deck of 40 cards, used to resolve his own reconnaissance and combination attempts [6.2, 9.4] and possible damage to his own ships due to Gales or Storms [9.3.1], or ice [10.2]. For best randomization, each deck should be reshuffled every turn (e.g., while the other player is moving).

## 1.8 Dice

This game includes five 10-sided dice. Unlike some other games, a 0 counts as *0* and *not 10*. Rolls are never secret.

## 1.9 Planning Sheets

Each player uses one Planning Sheet to plan each operation [4.2], track the expenditure of CPs and loss of Interceptors [4.3.2, 7.2.3], and note the accumulation of VPs.



## 2. HOW TO WIN

Victory Points (VPs) are gained and lost as various events occur during the course of the game, such as the destruction of ships and aircraft [see the Unit Chart] and the safe arrival of merchant ships at their destination. Track VPs accrued on the planning sheets, adding VPs for the destruction of Axis units and subtracting VPs for the loss of Allied units. At the end of the game, the VP score determines the winner:

- +1 or more                   Allied Victory
- 0                              Draw
- –1 or less                   Axis Victory

## 2.1 Convoys

**2.1.1 Loaded Merchant Ships:** Loaded Allied MXs add 1 VP each upon arriving at their destination, but subtract 1 VP in addition to the normal –1 VP each if sunk. Mark Convoys leaving the Soviet Union with *Convoy in Ballast* markers on the Force Display — they do *not* earn extra VPs.

**Play Note:** The Convoy in Ballast markers allow Allied players to distinguish the destination of Convoy blocks in close proximity. This helps prevent inadvertently reversing direction and having convoys returning to the ports they left.

**2.1.2 Convoy Arrival:** Unless at least three-fourths of an Allied Convoy arrives at its destination, subtract an additional  $\frac{1}{2}$  VP for every MX that fails to arrive unless specifically exempt (e.g., weather damage [9.3.1]).

## 2.2 Task Forces

Deduct VPs if Allied ships leave Patrol White stations [5.1.9]. Also, add (if Axis) or subtract (if Allied) VPs for ships in TFs at Critical Fuel [11.2.3] during a Victory Point Phase:

- |                        |                  |
|------------------------|------------------|
| • Each Capital Ship:   | 2 VPs            |
| • Each Cruiser or CVE: | 1 VP             |
| • Each CS of DD/TBs:   | $\frac{1}{2}$ VP |

## 2.3 Command Points (CPs)

The Allied player must deduct VPs and the Axis player must add VPs as shown on the Planning Sheets for CPs used during an Operation to activate Heavy Ships [4.3].

## 2.4 Damaged Capital Ships

Add 10 VPs for each CS point lost by a damaged (but not sunken) Axis Capital Ship [see the Unit Chart]. Subtract 5 VPs for each CS point lost by a damaged Allied Capital Ship.



## 3. SEQUENCE OF PLAY

Most scenarios of *PQ-17* consist of a single Operation, in which the Allied player usually attempts to run one or two Convoys between the United Kingdom/Iceland and the Soviet Union as described in the Scenario instructions. The Campaign rules [15] provide a means to link a number of Operations together. The Sequence of Play (SoP) lists the steps to take, *in strict order*, as the game is played. Players are encouraged to refer to the expanded SoP on the back cover of this Rule Book as they play.

### 3.1 Preparatory Turn (prior to an Operation)

- A. Environmental Phase
- B. Planning Phase
  - (1) Draw for Special Conditions (Allied player first)
  - (2) Determine Initiative and set up forces
  - (3) Plan Convoy schedules and Special Conditions

### 3.2 Operation Turns (repeat until the Operation ends [3.4]; omit if no CPs expended during a Campaign scenario)

- A. Weather Phase

### B. Allied Player Phase

- (1) Random Event Segment
  - (2) Photo Reconnaissance Segment
  - (3) Naval Movement Segment
    - a. Stand ID0 forces upright and generate Dummies
    - b. Split naval forces
    - c. Designate any forces refueling or rearming
    - d. Move Convoys/TFs/Wolfpacks/Dummies
    - e. If a PM turn, reduce the ID of non-moving forces
  - (4) Air Movement Segment
  - (5) Reconnaissance Segment
  - (6) Air Combat Segment
    - a. Opposing player Scrambles if capable
    - b. Resolve air-to-air combat
    - c. Deploy target units
    - d. Deploy attacking air units
    - e. Resolve each wave of bombing/torpedo attacks
    - f. Increase target ID and adjust target TF fuel
    - g. Return mission aircraft to base
  - (7) Submarine Combat Segment
    - a. Determine the order of ASW combat/sub attacks
    - b. Increase force IDs and adjust fuel for offensive TF
    - c. Return enemy Air Radius aircraft to base
  - (8) Surface Combat Segment
    - a. Attempt intercepts
    - b. Check for Surprise
    - c. Deploy engaged forces on the Battle Display
    - d. Surface Combat Rounds
      - (i) Check for engagement
      - (ii) Maneuver
      - (iii) Exchange gunnery attacks
      - (iv) Resolve torpedo attacks
      - (v) Attempt to withdraw
      - (vi) Increase force IDs
    - e. Adjust fuel for engaged TFs
  - (9) Combine Forces Segment
- C. Axis Player Phase — Repeat Phase B, reversing the player roles
- D. Special Conditions Phase
- E. Fuel Phase
- (1) Advance Turn markers
  - (2) Check for fuel status change

### 3.3 Administrative Turn (after an Operation)

- A. Confirmation Phase — Reveal Special Conditions and CPs
- B. Victory Point Phase
- C. Order of Battle Phase (Campaign Scenario only)

### 3.4 Ending an Operation

An Operation ends when all Convoys are in port at their destinations **and** either a) all Task Forces of one player (Allied or Axis) are in port, or b) after the Day 15 PM Turn is complete (whichever comes first).



## 4. INITIATIVE & COMMAND

### 4.1 Initiative

Initiative determines whether or not the Allied player has a Naval Movement Segment during the Day 1 AM Turn, and who sets up first.

**4.1.1 Operation Scenarios:** The Allied player always has the initiative.

**4.1.2 Campaign Scenarios:** Players secretly bid for Initiative by each hiding one die with their hands on the table top, then simultaneously revealing them. The numbers showing are bid, up to a maximum of 9 — a 0 in this case is a 0 bid (“pass”). Special Conditions may allow either or both players (Allied player first) to then announce a +1 bonus [12]. The player with the higher bid gains the Initiative for that Operation, and must deduct VPs equal to the number bid on the die. If both players pass, do not conduct an Operation this Fortnight. The Allied player has the Initiative in the event of a tie.

**4.1.3 Setup:** The Initiative player always sets up (or places reinforcements in a campaign scenario) *last*. The Axis player places one block in Tromsø (a Dummy unless his Special Condition is Axis Convoy). Both players place one Dummy in every other friendly-occupied port (in addition to any Dummy placement specified in the scenario instructions).

### 4.2 Planning

Before commencing Operation Turns, players must record on their planning sheets each Convoy’s departure port, composition

(AXs and MXs), route, destination, and the exact Turn (day and AM or PM) when it will leave port. Unless the Axis player has the Initiative, at least one Allied Convoy must leave port Day 1 of each Operation. The Allied player should also include this information for supporting TFs and Wolfpacks, at least up to the scenario's Starting Turn [8.3]. Some Special Conditions require the player to record force composition, the target hex, and the target turn [12.8, 12.14]. Axis forces may not be scheduled to move prior to the scenario's Starting Turn unless they start in Kiel or the Germany Box.

Once Player Phases begin [8.3], forces are not required to conform with planned movement.

### 4.3 Command

Players must expend Command Points [CPs] in order to deploy Heavy Ships during an Operation, or to deploy Soviet ships or move them outside the Soviet Air Radius/Sector. All other ships and aircraft may deploy and move without cost. The Initiative player **must** expend at least 1 CP during his first Naval Movement Segment. Either player may elect to expend CPs during any subsequent Naval Movement Segment.

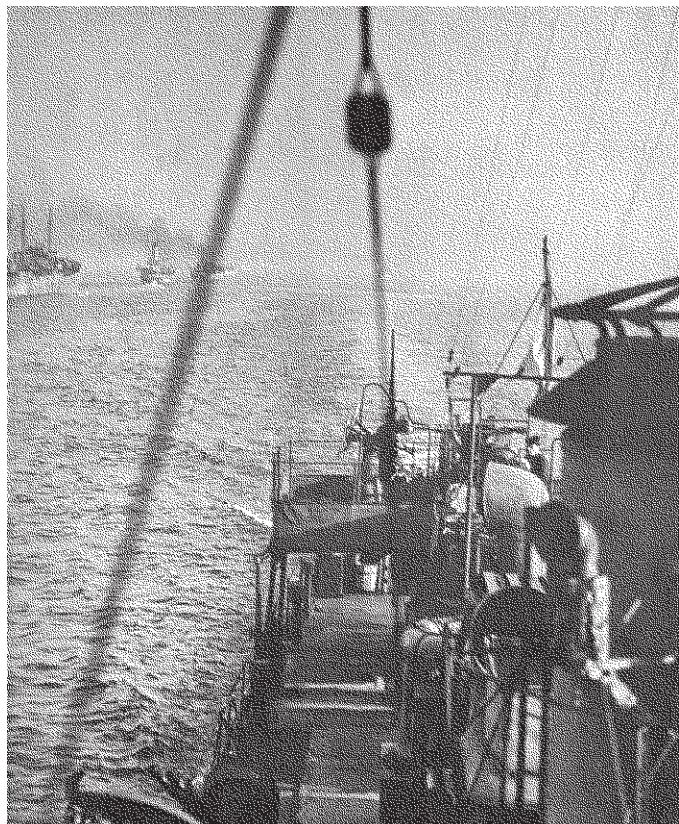
**4.3.1 Setup:** The Allied Home Fleet begins every Planning Phase with 8 Command Points. The *Severnny Flot* and Axis *Gruppe Nord* begin with CPs as specified for the scenario.

**4.3.2 CP Expenditure:** Expend CPs by checking off boxes left to right on the Planning Sheet. Each Command Point spent allows the player to leave port with one Capital Ship or two Cruisers/CVEs (or any/all Soviet surface units for *Severnny Flot*) in that or any subsequent turn in this Operation. An additional *Severnny Flot* CP must be expended for each hex outside the Soviet Air Radius or Air Search Sector entered by a TF including Soviet unit(s). **There is no CP cost to move Patrol White cruisers [5.1.9].** Cumulative CP expenditure will cost VPs as shown on the Planning Sheet during the Confirmation Phase [2.3].

**Example:** Playing Scenario II (PQ-12), the Allied player deploys CLs Liverpool, Trinidad, and Nigeria during planning and they are already at sea when play begins AM Day 5. At the start of his Naval Movement Segment, he must expend 2 CPs, which also fulfills his requirement as Initiative player [4.3]. The next turn, he wants to deploy the Home Fleet (1 BB, 1 CV, 1 CA, 6 DDs) from Scapa Flow, so must expend an additional 2 CPs — Berwick deploys using the “leftover”  $\frac{1}{2}$  CP from the previous turn. During the Confirmation Phase, the Allied Player will have expended a total of 4 CPs and must deduct 2 VPs.

**4.3.3 Germany:** No Command Points are needed to deploy Heavy Ships from the Germany Box or Kiel.

**4.3.4 Training (Optional):** Once per Operation, the Axis player may deploy a TF for Training (see 11.4.1). It may include Heavy Ships without expending a CP as long as it returns to its starting port.



## 5. MOVEMENT

Forces and Dummies may move from one whole or partial sea hex to another, up to three hexes per Turn, but never faster than their slowest unit. Except for Convoys at sea [5.1.5], they are not required to move at all. Only aircraft may move across all-land hexsides.

### 5.1 Naval Movement

Ships (and Dummies) move at four Speeds, which may change as they accrue hits:

**High** — Dummies and most warships may move three hexes per turn until hit, but will have to refuel sooner [11.1.3].

**Moderate** (white circled CS) — All unhit warships and submarines can move two hexes per Turn.

**Slow** (red circled CS) — Crippled Ships [7.3.1], forces in Critical Fuel status [11.2.3], and merchant ships (and thus Convoys) may only move one hex every turn.

**Crawl** — Ships under tow [5.1.1] move one hex every PM Turn.

**5.1.1 Towing:** Ships Dead in the Water (DiW [7]) must be towed to move. Capital Ships require a cruiser or larger to tow them; a cruiser, convoy ship, or destroyer may be towed by 1 destroyer CS.

The decision to tow must be made during a Combine Forces Segment; DiW ships *not* taken under tow are automatically sunk (scuttled) at the end of the segment. A tow may be voluntarily dropped during a Naval Movement Segment, leaving the ship once again DiW.

**5.1.2 Entering Port:** A force at sea in a port hex must expend one hex of movement to actually enter port. Turn the force's block face down and, if it is a TF, place a Dummy face down with it [1.3]. TFs may not use High Speed when entering port.

The total number of unhit non-Soviet ships that may enter Murmansk and/or Arkhangelsk during an Operation is limited:

- July II 41 – Nov I 42: 1 Cruiser + 5CS of DD/TB
- Nov II 42 – Nov I 43: 2 Cruisers + 8CS of DD/TB
- Nov II 43 – May I 45: 1 Capital Ship + 3 Cruisers + 10CS of DD/TB
- Any number of ES or Convoy Ships

**Design Note:** There were minimal stores of fuel, ammunition, and provisions available in the North Russian ports to resupply foreign warships. For example, the British had to keep one of their own oilers in Murmansk to refuel the “through” escorts.

**5.1.3 Leaving Port:** Forces must expend one hex of movement to “move” out to sea and be stood up on edge in the port hex. They may not use High Speed when leaving port, and may not re-enter port in the same Turn. Units with *Inop* markers may not leave port.

**5.1.4 Enemy Ports:** Naval forces may never enter enemy port hexes (**Exceptions:** One German Wolfpack may occupy Murmansk, and Operation SIZILIEN [12.11]).

**Design Note:** Shore batteries, minefields, and local patrols usually made it far too risky and unproductive to approach enemy bases very closely. German U-boats did, however, achieve success in the approaches to the Kola Inlet due to the relative ineffectiveness of Soviet ASW.

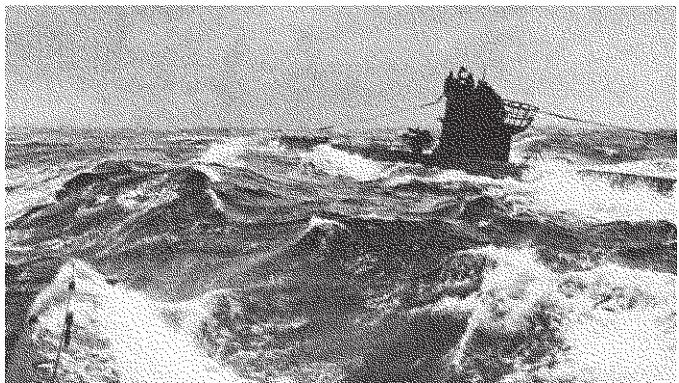
**5.1.5 Convoys:** Scenario instructions will list Convoys’ destinations. Unless Scattered or prevented by Gales or ice, a Convoy at sea *must* move every turn, cannot re-enter a hex it has previously occupied, and may not move into a hex farther from its destination than the one it is leaving unless required by land configuration.

**5.1.6 Inner Leads:** Task Forces may not use High Speed during a turn they enter an Inner Leads hex (Norwegian coastal hexes between Bergen and Banak inclusive).

**5.1.7 Ice:** Axis forces may *never* cross a hexside into actual Heavy Drift or Pack conditions [10.1].

**5.1.8 Hitler’s Restrictions:** *Tirpitz* may not leave port unless all Allied CVs listed in the Scenario are identified (at sea or in port).

**5.1.9 Patrol White:** The Allied player must begin every Operation with two unhit heavy cruisers, one in a TF in the Denmark Strait (in or adjacent to hex 0305) and the other either in the same TF or in port at Reykjavik. If at sea, place the TF’s *Fuel Warning* marker in the PM Day 10 space. If either cruiser moves other than between these assigned areas, the Allied player must deduct 2 VPs per cruiser *unless* he has Identified either a German TF within the British Air Radius, or a German Capital Ship at sea, during the current Operation.



## 5.2 Wolfpacks

Submarine Wolfpacks *cannot initiate submarine combat if they move*. Moving may incur automatic ASW attack under certain circumstances [7.4.5].

**Play Note:** Players may wish to angle Identified Wolfpacks and any Unidentified blocks that move to enter an enemy-occupied hex as a reminder.

**5.2.1 Allied Deconfliction:** Soviet Wolfpacks must remain in Soviet Sub Patrol Area hexes. A British Wolfpack may never occupy the same hex as an Allied Convoy or a Soviet Wolfpack, even temporarily while moving.

## 5.3 Aircraft

Aircraft units (**not Interceptors**) fly missions in which they are placed in a hex within their movement range, conduct reconnaissance or combat, and return to base at the end of the Air Segment. Except as allowed by Special Condition or Random Event [12, 13], only Reconnaissance-capable units and British Bombers may fly during Night turns. Only Reconnaissance-capable and Photo units may fly to hexes where they could not attack a target. Weather may also restrict some or all aircraft from flying [9.2]. Defending Fighter units may Scramble to oppose attacking aircraft [7.2.1]. Aircraft must return to the airbase or carrier from whence they took off (specified in the scenario Forces and usually

indicated by the Base code on the counter).

**5.3.1 Air Radii:** Instead of normal missions, units capable of both Reconnaissance *and* ASW may establish temporary Air Radii [6.4] in one hex within their range per step. Such units return to base at the end of the next *enemy Submarine Combat* Segment, rather than their own Air Segment. Air Radii may not be established in enemy port hexes, and Axis units may not establish Air Radii during Night turns before August 1943.

Aircraft carriers at sea always project an Air Radius in the hex their force occupies when the weather is not Fog, Storms, or Gales [9.2.3-9.2.5]. This need only be announced when the controlling player wishes to take advantage of its presence.

## 5.4 Shadowing

Shadowing assets MUST move *with* the enemy force they are shadowing — they *cannot* move in their own Player Phase [6.3]. The enemy force does *not* reduce its ID when moving [6.6]. Shadowing ends if the enemy force enters a hex outside the range of the shadowing air unit or enters a port hex.

## 5.5 Scattering

Any Convoy may Scatter in lieu of movement, with accompanying warships becoming a separate Task Force. A Convoy composed entirely of convoy ships when attacked by a TF [7.5.8] *must* Scatter after the attack. Place a *Scatter* marker on the Convoy block. A Scattered convoy subsequently moves at normal speed and is less vulnerable to surface attack [7.7], but is more vulnerable to air and submarine attacks. Once scattered, a convoy may *never* reform until it enters port.

## 5.6 Dispersal

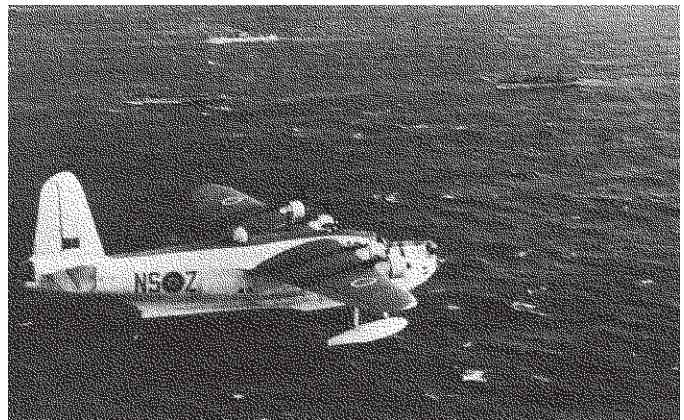
Gales may result in dispersal of Convoys [9.2.5]. The Dispersed portion of a Convoy always remains in the same hex as its “parent.”

## 5.7 Off-Map Boxes

**5.7.1 Germany:** Axis Forces may enter or leave port in the Germany Box by spending an entire Turn moving at Moderate Speed to or from hexes 1707 or 1708.

**5.7.2 Kara Sea:** Forces may enter or leave the Kara Sea Box by spending an entire Turn moving at Moderate Speed to/from hexes 0122, 0421, or 0622. Zone III East must be Clear or Light Drift ice, and Axis forces may only enter per the Operation WUNDERLAND Special Condition [12.12].

**5.7.3 English Channel:** Allied forces may enter/leave the English Channel Box by expending one hex of movement to/from hex 1706. Remove forces entering the Box from the operation (do not score any VPs).



# 6. RECONNAISSANCE

Players must perform reconnaissance in order to locate and identify enemy forces before they can attack them. Reconnaissance *is* mandatory, including *all* assets in each hex.

## 6.1 Identification Levels

All forces at sea are either Unidentified or Identified. Unidentified blocks stand on edge facing the owning player, so the opponent may not read them. Identified blocks lie flat, face-up and with the correct Identification Level (ID) oriented at the top of the block as viewed by the owning player. **Forces at sea never exceed ID3.**

**Design Note:** Identification Levels reflect how accurately and recently the enemy has located the force, as well as knowledge of its makeup:

- ID0 — Last located more than six hours ago.
- ID1 — Tentatively located six hours ago with a vague estimate of its composition.
- ID2 — Accurately located six hours ago with a good estimate of its composition.
- ID3 — Accurately located less than six hours ago with an excellent estimate of its composition.
- ID4 — Concisely photographed in port (*only*).

## 6.2 Reconnaissance Procedure

During the Reconnaissance Segment, draw one card against each enemy block in a hex that is either

- a) within a friendly Air Radius, or
- b) a designated hex within an Air Search Sector, or
- c) co-occupied by one or more friendly forces, Dummies, or reconnaissance-capable air units, or
- d) shadowed.

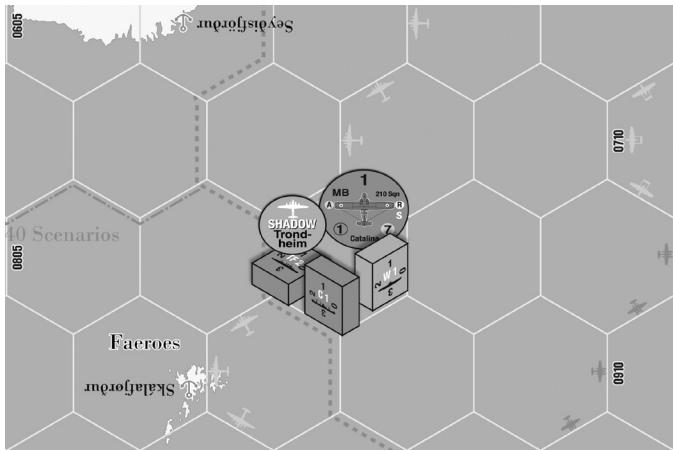
Consult the Day or Night section of the card as appropriate and cross-reference the searching asset(s) with the weather in the hex. If the searching asset is a force, use the card’s ‘Force’ line; if within a friendly Air Radius, in a designated hex within an Air Search Sector, or an air unit is searching, use the ‘Air’ line; when both apply, use the ‘Both’ line. If

- the result is “U”, or
- the ID level of the enemy force is greater than or equal to

- the listed number, or
- the result is “S” and either a friendly shoreline hex is being searched [1.1.3] or the enemy force is being shadowed [6.3], the search is successful: increase the ID of the enemy force by the amount listed at the bottom of the column or remove it if a Dummy. If the result is a  $\ddagger$  symbol, treat this as a “U” unless the target force includes an aircraft carrier or CAM [6.2.2] or is in or adjacent to an airbase hex with Interceptors [1.1.2]. If the card section is marked with a watermarked submarine silhouette  and the target force is a Wolfpack, the enemy player may announce this to negate the result [6.8]. On any other result (including searching with only a Dummy), or if the card section is marked with a  symbol and all searching units are Soviet, the search fails. The searching player need never reveal the card to the opposing player unless successful.

**Play Note:** To conceal the nature of Unidentified forces and Dummies, players should draw a card and proclaim failure for all searches except successes by actual assets.

**Example:** It is a Day turn and the weather is Reduced Visibility. Allied TF2 (which includes CV Victorious) is being shadowed by the Axis Trondheim Sector asset. (See illustration on next page.) The Allied player would draw one card to search for the Axis block, cross-indexing the ‘Reduced Vis’ column and the ‘Both’ line; any result but a ‘U’ or a  $\ddagger$  would be a failure.



If the Day section of the card included a watermarked sub silhouette, the Axis player could announce “The target is a Wolfpack,” and then even these results would fail. The Axis player would draw a card for the shadowed TF using the ‘Both’ line result. This would succeed on any result save a 2 or 3, but if the result is a  $\ddagger$ , the Allied player could (but need not) announce “The TF includes a carrier” and the search would fail. The Axis player would draw another card for the unidentified block using the ‘Force’ line (because shadowing assets cannot search for forces except the one they are shadowing — see 6.3), succeeding only with a ‘U’ result.

**6.2.1 Search Results:** If reconnaissance is successful, check the “ID” line of the card in the appropriate column to determine the amount by which ID increases (consider an Unidentified force to be ID0). The opponent must reveal the following information about the located force:

- **ID1** — The total number of warship *counters*  $\pm$  50%, and if the force is a Large (>10 Convoy Ships) or Small Convoy.
- **ID2** — The total number of warship *counters*, the total number of Heavy Ships and whether *any* carriers are in the force, and the total number of Convoy Ships.
- **ID3** — The exact number of counters and CS sum of ships of each category.
- **ID4** — The exact number, type, and CS of Light/Convoy Ships and submarines, and the names of any Heavy Ships.

**Example:** An Allied Convoy consists of BB Duke of York, CV Victorious, CA Suffolk, CL Jamaica, 4 A-I class DDs, 1 AO, and 24 MVs. Successful German searches would result in the following revelations by the Allied player:

**ID1:** “(Any number between three and seven inclusive) warship counters in a Large Convoy.”

**ID2:** “Five warship counters total, of which four are heavy ships including at least one carrier; and 25 Convoy Ships.”

**ID3:** “Two Capital Ship counters/8CS, one Carrier counter/4CS, two Cruiser counters/6CS, one Light Ship counter/4CS, and 25 Convoy Ships.”

If reconnaissance fails, the ID of the target force does not change unless it was shadowed [6.3.5].

**6.2.2 Target Type:** The non-searching player may (but need not) choose to negate Reconnaissance attempts against Wolfpacks or forces containing a carrier or unused CAM *after* the card is revealed if the card has a watermarked sub silhouette (for Wolfpacks, unless they are transiting a hex [6.6.1]) or the result is a  $\ddagger$  symbol and the player announces this [6.2]. A carrier need not have a Fighter unit on board. An announced CAM becomes used [1.4.3].

## 6.3 Shadowing

Some assets that successfully identify an enemy Convoy or TF during the Reconnaissance Segment may immediately elect to shadow that force to retain ID and gain an additional attack location draw [7.1.1]. If so, they MUST move *with* the enemy force — they *cannot* move in their own Player Phase. **Important:** The enemy force does not reduce its ID until shadowing ends [6.6]. A shadowing force searches only for the force it is shadowing each turn, and may *not* search for other enemy forces in the same hex. Dummies may never shadow. Wolfpacks may never be shadowed.

**6.3.1 Air Shadowing:** A successful Air search (or Both) may shadow an enemy TF or Convoy that is not Dispersed or Scattered unless the searching air asset is Soviet or the target is in or adjacent to an enemy airbase hex with Interceptors [1.1.2]:

**Air Units:** Mark a reconnaissance-capable air unit with a *Shadow* marker, and do not return it to base.

**Air Radii:** Mark a force identified inside an enemy permanent Air Radius with a *Shadow* marker unless the weather is Gales.

**Air Sectors:** Place the reverse (*Shadow*) side of an appropriate

Air Sector marker on the target force. Reduce the number of hexes available for search in that sector by 1 for each enemy force so marked.

**6.3.2 Wolfpacks:** One German Wolfpack (only) may shadow each Allied Convoy that is not Dispersed or Scattered. If two or more Wolfpacks conduct a successful search, the Axis player may select one that may shadow. Place the shadowing block under the target block, either face-down (if it is Unidentified) or face-up as appropriate. A shadowing Wolfpack *cannot* attack.

**6.3.3 Cruisers:** An Allied TF made up solely of one or more unhit cruisers may shadow an Axis TF it identifies during the Reconnaissance Segment or transit. If the Axis TF includes a capital ship, Allied cruiser(s) may also shadow after surface combat. To do so, the shadowing cruisers may split off into a new TF upon identification or at the end of the Surface Combat Segment [1.2.3].

**6.3.4 Target Splitting:** If a shadowed force splits, the opponent may choose which of the resulting forces will continue to be shadowed. The shadower may announce this decision based on known composition of the original force.

*Example:* “Shadow the Convoy,” or “shadow the larger TF,” or “shadow the capital ship.”

**6.3.5 Termination:** Shadowing ends *immediately whenever circumstances would prevent* shadowing air assets from *taking off or flying* [7.8, 9.2.3-5] or a search by the shadower(s) fails. Shadowing must also end if the enemy force leaves the applicable Air Search Sector/Radius, enters a hex outside the range of a shadowing air unit or adjacent to an airbase hex with Interceptors [1.1.2], or enters a port hex. The shadowing player may voluntarily cease shadowing before the enemy force moves during an enemy Naval Movement Segment.

**Design Note:** The failure of a search while shadowing may result from a number of potential causes such as deteriorating local weather, navigation error or equipment malfunction on the shadowing platform, or the failure of a relief aircraft to arrive.

When shadowing ends, remove the *Shadow/Air Sector* marker (or stand the formerly-shadowing Unidentified TF/Wolfpack upright), and return the formerly-shadowing air unit to its base. Immediately reduce the ID of the force no longer shadowed by 1 [6.6]. {text deleted}



## 6.4 Routine Air Reconnaissance

**6.4.1 Air Radii:** Air patrols from land bases are effectively constant in every hex within the Air Radii shown on the mapboard (except during Gales weather). Unless Crippled or DiW, Allied carriers (and *Graf Zeppelin* during Day turns only) project an air radius into their own hexes in Fair or Reduced Visibility weather. Air units capable of both reconnaissance *and* ASW may project an air radius into one hex within their range per step *when weather at their base (and the condition of their carrier [7.8]) permits them to fly*. One-step units have *Air Radius* markers on their backs; others must use spare markers provided.

Search every hex within an Air Radius as if a Reconnaissance air unit is present. Wolfpacks moving in *or* out of or attacking in a hex within an Air Radius may suffer adverse effects [7.4.5].

**6.4.2 Air Search Sectors:** Each scenario will indicate how many hexes may be searched with notional air units in each of the five sectors (one British, one Soviet, and three German) shown on the map during each turn, including Night turns. During the Reconnaissance Segment, the searching player may select and search these hexes (which may include other forces) just as if an air unit was present there. Where the German Trondheim and Barents Sectors overlap, the Axis player may use an allocation from either sector to search a hex. Players should designate all hexes to be searched before any cards are drawn, and may use the *Air Sector* markers provided if they wish.

## 6.5 Dummies

Search hexes outside friendly Air Radii occupied solely by a Dummy to conceal the Dummy’s identity, *but always declare failure*. *If a card that would otherwise result in success is accidentally revealed, eliminate the Dummy rather than identifying any enemy forces.* Dummies may never shadow.

## 6.6 Movement and ID

A force decreases its ID by one every turn it moves one or more hexes unless *it begins shadowed* [6.3]. Rotate its block 90° counter-clockwise upon completion of its move. Decrease the ID of a non-moving force by one every friendly PM Naval Movement Segment *unless shadowed*.

Any force beginning its Turn at ID0 becomes Unidentified {text deleted}. Stand its block on edge, and place a Dummy with it if desired (without exceeding the number available — see 1.3).

**6.6.1 Transit:** If an active *force or dummy* moving at High or Moderate Speed [5.1] enters and then attempts to leave a hex containing any non-shadowing enemy force(s) in the same turn, the enemy player may immediately make one Reconnaissance draw against the moving force. If the Reconnaissance is successful, one locating force may shadow [6.3.3] and *either* player (inactive first, *but not a moving Wolfpack [5.2]*) may attempt to initiate combat in the hex the force is attempting to exit if allowed [7.1]. If combat results, the force must end its movement in that hex.

## 6.7 Combat and ID

After each round of surface combat, forces involved automatically increase to ID3 during Day turns/ID2 at Night. Air attack increases the ID of a target force to ID2. Submarine combat increases the ID of all forces involved to ID1. Combat cannot cause ID to decrease.

## 6.8 Convoys

A Convoy without any warships may not search.

**6.8.1 Scattered Convoys:** A Scattered Convoy remains at ID3 until it enters port. Enemy forces may search the hex with the Convoy block *or any adjacent hex the Convoy could enter*. If Reconnaissance results in contact, the searching force may attack immediately [7.7].

**Design Note:** Once Scattered, the Convoy block represents only the center of a group of ships spread out into the surrounding hexes and steaming individually. Since each ship must be located separately, normal ID rules do not apply.

## 6.9 Photo Reconnaissance

P-type air units may conduct reconnaissance against enemy ports during the Photo Reconnaissance Segment of Day turns only. They serve no other function.

Draw one card for Photo Recon of a port and consult the ‘Photo’ line. Success yields normal information on *all* forces in that port combined. Since forces in port have no ID level, the ID of such forces never increases. Do not reveal or remove any Dummy present.



## 7. COMBAT

Resolve most combat by cross-indexing the type of firing unit with the target’s type on the applicable table to obtain a Hit #. The player firing rolls a number of dice equal to the firing unit’s CS and obtains one Hit for each number rolled that is greater than or equal to the Hit #.

For most units, the difference between each step is 1 Combat Strength. For each Hit taken, eliminate 1CS by rotating a ship unit 90° *counter-clockwise* to show the new CS at the top, flipping a 2CS air unit to its 1CS side, or eliminating a 1CS air unit.

If a unit has a difference of 2CS between steps, it must sustain two Hits to rotate 90° and lose one such step. In this case, rotate the counter 45° to track a single Hit during combat, but do *not* reduce the CS when firing until a full step is lost. Ignore any “odd” Hits remaining at the end of any Combat Round or Segment — they do not carry over.

Remove a unit from the game when it loses its last step. Note: many surface ships (*not* submarines/light ships/MVs) reduced to exactly 0CS sink only when they incur one additional hit. Mark them with a DiW (Dead in the Water) marker; they must either be towed by the owning player [5.1.1] or will be automatically sunk (scuttled) at the end of their next Combine Forces Segment. DiW (and towing) ships do not count for Submarine Combat DRMs and ASW attacks, and their forces cannot search. All subsequent attacks against ships DiW or under tow receive a (+2) modifier on the die roll to Hit.

## 7.1 Attacks

A target force may only be attacked by air units once in an Air Combat Segment. Each Wolfpack always attacks separately, and only if it is not moving [5.2]. TFs **may** attempt to attack in concert. Announce each attack against an enemy force in the appropriate Combat Segment.

**7.1.1 Target Location:** A player may announce an attack against a target at sea only if it is already Identified [6.1]. When an attack is announced, draw one card for an air strike or offensive air ASW attack or for each Task Force or Wolfpack attempting to attack. Check the search result, using the Force or Air line (**never Both**) as appropriate. If the first attempt is unsuccessful and the target is being shadowed [6.3] or is a Dispersed Convoy, draw a second card. Resolve combat if either result is successful. Regardless of the result, do *not* change ID levels except as specified in rule 6.7.

**Example:** Axis air units attempting to attack an Allied convoy (ID2) in Reduced Visibility draw one card and cross-index the Air line in the Day section with the Reduced Vis column. Unless the result is successful identification (0, 1, 2, U, or  $\frac{1}{2}$ ), the attack fails and the Luftwaffe units return to their bases. If the convoy was being shadowed, the Axis player could draw a second card, and the air units would attack if either card resulted in a successful search.

**Optional Rule:** If the first attempt is unsuccessful, draw a second card only if:

- The target is a Dispersed Convoy; or
- One or more air units are attacking and either the weather in the hex is Fair or the target force is being shadowed by friendly aircraft (unit, Air Sector, or Air Radius); or
- A Wolfpack is attacking and the target force is being shadowed by another friendly Wolfpack; or
- A TF is attacking and the target is being shadowed by any Allied aircraft (unit, Air Sector, or Air Radius) or TF.

**Design Note:** Cooperation among the German armed services was notoriously poor. Aircraft could not communicate directly with ships, and neither could communicate with U-boats. As a result, shadowing by one arm often failed to result in successful attacks by another.

**7.1.2 Coordinated Air Strikes (Optional):** Instead of combining all attacking air units into one strike, players should keep the units from each airbase or force in separate groups and draw a locating card for each. A group that succeeds in locating the target with a ‘U’ or  $\frac{1}{2}$  result must attack separately before the remainder strike (attacking player’s choice if more than one).

**7.1.3 Airfields and Ports:** Land-based aircraft may attack aircraft at airbases and ships in port only when permitted by Random Events or Special Conditions. Ports and airbases in the United Kingdom (including the Orkneys and Shetlands) may never be attacked. Aircraft may not attack ships in port with torpedoes.

**Design Note:** British facilities were well-protected by Fighter Command, whose squadrons have been omitted to save setup time and space in the counter mix.

## 7.2 Air Combat

Air units may attack enemy naval forces (if located per 7.1 or in port) or aircraft at airbases using the following procedure:

- a. The defender may Scramble eligible Fighter units [7.2.1].
- b. Conduct air-to-air combat [7.2.2-3].
- c. Deploy target units [7.2.4].
- d. Assign attacking air units to targets and declare torpedo attacks [7.2.4].
- e. Determine the results of each wave of attacks before resolving the next wave.
  - (i) Resolve anti-aircraft fire [7.2.5].
  - (ii) Resolve bombing/torpedo attacks [7.2.6-7.3.1].

**Note:** Only Soviet VVS units (with white Unit Names) may attack a Convoy or TF at sea, not Soviet air force units.

At the conclusion of air combat, increase the target force’s ID if necessary [6.7], move a TF’s Fuel Warning marker 1 Turn back [11.1.3], and return all air units to their original bases/carriers.

**7.2.1 Scramble:** During a Day turn (only), the defender may Scramble any Fighter units in the target hex (including Interceptors [1.1.2, 1.5.3]) to engage the attackers.

**Optional Rule:** Roll for Surprise [7.6] upon declaring an air attack. If successful, only 1 Fighter unit of the defender’s choice (an Interceptor if available) in the target hex may Scramble. If unsuccessful, 1 defending Fighter or Interceptor unit in an adjacent hex may Scramble, in addition to *all* defenders in the target hex.

**7.2.2 Air-to-Air Combat:** Scrambled Fighter units exchange one round of fire simultaneously with the attacking air units. Scrambled units may split their fire, but must match attacking Fighter CS one-for-one before they may fire on other types of air units. Scrambling prevents *all* attacking Fighter units from conducting bombing attacks.

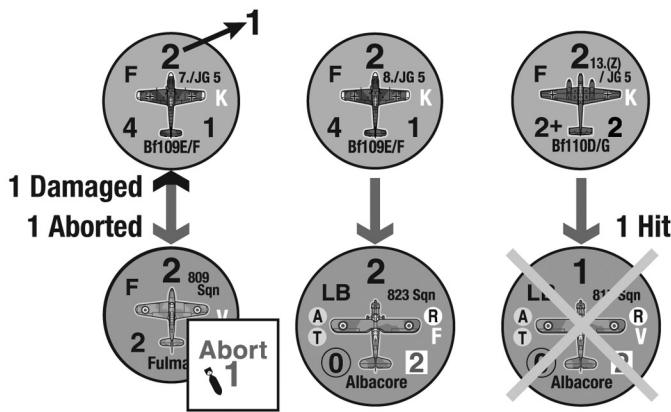
**7.2.3 Air Combat Resolution:** Subtract the target’s Air Combat # from the firing unit’s Air Combat #, and apply the resulting DRM to the Air Combat Table rolls (but never a negative DRM when a Fighter is firing). Roll one die for each firing CS:

- **Abort:** Reduce the CS of the target unit by 1 for the remainder of this Player Phase only. Place an *Abort* marker on the unit.
- **Damaged:** Reduce the target unit by one step for the remainder of the Operation, but score no VPs.
- **Hit:** Permanently reduce the target unit by one step.

Note losses to any Interceptors on the Planning Sheets. Air units with a ‘+’ symbol increase their Air Combat # by one when firing upon a bomber unit. A unit with a circled Air Combat # may not fire in air-to-air combat unless fired upon.

**Example:** Two Albacore units (3CS total) and one Fulmar (2CS) attack Kirkenes. Two Bf-109E/F units (4CS total, including the

Interceptors) and one Bf-110 (2CS) scramble to oppose the attack. 2CS of defending Fighters must engage the Fulmars, so one Bf-109 takes on the escorts, rolling 5 and 6 (modified to 7 and 8): one Fulmar step Aborts. The other two Scrambled units each attack an Albacore unit. The 109 rolls 0 and 2 — a whiff, even with the +4 DRMs. The 110 rolls 2 and 7; because the '+' increases the Bf-110's Air Combat # by one against a bomber, the 7 becomes a 10 and the 1CS Albacore unit is shot down.



Since fire is simultaneous, the Fulmar unit gets to return fire on the Bf-109s with 2 CS and rolls 2 and 9, Damaging one Messerschmitt step. The Albacores (including those destroyed) could roll against the Interceptors, but with no chance of Damage or a Hit, the Allied player declines.

**7.2.4 Air Strike Deployment:** Deploy target ship or aircraft counters face-up (on the Battle Display if desired) in a single line. MX/AXs may stack together up to 10 CS per stack, and Light Ships may stack together up to 4CS, but ships DiW/under tow may not stack except in port. Otherwise, ships may not be stacked. Place all surviving attackers adjacent to the counters they will attack. Up to two attacking aircraft units may be assigned to a specific target in each wave. The attacking player must declare whether **each** Light and Medium Bomber unit with a Torpedo symbol (Ⓣ) is attacking with bombs or torpedoes against ships at sea, and roll one die on the Ice Table if necessary [7.3].

**Design Note:** Faced with serious attack, towing ships would drop their tows (which is why there is no DRM for ships towing). Towing ships need not line up adjacent to their erstwhile tows.

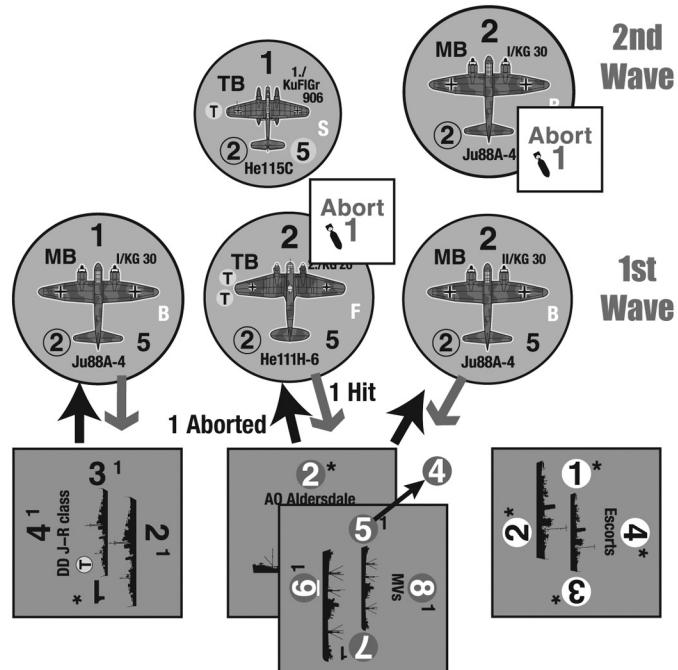
**7.2.5 Anti-Aircraft Fire:** For each wave of attackers, a target ship counter fires its entire AA value at **each** unit attacking it. Stacks fire the sum of their values (e.g.,  $1 + * = 1$ ,  $* + * = *$ ). Ship counters adjacent to a target that are not themselves targets may fire at **one** air unit targeting an adjacent ship per wave if they have a numerical AA value (not '\*'). If the target forces are in port, the port AA may fire at **every** attacking unit. Airbase AA also fires at every attacking unit.

Roll one die for every AA factor firing on the AA Defense Table. One die roll may be modified per unused CAM in the target force, after which the CAM becomes used [1.4.3]. Stacks with AA values of '\*' roll only once.

**7.2.6 Bomb/Torpedo Attacks:** Surviving attackers bomb naval targets/air units by rolling one die for each CS on the appropriate line of the Naval/Airbase Bombing Table. Aircraft with torpedoes must make torpedo attacks [7.3] instead of bombing.

An attacking aircraft unit in the second or later waves must attack its pre-selected target unless that target is eliminated. In that case, the aircraft may either switch targets to an adjacent (surviving) unit or voluntarily forego attacking altogether. Aircraft choosing not to attack do not suffer AA fire.

**Example:** One He111H-6 (2CS), one He115C (1CS), and three Ju88A-4 units (total 5CS) attack a small Convoy consisting of one DD unit (3CS), 1 ES, 1 AO, and 5 MVs. The Allied player deploys his convoy ships in a single stack in the center of his formation. The Axis player wants to concentrate on the merchants, so deploys his aircraft in two waves.



In the first wave, the He111s and one Ju88 unit (1CS) attack the convoy ships, while another Ju88 unit (ICS) attacks the DDs. The remaining aircraft in the second wave all attack the convoy ships.

As the first wave attacks, the DDs will get one AA die roll against the Ju88 attacking them, while the convoy ships get one roll against each unit attacking them. The ES unit does not fire, since its AA value is '\*' and it is not under attack. The results are:

DDs vs. Ju88:	4	= no effect
MVs vs. He111:	7	= 1 Abort
MVs vs. Ju88s:	7	= no effect

The He111 is marked with an Abort 1 marker, and the aircraft make their attacks:

Ju88 vs. DDs:	2	= no effect
He111 vs. MVs:	5,7	= 1 Hit
Ju88s vs. MVs:	0,3	= no effect

The follow-up roll on the Torpedo Damage Table yields a result

of 1 Sunk. The Allied player randomly determines that the AO was not hit, so the 5CS MV counter is replaced by a 4CS counter.

Now the second wave faces AA fire. Since the DDs are no longer targeted, they can fire at one of the air units attacking the adjacent merchantmen:

<i>DDs vs. He115:</i>	6	= no effect
<i>MVs vs. He115:</i>	1	= no effect
<i>MVs vs. Ju88s:</i>	9	= 1 Abort
<i>He115 vs. MVs:</i>	3	= no effect
<i>Ju88 vs. MVs:</i>	8	= 1 Hit

One more MV CS is eliminated, and the attack is over.

**7.2.7 Ju88s:** German Ju88 bombers use the Light Bomber row of the Naval Bombing Table unless attacking a port at night.

**Design Note:** The Junkers Ju88 had dive brakes and attacked shipping in dives up to 60°. While not as deadly as true dive bombers, they were much more effective than most other medium bombers when attacking naval units.

### 7.3 Torpedo Attacks

Units marked with  $\textcircled{T}$  symbols may attack ships at sea with torpedoes instead of bombing or gunnery. Ships so marked may make one torpedo attack per symbol during step (iv) of a Surface Combat Round (**Note:** ships with two symbols need *not* use both in a single attack). Light Ships, submarines, and aircraft declaring torpedo attacks make a number of torpedo attacks per symbol equal to their current CS. If bombers attack with torpedoes in a hex that is not confirmed Clear of ice, roll one die on the Ice Table. If the result is anything other than Clear, the torpedo bombers may *not* attack.

#### 7.3.1 Torpedo Attack Procedure:

- Roll one die on the Torpedo Attack Table for each torpedo attack. An attack is successful if the modified result is 8 or more.
- Roll one die for each successful attack on the Torpedo Damage Table to determine how many Hits are scored or whether the target is crippled or sunk outright:

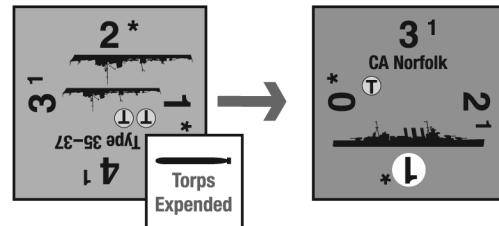
(a) **Hits** — Battleships, battlecruisers, most aircraft carriers and cruisers, and **some Convoy Ships** may sustain multiple hits without sinking. A number on the chart indicates how many CS factors the target ship loses, or how many Light Ship or MV CS are DiW [7].

(b) **Crippled** — Mark crippled ships with a *Cripple* marker. Cripples maintain full combat capabilities but limit their forces to moving at Slow speed [5.1]. All subsequent attacks against crippled ships receive a positive modifier on the die roll to hit.

(c) **Sunk** — Eliminate the target ship immediately, regardless of any remaining CS. “1 Sunk” or “2 Sunk” indicates that many CS are eliminated.

**7.3.2 Torpedo Expenditure:** After making a torpedo attack, mark surface units with a *Torps Expended* marker. Subs flip

to their reverse side when indicated by the Submarine Combat Table, and may no longer announce attacks [7.1.1]. Ships with all *Torps Expended* may no longer make torpedo attacks without spending a complete turn (*not* refueling) in a designated port [Bergen, Trondheim, Narvik, Scapa Flow, Lerwick (subs only), and Murmansk (Soviets only)].



**Example:** A German Type 35-37 TB unit (2CS) makes a torpedo attack on an Allied CA. The Axis player could save some torpedoes for future use by rolling only one die per CS on the Torpedo Attack Table and placing one *Torps Expended* marker on the TB counter, or expend all torpedoes by rolling four dice (and placing two *Torps Expended* markers).

### 7.4 Submarine Combat

Wolfpacks attacking naval forces or attacked by them must determine the order of antisubmarine warfare (ASW) and submarine torpedo attacks. Roll one die on the Submarine Combat Table. After applying all applicable DRMs to a maximum of + or - 6, determine the **maximum** number of subs that *{text deleted}* attack before and after any ASW attacks (each sub may attack **only once**), if the subs have expended their torpedoes after attacking [7.3.2], and whether or not any Refueling at Sea (RAS) in the target force may continue [11.3.2]. An odd-numbered modified die roll also indicates the subs will expend their torpedoes if *all* attack. Players then conduct ASW and Submarine Attacks as appropriate.

**7.4.1 ASW Combat Procedure:** Roll one die for every 3CS (rounded off) of destroyers and/or torpedo boats, or 1CS of escorts or aircraft marked with  $\textcircled{A}$  symbols, not to exceed twice the number of subs in the opposing Wolfpack:

- Success** — Roll one additional die, resulting in:
  - Sunk** — Eliminate 1CS of submarines.
  - Damaged** — Remove 1CS of submarines from play (simulating returning to port), but no VPs are awarded.

**(b) Held Down** — Reduce the number of submarines that may subsequently execute a torpedo attack in this combat by 1CS.

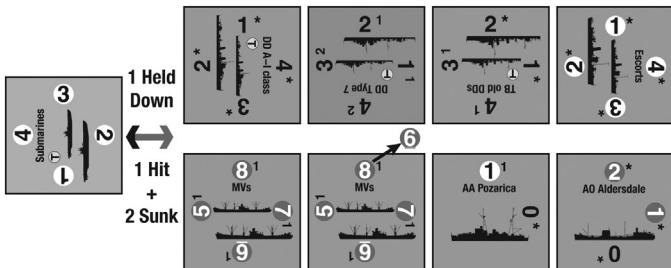
Results in excess of the number of subs allowed to attack *do* count. If there are more results than submarines present, apply the most severe results.

**7.4.2 Offensive ASW:** Aircraft marked with  $\textcircled{A}$  symbols may attack during their Air Combat Segment. Task Forces (*not* Convoys) may attempt to attack Wolfpacks during the Submarine Combat Segment of their turn or when detecting a transiting Wolfpack [6.6.1], but must still follow the normal Submarine

Combat procedure [7.4]. In either case, apply the Offensive ASW -1 DRM to their ASW rolls and, for a TF, expend 1 additional turn of fuel [11.1.3].

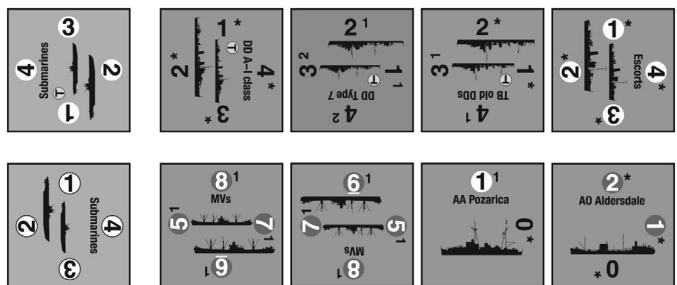
**7.4.3 Submarine Attack Procedure:** When Submarine Combat results in a Submarine Attack (before or after ASW Combat), **subs must attack if able**. The defender does not reveal the units in the target force. Instead, the attacking player chooses one target category for each sub CS *before* executing any Torpedo Attacks [7.3.1]. If he selects a category that is not present, that sub's attack has no result. Randomly choose target(s) within categories when hits are scored.

**Example:** A German Wolfpack of 3 subs at ID1 attacks a loaded ID0 British Convoy consisting of 16 MVs, 1 AA, and 1 AO, accompanied by 3 DDs, 2 TBs, and 1 ES CS during a Night turn in Fog.



The Axis player rolls a '3' on the Submarine Combat Table, modified (+2 Night +1 for 3 Subs -1 ID1 -3 DDs/TBs/ES) to 2. ASW combat occurs first, so the Allied player rolls three times on the ASW Table: 2 and 4 for the British ships, and 7 (modified to 6) for the Soviets. The 'Held Down' result means only 1 sub *executes* a torpedo attack. The Axis player declares he is attacking Convoy Ships and rolls a 7 on the Torpedo Attack Table — a hit! A roll of 8 on the Torpedo Damage Table means 2 convoy ships are sunk. These are randomly determined not to include either AX, so 4 VPs are deducted. The Convoy becomes ID1.

An Unidentified Wolfpack of 2 subs then attacks the same Convoy. This time the Axis player rolls a 6 on the Submarine Combat Table, modified to 5. Both U-boats get to attack first, and one chooses a Heavy Ship as its target, while the other picks a Convoy Ship. Since there are no Heavy Ships in the Convoy, the first attack fails without being rolled. The other sub's result of 5 misses. The Allied ASW rolls are 1 and 7 (British), and 9 modified to 8 (Soviet), resulting in 1 sub Held Down and one Success. The follow-on roll of 5 means one sub is Damaged, while in this case the Held Down result has no effect (since all the subs in this Wolfpack have already attacked).



The damaged sub is removed (but no VPs are awarded), and the unit counter rotated and flipped to its (1) aspect, showing that its torpedoes are expended (because the *modified* Submarine Combat roll was odd and all subs attacked). Although the oiler is unscathed, the second Submarine Combat result means that if it had been conducting refueling at sea [11.3.2], that would be canceled. The second Wolfpack becomes ID1 and the Convoy's ID remains 1.

**7.4.4 Sub vs. Sub:** A Wolfpack may only attack an enemy Wolfpack if it achieves surprise [7.6]. Attacking subs that fail to achieve surprise are instead ambushed and attacked by their intended target. In either case, do not follow the normal Submarine Procedure. Instead, roll **once only** on the ASW Table (ignoring the number of submarine CS present). No return fire is allowed. A 'Success' result destroys 1CS.

**Design Note:** Unlike today, submarines were not ideal ASW platforms in World War II. Successes obtained were due to either accurate intelligence or chance encounter, with surprise almost always a major factor.

**7.4.5 ASW Air Patrols:** Any Wolfpack attempting to move into *or* out of a hex within an enemy Air Radius incurs one roll on the ASW Table for each hexside it attempts to cross if it is Identified during a Day turn *or* if it attempts to move two hexes. Do not apply the +1 Air Radius DRM. If the result is Held Down, Damaged, or Sunk, *in addition to incurring the normal results*, the **Wolfpack** becomes ID1 (if Unidentified or ID0) and loses that hex of movement. If it never leaves its starting hex as a result, its ID does *not* decrease.

**Example:** A German Wolfpack starting in the same hex as HMS Victorious in Reduced Visibility declares it will move two hexes. The Allied player rolls once on the ASW Table. On a result of 4 or less the Wolfpack leaves the hex and may move one additional hex; on 5 or more the Wolfpack is still in the hex with one hex of movement remaining (and may try to exit the hex again).

**Design Note:** Submarines moving on the surface in areas covered by enemy air patrols face substantial risk of attack.

**7.4.6 Submarines in Convoys:** Allied submarines in a Convoy attacked by an enemy Task Force that does **not** achieve Surprise may immediately split into a Wolfpack and initiate Submarine Combat with that TF before any surface combat is resolved.

## 7.5 Naval Surface Combat

Each TF may participate in only one surface combat per Surface Combat Segment.

**7.5.1 Intercept:** If an active TF announces an attack in the Surface Combat Segment and successfully locates its target [7.1.1], a different enemy TF in the same hex may attempt to cover the target by intercepting the active TF. The inactive player draws one card (two if shadowing the active TF). If the result is successful identification, the intercepting TF attacks the active TF. Otherwise, the active TF attacks its target in surface combat. In either case, the attacking TF may attempt to achieve surprise at Night or in Poor Weather [7.6].

**7.5.2 Surface Combat Procedure:** Both sides place their units (face up) in their respective Deployment areas on the Battle Display, obeying the same stacking restrictions as for air attacks [7.2.4]. Combat lasts up to ten Rounds [see step vi below and 7.5.8], with each Round consisting of six steps:

i. Engagement — In the 2<sup>nd</sup> and later Rounds, every other TF in the hex (Active player's first) may attempt to join the combat by drawing a reconnaissance card. Place the units of TFs that successfully identify the enemy in their respective Deployment areas on the Battle Display.

ii. Maneuver — First the defender, then the attacker may move any units not Crippled or DiW from the Deployment into the Torpedo Attack, Screening, or Withdrawal areas of the Battle Display, *or* place *Evasion* markers on any or all (to hinder enemy torpedo attacks at the cost of reduced gunnery accuracy). Units in Withdrawal areas may never move. If all units of both sides are in their Withdrawal areas, surface combat ends immediately.

**Important:** Units may not move into the Torpedo Attack areas the first Round they participate in a battle except at Night or in Poor Weather conditions, and then only if they achieve surprise [7.6].

iii. Gunnery — Both players assign targets before firing. Enemy units may not be targeted if they are Screened [7.5.4]. Every enemy unit not Screened must be targeted before any unit can be targeted by multiple friendly units. Splitting fire is not allowed unless the entire firing TF consists of a single Light Ship unit. Resolve fire **simultaneously** by rolling one die per CS on the Naval Gunnery Table.

**Play Note:** The first player may use Abort markers to temporarily show Hits obtained before the second player fires.

iv. Torpedo Attack — Both players (defender first) may assign targets for their surviving units in Torpedo Attack areas in the same manner as for gunnery attacks. Simultaneously execute the Torpedo Attack Procedure [7.3.1]. After resolving each unit's Torpedo Attack, mark it with appropriate *Torps Expended* markers.

v. Withdrawal — Either or both players (defender first) may roll once on the Withdrawal Table (*and the Axis player must roll if any German unit has lost a step since the battle began*), whether or not they have any unit(s) in the Withdrawal Area. If the modified result is 7 or more, return that player's units to the Force Display. Although a player only rolls once per round, DRMs apply to each unit individually, so some may withdraw

while others do not. Return all units still on the Battle Display and not in Withdrawal areas to their Deployment areas.

vi. Force ID — Increase the ID of all forces in the battle to ID3 if a Day turn or ID2 if Night [6.7]. If both players still have warship units on the Battle Display, the Axis player rolls one die. If either player no longer has ships on the Battle Display or the result is less than the Round number, surface combat ends. Otherwise, begin a new Round unless 7.5.8 applies.

**7.5.3 Surprise:** If Surprise is achieved [7.6], enemy units may not move during the first round of Naval Surface Combat [7.5.2ii]. Attackers achieving surprise may fire guns and torpedoes before receiving fire in return during the first Round.

**7.5.4 Screening:** Each unit in the Screening or Torpedo Attack areas that is not DiW or Crippled can block two enemy units from attacking any friendly units in the Withdrawal area, or one enemy unit from attacking one friendly unit in the Deployment area. Place Screening units adjacent to any friendly unit it is protecting in the Deployment area and opposite the blocked unit(s). Each Screening unit may only fire upon a unit it blocks; a blocked unit may fire on any target not protected by an opposing Screening unit. Screened units may not fire upon enemy units blocked from firing at them.

**7.5.5 Escorts:** Escorts (Type ES) may Screen in surface combat, but cannot target enemy units with guns or torpedoes. Eliminated Escort CS return to play *in the same force* after the battle ends.

**Design Note:** Each Escort CS represents multiple small ships whose only real contribution in a surface action was to cover the convoy with smoke, since they posed little or no threat to attacking warships. Even if one or two were sunk and the rest driven off or bypassed, the surviving escorts would resume ASW defense of their convoy after the battle.

**7.5.6 Aircraft Carriers:** If the defending player has one or more Carriers in his force and the Weather is Fair or Reduced Visibility during a Day turn, the carrier aircraft may attack at the beginning of the second and subsequent rounds. Conduct an abbreviated Air Combat Segment using only steps (d) and (e) [7.2].

**7.5.7 Hitler's Restrictions:** German TFs may only attack weaker forces:

- May never attack a force with an *unhit* BB or BC;
- Unless a German TF with Heavy Ships includes an *unhit* BB or BC, it may never attack unless the target force does not include a BB or BC *and* has fewer cruisers than the German TF;
- May never attack if the target force has more destroyer/torpedo boat CS than the sum of *all* German CS.

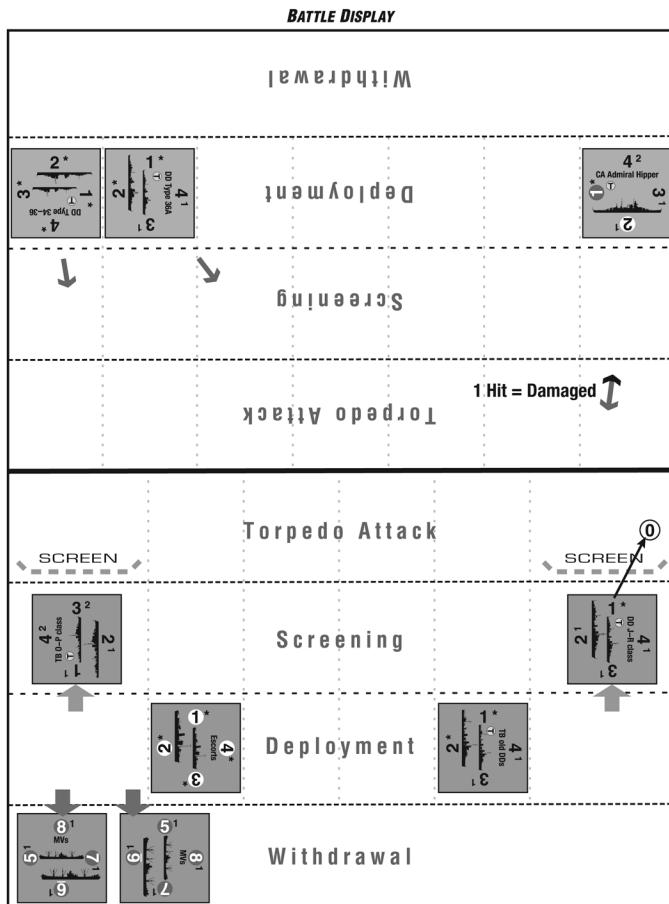
If in surface combat with a force revealed not to be weaker, German ships must move into the Withdrawal area in Step ii and roll to Withdraw every Round.

**Surface Combat Example:** An Axis TF attempts to attack Allied Convoy JW-51B (ID1) at Night in Reduced Visibility. To increase its chances, the unidentified TF had split in two before moving into the Convoy's hex. An Allied covering TF is in the same hex.

The first Axis TF, consisting of Admiral Hipper and 3 DDs, draws a '0' result on its location card — success! Before it can attack, the Allied player decides to try and Intercept with the covering TF, but its location draw is not a 'U' or  $\frac{1}{2}$  and it fails. The Axis player then rolls for Surprise, but the result of 3 + 1 (for Reduced Visibility) + 1 (attacker Unidentified) = 5 is less than 7, so JW-51B is not taken by surprise.

The Convoy, with 1x DD (J-R class), 4x TB (1x Old DD, 3x O-P class), 1x ES, and 13x MV, deploys. The Axis player places the German ships in his Deployment area of the Battle Display, and Rounds begin.

**Round 1:** The Allied player moves his MVs into the Withdrawal area, and his DD and O-P class TBs into the Screening area. The DD screens Hipper from attacking the MVs, while the TB screens both German DD units. Since the Axis ships cannot close into the Torpedo Attack area in the first round, the Axis player does not maneuver.



The Axis player fires first (though gunfire is simultaneous, so it doesn't really matter). Hipper fires at the DD, and the Type 34-36 DDs fire at the O-P class TBs. All of the Germans are blocked from firing on the MVs, but the Type 36A DD can and does fire at the remaining ('Old DD') TB. The results are:

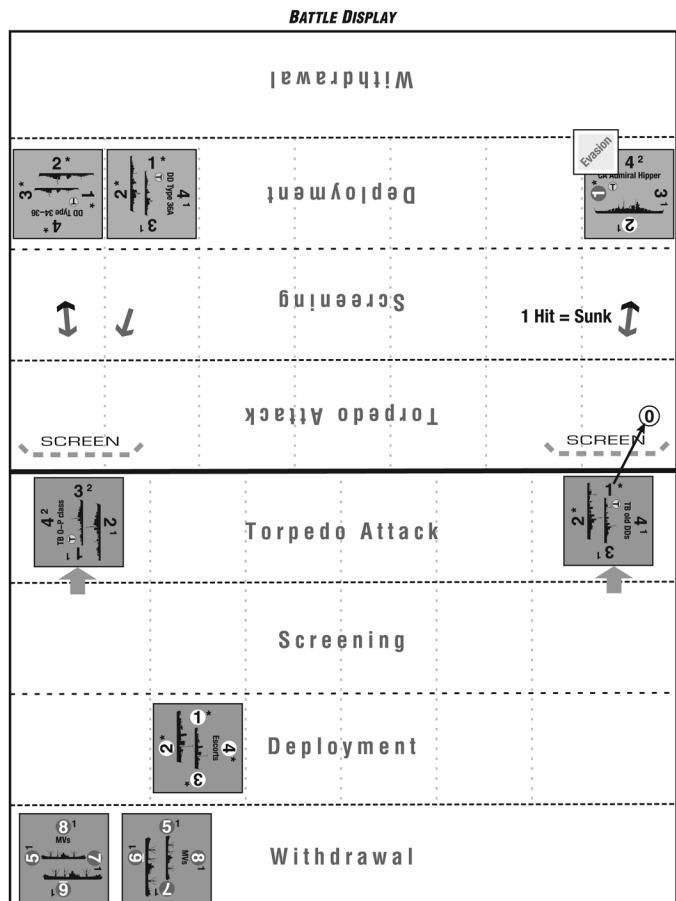
Admiral Hipper:	0, 3, 6, 8	= 1 hit on J-R class DD
Type 34-36:	2, 7	= no effect
Type 36A:	1	= no effect

The (Optional Rule 7.9) roll for the DD hit is a 7, so it will be Damaged and removed without scoring VPs. In return, the British DD gets to fire back at Hipper before being reduced to 0CS, but its roll of 5 misses. Since the TBs may only fire at Torpedo range, they do not roll.

Because the battle does not take place in a friendly shoreline hex, the Allied MVs cannot withdraw, and neither player attempts Withdrawal. All ships except the MVs return to their respective Deployment areas. Both the Convoy and Axis TF1 are now at ID2 [6.7]. The Axis roll of 5 is higher than the Round number, so the battle continues.

**Round 2:** Neither the second Axis TF nor the Allied TF succeed in engaging this round.

The Allied player this time sends all his TBs into the Torpedo Attack area, where the Old DD screens Hipper from attacking the MVs and the O-P class unit screens both German DD units. The MVs must remain in the Withdrawal area. With no desire to expend torpedoes on Allied Light Ships, the Axis player still does not maneuver, but concern for possible torpedo attacks leads him to place an Evasion marker on Hipper.



Hipper fires at the Old DD, while all German DDs fire at the O-P class TBs:

Admiral Hipper:	0, 2, 8, 9	= 1 hit on Old DD TB
Type 34-36:	4, 5	= no effect
Type 36A:	3	= no effect

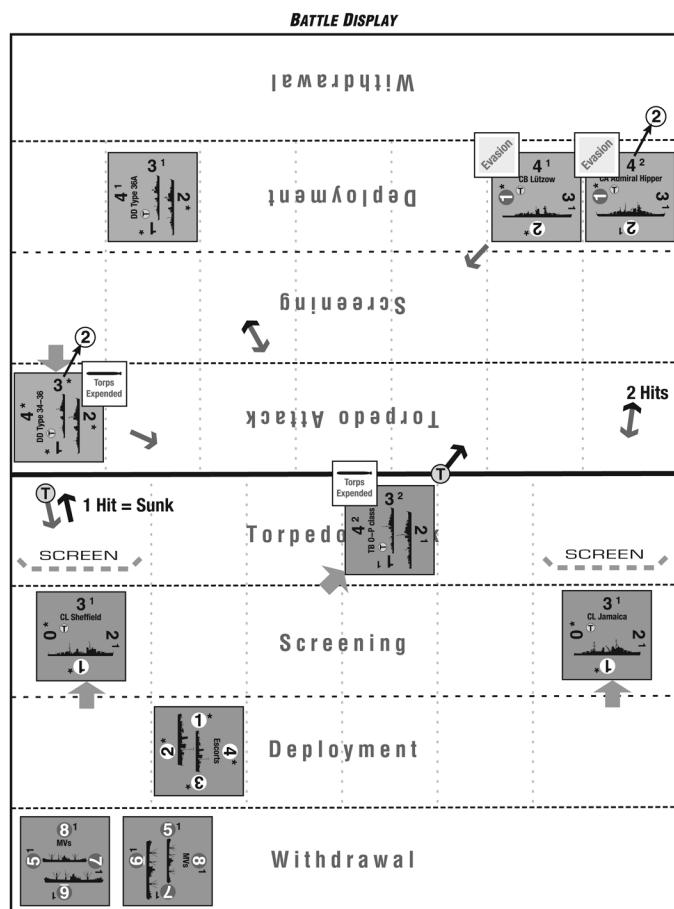
The Old DD fires back at Hipper before it sinks, but misses. The O-P cl. TBs fire at the Type 34-36 DDs and also miss.

Because he wishes to retain the threat of torpedo attacks in future rounds, the Allied player declines to attack.

Once again, neither player attempts to Withdraw, and the Axis roll of 2 does not end the battle.

**Round 3:** The Axis player draws a 2, finally allowing his second TF to join the battle, and places Lützow and three more destroyers (1x Type 34-36, 2x Type 36A) in the Deployment Area. The new destroyers must combine with those already present into two 3CS counters [1.2]. The Allied Covering Force also engages (draw of U), and CLs Jamaica and Sheffield join the Convoy's units in the Deployment Area.

The Allied player shifts both cruisers into the Screening area, and again advances the O-P class TBs into the Torpedo Attack area. Jamaica will screen the cruisers from attacking the MVs, and Sheffield screens the German DDs. This time, the Axis player advances his Type 34-36 DDs into the Torpedo Attack area, but chooses not to screen his cruisers (to avoid blocking their fire). He does, however, give both Hipper and Lützow Evasion markers.



This round, Hipper fires at Jamaica, Lützow targets Sheffield, and the Axis DDs shoot at the OP class TBs. To the Axis player's dismay, all 14 shots miss.

Jamaica fires at Hipper, Sheffield shoots at the Type 34-36 DDs, and the British TBs fire at the Type 36A DDs. Luck is finally with

the Allied player:

Jamaica:	1, 8, 9	= 2 hits on Hipper
Sheffield:	3, 6, 7	= 1 hit on Type 34-36 DD
O-P cl. TBs:	0, 2, 6	= no effect

The roll for the stricken DD is a 3 — it sinks immediately. The O-P class TB unit selects Hipper as the target for its torpedo attacks, but rolls of 0, 3, and 8 all miss. The two surviving German Type 34-36 DDs now target Sheffield with their torpedoes, but also miss (rolls of 1, 6). Both units that fired receive a Torps Expend marker.

Because they've taken damage, all Axis ships must attempt to Withdraw. The die roll of 5 is modified to 7 (+1 Night, +1 Reduced Visibility), and the Axis player returns all his units to the Force Display. The Battle of the Barents Sea is over.

**7.5.8 Unescorted Convoys:** Once all warships included in a Convoy are eliminated, or if it had none to begin with, resolve 2 Rounds +/- (but always at least 1) in which the attackers may make Gunnery and/or Torpedo attacks on the Convoy Ships:

- +1 Round if Convoy initially included no warships
- +1 Round if the attackers achieve Surprise
- -1 Round if Night and/or Reduced Visibility
- -2 Rounds if Fog/Storm/Gales

If part of the Convoy survives, it **immediately** Scatters [5.5].

**7.5.9 Night Actions (Optional):** To reflect the difficulty of identifying opposing forces at night, players may keep their counters inverted on the Battle Display during Night turns. At the conclusion of the Segment, players must reveal their losses as if they were a separate TF at ID2.

## 7.6 Surprise

A Task Force attacking at Night or in Poor Weather (including when Intercepting), a Wolfpack attacking another Wolfpack, or (optionally) an air attack [7.2.1] may achieve Surprise and gain benefits in subsequent combat. Roll one die on the Surprise Table before resolving combat.

## 7.7 Dispersed or Scattered Convoys

Attacks on Scattered or Dispersed Convoys are conducted differently than attacks on other forces.

**7.7.1 Task Forces:** A surface force automatically sinks one (and **only** one) randomly-determined Convoy Ship.

**7.7.2 Wolfpacks:** Instead of rolling on the Submarine Combat Table, each **sub** attacks one randomly-determined Convoy Ship. **Note:** subs may inadvertently attack the same target! After all subs have attacked, roll one die: if the result is 0 or 1, flip the Wolfpack to its Torpedoes Expend side.

**7.7.3 Air Attacks:** Each air unit attacks one randomly-determined Convoy Ship.

## 7.8 Damaged Carriers

Destroy 2 randomly-chosen steps of aircraft on an aircraft carrier for each *step* loss suffered by the carrier. Crippled or DiW carriers may no longer operate aircraft (including shadowing), and do not generate an Air Radius [6.4.1].

## 7.9 Destroyer Hits (Optional)

If a DD unit is hit in combat, roll immediately on the Destroyer Fate Table to determine the fate of the stricken ship:

- Damaged — remove the DD step without scoring VPs;
- Crippled — place a *Crippled* marker on the counter [7.3.1];
- DiW — place a *DiW* marker on the unit counter [7];
- Sunk — the CS is lost permanently.

Crippled/DiW destroyers are 0 CS, and do not contribute to subsequent combat. They may be split off into separate unit counters if desired (contrary to 1.2).



# 8. TIME

## 8.1 Time Tracks

A Time Track consists of 15 Days, each of two 12-hour turns (AM and PM). Prior to the Operation, place the Turn markers in the Day 1 AM boxes on either their Day or Night sides as indicated in the Scenario instructions. During the Fuel Phase, move each marker to the next box on the Time Track and flip it if appropriate. If the current turn is a PM turn, this will be the AM turn of the next day.

If an Operation has not ended upon completion of the Day 15 PM turn [3.4], consider the Time Track to “wrap around” such that Day 1 on the Track is actually Day 16, etc.

## 8.2 Daylight and Darkness

Scenario instructions will indicate whether each turn is a Day or a Night turn, depending on the date of the Operation.

**Design Note:** Because of the high latitude of the Arctic convoy routes, the length of daylight varied from virtually 24 hours in the summer to only a couple hours of dim twilight in the winter. Alternating turns are described as AM and PM to avoid confusion, although they really represent periods between 6AM and 6PM.

## 8.3 Initial Transit

Players always plan their operations starting with a Day 1 AM Turn [4.2]. However, skip the Allied and Axis Player Phases until either the weather is Gales or the designated Starting Turn is reached. At that point, place all Allied forces (Unidentified) and their *Fuel Warning* markers at their planned locations as of the end of the previous turn and begin following the full Sequence of Play. Dummies in play may be placed anywhere.

**Example:** Playing Scenario VIII (JW-51B) with an AM Day 3 Starting Turn, the Allied player will roll for weather up to five times. If Gales never result on the first four rolls, he should place his forces in the positions he had planned for them at the end of the Day 2 PM turn, including Fuel markers in the appropriate spaces on his Turn Track. The weather condition is established by the fifth die roll, and play begins with the Allied Player Phase of AM Day 3.

For each hexside crossed that would require checking Ice Conditions [10.1], the Allied player must roll a die on the Ice Table and draw cards to check for ice damage if necessary.

**8.3.1 Variable Start (Optional):** Roll one die on the Variable Start Table at the beginning of the Planning Phase to determine the Starting Turn.

**8.3.2 Complete Operations (Optional):** Play full Allied and Axis Player Phases beginning with the Day 1 PM Turn.

**Design Note:** To allow players to “get into the game” faster, the scenarios begin play when an Allied force was historically first detected. These options enhance decision-making and replay value, but require longer playing time.

## 8.4 Campaign Scenarios

When playing a Campaign scenario, turns are grouped into semi-monthly turns called Fortnights. For convenience, each is 15 days (30 turns) long, and each month includes two equal Fortnights.

**Design Note:** The inexact correspondence of fortnights to the days of the month has no impact on the game.



## 9. WEATHER

**Design Note:** Although weather is an important factor in any battle, the climatic extremes of the Arctic Ocean require detailed rules to reflect their potential impact on naval and air operations.

### 9.1 Weather Determination

The Allied player rolls two dice during the Weather Phase of each turn and consults the Weather Table to determine the Prevailing Weather Conditions. In some cases (never on AM Day 1), the current Prevailing Weather will modify the die roll. These Conditions apply across the entire map during both Player Phases of the Turn unless altered by a Random Event [9.5].

### 9.2 Weather Effects

Any weather other than Fair Weather is Poor Weather. Poor Weather conditions modify a number of die rolls, reduce the number of surface combat rounds against unescorted convoys, may limit naval movement, may prohibit aircraft from flying, and may even damage ships at sea.

**9.2.1 Fair Weather:** Good conditions impose no restrictions and modify the subsequent Weather dice roll.

**9.2.2 Reduced Visibility:** Clouds and rain or snow modify die rolls on the Surprise, Submarine Combat, and Withdrawal Tables.

**9.2.3 Fog:** Widespread areas of dense fog modify die rolls on the Surprise and Withdrawal Tables. No aircraft units may *take off* (but Air Sectors and permanent — not carrier — Air Radii are still in effect), and CAMs may not be used.

**9.2.4 Storms:** Strong winds with broad areas of rain and snow modify die rolls on the Surprise, Submarine Combat, ASW, Withdrawal, and Weather Tables. Light Ships may not move at High Speed. Carriers may not *launch* aircraft or generate Air Radii, and CAMs have no effect. German light cruisers and torpedo boats and Soviet ships at sea may suffer damage. Optionally, forces must locate one another to combine [1.2.4, 9.4].

**9.2.5 Gales:** Severe storms with very high winds and seas modify die rolls on the Surprise, Withdrawal, and Weather Tables. Ships may not move at High Speed and may be damaged, submarines may only move at Slow speed, and Convoys may suffer Dispersal and be unable to move at all. No aircraft may *take off*, and neither Air Radii nor Sectors are in effect. ASW and torpedo attacks (*but not Minefield random events*) are prohibited. Optionally, forces must locate one another to combine [1.2.4, 9.4].

Draw one card for each Convoy at sea and set it/them aside as a reminder during the Naval Movement Segment. If its index number is enclosed in a red octagon, that Convoy cannot move this turn. Note a partially Dispersed Convoy will draw two cards, one for each block; if *either* prevents movement, *neither* force may move since they must remain in the same hex [5.6].

### 9.3 Weather Damage and Dispersal

**9.3.1 Weather Damage:** Check each Task Force and Convoy at sea for weather damage if called for by Random Event.

- In Gales, draw one card for every 20 Heavy Ships, Convoy Ships, and/or CS of DDs/TBs in the force (rounded *up*, counting all the Dispersed *and* undispersed ships of a Convoy as one force) to determine the number of randomly-chosen ships that are damaged and must return to port. If two numbers are listed (e.g., “1+2”), do *not* apply the “+X” number in addition to the first.
- In Storms, draw one card for each German CL, German TB CS or Soviet DD/TB CS at sea in a non-coastal hex, and only apply corresponding CL/DD/TB results.

**Immediately** apply 1 hit and remove ships damaged by weather from the game (but do not score any VPs unless DDs sink [7.9]).

**Design Note:** German light cruisers had very fragile hulls compared to most foreign counterparts, and their torpedo boats had limited seaworthiness. For this reason, they were never employed operationally in Arctic waters. Two Soviet destroyers were caught in a gale while escorting QP-15 in November 1942; *Sokrushitelniy* broke in half and sank, while *Baku* was badly damaged and never returned to service.

**9.3.2 Dispersal:** During the Split Forces step of the Naval Movement Segment in a Gales turn, *an Allied Convoy may Disperse if its movement card has a boxed ‘D’ above the index #*. Roll one die for every 11 undispersed MXs *in that Convoy* (rounded off, *i.e.*, *down if 5 or less, up if 6 or more*), modifying each roll by the Dispersal DRM from the turn’s weather roll. The resulting number (or sum) is the number of MXs that must be split off (into a new Convoy with the same ID in the same hex if a Convoy block is available) and marked with a *Disperse* marker on the Force Display. **Note:** All Dispersed MXs are part of the same Dispersed Convoy, regardless of how many times ships split off from the “parent” Convoy.

**9.3.3 Dispersal Recovery:** During turns that are not Storms or Gales, a Convoy may attempt to restore Dispersed MXs to its ranks by rolling one die on the Rejoining Table during the Combine Forces Segment.

### 9.4 Combining Forces (Optional)

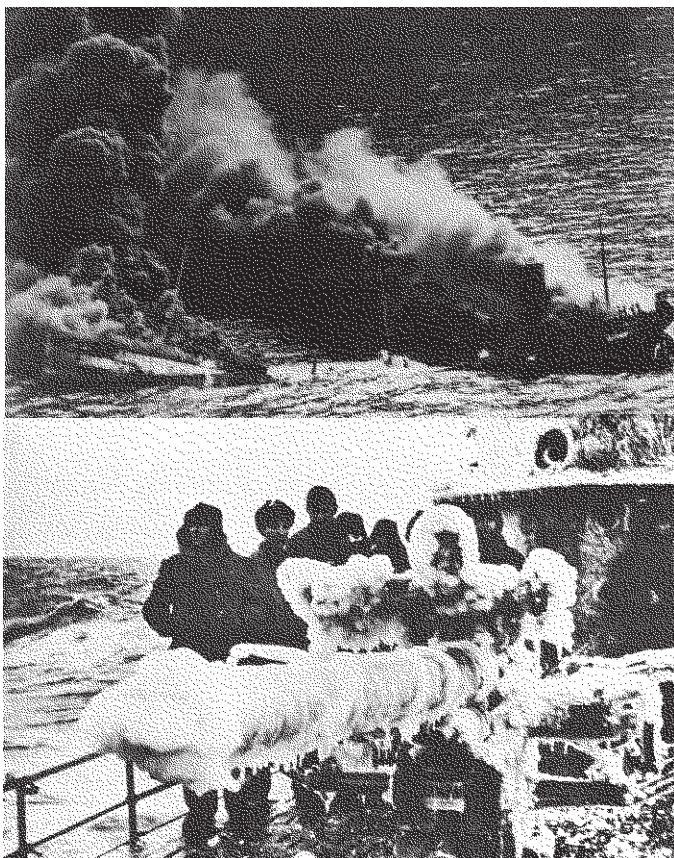
In Storms and Gales, two forces in the same hex must locate one another to combine [1.2.4]. Draw one reconnaissance card, considering the target force as ID3. If the target is identified, the forces may combine.

**Design Note:** In bad weather, warships not infrequently failed to locate and join ships they were to escort. This was often due to navigation errors: as storms blew them off course and they were unable to obtain celestial fixes, forces unwittingly ended up many miles from their rendezvous point.

### 9.5 Local Weather

Random Events may render the weather in some coastal hexes different from the Prevailing Weather Conditions. This may allow air units based there to fly (and Air Sectors and Radii

to apply) even when the weather roll resulted in Fog or Gales. Local Weather resulting from an Axis Random Event always continues to apply during the next Allied Player Phase even if the Prevailing Weather changes. **Note:** North Norway does not include Kirkenes (hex 0816).



## 10. ICE

Ice Conditions are always Solid Pack in white hexes, and vary across five other Zones (color-coded and designated by Roman numerals I-V) in two Sectors (East and West) depending on the season and broad weather trends. When moving, the Ice Condition affecting a force is that of the Zone on the farther side of the hexside the force is attempting to cross. Ice may also affect a force entering or leaving port (e.g., Arkhangelsk).

### 10.1 Ice Conditions

Place the markers for each Zone face-up (with a '?') on the Ice Conditions displays as prescribed in the Predicted Ice Conditions section of the Scenario instructions unless the condition is underlined. Whenever a force or Dummy of *either* player attempts to cross a hexside into such a Zone, or bombers attempt to attack with torpedoes, roll one die and consult the Ice Table to determine the actual Condition for that force. Based on this result, the rolling player may decide (or be forced by Thin or Solid Pack ice) to abort the attempt to cross the hexside and immediately end that force's movement, but must still draw for potential damage [10.2.6]. **Important:** Axis forces may never cross a hexside into actual Heavy Drift or Pack conditions.

If the Predicted Ice Condition for a Zone is underlined, place the marker face-down on the display. In this case, the condition is always as indicated; no Ice Table rolls are necessary.

**10.1.1 Set-up Locations:** Unless directed by setup instructions, forces may not start an Operation in a hex unless at least part of it is confirmed Clear of ice.

### 10.2 Ice Effects

Ice may hinder or prevent movement into a hex, and may damage ships moving or attempting to move across a hexside or into or out of port.

**10.2.1 Clear:** No movement restrictions or dangers exist. Torpedo bombers may attack. Conditions are always Clear outside the Ice Zones.

**10.2.2 Light Drift:** Scattered drifting floes and small bergs present a slight risk to ships. Draw one card for each force and apply Ice Damage.

**10.2.3 Heavy Drift:** Concentrations of drifting floes and larger bergs present a substantial danger to ships. Draw two cards per force and apply Ice Damage.

**10.2.4 Thin Pack:** Pack ice poses a high risk to ships and may be impassable. Roll one die upon attempting to cross a hexside or leave/enter port into Thin Pack conditions. If the die result is 5 or less, the force cannot enter the hex. Draw three cards for each force and apply Ice Damage.

**10.2.5 Solid Pack:** Solid Pack ice is always impassable. A force may never cross a hexside into Solid Pack. If attempting to do so, draw four cards and apply all Ice Damage.

**10.2.6 Ice Damage:** Whenever the potential for damage exists, draw one or more cards for each force and check the 'Damage' section. The resulting number of randomly-determined ships are damaged by ice. They *immediately* suffer 1 hit and are removed from the game, but do not score VPs for either player. If two numbers are listed (e.g., "1+2"), do not apply the "+X" number in addition to the first if the ice condition is Light Drift or if the crossing attempt into Heavy Drift or Thin Pack is voluntarily aborted [10.1].

### 10.3 Soviet Icebreaking

Allied units may treat hexes in the Arkhangelsk Icebreaking Channel (0818-0919-1019-1119) as Clear if the Zone III/IV/V East Ice Conditions are Light or Heavy Drift, and as Light Drift if the actual condition is Thin Pack.

### 10.4 Campaign Scenario

Since there are no predicted Ice Conditions after the first Fortnight of the Campaign Scenario, instead roll on the Ice Table every Environmental Phase to determine the actual Condition for each Zone with a '?' marker.

**10.4.1 "Breakup" Season:** When rolling to determine Ice Conditions during the April I through September I Fortnights of the

Campaign Scenario, roll lower-numbered Zones first in each Sector. Always roll again if a result would render the Ice Condition more severe than in this or the next lower-numbered Zone. Flip the highest-numbered *Solid Pack* marker in each Sector to its '?' side, and flip every *Clear* marker except the lowest-numbered in each Sector to its back (no roll) side.

**10.4.2 “Freezing” Season:** When rolling to determine Ice Conditions during the September II through March II Fortnights of the Campaign Scenario, roll higher-numbered Zones first in each Sector. Always roll again if a result would render the Ice Condition *less severe* than in this or the next higher-numbered Zone. Flip the lowest-numbered *Clear* marker in each Sector to its '?' side, and flip every *Solid Pack* marker except the highest-numbered in each Sector to its back (no roll) side.

**Design Note:** In the spring and summer as the ice melts and recedes, conditions will never worsen in a given Zone, and will not be worse than in a Zone further north. The converse is true in fall and winter.



## 11. FUEL

Every Convoy or Task Force at sea will also have a Fuel marker on the Time Track, showing when its Fuel Status changes. The Fuel Status of each Task Force is shown by the presence or absence of a marker in its Fuel box on the Force Display.

**Design Note:** Fuel expenditure by warships increases dramatically at higher speeds, particularly for Light Ships. For example, an average WWII destroyer burns four times as much oil at High Speed as at Moderate Speed. For Heavy Ships the effect is not as pronounced, and most are designed with larger bunkers to provide longer ranges.

### 11.1 Fuel and Time Tracks

Whenever a Convoy or Task Force leaves port or finishes refueling from Oilers, place its *Fuel Warning* marker in the space 6 days/12 turns ahead of the current turn on the Time Track of the Force Display. During the Fuel Phase of each turn, check the corresponding turn on the Tracks. If a force's *Fuel Warning* marker is in that space, flip the marker to its *Fuel Danger* side, move it to the space three turns after the current turn on the Time Track, and place a yellow *Low Fuel* marker in the TF's Fuel box as a reminder [11.2.2]. If its *Fuel Danger* marker is in the current turn's space of the Time Track, flip its *Low Fuel* marker to the

red *Critical Fuel* side [11.2.3].

Wolfpacks have no *Fuel Warning* markers, and are always considered to be at Full Fuel [11.2.1]. Convoy Ships and Escorts (Type ES) are also always at Full Fuel for purposes of these rules.

**11.1.1 Combining and Splitting:** If two or more forces combine, the combined force *always* adopts the *worst* Fuel marker position. If a force splits, place the new Fuel marker(s) in the same space as the existing one. Forces may swap *all* units *requiring fuel* [see 11.2.1] during the Combine Forces Segment, rather than combining and then splitting, and avoid this by swapping *Fuel* markers [1.2.5].

**Example:** During PM Day 4, TF 3 with its *Fuel Warning* marker in the AM 9 space ends movement in the hex with Convoy 1, whose marker is in the AM 7 space. The destroyers and torpedo boats in the two forces swap, as do their markers' positions. Convoy 1's marker is now in the AM 9 space, with TF 3's in the AM 7 space.

**Design Note:** Because the economical speed of destroyers was much higher than convoy speed, the British commonly used this practice of "relays" of escorts to provide coverage during long voyages. The "Ocean Escort" would relieve the "Local Escort" several days after a convoy left port.

**11.1.2 Heavy Ships:** When a TF composed entirely of Heavy Ships leaves port or refuels, place its *Fuel Warning* marker in the space 10 days/20 turns ahead of the current turn on the Time Track.

If a *force* including both Heavy and Light Ships splits such that one or more parts are composed entirely of Heavy Ships, move those parts' Fuel markers 4 days/8 turns to the *right* on the Turn Track and rotate them 90 degrees. Such forces cannot receive this "bonus" again until they refuel and rotate their markers upright..

**11.1.3 Extra Expenditure:** Move a force's *Fuel Warning* marker back (up/to the left) on the Time Track under the following circumstances:

- **High Speed.** If a TF moves at High Speed, move the marker 3 spaces.
- **Surface Combat.** On conclusion of a Surface Combat, move the marker 2 spaces.
- **Air Attack.** Move a TF's (*not* a Convoy's) marker 1 space after an Air Attack.
- **Offensive ASW.** Move a TF's marker 1 space after conducting Offensive ASW.

**11.1.4 Soviet Endurance (Optional):** Whenever a force including Soviet ships leaves port, place its *Fuel Warning* marker in the space only 3 days/6 turns ahead of the current turn on the Time Track. If the force is a Convoy in Ballast and the Soviet ships split off, move the Convoy's marker 3 days/6 turns to the *right* on the Time Track.

**Design Note:** Soviet warships of the period were designed primarily for the restricted waters of the Baltic and Black Seas, where high endurance was not required.

## 11.2 Fuel Status

A force's Fuel Status changes during the Fuel Phase of a turn when its *Fuel Warning/Danger* marker is in that space or it is refueling [11.1, 11.3].

**11.2.1 Full Fuel:** Convoys and TFs with no marker in their box operate without restriction. **Note:** *Escort carriers (CVE), submarines, Convoy Ships, and Escorts (Type ES)* are *always* at Full Fuel.

**11.2.2 Low Fuel:** Task Forces with a *Low* or *Training* [11.4.1] *Fuel* marker may not move at High Speed.

**11.2.3 Critical Fuel:** Forces with a *Critical Fuel* marker may move no faster than Slow Speed and suffer disadvantages in combat. If still at sea when an Operation ends, they score VPs for the opponent [2.2].

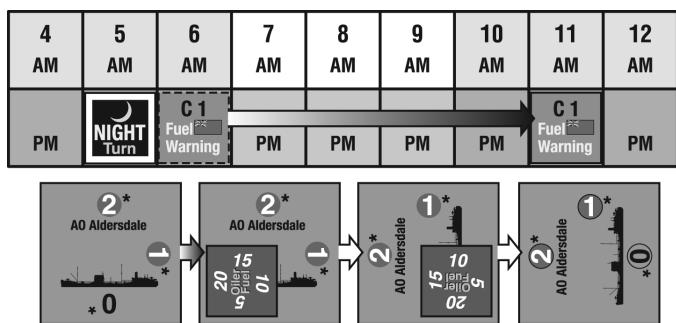
## 11.3 Refueling

Ships may refuel in one of two ways.

**11.3.1 Refueling in Port:** Task Forces may refuel when they spend an entire turn in port (**Exception:** does not apply to Barentsburg). Place a *Refuel* Fuel Status marker on the TF's display during the Naval Movement Segment. During the Fuel Phase, remove the *Fuel Warning/Danger* marker from the Time Track and any Fuel Status markers from the Task Force, and flip any oilers on their back (circled CS) sides to their front sides.

**11.3.2 Refueling at Sea (RAS):** Task Forces may refuel while at sea if they include one or more oilers. Place a *Refuel* Fuel Status marker in the TF's Force Display box during the Naval Movement Segment. The Task Force must contain no more than 10 CS per AO/MO, may move no faster than Slow Speed, and may not engage in air or surface combat. If these conditions are met, move the TF's *Fuel Warning* marker 6 days/12 turns ahead of the *Turn marker's position* on the *Turn Track*, and remove the *Refuel* and any other Fuel Status marker from the Task Force during the Fuel Phase.

Oilers may only refuel 10 CS per each of their own CS before they must refuel in a non-temporary port. Place an *Oiler Fuel* marker on each oiler with the appropriate # (representing the remaining number of ships it may refuel) at the top, and rotate the marker 90° counter-clockwise for every 5 CS it refuels (rounded up). When its fuel is exhausted, remove the marker and flip the AO/MO to its back (circled CS) side, indicating it may no longer refuel other ships until it refuels in port itself.

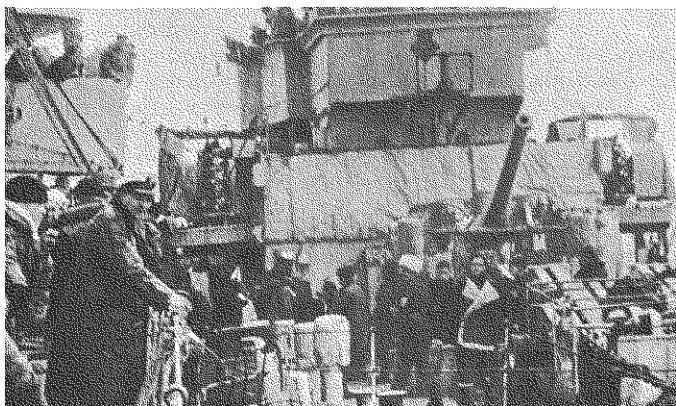


**Example:** British oiler Aldersdale refuels a Convoy including 4CS of destroyers during the Day 5 AM Turn. After advancing the Turn marker in the Fuel Phase, place the Convoy's Fuel Warning marker in the Day 11 PM box of the Turn Track, and an Oiler Fuel (15) marker on the oiler. The next turn, Aldersdale takes 1 hit in an air attack, and is rotated to its ICS aspect — note the Oiler Fuel marker rotates with it, so it is now (10). After refueling a TF consisting of 1 CA and 4 DDs (total 7CS) on AM Day 7, Aldersdale is flipped to its back side and its Oiler Fuel marker is removed — it can no longer RAS.

## 11.4 Axis Fuel Shortages

During Operation Scenarios in 1942 and later, German TFs may not leave port until an allied TF or Convoy is identified at sea except as part of a Special Condition. German Heavy Ships do not receive the benefits of rule 11.1.2 unless they are part of an Atlantic Breakout or deploy from the Germany Box or Kiel.

**11.4.1 Training (Optional):** If an Axis TF deploys for Training [4.3.4], place its *Fuel Danger* marker 3 turns ahead on the Time Track, and place the *Training Fuel* marker in its Fuel box.



## 12. SPECIAL CONDITIONS

Prior to an Operation, place all the Special Condition chits in an opaque container such as a cup. Each player secretly draws one chit (Allied player first), consults the applicable column of the Special Conditions Chart to determine the result, and places the chit face down (except *Ground Offensive* face up) in the Special Conditions box on the map board. The Axis player places one block in Tromsø (a Dummy unless the result is "Axis Convoy"). Asterisked results allow the player to add +1 to his Initiative bid [4.1.2]. Other possible results are explained below.

During the Special Conditions Phase, players may reveal their chits to score VPs as described for the Condition.

## 12.1 Agent ‘Cobweb’

Beginning the next fortnight of the 1942 Campaign Scenario (only), the next *two* Allied Convoys departing Reykjavik are immediately identified (ID2) after leaving port.

**Design Note:** U-252 landed Special Agent ‘Dana’ — Icelander Ib Arne-son Riis — on the northeast coast of Iceland on 6 April 1942. As an Allied double agent codenamed ‘Cobweb’, he accurately reported the departures of PQ-16 and 17 in an unsuccessful effort to lure *Tirpitz* to sea and bring her to battle.

## 12.2 Atlantic Breakout

German Heavy Ships (except light cruisers, and including Reinforcements) may exit off the xx01 edge of the board. Axis player scores 12 VPs for each Capital Ship and 5 VPs for each Cruiser exited with at least 7 turns until Fuel Warning remaining. Neither Hitler’s Restrictions [5.1.8] nor Fuel Shortages [11.4] prevent ships attempting a Breakout from leaving port.

**12.2.1 Campaign Breakout:** During the Planning Phase of the next fortnight after Heavy Ships exit the map, Axis player draws one additional chit to determine if the TF returns to Norway:

<u>Chit</u>	<u>Reveal Turn</u>	<u>Fuel Warning</u>
• A-B:	AM Day 4	PM Day 8
• C-D:	AM Day 5	PM Day 9
• E-F:	AM Day 7	AM Day 11
• G-H:	AM Day 9	PM Day 12
• I-V:	AM Day 4	N/A
• W-Z:	Immediate	N/A

Reveal the chit during the Special Conditions Phase of the indicated turn. Place the TF and one Dummy in any hexes xx01 during the Axis Random Event Segment of the next turn. On results of I-Z, the ships never return to the game.

## 12.3 Axis Convoy

Place an Axis Convoy in port Tromsø. The convoy cannot leave port prior to the Operation’s designated Starting Turn, and must arrive in Kirkenes prior to Day 12 or score (Allied VPs). The

chit drawn determines its composition:

- A-C, I-J: 1x ES, 2x MV (2 VPs)
- S-X: 2x ES, 3x MV (3 VPs)

Deduct 1 VP during the Confirmation Phase for each MV in Kirkenes.

## 12.4 Bomber Command

At the beginning of the Allied Player Phase of any one Night turn after an Axis capital ship has been identified in port, place 6x Halifax Heavy Bomber CS at Wick. They may attack *Tirpitz* in port only (if in range), and are removed upon returning to base. Do **not** score VPs for destroyed bombers or per Rule 2.4.

## 12.5 FAA Strike

All Fleet Carriers beginning the Operation in Scapa Flow must launch air attacks against a Norwegian port or airbase at least once during the Operation or deduct 5 Allied VPs for each Carrier that does not.

## 12.6 Ground Offensive

Besides British/US aircraft and Interceptors scrambling [7.2.1] (and *Graf Zeppelin*’s air wing), only KG40, VVS-SN, and torpedo bombers may fly during this Operation. Immediately reveal this chit and draw another.

**12.6.1 Campaign Offensive:** Each player must roll one die during the OOB Phase. Randomly select and remove one third the resulting number of German and one half the Soviet aircraft CS (round up) from North Norway or the Soviet Union (no VPs accrue). They may only return as Replacements [15.6.3].

## 12.7 Harbor Raids

Aircraft from North Norway may attack ships in Murmansk or Arkhangelsk (including in the Unloading or Ballast Boxes) twice during the Confirmation Phase. Each attack may be Day or Night unless the Operation had all Day or all Night turns. During Day attacks on Murmansk, add I/StG 5 (initially 4 CS; Hit and Damage results carry over to the second raid) to the attacking units. If targeting MVs, every 2 Hits will sink 1 previously-undamaged ship.



## 12.8 Minelaying

If Ice Zone IV East or West is Clear or Light Drift, the Axis player may plan a mining operation for German cruisers and/or destroyers into one Minelaying Objective hex prior to the Operation [4.2]. If the weather is not Storms or Gales and the TF moves no more than 1 hex during the one turn it ends in the Objective hex, deduct 2 VPs for each cruiser and 1 VP for each DD during the Special Conditions Phase, not to exceed 5 VPs.

## 12.9 No Restrictions

Hitler's Restrictions [5.1.8, 7.5.7] do not apply during this Operation.

## 12.10 Operation GEARBOX

Treat as "None" if the Ice Condition in Zone IV West is Thin or Solid Pack. Otherwise, the chit drawn determines the TF starting in Reykjavik or Scapa Flow (Allied player's choice):

- F-G: 1x CA, 1x CL, 1x DD
- H-J: 1x CL, 1x DD

Ships must come from forces already in play. Once per Operation, if these units are in port Barentsburg during a Special Conditions Phase, score 1 VP for each Cruiser and  $\frac{1}{2}$  VP for each destroyer; otherwise lose this amount during the Confirmation Phase.

**Design Note:** Allied ships periodically resupplied garrisons in Spitzbergen when ice conditions permitted.

## 12.11 Operation SIZILIEN

One Axis TF may spend a complete Day turn in the Barentsburg hex (0214 — exception to 5.1.4) once during the Operation. If not attacked during this turn, deduct 2 VPs for each Capital Ship and 1 VP for each Cruiser in the TF during the Special Conditions Phase.

**Design Note:** On 8 September 1943, *Tirpitz*, *Scharnhorst*, and nine destroyers under Admiral Kummetz bombarded Allied positions in Spitzbergen and landed embarked troops to destroy others. This was the only time *Tirpitz* ever fired her guns offensively, and her last operational sortie.

## 12.12 Operation WUNDERLAND

One German *Panzerschiff* and/or one Wolfpack may enter the Kara Sea Box [5.7.2] if Ice Zone III East is Clear or Light Drift to operate against a Soviet Convoy. Upon entering the Kara Sea Box, place a loaded Allied Convoy (consisting of 1x ES and 4x MV) in the Box; it may not move or voluntarily Scatter, but may Withdraw in surface combat as if in a coastal hex. If a *Panzerschiff* is used, deduct 5 VPs during the Special Conditions Phase (once per Operation).

**Design Note:** *Admiral Scheer* and two U-boats operated against the Soviet Siberian sea route in the Kara Sea in August 1942, attacking several ships and shelling Port Dikson. A similar operation with *Lützow* was planned a year later, but only submarines ultimately participated.

## 12.13 Reinforcements

Immediately place units as specified in the scenario Special Rules. If none, may place the first units listed in the Reinforcement section of the scenario or Campaign OOB instead.

## 12.14 Special Attack

ARCHERY is a raid; TITLE is an attack on *Tirpitz* if she is in port. Must be planned prior to the Operation [4.2] and declared in the Special Conditions Phase prior to the target turn. If the weather result is Storms or Gales, the special attack automatically fails. Details of the attacks differ.

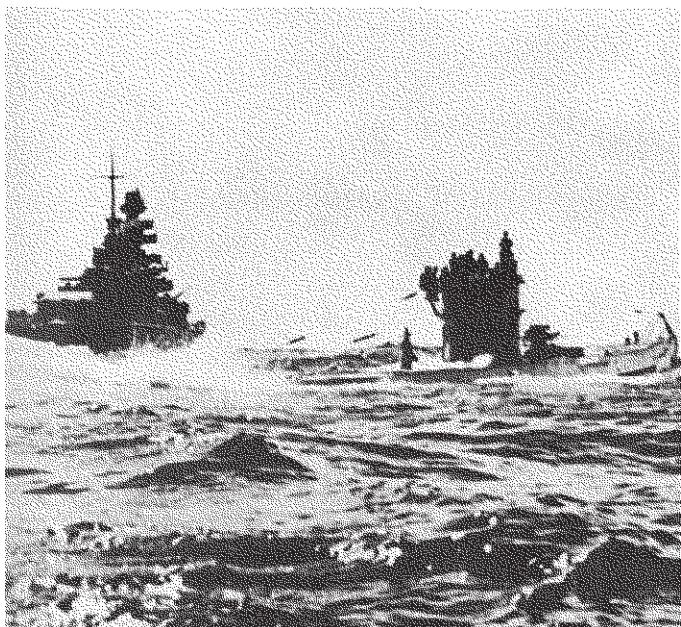
**12.14.1 Operation ARCHERY:** A TF starting at Scapa Flow must include at least:

1x CA or CL, 4x DD or TB, 1x ES, 2x AL (LSI), 1x AO

Ships (except ES and AXs) must come from forces in play. Any one Norwegian coastal hex may be targeted. If the weather is suitable during the target turn, the TF moves no more than 1 hex that turn, and is in that hex during the Special Conditions Phase with at least 1CS of LSIs, score 5 VPs.

**12.14.2 Operation TITLE:** May only be planned against *Tirpitz* in a port in South Norway (and only once during the Campaign Scenario). Roll one die during the Special Conditions Phase: on a result of 1 through 5, inflict that many Hits on *Tirpitz* but do *not* score VPs per Rule 2.4.

**Design Note:** Operation ARCHERY was a raid by British commandos on Vågsøy (Vaagso in English) on 27 December 1941. Operation TITLE was an attack by British "chariots" (human torpedoes) on Trondheim the night of 31 October 1942. It failed when the chariots broke free from their mother ship in heavy seas and were lost.



## 13. RANDOM EVENTS

During the Random Event Segment, the active player rolls two dice and consults his Random Events Table. Most results are self-explanatory; some require further details below.

**13.1 Elusive Target:** Select a single ship (i.e., a unit with one silhouette) in ONE Allied force after Axis aircraft deploy but before AA fire. The Axis player must switch aircraft attacking that ship to different target(s), and they suffer a -1 DRM on their rolls to hit.

**Design Note:** German bombers were ordered to concentrate on knocking out *CVE Avenger* during the battle for PQ-18. They had difficulty finding her, and their ability to successfully attack other targets was compromised.

**13.2 Gale/Weather Damage:** Both players' Convoys and TFs must immediately check for Weather Damage [9.3.1].

**13.3 High Command Caution:** While this event is in effect, German TFs must attempt to Withdraw with a +2 DRM every surface combat Round. Application of other DRMs (e.g., weather) is strictly voluntary.

**13.4 Local Weather:** "Current weather" refers only to the conditions *at the time the Event is rolled*.

**13.5 Minefields:** Do not conduct more than one Torpedo attack on any given ship or Light Ship/MX CS. Any Hit result against a Wolfpack sinks one submarine.

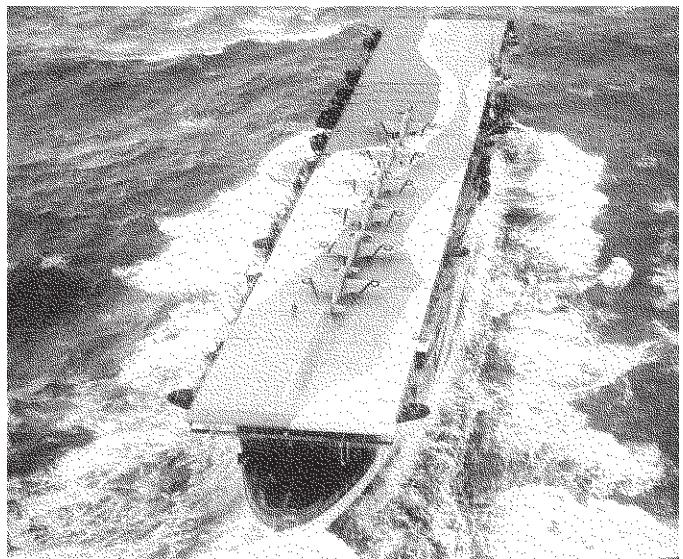
**13.6 Reinforcements:** Place your lowest-numbered group of units listed in scenario instructions and not yet taken at the specified location(s), in a new force if necessary.

**13.7 Surprise Encounter:** Randomly select one Axis block (Identified or not) in the same hex with an Allied force (not a Dummy). Regardless of the composition of the Allied force, if the Axis block is a:

- Convoy — Roll once on the Gunnery Table DD vs. MV;
- TF — Roll once on the Gunnery Table DD vs. Axis unit present and lowest on the Unit Chart (e.g., TB lower than DD; pick randomly if two or more units present of the same type);
- Wolfpack — Roll once on the ASW Table; a Held Down result = Damaged and a Success = Sunk;
- Dummy — Remove the Dummy.

1CS is sunk if a DD, TB, or MV is hit. If the Axis ship survives, both the Allied and Axis forces become ID0 if previously Unidentified.

**13.8: B-Dienst:** If this result occurs when only one Allied Convoy is in play, that Convoy is automatically detected – do not roll.



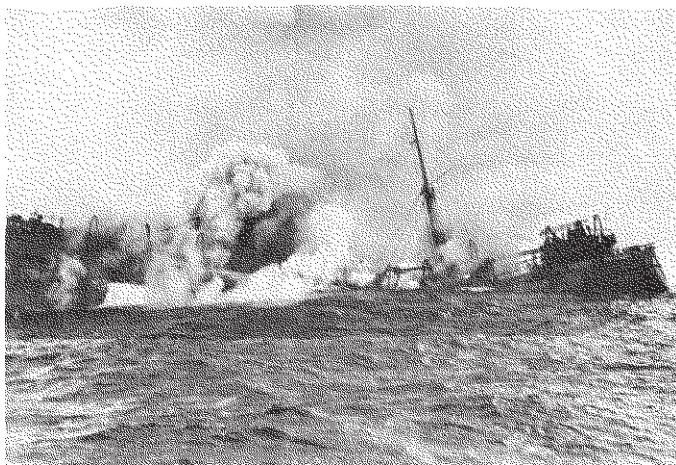
## 14. AHISTORICAL FORCES (Optional)

Players may choose to selectively add forces at the beginning of the game by sacrificing VPs. The forces may start on map, or be available as Reinforcements at half the listed VP cost. If chosen as Reinforcements, forces may appear as any group # desired, but the VP penalty applies *even if the group never enters play*. See the Scenario Book for the listing of which units are available, when, and their VP costs.



### 14.1 Carrier Battles

If *Graf Zeppelin* is in play and attacks with or is attacked by carrier aircraft during a Day turn, any defending carrier(s) may conduct their own limited Air Movement and Air Combat Segments if the attacking carrier's force is identified and the air strike does not achieve Surprise. Conduct these second Air Segments before applying hits to the defending carrier(s), and before the attacking aircraft return to their carrier(s). Scrambled Fighters may not move, and bombers may only attack the force(s) that attacked them.



## 15. CAMPAIGNS

Rules in this section apply only to Campaign scenarios — do not use them in the Operation scenarios.

### 15.1 Command Points

The Allied Home Fleet automatically starts each Fortnight with 8 CPs. Except for the March I Planning Phase, the Axis player must draw an additional chit after drawing for Special Conditions and consult the German Fuel Chart to determine if *Gruppe Nord* CPs increase; **redraw if the result is ‘Ground Offensive.’** Add 2 CPs to the Soviet *Severnyy Flot* each Planning Phase, but never accumulate more than 3 until the Axis sinks more than 1/3<sup>rd</sup> of the starting MXs in a Convoy. After that occurs, increase the limit to 4 CPs for subsequent Operations.

### 15.2 Allied Convoys

The Allied player may leave port with no more than one loaded Convoy, plus one Convoy in Ballast from each Russian port, per Fortnight. A single Convoy may include only a limited number of AX-type ships (no more than 2 AA ships and 2 AOs), and may never include more than one CAM, one Escort (ES) unit, and one Submarine unit. Ships in the Ballast Boxes (face-up or -down) may join Convoys in Ballast during the Planning Phase; these Convoys MUST leave port during the same Fortnight.

**15.2.1 Destinations:** Loaded Convoys arrive in Murmansk and/or Arkhangelsk (Allied player’s choice). Convoys in Ballast arrive in Reykjavik until Operation EV is initiated [15.8.3], after which they terminate at Loch Ewe.

**15.2.2 Unloading:** During the Victory Point Phase, turn all ships in the Ballast Boxes face up, place 11 (Murmansk)/15 (Arkhangelsk) ships from the Unloading Boxes (if present) face down in the respective Ballast Boxes, then score VPs per 15.9.1. During the Order of Battle Phase, move all Loaded merchant ships in Russian ports into their respective Unloading Boxes and remove any Crippled/DiW ships in Ballast Boxes.

**15.2.3 Damaged Merchant Ships:** **Immediately** place MXs removed from Convoys in Ballast due to **Breakdown/Ice/Weather Damage** **face up in the Ballast Box** of their port of departure **{text deleted}** unless they suffer Ice Damage in Western Zones.

### 15.3 Reinforcements

Place units listed on the Campaign Orders of Battle in the designated port or airbase during the Order of Battle Phase of the appropriate Fortnight.

**15.3.1 Loaded MVs:** Place 15 loaded MVs at Reykjavik each Order of Battle Phase until Operation EV is initiated [15.8.3]. No more MVs appear until Operation EV is completed. Place loaded MVs at Loch Ewe thereafter, starting the Fortnight *after* Operation EV is executed.

**15.3.2 Random Events/Special Conditions:** If a player draws the ‘Reinforcements’ Special Condition **or rolls that random event, immediately** place one heavy or light ship unit, or up to two submarine CS or air units in any combination, of his choice from any reinforcements listed for the current Fortnight (including any repaired ships [15.5]).

**15.3.3 Conditional Air Reinforcements:** Place Soviet air units listed with an asterisk (\*) only if at least 3 CAM/MVs per air CS unloaded at Arkhangelsk or Murmansk during the listed Fortnight. If this condition is not met, they arrive in any subsequent Fortnight when a sufficient number of ships unloads.

### 15.4 Emergency Reinforcements

During a crisis, players may elect to add additional units, but must pay a VP cost. All Emergency Reinforcements must be announced during the Planning Phase before an Operation, and are placed in Scapa Flow or Kiel during the Order of Battle Phase of the same Fortnight. They must transfer during the next Order of Battle Phase or the VP cost must be paid again [15.7] unless using Optional Rule 15.4.3.

**15.4.1 Allied Light Ships:** The Allied Player may place up to 4CS of A-I class destroyers and/or Old DD torpedo boats per Fortnight. Before August II, up to 4CS of US destroyers may also be placed. Subtract 1 VP for each CS taken.

**15.4.2 German Light Ships:** The Axis Player can place up to 2CS of German torpedo boats per Fortnight. Add 1 VP for each CS taken.

**15.4.3 Untrained Units (Optional):** A player may choose to employ ships whose crews are not fully trained. These may be either ships scheduled to appear as New Construction reinforcements (labeled “New” in the Campaign Orders of Battle), or ships listed as Emergency Green Units:

a) New Construction reinforcements may be selected up to two months (four Fortnights) prior to their scheduled placement.

b) Emergency Green units may be taken in the Fortnights listed.

When placed, mark each unit with a *Green Crew* marker. On the Naval Gunnery/Bombing Table, ships so marked (and their aircraft) only roll once for every 2CS (rounded *up*), and **must** be Scuttled when DiW [7].

New Construction units employed while untrained remain in play, and become fully trained one Fortnight earlier than their

scheduled arrival for each Operation in which they participate. Emergency Green units must transfer during the Order of Battle Phase of the Fortnight in which they are employed. If lost while untrained, add/subtract additional VPs equal to one-half the value of the lost unit (round up).

**Example:** New Construction CL Jamaica is scheduled to arrive during the August II Order of Battle Phase, but can be taken “Green” as early as June II. If employed in an Operation July II, remove its Green Crew marker during the August I Order of Battle Phase. If sunk while untrained, deduct 6 VPs vice 4.

## 15.5 Repairs

Damaged aircraft and British and German ships may be repaired and returned to play during the course of the campaign game unless they are Crippled or DiW [7, 7.3.1]. Soviet, US, and Crippled or DiW ships may *not* be repaired (**Exceptions:** ice and weather damage [15.5.3]; *Prinz Eugen* per Special Rule 2).

**15.5.1 Surface Ships:** Except *Tirpitz*, surface ships must transfer to be repaired [15.7]. They return to the game as reinforcements [15.3] five Fortnights after transfer *for each CS repaired*. If using optional rule 7.9, repair Damaged destroyers as having 1 CS hit. Place repaired British ships in Clyde or the English Channel, and German ships in Kiel or the Germany Box.

*Tirpitz* may be repaired in any Norwegian port except Kirkenes, but each CS requires an additional one month (2 Fortnights) and deduction of 1VP to do so.

**15.5.2 German Submarines:** One third (round up) of damaged submarines return to play during the Order of Battle Phase of each month’s first (I) Fortnight. Place repaired German subs in Bergen.

**15.5.3 Random Events:** Some ships rendered Inoperative or removed due to ice, weather, and random events [9.3.1, 10.2.6, 13] may be repaired.

- **Breakdown:** Remove *Inop* markers from MVs during the next Order of Battle Phase and from warships during the Order of Battle Phase of the third Fortnight after occurrence.
- **Collision and Grounding:** Permanently remove one half (randomly selected, round up) of ships Grounding and all Lt ships/MVs in a Collision from the game. Place other grounded MXs in the nearest friendly port and repair remaining ships involved in these events as if they suffer 1CS hit.
- **Ice and Weather Damage:** Return damaged ships to play during the Order of Battle Phase of the next Fortnight. Place repaired British and US warships in Scapa Flow, and German ships in any port in North Norway. Soviet ships may not be repaired.

**15.5.4 Aircraft:** Return all Damaged aircraft (including Interceptors) to play at their coded airbases.

## 15.6 Replacements

Players may replace certain lost naval and air units, or flip 1-CS air units, during Order of Battle Phases.

**15.6.1 British AX/MXs:** Lost CAMs and oilers may be replaced at Reykjavik, Scapa Flow, or Loch Ewe during the second Fortnight the month they are lost. Lost AA ships may not be replaced.

**15.6.2 Submarines:** Place sunken or damaged British subs at Lerwick, and Soviet subs at Murmansk, the Fortnight they are lost. Replace sunken German subs during the Order of Battle Phase as listed on the Campaign Order of Battle, placing them at Bergen or Trondheim.

**15.6.3 Air Replacements:** Replace air unit CS as listed on the Campaign Order of Battle. CS may either be added to 1-CS units on map, or used to return destroyed air units to play at their coded airbases. Unused CS may *not* accumulate for use in future Fortnights.

**15.6.4 Convoy Arrivals:** For every three MVs unloaded in Russia (round up), 1CS of Soviet Hurricane/P-40/P-400 aircraft may be replaced or upgraded.

**15.6.5 Aircraft Upgrades:** Replacement CS listed with a unit designation replace air units with the same designation, regardless of the on-map CS of that unit or even if it is destroyed. Place the new unit in the same location as the old (if on-map), or at their coded airbases, and permanently remove the replaced unit from the game.

## 15.7 Transfers

Units must transfer from the game to repair damage or as called for by the Campaign Orders of Battle. Remove them during the Order of Battle Phase of the scheduled Fortnight (or any Fortnight, if damaged or MVs in ballast at their destination).

**15.7.1 Air Units:** Permanently remove the designated air units from the map.

**15.7.2 Royal Navy:** Designated British ships must end the last Allied Player Phase of the scheduled Fortnight in Scapa Flow or the English Channel *or on Patrol White*. If a named ship is scheduled for Refit and is sunk, no substitute is necessary. If scheduled for an operation (named in all caps, e.g., PEDESTAL) but not in Scapa Flow, a substitute of the same type (and class if possible) must be removed from Scapa Flow. For each transfer requirement not met, subtract  $\frac{1}{2}$  the Allied VPs (rounded up) as if the ship were sunk.

**15.7.3 US Navy:** All US ships must end the last August II Allied Player Phase in Scapa Flow or Reykjavik. Remove all US ships from the TF Display, regardless of their location, but the Allied player loses 1 VP for each surviving Heavy Ship/destroyer CS that is *not* in Scapa or Reykjavik.

**15.7.4 Kriegsmarine:** Remove German ships from the TF Display regardless of their location. Submarines may be removed from Wolfpacks at sea.

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**15.7.5 Transfers to Germany (Optional):** If both players agree, the German player must move transferring Light/Heavy ships to Kiel or the Germany Box during the scheduled Fortnight, rather than simply removing them. They may be accompanied by non-transferring ships, which can either return to a Norwegian port normally during the Operation, or begin the next Fortnight in the Germany Box or Kiel (German player's choice).

**15.7.6 Convoys in Ballast:** Remove empty MVs from Convoys in Ballast at Reykjavik or Loch Ewe.

### 15.8 Campaign Operations

Place TFs at sea at the beginning of an Order of Battle Phase in any friendly port in Iceland, Norway, the Soviet Union (Soviet units only), or the United Kingdom. One-half (round down) of British, German, and Soviet submarines may remain at sea; place all others in Lerwick, Narvik/Kirkenes (split evenly), or Murmansk.

**15.8.1 Patrol White:** During each Planning Phase after March I, the Allied player must swap one or both of the two ships on station with two others in ports in Iceland or the United Kingdom; no movement or refueling is necessary. If no CA is available, substitute a BC; if neither, use a CL. When the Agent 'Cobweb' Special Condition is in effect or after Operation EV is completed [12.1, 15.8.3], reduce the Patrol requirement to 1 CA in Reykjavik.

**15.8.2 Soviet Forces:** Soviet subs may not enter hex 0715 until after the May II Fortnight. Only one-half of all Soviet destroyers and torpedo boats (round down separately, but always at least one of each) may ever be at sea at any time.

**15.8.3 Operation EV:** Once per campaign during a Planning Phase in which the Allied player bid '0' for initiative [4.1.2], he may declare Operation EV. If the Axis player does not also bid '0', the Allied player must send a TF including at least 1 cruiser and 2 destroyers from the Clyde to Murmansk (and back to the United Kingdom) during this Fortnight in order to reposition two Medium Bomber units from the UK to Murmansk, and further aircraft as described below.

**Design Note:** USS *Tuscaloosa* and three destroyers delivered the RAF ground crews of 144 and 455 Squadrons to Murmansk on 17 August 1942.

Besides the effect on the appearance of loaded MVs [15.3.1], place additional reinforcements as specified in the Campaign Scenario. The Allied player must call up all available New Construction light ship reinforcements [15.4.3a], and may ignore Patrol White requirements until the Operation is completed [5.1.9, 15.8.1]. All Convoys in ballast now terminate in Loch Ewe instead of Reykjavik [15.2.1].

Operation EV must be executed by sending a loaded convoy from Reykjavik to North Russia during the next Fortnight. If both players bid '0' or the TF from the Clyde reached Murmansk during the preceding Fortnight, the Allied player may transfer/

place aircraft units during the Operation as in the PQ-18 Scenario Special Rule 5.

### 15.9 Campaign Victory

During a campaign, VPs accrue from bidding for initiative [4.1.2], expenditure of CPs [4.3.2], destruction of units [2], failure of Critical Fuel forces to reach port [11.2.3], arrival and unloading of loaded MXs [2.1, 15.2.2, 15.9.1], failure to sail unloaded MXs [15.9.1], Special Conditions [12.], emergency reinforcements [15.4], and repair of *Tirpitz* in Norway [15.5.1]. The Allied player must accumulate at least 30 Victory Points per full month (two Fortnights) played to win. A lesser amount results in Axis victory.

**Example:** The players decide to play a 4-month campaign, ending after the June II Fortnight. The Allied player would win with 120 VPs or more.

**Design Note:** In June 1941, Winston Churchill promised Stalin that Britain would deliver 10 ships every 10 days to North Russia.

**15.9.1 Shipping Backlog:** During each Victory Point Phase, score 1 VP per ship moved from an Unloading to a Ballast Box unless it is Crippled or DiW, and subtract  $\frac{1}{2}$  VP for every ship face-up in the Ballast Box of a Soviet port.



## GLOSSARY OF ABBREVIATIONS

Common abbreviations used in *PQ-17* are defined here. Players should consult the index for references to specific game applications. Air and naval type abbreviations may be found on the Unit Chart.

<b>AA</b>	Anti-aircraft
<b>ASW</b>	Antisubmarine Warfare
<b>CAM</b>	Catapult Merchant Ship
<b>CP</b>	Command Point
<b>CS</b>	Combat Strength
<b>DiW</b>	Dead in the Water
<b>DRM</b>	Die Roll Modifier

<b>ID</b>	Identification Level
<b>RAS</b>	Refueling at Sea
<b>SoP</b>	Sequence of Play
<b>TF</b>	Task Force
<b>VVS-SF</b>	<i>Voyenno-Vozdushnye Sily – Severnyy Flot: (Military Air Force of the Northern Fleet [Soviet])</i>
<b>VP</b>	Victory Point

**Note:** Where there are multiple entries, the number in **bold** face indicates the primary reference.

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# Turn Summary

## 1. Preparatory Turn (prior to the Operation)

- A. Environmental Phase — Establish predicted Ice Conditions [10.1, 10.4]
- B. Planning Phase
  - (1) Draw for Special Conditions (Allied player first) [12]
  - (2) Determine Initiative and set up forces, including one block in Tromsø and one Dummy in every other port with any friendly force(s) [4.1, 12]
  - (3) Plan Convoy schedules [4.2] and Special Conditions [12] and announce Emergency Reinforcements [15.4] or Operation EV [15.8.3].

## 2. Operation Turns (repeat until the Operation ends [3.4]; omit during a Campaign game if no CPs expended)

- A. Weather Phase — Roll for weather [9.1] and draw for Convoy movement and Dispersal if Gales [9.2.5, 9.3.2]
- B. Allied Player Phase
  - (1) Random Event Segment [13]
  - (2) Photo Reconnaissance Segment (Day turns only) [6.9]
  - (3) Naval Movement Segment (omit AM Day 1 if Axis initiative) — Expend CPs [4.3, 11.4]
    - a. Stand ID0 forces upright and (except for Wolfpacks) generate Dummies [6.6]
    - b. Split naval forces, including Dispersal [1.2.3, 9.3.2, 11.1.1]
    - c. Designate any Convoys/TFs/Wolfpacks refueling or rearming with torpedoes [7.3.2, 11.3.2]
    - d. Move Convoys/TFs/Wolfpacks/Dummies and shadowing enemy units, reducing ID and checking for Transit ID and Intercept if appropriate [5.1-2, 6.6.1]
    - e. If a PM turn, reduce ID of non-moving forces [6.6]
  - (4) Air Movement Segment [5.3]
  - (5) Reconnaissance Segment — Draw one card for each enemy block subject to search [6.2]
  - (6) Air Combat Segment — For each announced attack, make location draw(s) if necessary [7.1] and resolve:
    - a. During a Day turn, the defender may Scramble Fighter units in the same (or optional adjacent) hex [7.2.1]
    - b. Resolve air-to-air combat [7.2.2-3]
    - c. Deploy target units [7.2.4]
    - d. Assign attacking air units to targets and declare torpedo attacks [7.2.4]
    - e. Determine the results of each wave of attacks before resolving the next wave
      - (i) Resolve anti-aircraft fire [7.2.5]
      - (ii) Resolve ASW [7.4.2], bombing [7.2.6], and torpedo [7.3.1] attacks
    - f. Increase the target force's ID to ID2 Day/ID1 Night [6.7]; if a TF, move its Fuel Warning marker 1 turn back [11.1.3]
    - g. Return all aircraft to their original bases except those generating Air Radii or Shadowing [7.2]
  - (7) Submarine Combat Segment — For each announced attack, make location draw(s) [7.1] and resolve if successful:
    - a. Determine the order of ASW combat and submarine attacks, checking for Surprise if sub vs. sub [7.4, 7.6]
      - (i) Resolve ASW combat [7.4.1] and/or
      - (ii) Resolve submarine torpedo attacks [7.4.3] in the order determined
    - b. Increase the ID of all forces involved to ID1 [6.7];
      - if a TF conducted Offensive ASW, move its Fuel Warning marker 1 turn back [11.1.3]
      - c. Return enemy aircraft generating air radii to their original bases [7.2]
  - (8) Surface Combat Segment — For each announced target, make location draw(s) [7.1] and resolve if successful:
    - a. Attempt intercepts [7.5.1]
    - b. Check for Surprise [7.6]
    - c. Deploy engaged Task Forces and Convoys on the Battle Display [7.5.2]
    - d. Surface Combat Rounds
      - (i) Check for additional TFs engaging (active player first, never in Round 1) [7.5.2i]
      - (ii) Maneuver (defender first) [7.5.2ii]
      - (iii) Exchange gunnery attacks [7.5.2iii]
      - (iv) Resolve torpedo attacks (defender targets first) [7.5.2iv]
      - (v) Roll for withdrawal (defender first) [7.5.2v]
      - (vi) Increase the ID of all forces involved to ID3 Day/ID2 Night [6.7] and roll for end of combat [7.5.2vi]
      - e. Move engaged TFs' Fuel Warning markers 2 turns (i.e., one day) back [11.1.3]
  - (9) Combine Forces Segment [1.2.4, 9.3.3, 9.4, 11.1.1] — Scuttle any DiW ships not under tow [5.1.1, 7]
  - C. Axis Player Phase — Repeat Phase B, reversing the player roles
  - D. Special Conditions Phase — Score VPs for certain Special Conditions if criteria are met [12]
  - E. Fuel Phase
    - (1) Advance the Turn markers [8.1]
    - (2) Check for fuel status change and replenish fuel/torpedoes [11.1-2]

## 3. Administrative Turn (after the Operation)

- A. Confirmation Phase — Reveal CPs expended and Special Conditions [4.3.2, 12]
- B. Victory Point Phase — Total VPs [2] and unload MXs in Soviet ports (Campaign Scenario only) [15.2.2]
- C. Order of Battle Phase (Campaign Scenario only) [15]

