

PAUKENSCHLAG

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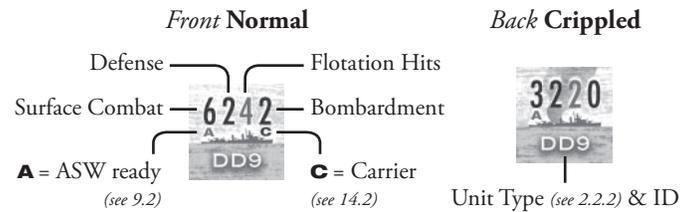
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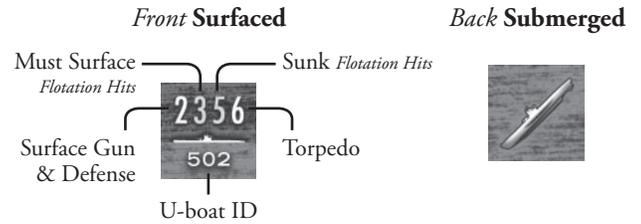
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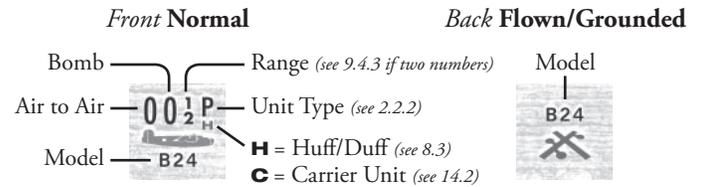
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CONVOY MARKERS AND THEIR PLACEMENT



ID map



Speed map



Formation map



Formation map



See 14.1 map



Ships track

The Ships marker shown here records 10s for Convoy # 5

OTHER MARKERS



Turn



Contact



Spotted



Ships Sunk



Tons Sunk 1s



Tons Sunk 10s



Tons Sunk 100s

READ THIS FIRST

We've organized the overall structure of these rules to introduce concepts following the game's sequence of play. They are written in a format known as the Case System. This approach divides the rules into Modules, each dealing with an important aspect of play. Modules are numbered sequentially and possess a title. Each Module is divided into Sections, dealing with major sub-topics within the Module. These are also numbered sequentially. Finally, the majority of each Section consists of Cases, the specific, detailed rules that govern play. Their sequential numbering follows a logical progression based upon the the Module and Section of which the Cases are a part. Look to these numbers to determine where a Case is located in the rules.

3.1.4

The example above is the number of the fourth Case of the first Section of the third Module of the rules.

Learning to Play the Game

Begin by familiarizing yourself with all of the components listed for this game. Then skim through the charts and rules, reading all the titles of the Modules and Sections. Set up a game scenario or portion of a scenario (after reading the applicable Module) and play a trial game against yourself. Try referring to the rules only when you have a question and remember the numbering system we employ makes it easy to look up rules. While a trial game may take you an hour or two, it is the quickest and most pleasant way to learn (short of having an experienced friend teach you). We don't recommend attempting to learn the rules word-for-word. We've written these rules to be as comprehensive as possible – but they are not designed to be memorized. Taking in the rules as you play along is the best approach to mastering this game. We're always open to suggestions on how to improve the comprehension of our rules. Write to us (see addresses in 2.0) if you have an idea on how we can communicate better with you.

1.0 INTRODUCTION

Operation Paukenschlag (the "Roll of Drums") depicts the German offensive waged by their U-boat wolfpacks from January through August, 1942, off America's eastern shore and in the Caribbean. Unknown to most Americans, nearly half of the available US transports and tankers at the war's start on the East Coast were sunk during the German onslaught. The German U-boats were like ravenous wolves against the unpre-

pared and nearly defenseless American shipping. It was like Pearl Harbor all over again in scale and magnitude. By May alone, over four hundred transports had been sunk, including some two million tons of supplies and the loss of nearly 5000 lives.

Planned by the Germans (well, more wishfully imagined), but never able to be executed, was a bombing offensive against American ports and key industrial plants using German long-range bombers. A variant game and pieces are included for players wishing to explore this *Reich's* dream.

1.1 Game Scale

Each strategic zone is 550-600 miles across. Each operational square is 55-60 miles across. Each tactical square is 6-7 miles across. Each turn represents three days. Each U-boat represents one ship. Each convoy represents 10-50 ships. Each US DD, ASW, and WPG naval unit represents two ships; each US CV and BB is one ship. Air units represent squadrons of 6-12 aircraft. A turn in the game is a week.

2.0 GAME COMPONENTS

Paukenschlag includes the following components:

- One 22" x 32" map
- 280 die-cut counters
- This rules booklet

Not supplied with this game but also required for play are one six-sided and one ten-sided die. If any of the supplied parts are missing or damaged, write to:

Against the Odds Magazine
 PO Box 165
 Southeastern, PA 19399-0165 USA
 Attn: *Paukenschlag*

Or e-mail us at: admin@atomagazine.com

We hope you enjoy this game. Should you have any difficulty interpreting the rules, please write to us at the above postal address, or send an e-mail to: support@atomagazine.com, phrasing your questions so that a simple sentence, word, or number can answer them. If you send a letter by mail, you must enclose a stamped, self-addressed envelope to receive a reply. We recommend e-mail as the best way to resolve a query. Although we welcome comments and suggestions about the game's interpretation of events, we cannot promise to respond to questions on theory or design intent. Additionally, check out the *Against the Odds* and *Paukenschlag* discussion folders at www.consimworld.com.

2.1 The Game Map

The game is played on a stylized map based on grids that German U-boats used. The Strategic Map portrays areas of the East Coast, Gulf and Caribbean, as well as the Atlantic. Icons depict a variety of targets that represent airfields, factories and ports. The Operational/Tactical Specific Location (OSL/TSL) grid is used to signify a specific square from which a naval unit or U-boat begins its movement when detections, interceptions and combats are involved.

2.1.1 Map Charts and Tables Also included is a Turn Record Track, used to assist in recording the game turn.

2.2 THE PLAYING PIECES

The cardboard playing pieces (or counters) in the game should be carefully separated before play. The pieces are of different types depending on the information that appears on each. In general, the pieces represent one of three types of counters: surface naval units, U-boats, or aircraft. US Aircraft units represent 6-12 aircraft. Most surface and U-boat units are one or two vessels. German aircraft units represent six aircraft.

2.2.2 Combat Unit Type Symbol There are different types of combat units: Aircraft, U-boats, Transports (TR), Destroyers (DD), Aircraft Carrier (CV), Battleships (BB), Anti-Submarine Trawlers (AST), and Coast Guard Cutters (WPG).

Air-to-Air Strength Used between enemy and friendly air units during air-to-air combat. Units with a circled strength may only defend.

Aircraft type Aircraft are grouped into three general classes. Within those classes, each type varies in its capabilities:

SEARCH

P <i>Patrol</i>	Spot and Attack U-boat
E <i>Recon or Anti-Sub</i>	Spot or Attack U-boat
A <i>Anti-Submarine</i>	Spot or Attack U-boat
R <i>Reconnaissance</i>	Spot only

BOMBER

B <i>Bomber</i>	} Spot or Attack Airfield, Factory, City
D <i>Dive-Bomber</i>	

FIGHTER

F <i>Fighter</i>	Spot or CAP or Escort
-------------------------------	-----------------------

The reverse side of an air unit indicates Flown (US) or Grounded (German) status.

Note O-47 "R" type aircraft may not engage in combat (these units do not have a combat factor) and can only perform Reconnaissance missions.

Anti-Aircraft Strength Used when attacking enemy aircraft.

Bombardment Strength A strength used when a ship attacks enemy bases on land.

Bombing Strength Used by aircraft when attacking enemy targets (factories, airbases).

Defense Strength The ability of a ship to resist damage and/or defend itself from attack against enemy aircraft or ships.

Flotation Factor Related to damage, this number is used to determine whether a ship survives an attack or becomes crippled or sunk.

Movement Point (MP) The number or areas/squares a unit may move on the map and the OSL/TSL.

Surface Attack Strength Used between other surface ships.

2.3 Markers

Markers are special pieces used to record various game functions such as Game Turn, Spotted, Lost Cargo, etc. See the key on this booklet's cover for more info.

2.4 Dice

The game uses both six-sided and ten-sided dice to resolve combat and other factors for which a combat unit's performance will vary. Throughout these rules, the abbreviations DR6 and DR10 are used to stand for a six- or ten-sided Die Roll, and DRM for Die Roll Modifier, a plus or minus number used to adjust the appropriate DR. Unless otherwise noted, a D10 result of 0 is read as 10 (not zero).

2.5 Charts and Tables

Various charts and tables simplify and illustrate the game and furnish results for certain game actions.

2.6 Terms

Strategic Map The orange globe found at the top of the map depicts general movement and location from each player's plotting. The boxes found within this map are Strategic zones.

Operational Specific Location (OSL) The blue grid printed on the bottom of the map is used when opposing naval units end movement in the same Strategic zone.

Tactical Specific Location (TSL) The same blue grid is also used when opposing naval units end movement in the same square on the OSL. Combat and detection occurs at this level.

Note One grid, located on the map, is used for both the OSL and TSL. Players first resolve all OSL actions to determine if any combats will be resolved on the TSL. The lettered TSL boxes temporarily hold units from the OSL play for deployment and possible combat resolution in TSL play (Sections 5.5 and 6.1).

Wolfpacks German U-boats operating as a group to track and attack Allied ships/convoys.

3.0 GAME CONCEPTS

Before getting on with the main body of the rules, there are several important concepts with which players should familiarize themselves.

3.1 Stacking

There are no stacking issues in this game.

3.1.2 Enemy Units and Stacking Opposing units may stack in the same zone or square.

3.2 Zones of Control

There are no Zones of Control in this game.

3.3 General Course of Play Overview

The game design is based upon a nearly identical movement system that the German U-boats used to plot their movement and their adversaries. It can be looked upon as a sort of telescoping and magnifying system. As such, the game uses a Strategic Map where units move from one zone to another. When opposing naval units are in the same zone, each unit's general location is determined on the Operational Specific Location (OSL) grid. While on the OSL naval units move, in the course of which opposing units may or may not try to intercept or avoid one another. When opposing units occupy the same OSL square play moves to the Tactical Specific Location (TSL) grid to determine their precise location and any combats that result are resolved. In a similar fashion to that on the OSL units move and try to intercept or avoid one another on the TSL. When enemy units end in the same TSL grid square, or are within range of one another on the TSL, naval combat occurs between U-boats and surface ships.

For each zone on the Strategic Map where opposing naval units are located, the above process is performed. This could make a turn move slowly or very fast. If a zone does not contain enemy naval units, nothing much will happen.

4.0 Supply

There are no supply rules. Both sides are always in supply. See Module 11.0 regarding German U-boat fuel limitations, however.

5.0 SEQUENCE OF PLAY

Each turn is subdivided into a number of phases. Play will switch to and from the grid for OSL and TSL play once Naval and Air movement on the Strategic Map is completed.

5.1 Random Events Phase

Either player rolls a single ten-sided die. The results will apply to one of the players for the rest of the game (see Module 13.0). The composition and destination of a new convoy, if a marker is available, is determined (maximum of one new convoy per turn, see Module 10.0).

5.2 Repair Phase

Hits on Airbases and Ports can be removed (see Cases 12.5.4 and 12.5.5). Fighter units can be placed on Combat Air Patrol (CAP) missions (Case 12.1.2).

5.3 US Air Unit Movement Phase

Any eligible aircraft may now move only on the Strategic Map conducting spotting. If any U-boats are detected play will proceed to the OSL (and perhaps TSL) after Naval Movement is completed. If a U-boat is spotted while surfaced, the aircraft may immediately attack it (Sections 8.4 and 9.9). Aircraft cannot spot a submerged U-boat. Air units can be placed on Combat Air Patrol (CAP). Air units on CAP attack any enemy Bombers entering the zone in the coming turn.

Note If playing with optional rules in Module 17.0, German air units alternate movement with US, the US player moving first.

5.4 Naval Movement Phase

Naval units are moved on the Strategic Map one stack/unit at a time with players alternating the movement of their units/stacks, the US player going first each turn. U-boats can be spotted if in a zone containing an aircraft unit. The US player rolls a D6. Designate if a U-boat is submerged or spotted by using the appropriate marker.

Note See Case 6.1.1 for Secret Plotting of naval units (recommended for non-solitaire and advanced play).

After movement is completed, areas where opposing naval units are located will shift to the grid for OSL play and possibly from there to a lettered TSL holding box for possible interception and combat resolution on the grid once more with TSL.

5.5 Operational and Tactical Specific Location Grid Sequence (OSL/TSL)

When opposing naval units end movement in the same map zone on the Strategic Map,

as well as when air units detect U-boats, additional movement is completed using the sequences outlined below. First, use the grid to establish the Operational Specific Location (OSL). Mark the Strategic Map zone where opposing naval units exist with the Contact marker and then remove these units for deployment on the grid for OSL play.

1) Each player rolls two D10. All US ships and U-boats are placed in the rolled location (see section 7.1) rolling a D10 twice for each unit. Place them on the OSL.

2) Each player rolls another D10. The player with the highest roll may choose to move first or second. This continues until either the opposing forces end in the same square or the US ships move off the OSL. If this happens, return the units to the Strategic Map. The U-boats remain undetected in the zone on the Strategic Map and contact is lost.

When U-boat and surface units end movement in the same OSL square the units are removed from the grid and placed in a lettered TSL holding box. While on the OSL each U-boat may attempt to detect the ships using Sonar (Section 8.1). The Allied player may attempt detection of U-boats on the OSL with Huff/Duff (Section 8.3). If this fails nothing happens in that round. If any detection of a surface ship is positive on the OSL it is detected by all U-boats. All U-boats are subject to detection if Huff/Duff is used (Section 8.3).

Detection must be performed for undetected units when on the grid for TSL play and to engage the unit in combat. If detection fails on the grid during OSL play, nothing happens. The units involved return to the Strategic Map. If there are other Strategic Map zones with opposing forces, begin the OSL process again after marking the map zone with the Contact marker and deploying the units on the grid.

5.5.1 Combat When opposing units end movement in the same grid square during OSL play, they are placed in a lettered TSL holding space (see Section 7.1). Units are deployed for TSL play on to the grid in the same manner used in deploying units for OSL play. Each unit in the lettered TSL holding box is rolled for twice with a D10 to determine its initial grid square deployment. If the units are detected during TSL play combat can occur. The side that detects the other first, fires first. Any escorting surface warships may then attack the U-boats (see Section 7.2). *Note It is very unlikely a surface warship would detect a U-boat first. Each U-boat can fire four times (use the U-boat Roster).*

Combats in other zones where opposing ships end movement on the Strategic Map are resolved separately with each occurrence. When no more combat situations exist, continue with Section 5.6 on the Strategic Map.

5.6 German U-boat Movement Phase

U-boats (surfaced only) may move again on the Strategic Map (even for a second time if moved in Case 5.4). Similar to Case 5.3, surfaced U-boats can be spotted and/or attacked if in a zone containing an aircraft unit. Any U-boat that is detected during this phase is marked as such. *Note play using the OSL/TSL and combat will not be implemented following this phase. Designer's Note This second move capability represents the low level of US preparedness for fighting this war, as well as the aggressive patrols conducted with relative impunity by the experienced U-boat captains during their "happy time".*

5.8 Air Unit Return Phase

Aircraft units on the Strategic Map and CAP now return to their bases.

Once all of the above phases are completed, the game turn is over and the Game Turn Record Marker is advanced one space on the Turn Record Track. All game activity must follow the sequence of play, as given, and may not be performed out of sequence.

6.0 MOVEMENT

Movement in this game is relatively simple. On the Strategic Map, a Slow Convoy may move one zone per turn; a Fast Convoy, two zones. All other surface ships may move two zones per turn. A U-boat may travel one zone when submerged, or two zones when surfaced. Similarly, when moving on the grid for OSL/TSL play, U-boats move 2 grid squares when surfaced, 1 when submerged. U-boats have limited fuel and must exit the east map edge when it is expended (see Section 11.2).

Aircraft with a range of zero may only fly in the zone where the unit is based. Aircraft with greater ranges may fly beyond the zone where they are based (see 12.1). All air, naval, and U-boat units may move in any direction or combinations of directions while on the OSL or TSL (horizontal, vertical or diagonal).

6.1 Operational and Tactical Movement

Movement on the grids for OSL/TSL play only applies to those opposing naval units in the same Strategic zone on the game map. The rates are the same per square: either 2

MP (normal and surfaced) or 1 MP (crippled and submerged). *Exception Some ships (DD 11 and 12, both BB, CV) may move 3 MP in normal condition on the grid for OSL/TSL play. Prior to moving a U-boat, the German must decide whether it is submerged or surfaced.*

Naval units are moved on the Strategic Map one stack/unit at a time with players alternating the movement of their units/stacks, the US player going first each turn. It is recommended that players rotate units/stacks to indicate which ones have moved and those that have not. *Note See Secret Plotting Variant for moving naval units, Case 6.1.1 below.*

Naval units and aircraft may move through other zones while on the Strategic Map with no adverse affects. Only the final zone where movement ends and the presence of enemy ships determines if the grid will be used for OSL/TSL play. If the ending zone has no enemy ships, nothing more happens. If it does, the involved units are removed and placed on the grid for OSL play and each player determines their precise location using D10. Units alternate moving until either opposing ships end in the same square or not. Units may move about the OSL/TSL grid horizontally or vertically, but not diagonally (see Section 10.2). If units do occupy the same OSL square, the TSL is used and the same procedure is repeated. Once all OSL and TSL grid play is finished, surviving units are returned to the original Strategic Map zone.

6.1.1 Secret Plotting (Variant) During the plotting phase, both players determine where their naval units or U-boats will end their movement on the Strategic Map. This is kept secret at all times on scratch paper. US convoys must plot ahead two turns. German U-boats must plot only where the U-boat will end its movement for the current turn. Convoys and assigned escorts must have a plot, and they must move every turn. U-boats and naval units not assigned as escorts may choose not to move in a turn.

During US movement, the player announces in which zone on the Strategic Map each convoy ends its movement. The German player advises him if there are any U-boats in the zone. If this happens, refer to Case 5.6.1 for possible use of the grid in OSL and TSL play. During the German movement, the reverse happens, and if any DDs, Convoys or other allied ships are present, use Case 5.6.1. Either player needs to state that there are ships present.

The written plots are used only to prove movement should illegalities or disputes arise (play nice!). Until opposing forces end movement in the same zone on the Strategic Map, no coun-

ters are on the map, except air units. **Note** *Secret plotting is not used on the OSL and TSL.*

7.0 SPECIFIC LOCATION GRIDS (OSL AND TSL)

After movement is completed, if opposing naval units are in the same Strategic zone on the map, the German player has the decision to pursue or disregard before the OSL is actually used. If pursuing, the OSL, and possibly the TSL, are used. If the German player elects to ignore any Allied ships in the Strategic Map zone nothing happens on the grid for the turn (no detection and combat will be performed). **Exception** *Air units in the same map zone may, if lucky, be able to attack surfaced U-boats (see Section 8.4).*

7.1 Operational Specific Location (OSL) Grid Play

When the German player has one or more U-boats in the same Map zone as Allied naval units, and elects to attempt detection and interception, play proceeds to the grid for OSL determination. Mark the Strategic Map zone with the Contact marker and relocate all of the naval units, surface and U-boat, in the area to the OSL/TSL grid. Players roll a D10 twice to determine each U-boat's and naval unit's location on the grid for OSL play. The first roll is always read as "tens". The second roll is always read as "ones". So, if the first roll is a 7 and the second roll is 9, the specific square on the OSL/TSL grid is box 79. If a zero is rolled, roll again. If a convoy has assigned escorts, the convoy and assigned escorts are all deployed in the same box.

7.1.1 OSL Detection Although actual units are on the map, they are cannot be intercepted or attacked until detected. U-boats while submerged are only spotted if an aircraft gets lucky or finds them with Huff/Duff (Module 8.0). Surface ships can only move on the OSL towards the **same** nearest map edge until a U-boat is detected. Once a U-boat is detected the Allied player can move any and all surface ships on the OSL without restriction. Surface ships can also be detected by a U-boat on the grid during OSL play. If this occurs, the U-boat may move towards them to intercept and attack during TSL play. Other U-boats on the OSL may move towards them to intercept and attack if the German player decides to use radio communications and risk detection by Huff/Duff (Section 8.3). A U-boat that does not have a detected target cannot move except to avoid being detected. It can move freely once an enemy ship or convoy becomes detected. Each U-boat can attempt to detect before actually moving.

Since U-boats attacked in Wolfpacks, all U-boats on the grid during OSL play (which can reach the enemy force) should endeavor to end their movement in the same square as the convoy or opposing ship before using the TSL process. This is to minimize the use of the grid for TSL play to once per turn. In other words, once a U-boat or stack of U-boats enters a grid square during OSL play with any surface unit or stack, all are removed from the grid to a lettered TSL holding box. No other U-boats or surface naval units can be included/placed in this particular lettered TSL holding box.

Example *If five U-boats are on the grid for OSL play, but only 3 are able to end their movement in the same enemy square before the convoy moves off of the grid (convoy escapes until next turn), TSL grid play is used with only the 3 U-boats and combat is resolved with only those 3 (assuming they all end movement in the same square). This will also force the German player to coordinate the U-boats to arrive at the intercept square for maximum effectiveness.*

OSL grid play is done in a series of rounds:

1. Initiative Determination
2. Detection
3. Initiative Unit Movement
4. Non-Initiative Movement
5. Combat (TSL play only)

Any number of rounds may occur on the grid during OSL play until either the opposing naval units end in the same box with one or more U-boats, and are then relocated to a lettered TSL holding box, or all of the surface units escape by leaving the grid during OSL play. **Note** *Even if surface units leave from differing grid edges during OSL play they are returned to the Strategic Map zone where the Contact marker is located.*

7.2 Tactical Specific Location (TSL) Grid Play

When opposing naval units end movement in the same grid square during OSL play the units are removed and placed in a lettered TSL holding box. If a convoy or naval unit exits the grid during OSL play before any U-boats can intercept and end movement in the same box on the grid during OSL play, nothing more happens—the convoy / ship has escaped for this turn. Assuming that interception during OSL play is a success, play proceeds once more to the grid for TSL play as follows:

1) Roll two D10 per convoy or naval unit as was done for OSL play to place the units on the grid for TSL play. A zero means roll again.

2) Units detected in the OSL remain detected on the TSL. If undetected, while on the TSL grid a unit will need to be detected before it can be attacked. Prior to movement, either side may attempt to detect. If not successful, a U-boat without a detected enemy targets may not move. This can happen if during play its original victim was eliminated (use a piece of note paper to keep track of which convoy/ship is detected by what U-boat(s). Likewise, DDs or non-convoy ships that fail to detect U-boats cannot move and attack submerged U-boats, and can only move towards the same grid edge during TSL play. U-boats, before moving, must decide to move submerged or surfaced.

2a) At the beginning of each round players roll for initiative. The player with the highest DR has the initiative and goes first in the round. The players alternate movement and may try detection (if previous attempts fail) before moving any number of times, rolling once per naval unit or U-boat on the grid.

2b) Units continue moving and attempting detection on the grid until there are no units of one side left on the playing area. There is no fixed number of rounds for TSL play. If the opposing naval units fail to detect one another, or the all surface units exit the grid without detection/interception, nothing more happens to those units in that strategic zone—they evaded or escaped for the current turn. **Note** *Even if units exit from differing grid edges they are still returned to the Strategic Map zone where the Contact marker is located.* If a U-boat begins movement in the same grid square as opposing units, combat is resolved before any movement, unless it is undetected. If undetected, movement does occur first.

3) If U-boats end movement in the same square as detected naval units, naval combat ensues. Naval combat can only occur on the grid during TSL play. Players resolve combat with the initiative player going first, or if he/she has failed to detect the enemy, the opponent goes first.

Combat is resolved one unit at a time per square. Further movement is prohibited. Once all the combats have occurred, the next combats occur in another set of units from a different lettered TSL holding box. Once all TSL actions are concluded surviving units are returned to their Strategic Map zone and the Contact marker removed.

Example *After both players have plotted movement, zones CB and DD on the Strategic Map reveal that opposing naval units both occupy each zone. The first zone chosen for resolution is CB and the map zone marked with the Contact marker. Both players now must determine each naval unit's specific location on the grid*

for OSL play. It so happens that two convoys are in zone CB. Convoy A has an escort of 2 Destroyers. Convoy B has none. Both players take turns rolling a DR10 to determine initiative. The US rolls the highest. The die is rolled twice for Convoy A, resulting in grid space 99, while Convoy B ends up in grid space 12. The ships are placed on the grid. The German has three U-boats, all on the surface, to roll for. He does so, and they end up in grid spaces 83, 26, and 99. Since only U-boats can detect on the grid during OSL play (there are no Huff/Duff units here), the German rolls once per U-boat. In the first round, the U-boats fail to detect. The US moves first. Convoy A is slow but successfully moves off of the OSL and is returned to area CB (the same Strategic Map zone) thereby escaping until the next game turn. However, Convoy B, also slow, moves one square to the right, square 13. Since the U-boats failed in detecting the convoy they may not move. Round two begins. The German wins the initiative and one of the U-boats detects Convoy B. Since all U-boats are on the surface they may move two squares towards the convoy. Convoy B moves one hex. At some point, the U-boat that started in square 26 will end in the same square as Convoy B before the other U-boats. The other U-boats are able to reach the enemy before it exits. Thus, the German delays the closest U-boat from entering the enemy square until the other U-boats arrive. Eventually, this occurs and the grid is used for TSL play. The entire process repeats: initiative, detection, movement. Only the U-boats that end movement in the same enemy occupied square may conduct attacks. After all combat occurs, resolution for Convoy B is done. Resolution for the second convoy would now occur. However, Convoy A moves out of the Strategic zone and is safe for the current turn. If there are any other zones on the Strategic Map where opposing naval units occupy the same zone, the process using the grid for OSL and TSL play. Thus, on some turns, the game turn may last a long time, while in others, it will be short.

8.0 DETECTION



After opposing naval units end movement in the same zone on the game map, the actual units are placed on the OSL grid by the previously described procedure. Just because they are present visually does not mean, in reality, that they are detected. When the TSL is used, both U-boats and certain surface ships may use detection devices.

Surface ships and U-boats may use Sonar (Active or Passive) and Radar to attempt detection. Sonar can be used to detect targets on the surface or submerged. Radar can be used only to detect targets on the surface. Air

and surface units can use also Huff/Duff to detect U-boats (submerged or surfaced).

8.1 Active and Passive Sonar

Active and Passive Sonar allows units to detect one another on the grid during TSL play (OSL play as well for U-boats). U-boats cannot use Passive Sonar when moving at a high speed when surfaced (2 squares).

Active Sonar emits wavelengths allowing others who are listening to locate them. When Active Sonar (regardless of who searches) is successful, both the searcher and the hunted are spotted because each is listening. US ships with ASDIC may use it moving or not. However, attempting to locate a U-boat while moving decreases the chances of a successful detection.

Each U-boat or naval surface unit that is eligible may make one Sonar detection attempt per round. U-boats, however, may do so once Passively, and if that is not successful, once again using Active Sonar, but ONLY if the Passive Sonar attempt failed. Surface units may only attempt once to detect using sonar (Active or Passive).

8.1.1 Active Sonar Any DD, WPG, AST or U-boat can attempt to detect one enemy unit anywhere on the grid during TSL play up to 8 squares away (do not count the square the unit attempting to detect is in) using Active Sonar. For each unit attempting to detect the enemy the owning player rolls a D6.

Notes +2 if surface naval unit attempting detection moved. +1 to all Active Sonar detection attempts in zones DN, DM, EB, EC, ED and EF. -1 DR if surfaced U-boat attempting detection.

1-4 = Enemy unit detected

≥5 = Detection attempt fails

A BB or CV can only use Active Sonar to detect a U-boat if they are both in the same grid square during TSL play.

8.1.2 Passive Sonar Any unit can attempt to use Passive Sonar to detect one enemy unit up to 2 squares away on the grid during TSL play if it does not move, otherwise Passive Sonar can only be used against an enemy unit in the same or adjacent square. For each unit attempting to detect the owning player rolls a D6.

Notes Subtract 1 from a Passive Sonar DR if the target used Active Sonar earlier that round. Add 1 to the DR if the unit attempting to detect moved.

1-4 = Unit detected

≥5 = Detection failed

8.2 Radar

Both sides also have surface radar that can be used to detect on the grid during TSL play. A U-boat must be surfaced to use radar. A submerged U-boat cannot be detected by radar. U-boats using radar only have a range of two squares. US ships with radar have a range of three squares. When a unit is detected, place a Spotted marker on the unit. If the same unit moves out of range, the unit immediately becomes unspotted and the marker is removed.

8.2.1 US Radar (variant) US BB, CV and DD units can search via radar out to 4 squares. Use the 3 column to resolve the search at the 4 square range.

8.3 Huff/Duff



Only the US has Huff/Duff, a device that was accurate in locating submerged U-boats by homing in on their radio transmissions. Ships of any type or aircraft with a red "H" printed along their right edge (O-47, PBY, B-17 and B-24) have this ability. Whenever a U-boat has successfully detected a convoy, the German player must decide whether to contact other U-boats which are also on the grid (any distance) during OSL or TSL play. If the German player decides to do so, and if the U-boat is within a seven square range of a naval unit on the grid during TSL play with Huff/Duff, or any air unit with Huff/Duff is in the Strategic Map zone and players are using the grid during OSL play, the US rolls a DR6 for each U-boat on the grid. A DR of 1-3 results in the U-boat being detected. If the DR is 4 or higher there is no detection **but** only the U-boat that detected the convoy can move towards the convoy. All others must remain in place until some other warship is detected. The US player rolls once for each unit with Huff/Duff that is present on the grid during OSL/TSL play. **Note** Although aircraft are only deployed on the Strategic Map, an aircraft with Huff/Duff is also presumed to be in the grid during OSL/TSL play where the U-boats are located and can roll for detection.

8.4 Aerial Detection

Detection of a U-boat using aerial observation was very much an affair with luck. If a U-boat is surfaced in a Strategic Map zone that also contains aircraft, roll a D10 per each aircraft in the zone. A roll of 1 spots the U-boat. Any aircraft in the same zone, capable of attacking U-boats (see 2.2.2), may then immediately attack the U-boat individually (Section 9.4). However, after the first such attack, there is a chance the U-boat will

dive before subsequent attacks. Roll a D10. Add 1 to the DR for each attack after the first that was made upon the U-boat. With a modified second DR10 of 6 or more the U-boat dives and becomes unspotted, and any further attacks are rendered moot. Aircraft that have spotted or attacked are flipped to their Flown side once the spotting/attack is resolved. **Note** Do not flip any Bomber or Search aircraft that were not able to attack due to the U-boat diving.

9.0 COMBAT

All naval combat occurs only on the grid during TSL play when opposing naval units end their movement in the same box. It is considered simultaneous and any results are applied after both have attacked.

The types of combat are U-boat Torpedo, Anti-Submarine Warfare, Surface-to-Surface, Air-to-Surface and Air-to-Air.

9.1 U-boat Torpedo Combat



Torpedo combat occurs when a submerged U-boat fires at a surface ship using its torpedoes. Each U-boat may fire four times

at the same target or fire at up to four targets, with each hit being resolved separately in a combat segment. As a U-boat consumes torpedoes, record the number of remaining torpedoes on the U-boat Roster. When none remain, the U-boat can no longer attack. The German player can exit these units from the game map to avoid their being lost by moving them off the Strategic Map from zones BE or CF.

To resolve Torpedo Combat, use a D6. Simply roll once for each torpedo fired using the U-boat Torpedo Combat table. Note the target type. If the roll is equal to or less than number listed, a hit is secured.



If a hit occurs, roll for a possible dud each time a torpedo impacts on a target. If a dud result occurs nothing happens to the targeted ship. If a hit is scored, use the Surface to Surface Combat Table to determine the number of floatation hits. Create an odds ratio by comparing the attack strength to the ship defense for each torpedo fired (equal to the U-boat's Torpedo CF of 6). Total the number of hits if more than one torpedo struck. For example, two hits would equal 12. If the total number of hits is equal to or less than half the target's Flotation Factor the target is unaffected (damage control parties were able to contend with the attack). If the total number of hits is greater than half but not more than the Flotation Factor the ship is crippled and can only move 1 MP (if it only

had 1 MP, such as a Transport, it is dead in the water and cannot move at all). Flip the unit over to indicate this status. If the target was already crippled it is sunk and removed from the game. If the number of hits is greater than the Flotation Factor the ship is sunk.

9.2 Anti-Submarine Warfare (ASW) Combat



ASW combat occurs when a ship marked with a red "A" printed along its left edge uses its depth charges to attack a U-boat. The U-boat must be in the same grid square during TSL play as the attacking ship. One ship may only attack one U-boat. If more than one is in the same square, the attacker selects which U-boat is being attacked. Only ships capable of performing ASW combat (DD, WPG or AST) may attack U-boats. Consult the Anti-Submarine Warfare Chart noting how many ASW factors are attacking. Roll a D6 to resolve the attack. If a numbered result is obtained a second D6 is rolled. If the second DR is greater than the ASW CRT result, the U-boat is destroyed. If the second DR is greater than the table result, the U-boat is destroyed. If the second DR is less than the table result, and if the second DR was a 4, then the U-boat must surface (and perhaps be engaged in Surface-to-Surface combat). Any other result in the ASW attack has No Effect on the U-boat.

9.3 Surface-to-Surface Combat

This form of combat occurs should a surfaced U-boat and ships fire at one another. Again, both must be in the same grid square during TSL play. Using the Surface to Surface table, players total and compare all of the attacking unit's Surface Combat Factor(s) with the target's Defense Factor to derive an odds ratio (round any fraction in favor of the defender). Locate the appropriate odds column and roll a D6. The result is the number of hits. Combat is simultaneous before hits are applied regardless of whose attack is resolved first.

The owning player of a ship that is hit in Surface-to-Surface combat rolls a D6 and adds the hits from the attack. If the modified DR is greater than ship's flotation/defense factor the ship is flipped to its reduced/crippled side. If already reduced/crippled the ship is destroyed and removed from play. If the modified DR is less than or equal to the ship's flotation/defense factor nothing happens. **Note** Subtract 2 from the DR if the ship that was hit is a BB. There is only one round of surface combat between opposing naval units.

Note See Section 12.7 for Shore Bombardment by ships and U-boats.

9.4 Air-to-Surface and Air-to-Air Combat

Air-to-surface combat occurs when an aircraft attacks a spotted, surfaced U-boat (very rare) and bombs it, or when German long range Bombers drop their loads on their targets.

German and carrier-based Bomber aircraft that arrive over their targets may or may not encounter enemy aircraft or AA fire. When German Bombers attack targets, only one target may be selected. If there is any AA or enemy Fighters, these attacks are resolved in the following order before the bombing attack. Each round is considered simultaneous with losses extracted after each round:

CAP Fighters vs Escort Fighters

CAP that successfully Bounce escorts skip this step and go to CAP Fighters vs. Bombers

CAP Fighters vs Bombers

AA vs Bombers

After CAP and AA combats are concluded bombing attacks are then resolved. Roll once per surviving Bomber and resolve the attack on the Bombing table.

Units that are capable of attacking U-boats (see 2.2.2), that are in the same zone as a spotted U-boat, may attack if they were not the one that detected the U-boat. **Exception** *PBY aircraft are the only air units that can do both.* Using a D10, a DR of 1 sinks the U-boat or surface ship. Any other DR has No Effect.

9.4.1 CAP Bounce A Fighter on CAP may attempt to "Bounce" escort Fighters and directly attack an enemy Bomber. For each CAP Fighter the owning player rolls a D10. Modify the DR as follows (use all that apply):

-1 CAP Fighter's Air-to-Air factor is higher than escort

-1 there are more CAP Fighters than escort Fighters

+1 Escort Fighter's Air-to-Air factor is lower than CAP Fighter's

+1 there are more Escort Fighters than CAP Fighters

If the modified DR is 4 or less the CAP Fighter has successfully bounced the escorts and can attack an enemy Bomber instead of the escort. If the modified DR is 5 through 10 the CAP Fighter must engage the escort in combat in Round 1. If the modified DR is greater than 10 the CAP Fighter is immediately destroyed and cannot fight anyone.

9.4.2 Air-to-Air Combat Procedure Air units that engage in Air-to-Air combat are arranged off map in a convenient location for

both players. Both players resolve combat in Rounds 1 and/or 2 in Section 9.4 above by pairing off opposing air units. Excess Fighters in Round 1 can be held back for use against enemy Bombers in Round 2. A given enemy air unit cannot have another (second or more) enemy air unit(s) deployed against it until all of the player's air units have at least one enemy air unit arranged against it. A given air unit can only be used in one Round of air-to-Air combat. All combat within a step of Air-to-Air combat is simultaneous. The players compare the Air-to-Air factor(s) against the enemy units to obtain an odds ratio and a D6 is rolled on the Air-to-Air Combat Table. Results are applied after both players have rolled on the table.



9.4.3 US Long-Range Search

Aircraft US B-17 and B-24 air units (marked with an "E" unit type on their counters) may either be used for Reconnaissance or Combat missions, one or the other (not both in the same turn). If used for a Recon mission, the units can attempt to locate U-boats up to 2 zones away and use Huff/Duff (Case 8.1.2). If used for Combat missions these air units have a 1 zone range and can carry out attacks on U-boats per Section 9.4.

PBY aircraft are the only air units that can perform both Recon and Combat missions in the same turn.

10.0 CONVOYS

Each turn a convoy may enter or be in play if a convoy marker is available. Only one new convoy can enter the game per turn. The number of convoys that can be in play in any one turn, however, is limited to those in the counter mix.

10.1 Convoy Determination



The Convoy Map Entry zone Table is used to determine the starting area for a new convoy.

Until May, no convoy has a DD escort. The Convoy Destination Table also determines the possible destinations for each Convoy when it enters play. The speed of the convoy, slow (one square or zone) or fast (two squares or zones) is determined as well as the number of ships in the convoy, the convoy formation (Line, Loose, or Tight) and tonnage capacity. Use the appropriate markers. **Note** A convoy without a formation marker is assumed to be *Tight Formation*.

10.2 Convoy Movement

Convoys while moving on the grid during OSL or TSL play may only move in a horizontal or vertical manner across the grid in

the same general direction to their movement on the Strategic Map. For instance, if a convoy began in Florida and its destination was New York, then any movement on the grid during OSL or TSL play would be in a north-south direction, not west-east.

10.3 Convoy Composition

A convoy can consist of any number of ships from 1 to 40. Use a convoy marker on the game map and grid during OSL, and TSL play. If a convoy has an escort, the escorts move at the rate of convoy. If a convoy is reduced to just one ship, remove the convoy marker and place a Transport Ship unit. When a U-boat sinks a ship, the beginning total of the convoy is adjusted to reflect the remaining ships in the convoy (use the markers on the Game Record-keeping track to do this). **Example** If Convoy 1 lost 2 ships out of its 30, the 28 remaining ships in it are noted by the Allied player and the x10 marker would be placed in the 2 space, the x1 marker in the 8 space of the record-keeping track.

If a ship within a convoy becomes dead in the water, place an individual TR ship unit in the square and the rest of the ships (represented by the convoy marker) continue moving. When a ship is sunk from the convoy, a Lost Cargo marker is drawn at random (use a cup, envelope or other sort of opaque container). The tonnage value on the back of the Lost Cargo marker is disclosed to the German player for victory purposes before being returned to the draw pile/ container. Adjust the number and tonnage capacity of the convoy on the record-keeping tracks as well, and then return the Lost Cargo marker to the opaque container so it is part of any subsequent draw.

10.4 Convoy Tonnage Determination



The US player determines how many ships are in a convoy, and its tonnage, at the start of the game and when called for as reinforcements whenever there are fewer than 9 convoys on the map. Use the appropriate markers to record the number of ships in a convoy using the numbered spaces on the Turn Record or Tonnage Sunk Tracks (whichever is convenient for the US player). The convoy's destination should be recorded on a piece of paper (back side of the Target Roster is good) and kept secret from the German player (disclose this information at the end of the game). One convoy is created per turn until there are no more than 9 in play, as well as per Random Event for Convoy AT-10. When a convoy is attacked, any losses are deducted from the convoy total. For each loss, draw a Lost Cargo marker and keep a running total of the ton-

nage sunk using the appropriate markers on the Tonnage Sunk Track for victory point award determination (done at the end of the game). A running total number of ships sunk by the German player should also be kept on this track using the appropriate markers for victory point award determination. The tonnage chits are read in thousands, so a marker that reads 16 represents 16,000 tons.

11.0 U-BOAT FUEL

German U-boats were limited in their operations by the fuel and the number of torpedoes each carried. To facilitate their U-boats endurance, Milch Cow (Tanker) U-boats were dispatched to re-supply their brethren at sea.

11.1 U-boat Fuel



Each U-boat has a total of six fuel points. Use the U-boat Roster to record the expenditure of each U-boat's fuel. When all of a

U-boat's fuel points have been expended the U-boat must move towards and exit the map at BE or CF, or end movement in the same zone containing a Milch Cow Tanker U-boat. Once a U-boat exits the map, it remains out of the game for four turns. An exited U-boat is available again starting on the fifth turn after leaving the map. Place the U-boat unit on the turn space when it can re-enter the game. A U-boat that refuels off-map may re-enter at zones BE or CF on the Strategic Map.

A Milch (milk) Cow U-boat may refuel up to 10 U-boats. To do so each U-boat must begin its movement in the same zone as the Milch Cow (the Milch Cow may have moved to the U-boat's square earlier). Both must remain in the zone, in a surfaced state, and neither may move any further. Neither U-boat may detect or attack. At the end of the turn, the U-boat is refueled and may remain on the map until their six fuel points are exhausted. Once the Tanker has refueled 10 U-boats, it has no more fuel and is removed from play (the Milch Cow unit can re-enter as a reinforcement, however, but no more than 1 can be in play at any time).

11.2 U-boat Fuel Consumption

A U-boat consumes fuel point for the turn when moving in Slow Mode, and two fuel points in Fast Mode. Consuming two fuel points allows a U-boat to move one or two zones on the Strategic Map. If a U-boat does not move, it still expends one fuel point to maintain its position in the current zone. Record the fuel remaining to an individual U-boat on the U-boat Roster. Fuel is only consumed while moving on the game map, not the OSL or TSL.

12.0 AIRCRAFT

There are numerous types of aircraft with differing capabilities. See 2.2.2 for a key.

12.1 Aircraft Range

Aircraft with a range of zero may only fly in the zone where the unit is based. Aircraft with a range of 1 may fly into any adjacent zone from where the unit is based and attempt to detect any U-boats that happen to be on the surface. See 9.4.3 for an explanation of the variable range of “E” type aircraft.

12.1.1 Rebasing US air units (only!) may move to another airbase instead of performing a Recon or Combat mission. Any air unit can rebase to any other airbase that has less than 8 hits (see Case 12.7.4). There is no range limit to rebasing. *Note This represents not only the relocation of the aircraft, but also their ground support personnel and logistical resources (not an easy thing to do for the US at this point early in the war).*

12.1.2 Combat Air Patrol (CAP) Fighter type units (“F”) can be placed on CAP at the start of each game turn. Place the unit on the map and declare its CAP mission. It can be used to defend any target in that area. A Fighter on CAP cannot be used to detect or attack any other enemy units; the unit can only defend against attacks by other enemy air units. Fighters are returned from CAP to any base in the same area at the end of the turn.

12.2 Aircraft Spotting

Until March, only visual spotting may occur. If detection is a success, the aircraft may attack immediately, once per aircraft (see Section 8.3). If playing the variant scenario, the German player also has long range Bombers based in the Azores and Canary Islands.

12.3 German Bomber Procedure

Each Bomber moves across the map to its chosen target. Prior to completing the mission, any US Fighter units may attempt to scramble by rolling a 1-2 using a DR10 per Fighter type. Resolve any air to air combat and then AA combat, in that order. A surviving Bomber then attacks its target and is placed back at its airbase.

12.4 Base Anti-Aircraft

Each factory or airbase has an intrinsic AA unit with a Hit number. Use a D6 to resolve the attack. If the roll is equal to or less than the Hit number, the AA fire causes the Bomber to abort. Each Bomber attacking the target undergoes AA fire. If the roll is two less than the AA strength, the Bomber

is shot down. Thus, if the AA unit is 3, and a 1 is rolled, the Bomber is shot down. AA strengths are not destroyed or affected by bombing attacks.

12.5 Bombing

Any number of Bombers (types “B” and “D”) may drop their bombs on a target. Bombers attack via level or dive bombing.

12.5.1 Level Bombing Any “B” type aircraft may undertake level bombing on ship, airfield, or factory targets. In each case, a Bomber attacks individually and the appropriate column of the Aircraft Bombing Table is consulted, cross-referencing the D10 result with the Bomber’s BF and modifying the DR as needed.

12.5.2 Dive Bombing A “D” type aircraft may dive-bomb ship or airfield targets. In each case, a Bomber attacks individually and the appropriate column of the Aircraft Bombing Table is consulted, cross-referencing the D10 result with the Bomber’s BF and modifying the DR by -1. Hits on airfields are tallied while hits on ships are applied immediately (see below).

12.5.3 Bomb Damage After all Bombers that bomb a specific target are completed, roll a D10. If the target was a factory, a roll of 1-5 indicates the wrong target was bombed or missed, any hits are ignored, and no VP are awarded. If the target is a city or port all the Bombers hit their target.

At the end of the game VP are awarded as follows:

2 or 3 Damage points incurred by the end of the game on a specific target = 1 VP is awarded to the German.

4-5 Damage points = 2 VP

6-7 Damage points = 3 VP

≥8 points = 4 VP

No VP are awarded if only 1 or no Damage Point remains at the end of the game.

Note No US Bomber may fly from the US and bomb the Azores or Canary Islands. German airbases may only be bombed using aircraft from the CV Hornet.

Ships can suffer damage from bomb hits as follows:

Hits less than half of the targeted ship’s Defense Factor (DF) = No Effect.

Hits equal to and/or do not exceed the targeted ship’s DF = ship is crippled. An already crippled ship is sunk.

Hits greater than the targeted ship’s DF = ship is sunk.

12.5.4 Bomb Damage Repair The US player receives 5 repair points per turn to make repairs. The German player has 2 repair points per turn to be used on his airfields. Repairs are made at the start of a new turn before anything else occurs. Only 3 repair points can be used per individual city, factory, or airfield in a turn. Any facility that accrues 8+ damage points is rendered inoperable and cannot have any repairs made to it (at least in the time span covered in the game).

Note Unused repair points cannot be accumulated and saved for a later turn. Any not used in the current turn will be lost (this is war, deal with it!).

Any crippled DD, WPG or AST that spends an entire turn in a port (does not move or attack) is flipped to its normal status side during the next turn’s Repair Phase. Battleships and the CV *Hornet* cannot be repaired if crippled (at least not in the time span of the game).

12.5.5 Airfield and Port Bomb Damage Airfields/Ports are not useable if 6 or more damage points have been inflicted. No Repair Points can be applied to any facility with 8 or more damage points. Record the level of damage incurred and repaired on the Target Roster. When repair points are used to reduce the damage, adjust the damage level on that target. Damage repair points may be used in any manner or divided up. For instance, if a factory has 5 damage points and 3 repair points are used, the new damage level is 2. *Note AA factors are not affected by damage.*

The CV *Hornet* may not base aircraft if it is crippled. The air units may NOT rebase to a land airbase.

12.5.6 Grounded Aircraft Bomb Damage

For any aircraft based at an airbase that has incurred hits from bombing/bombardment roll a D10 per aircraft. Subtract 1 from the DR for every 6 damage points inflicted upon the airbase. If the modified DR is 1 or less then the unit is eliminated, 2 to 6 means the unit is flipped to its Flown/Grounded side, ≥7 means No Effect.

12.6 German Bomber Turn-Around

German Bombers may only fly every other turn from their airbases. When a Bomber takes off and returns, it is grounded for one turn. Place the air unit on the Turn Space of the Turn Record Track to indicate when it can return to play. For example, a plane that bombs on turn 1 is available again on turn 3.

12.7 Shore Bombardment

US warships with a bombardment factor may bombard the German airbases by ending

their movement in the same zone. Use the Air to Surface Combat table and roll for each warship that bombards using the ship's bombardment rating. Note that BBs have large BF and the US player rolls multiple times on the table to equal the unit's BF. For example: a BB with a BF of 6 could have the US player rolling 2 times on the 3 column, 3 times on the 2, or any other combination so long as the BF is not exceeded. Smaller ships with a bombardment factor of 1 can only perform a Shore Bombardment mission in combination with other ship(s) that has/ have a Bombardment Factor, and the owning player can choose which columns to use (2 and/or 3) if applicable. Record any hits on the Target Roster.

12.8 German Aircraft Issues

Had the Germans acted upon their first Amerika plans in 1940, the Me-264 long range bomber could've possibly been operational by 1942; historically, only a few were done by late 1942. The He-177 was operational in March 1942, and the FW-200 had been modified. All three faced the same problems with aircraft engines being unreliable over the long flight (2-4,000 miles to the East Coast from either island), weather, crew fatigue, and target recognition. The He-177 and FW-200 had a 50% chance of the engines catching fire during flights (*definitely not a good thing when flying long stretches over the Atlantic*). Flight times would average 7-8 hours, thus, pilot and crew fatigue would be an issue. Target ID would've been almost non-existent, as even the U-boats had inadequate navigation aides, generally using pre-war tourist maps to cruise along the coast.

12.8.1 German Long-Range Bomber Reliability When an aircraft takes off, for each zone the aircraft flies into, a D10 is rolled (exception is any zone adjacent to the airfield from where it took off). For each zone the aircraft crosses, including the zone with the target, 1 is added to the roll. Use the German Aircraft Problem table. Bombers that are lost never return or are replaced.

When a German Bomber enters a zone with an enemy convoy, the Bomber automatically detects it. It has two options: either immediately attack it by dropping its bombs on it or ignore it. If there are any U-boats in the same zone that have not detected the convoy, the U-boats automatically detect it. When bombing a convoy or ship, roll a D10 per aircraft. If the roll is 1 or 2, one ship is sunk. If it is a TR or tanker, pull a tonnage chit. If the DR = 10 the aircraft has been lost and is removed from play. A surviving Long-Range Bomber is then returned to its base.

12.9 Attacking Germain Airbases

Because of the extreme range, the only recourse the US would have to bomb the German airbases would be the Carrier Task Force consisting of battleships *North Carolina* and *Washington*, the carrier *Hornet*, and their seven destroyer escorts. This TF historically was at Key West and relocated in late January to Norfolk, Virginia. Amazingly, it made it to Norfolk without even being attacked! If Random Events allow, this TF may move towards the airbases and bombard and bomb the airfields. If the airfields are made unusable, the German Bombers may not be used in the game any further. When bombarding with battleships/DDs, see 12.7 for procedure.

12.10 US Aircraft Availability

The number of aircraft missions the US player may fly per turn per turn is limited as follows (see 2.2.2 for mission eligibility):

February and March Maximum of 1x U-boat attack mission (by any eligible plane type) and 2x Recon missions (by any eligible plane type) from zones BA to DC.

April Maximum of 3x U-boat attack missions (by any eligible plane type) and 5x Recon missions (by any eligible plane type) from zones BA to DC.

February and March Maximum of 1x U-boat attack mission (by any eligible plane type) and 1x Recon missions (by any eligible plane type) from zones DB, DN.

April Maximum of 2x U-boat attack missions (by any eligible plane type) and 3x Recon missions (by any eligible plane type) from zones DB, DN.

PBY air units are **not** bound by these mission limitations. Excess air units in these areas are grounded, but any and all air units in play can rebase without restriction (Case 12.1.1). From May to the end of the game there are no restrictions to the number of Combat or Recon air missions that may be flown (subject to eligible aircraft availability).

13.0 RANDOM EVENTS

During the Random Event segment of the turn, one player (play nice and take turns!) may roll a D10 to determine if any events not already rolled in prior turns occur. Each Event, other than No Event and Increased Home Front Allocation, can only occur once per game.

1, 2 = The US CV *Hornet* Carrier Task Force is ordered to attack the German airbases on the Canary Islands and Azores. The naval

units listed in Section 14.2 move towards the islands (Allied player's choice) to attack. If rolled after March, or not playing a variant scenario, treat as No Event. This event, if it is implemented, converts the AT-10 TF Random Event to be treated as No Event.

3, 4 = AT-10 Convoy to Iceland is cancelled and the provisions of Section 14.1 do not apply. The seven DDs (6-12) in the *Hornet* TF are diverted to coastal defenses in zones CA and DC only. If this event is rolled after January 15, treat as No Effect. This event, if it occurs, converts the *Hornet* TF Random Event to be treated as No Event.

8 or 9 = Increased home front allocation. The US player can return to play one eliminated DD, WPG, AST or air unit to the game.

Note *This is the only form of replacements in the game!*

5, 6 or 10 = No Event.

14.0 SPECIAL CONVOYS

There are two historical special convoys: AT-10 and the Carrier *Hornet* Task Force.

14.1 Convoy AT-10



This convoy sails from New York on January 15. Use the reverse side of the Convoy 9 unit (it is marked as AT-10). The AT-10 Convoy must move east to zone BC and exit the north map edge. It carried 5000 US troops and was heading to Iceland. The convoy consists of 10 TRs and two DDs as escorts (release DDs 3 and 4 for this), its speed is Fast and formation is Tight. Oddly, it was never attacked by any U-boats. To reflect this bizarre event, if any U-boats are in the same zone after movement, instead of automatically going to the OSL and TSL, roll a D10. If the roll is 1 or 2, the U-boats are aware of the convoy and use of the OSL and TSL grid play proceeds normally.

14.2 Carrier *Hornet* Task Force



This force sailed from Area CA (Norfolk) on turn 4. It was never detected or attacked (*what lucrative targets!*). If any U-boats are in the same zone, the force is spotted only with a roll of 1 or 2, using a D10. If spotted, the grid for OSL and TSL play are then used. The rules in this section only apply if Random events do not occur first (see Module 13.0). Unless Random events intervene, this same TF must sail from zone CA to to EB and exit (it was moving to the west coast). If Random Events intervene, the CV and BBs **do not** need to exit the map but remain in the game as regular units. All units

in this TF move at the rate of three zones or squares.

The *Hornet's* aircraft consist of 3x SBD, 2x F4F, 1x TBD and 1x B25. These units are designated with a black "C" printed along their right edge. The SBD, F4F and TBD air units can move and attack any German unit/airbase in the same zone as the carrier (range 0). See below for the B-25 carrier air unit.



14.2.1 Carrier B-25 The B-25 aircraft carried on the CV *Hornet* were not normal carrier warplanes. Like the ones used in the historical Doolittle raid on Tokyo, if this air unit is based from the carrier it is a "one shot" weapon.

The B-25 carrier air unit can only be used once in the game to move and attack from the CV *Hornet*. Further, until it does, none of the other carrier air units can move or attack as the B-25s are taking up the entire flight deck (these were too large to move about and stow below decks). The B-25 carrier air unit has a range of 1 zone (*the aircraft are actually flying to neutral Portugal where the surviving aircraft and crew will be interned*). Due to the surprise nature of this form of attack any Bf-109 Fighters on CAP have no effect and cannot intercept the B-25 (only AA fire will contest the air unit's attack).

The US player can also choose to not base the B-25 air unit on the *Hornet* and instead have it base at any land airbase. The decision to do so must be made before the start of the game when the US player is setting up. If the US player decides to base on land the carrier B-25 air unit is exchanged for the extra land-based counterpart and is based at any US airfield.

15.0 REINFORCEMENTS

Reinforcements that arrive may only be used after they are activated in a game turn. Reinforcements are placed at their designated areas. **Reminder** *If there are fewer than 9 Convoys in play the US player will enter a convoy as a reinforcement per Module 10.0.*

15.1 US Reinforcements

February 1 (Turn 5)

Miami (Airfield P): 1x O-47, 1x B-24

Boston (Airfield C): 2x B-17

Savannah (Airfield M): 3x B-25

Puerto Rico (Airfield Q): 1x P-36

Note See Section 12.12 for limitations on US B and R air units.

March 1 (Turn 9)

Puerto Rico (Airfield Q): 1x P-39

Norfolk (Airfield I): 2x B-25, 3x PBY

Savannah (Airfield M): 4x A20

New York (Airfield G): 1x O-47, 2x A20

Miami (Airfield P): 2x O-47, 3x B-17

Note See Section 12.12 for limitations on US B and R air units.

April 1 (Turn 13)

New York (Airfield G): 2x A29, 2x O-47

Norfolk: (Airfield I) 1x B-18

Puerto Rico (Airfield Q): 1x B-18

Havana (Airfield N): 1x B-18

Miami (Airfield P): 1x O-47

12x AST- zones BB, CA, DC (place 2 in each zone)

12x Coast Guard WPG - zones BB, CA, DC (4 in each zone)

4x Coast Guard WPG in zone DN

Note 4x DDs released.

Note See Section 12.12 for limitations on US B and R air units.

May 1 (Turn 17)

Miami (Airfield P): 1x A29 (zone DM)

Savannah (Airfield M): 2x A20, 1x B-17

Puerto Rico (Airfield Q): 1x O-47, 1x B-18

Norfolk (Airfield I): 1x B-24, 1x B-25

Havana (Airfield N): 1x A20

Note All remaining DDs released. End all restrictions with US B and R air units.

June 1 (Turn 21)

Miami (Airfield P): 4x B-24, 2x PBY

Puerto Rico (Airfield Q) and/or Havana (Airfield N): 1x B-18, 1x PBY

15.2 German Reinforcements

February 1 (Turn 5)

8x U-boats in zones BB, CA, DC, and/or CB

4x U-boats in zones ED, EC, and/or EB

February 15 (Turn 7)

2x U-boats in zones DN, EC, DB, and/or DM

March 1 (Turn 9)

6x U-boats, 1x Milch Cow* U-boat in zones BB, CA, CB, and/or DC

May 1 (Turn 17)

4x U-boats, 1x Milch Cow* U-boat in zones DO, DN, DB, and/or DM. Note: The Milch Cow U-boat can only enter the game if the one that entered in March has exited or been eliminated

6x U-boats in zones DN, EB, EC, ED, and/or DO

***Note** No more than 1 Milch Cow U-boat can be in play.

The zones listed are those in which U-boats may begin. They are free to move anywhere afterwards. There is no limit to the number of U-boats that may occupy a zone. Do not read the reinforcement as two U-boats per such zone. The number of U-boats arriving is for that turn, not per zone. Except for the Milch Cow, U-boats are selected at random for the specific turn of entry.

16.0 HISTORICAL SETUP

16.1 US Setup

US units set up first as follows:

1x DD (1) squadron in Norfolk. 4x DDs (2-5) in New York or Boston. These are in port and only one of these is released (see Section 14.1).

CV *Hornet*, 2x BBs, 7x DDs (6-12) in port at Havana.

1x O-47 aircraft each at Boston (Airfield C), New York (Airfield G) and Savannah (Airfield M).

5x P-40 Fighters, 1x B-17, 1x B-18 and 5x B-25 at New York (Airfield G).

3x P-39, 4x P-40s Fighters at Savannah (Airfield M).

3x P-47 Fighters and 4x O-47 in Norfolk (Airfield I).

Place convoys per the At-Start Convoy Determination Table. Place all Lost Cargo markers in an opaque container (mug or envelope for example).

Note The US player must decide whether to keep the B-25 carrier air unit on the *Hornet* or exchange it for a land-based counterpart (see Case 14.2.1).

16.2 German Set Up

German units set up second as follows:

5x U-boats, zones BB and/or CA.

5x U-boats in zone CF.

U-boat units are selected at random when setting up. For German aircraft, see Section 19.0.

17.0 VARIANT SCENARIOS

Books on German “wonder weapons” and “what if” counterfactuals are all the rage nowadays. Some of the most speculative imagine intense German pre-war and war-time efforts to seize bases and make ready very long range aircraft capable of attacking the US East Coast. The *Plan Amerika* and *Valkyrie* scenarios presented below examine what sort of Luftwaffe effort might have been mounted – a small one it turns out – given maximum aircraft development success and Hitler making firm friends in southwest Europe, capturing Gibraltar, and gaining access to the Azores and Canary Islands. Could a handful of aircraft over America, combined with a highly successful U-boat campaign, cause the US to overreact and focus on defensive weapons themselves? Players can now explore these fanciful themes...

17.1 Plan Amerika

None of the Me-264 aircraft are used. Instead, use of the FW-200 and He-177 aircraft. These were operational in 1940 and 1942 respectively, and had the range to reach Boston from the Azores. The problem was that they could only be based on the Azores, which had a limited aircraft capacity. In this scenario, the historical U-boat setup is used. Add the following air units to the German order of battle:

8x FW-200

5x He-177

2x Bf-109

Note The FW-200/He-177 can only bomb in zones BB, DC, CA, ED.

17.2 Plan Valkyrie

This scenario is the extreme “what-if”. The Germans have control of both the Canary Islands and the Azores. In this scenario, the historical U-boat setup is used. Add the following air units to the German order of battle:

3x Me-264 (Canary Islands)

1x Bf-109 (Canary Islands)

8x FW-200 (Azores)

1x Bf-109 (Azores)

Notes The Me-264s may bomb any zone. The FW-200 can only bomb in zones BB, DC, CA, ED. The He-177s are not used in this scenario.

17.2.1 Basing Limitations German air units may not change airbases during the course of the game. The German’s ability to relocate large numbers of ground crew and resources would be severely limited to say the least. If

an airbase is rendered inoperable the aircraft based there are lost.

17.3 Surprise

In either scenario above, the historical U-boat setup is used. Due to surprise, the first time German Bombers attack anywhere on the map, there is no AA or air-to-air combat from any US Fighters.

18.0 VICTORY

The German objectives were to cause the greatest amount of damage. Their U-boats alone sank 65 ships by March and by May nearly two million tons were lost. The objectives of the air attacks, had they been flown, would have been to damage American factories.

As a ship is sunk, adjust the Ships and Tonnage Sunk Markers on the Record Keeping Track. At the end of the game, the German must perform the following:

Have sunk at least 40 Allied ships **and**

Have sunk two million tons of Allied cargo.

If the Variants in Module 17.0 are in play the Luftwaffe must earn at least 40 VP in hits on US factories, ports or airbases.

Note If the CV Hornet, a BB or any TR ship from Convoy AT-10 is sunk, each counts as 50,000 tons towards the German victory calculation (this represents the loss of trained crew and aircraft, as well as the expensive warships. For the TR units there would’ve been extremely high casualties, with likely disastrous results on the Home Front, with the sinking of any troop transport).

If the German player fails to achieve all of the above conditions the US player wins the game.

19.0 DESIGNER’S NOTES

Submarine games are a real challenge to a game designer. The nature of the combat makes it ideal for computer games (my old favorite was *Red Storm Rising* by Microprose) and the opposite for a paper boardgame. I know of only a few submarine warfare games and most, in my opinion, make rather boring wargames.

So when I first learned about *Paukensschlag’s* topic, it immediately caught my attention—an operation starting out with just a few U-boats against a continent! Up until then I had no idea this had occurred. At first, I toyed with hexes for the map. I am always trying something different and then it hit me: use what the actual U-boat commanders

used to plot moves. U-boats were rather slow under water and fast on the surface—thus, the two speeds. The German player, like his historical counterparts, has to be aggressive and sink as much as possible before the US and British forces are fully brought to bear. No sunbathing allowed!

I simplified the detection elements, keeping the critical elements that had impact. A U-boat could sometimes detect surface ships as far as 50 miles away, yet ASW ships could not detect a sub until it was rather close. An aircraft attempting to detect a sub on the surface was also problematic. The encounter between opposing forces was, to a large extent, luck or chance. U-boats knew the general convoy routes and number of ships they could expect to encounter. Thus, they sat around or moved about looking for prey.

All this makes designing a game on this a challenge, as the repetition factor and lack of different strategies are substantial design challenges. Designing a sub warfare game is far more difficult than designing a typical set piece ground battle. So, always looking for a twist, I explored the Luftwaffe plans to bomb the US East Coast and found out that without some extreme “what ifs” to history, it could not have happened. To summarize:

The Germans would have to come up with a viable bombing plan to attack American ports and key industrial plants using German long-range bombers. By way of comparison, their own efforts against England in 1940 (almost in their backyard so to speak) suffered from a lack of intelligence about key targets and British vulnerabilities.

The bombers themselves were in various states of development at the war’s start in 1939. The Germans had already come up with the idea of the Me-264 and were trying to adapt both the FW-200 and He-177 for long range bombing. During the war itself they investigated air-to-air refueling techniques and more weirdly, towing large auxiliary large fuel tanks (with wings!) behind bombers in an effort to increase range. Assuming great successes here in bringing these aircraft into operation, small numbers might have been available.

Germany acquires the needed permission/acquiescence from Spain and Portugal to base the aircraft in the Canary Islands (3500 miles from the US coast) and/or the Azores (within 2000 miles). Hitler wanted the islands. Could he have cut a deal with all the parties?

Each of the prerequisites above was unlikely but for me, the idea is a very interesting component of the game and worth exploring. Let the dice fly high!