

U-BOOT

THE BOARD GAME



Rulebook

U-BOOT

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Willkommen an Bord, Herr Kaleun!

Thank you very much for purchasing U-BOOT The Board Game. When we started this project, we set ourselves a goal: to create the first ever tabletop submarine simulator. A game that would let players experience World War II submarine warfare like no other game before it. One that would explore various aspects of living and fighting at sea, from dwelling inside an iron coffin to playing a deadly game of cat and mouse with the enemy.

Now, after a lot of hard work and research, we are proud to present a game that redefines submarine board gaming, featuring true to life navigation, visual identification of targets, and many other elements that you probably haven't seen in a board game yet. This might seem daunting, but rest assured: the game comes with everything you need to become a U-boat ace in no time.

Firstly, a separate Tactical Guide booklet. It lays out the most important dos and don'ts without getting into unnecessary detail, so you should quickly get an idea of how to conduct combat. Secondly, player aids that summarize the most important information for each role and, lastly, online videos that teach you how to play. All of these will help you understand the basics quickly. Once you do that, the rest will come with experience.

And the experience that U-BOOT can deliver is truly unique. Approaching targets without getting detected, lining up perfect torpedo shots, and sneaking away from the escorts' counterattack... Or getting pounded by relentless depth charge attacks. This game has it all and much more, so if you wish to savor it to the fullest, be serious about your training. Trust us: it will be worth it.

Artur Salwarowski & Bartosz Pluta

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1. INTRODUCTION

1.1. Player Roles and the Goal of the Game

U-BOOT The Board Game is a cooperative game for 1-4 players which lets players take on the roles of officers on board a German U-boat during the Second World War.

Players assume the roles of the Captain, the First Officer, the Navigator, and the Chief Engineer on board a Type VIIC U-boat. They coordinate their actions to fulfill mission objectives issued to them by German U-boat HQ. They are a crew, and they all win or lose together.

1.2. The Companion App

The game requires a free downloadable companion app. Please visit uboottheboardgame.com or your preferred digital distribution platform (App Store, Google Play, or Steam) and search for 'U-BOOT The Board Game' to download and install the app on your device.

The app is an integral part of U-BOOT and you cannot play the game without it. The app provides real-time gameplay featuring dynamic enemy A.I., as well as many other essential gameplay functions. These all constitute a significant part of the experience and are meant to immerse you even further in the role of a U-boat crew.

Make sure you download and install the app on your device before you continue. The app is available for Android, iOS, Mac, and Windows PCs. To find out how to use the app during gameplay, see the First Officer's rules in section 8.1.

1.3. Real-time Gameplay Experience

Because U-BOOT is app-driven and proceeds in real time, it is different from a typical board game, as there are no defined player turns. Instead, the pace of the game is dictated by the companion app and the Captain's orders.

The app alerts players to new threats and opportunities, and the Captain coordinates the players' responses. It is important to make decisions quickly, while not losing sight of objectives or urgent threats.

1.4. Learning How to Play

Before reading on, you can watch our rules overview videos at uboottheboardgame.com. Once you have read and understood the rules, it is time to prepare for your first game. If you have already decided who is going to play as each role, we suggest the following:

- * **Captain** – read the Tactical Guide
- * **First Officer** – go through the in-app tutorial
- * **Navigator** – learn how to use the Attack Disk, as well as the Strategic and Tactical Maps
- * **Chief Engineer** – become familiar with the Technical Puzzle and the Chief Engineer's resources

The above steps will prepare each player to perform their most mission-critical tasks. After that, a quick explanation of core rules and components will allow everyone to start playing.

2. COMPONENT LIST

The following list will familiarize you with the box contents of U-BOOT.

The 3D U-boat model



The model is a representation of the Type VIIC U-boat and features all of its most important sections for the sailors to move about and carry out their duties. Before your first game, assemble the model as instructed in game setup in section 5.

Hull section cards

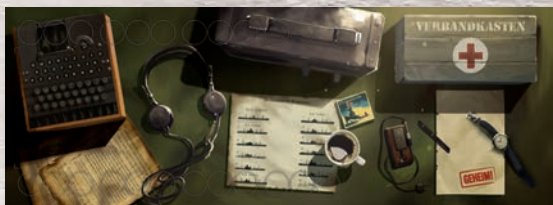


These cards constitute the Technical View of the U-boat. They are placed on both sides of the model to show section names and specialization icons indicating where particular orders are carried out.

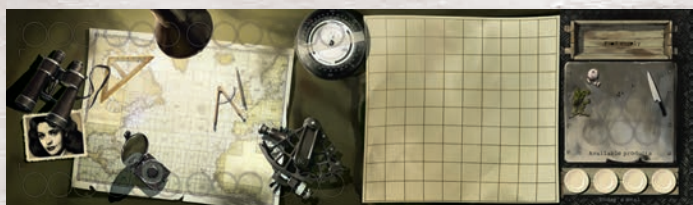
Player panels



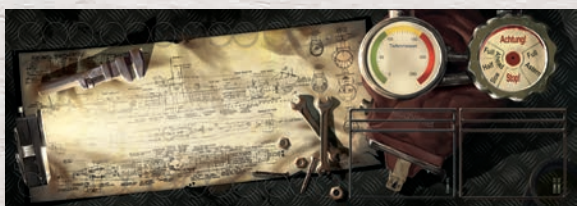
Captain



First Officer



Navigator



Chief Engineer

Each player uses a panel to track their resources and sailors' status.

Crew tiles

These tiles are placed on the player panels. They contain geometrical symbols



Captain



First Officer

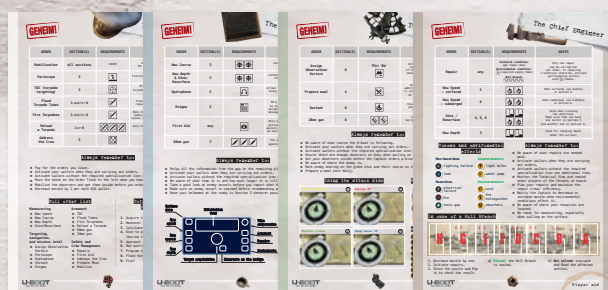


Navigator



Chief Engineer

for each sailor, as well as their specialization icons. The terms 'Captain', 'First Officer', 'Navigator' and 'Chief Engineer' are used throughout the rulebook to refer to players playing these roles, but they also appear as individual sailors on these crew tiles.



Player Aids

Four sheets summarizing the orders each player is responsible for, as well as the most important gameplay and setup information for each role.

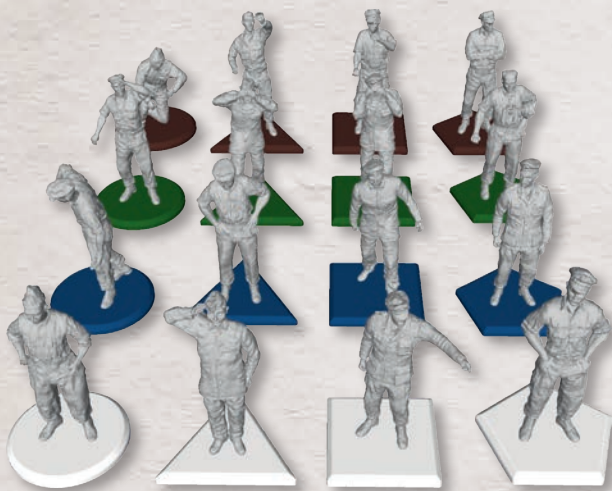
Rulebook

The rules booklet that you are reading right now.



Tactical Guide

A separate booklet containing gameplay advice.



Sailor Figures

These figures represent the sailors serving on the U-boat. Each player controls a group of 4 figures with bases in a given color:

- **White:** Captain
- **Blue:** First Officer
- **Green:** Navigator
- **Brown:** Chief Engineer

Please note that each figure has a different base shape from the others in its group.

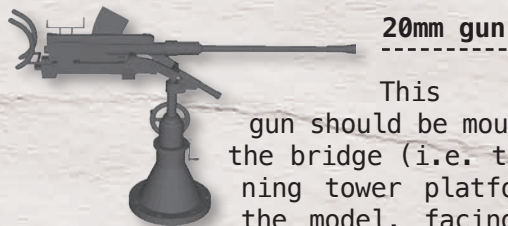
Conning tower equipment

This plastic piece should be mounted in the front part of the conning tower.



88mm gun

This plastic gun should be mounted on the fore-deck of the model, right in front of the conning tower.



20mm gun

This plastic gun should be mounted on the bridge (i.e. the conning tower platform) of the model, facing backwards.

Event cards



Cook Burns Dinner

Decrease morale by 1.

Prevent:
Activate the sailor with the  icon.

Cards with positive and negative events for the crew.

Morale cards



Dislocated Finger

Assign this card to a random sailor.
: place one additional  token when activating this sailor for repairs.

Dislocated Finger

Cards with negative effects caused by the deteriorating morale of the crew.

Wound cards



Minor Burns

Assign this card to a random sailor.

Minor Burns

Cards with health problems which might occur when sailors are exposed to dangerous situations.



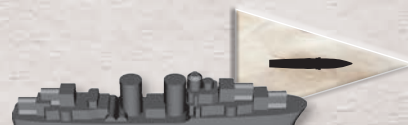
U-boat marker

This marker represents the U-boat on the Tactical Map.



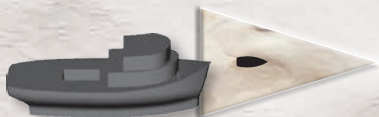
Merchant marker

This marker represents a merchant vessel on the Tactical Map.



Escort marker

This marker represents an escort vessel on the Tactical Map.



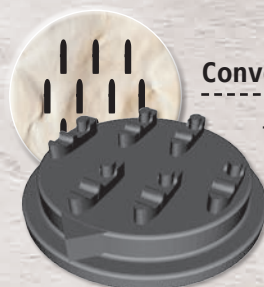
Small vessel marker

This marker represents a small vessel on the Tactical Map.



Enemy marker

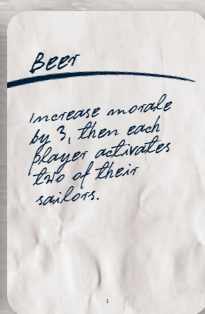
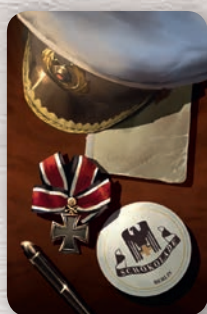
This marker represents an unidentified enemy on the Tactical Map.



Convoy marker

This marker represents a convoy on the Tactical Map.

The Captain's cards



Cards which the Captain plays to influence the crew in various ways.



Plastic order tokens

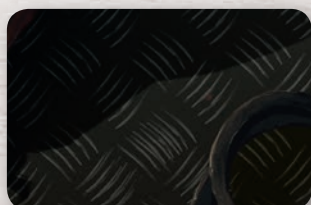
The captain uses these tokens to pay for orders on their player panel.



Cloth bag

A cloth bag to draw crew tokens from.

The Chief Engineer's cards



Cards which the Chief Engineer plays to boost the crew's repair skill.



Technical condition tokens

These tokens mark a wide variety of technical issues to be dealt with. They are placed on the Technical View by the Chief Engineer. The front of the token denotes varying degrees of technical issues, and the back is referred to as an activation side.



Environmental condition tokens

These tokens mark environmental effects which may occur (fires, flooding, electrical hazards, etc.) They are placed on the Technical View by the Chief Engineer, and may have severe consequences if not dealt with quickly.



Crew tokens

16 tokens, each corresponding to one of the sailors' base shapes and colors. The Captain randomly draws from these tokens when various game events affect random sailors.



Supply tokens

These tokens mark a variety of supplies and equipment which the Chief Engineer uses to deal with environmental conditions.



Toolbox markers

These two markers show the locations of the Chief Engineer's toolboxes.



Technical Puzzle

A puzzle which must be solved whenever the U-boat sustains critical structural damage. Randomly mix the pieces before playing.



Flooded Section Token

This token is used to mark a flooded section of the U-boat.



Activation tokens

These tokens track how many orders a particular sailor has taken. Observation tokens and technical condition tokens also have 'activation' on their back.



Observation tokens

The navigator uses these tokens to mark who is performing observer duty.

Provision tokens



These tokens represent the food supply that the crew has at their disposal.



Health condition tokens

These tokens mark sailors who become sick or wounded in the line of duty. They have a 'wound' side and a 'fatigue' side.



Medical supply tokens

These tokens represent various supplies which the First Officer uses to treat sick or wounded sailors.



Medkit tokens

These tokens help the First Officer keep track of their remaining medical supplies.



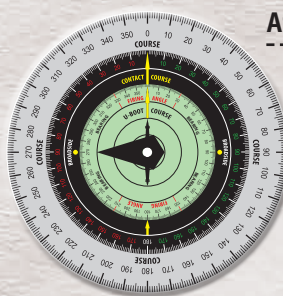
KIA tokens

These tokens mark sailors who have been killed in action.



Cigarette tokens

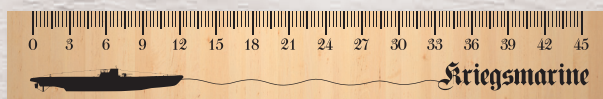
These tokens represent cigarettes which sailors can smoke on the Bridge to relax.



Attack Disk

The Navigator uses this tool to determine the position of enemy vessels on the tactical map, as well as intercept vectors to attack them. Before your first game, assemble the Attack Disk as instructed in game setup in section 5.

Distance ruler & pencil



The Navigator uses these to plot the course on the map. The ruler can also be used to calculate distance covered in transit.

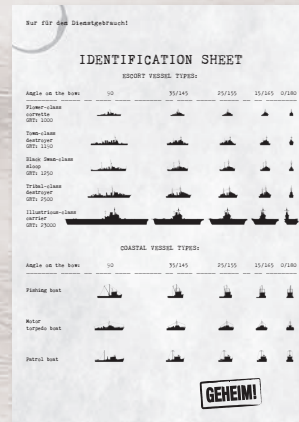
360 degree protractor

Used when plotting the U-boat's course on the strategic map.



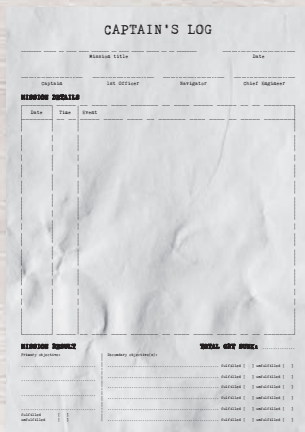
Strategic Map

Used by the Navigator to plot courses and determine the U-boat's position. It consists of two sheets: one for the North Sea and one for the Atlantic.



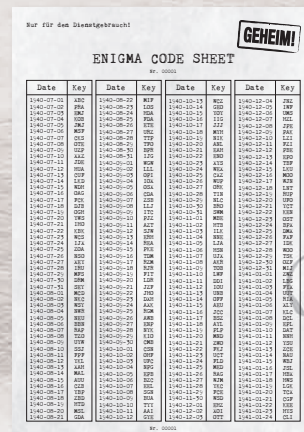
Identification Sheet

A sheet containing enemy vessel silhouettes, used by the First Officer to identify enemies.



Captain's Log Chart

Used by the Captain to record essential mission information.



Enigma code sheet

A sheet containing Enigma codes, used by the First Officer to decipher and encipher radio messages.

IMPORTANT: When you run out of captain's log or map charts, you can download them from uboottheboardgame.com.

3. GLOSSARY OF U-BOAT TERMS

Attack Disk

The Navigator's tool is composed of three concentric disks and provides quick answers regarding enemy position and optimal torpedo attack solutions.

The Attack disk very closely resembles authentic tools used by U-boat sailors to calculate targeting data, and mastering its use is absolutely essential for the Navigator to be able to perform effectively.

ASDIC (active sonar)

ASDIC was a device used for locating and tracking submerged U-boats. It emitted a highly concentrated sound wave which traveled through water, and, upon hitting an object, bounced back to the transceiver, giving the operator a rough location and depth of the target.

Initially, ASDIC lacked precision, but later models could give a very precise reading of a submerged contact. The downside of ASDIC was that it could not detect surfaced U-boats. If ASDIC detects

you, then you will hear the characteristic 'ping' of the sound wave hitting the U-boat's hull.

Bridge

The bridge of a WWII submarine is the open platform at the top of the conning tower. Observers perform their duties here.

Contact

A detected surface, subsurface or airborne unit.

Enigma

A cipher machine used extensively by German forces during WWII. It encrypted messages according to a 'daily key'. The daily key contained rotor settings which changed clear text into cipher text.

The three-rotor Enigma code was broken by Polish cryptanalysts before the second world war. Using their method, the Allied cryptanalysts at Bletchley Park were able to break the German four- and five-rotor enigma code and even the German Naval Enigma code. That gave the Allies an invaluable source of information on U-boat operations.

GRT (gross register tonnage)

During WWII, the United Kingdom was heavily reliant on its sea trade routes. German U-boat strategy focused on cutting these supply lines, depriving the UK of vital cargo in an attempt to starve

the country into submission. GRT refers to the amount of cargo (fuel, munitions etc.) a merchant vessel could carry. Merchant vessels were the primary target of U-Boat operations.

Hydrophone (passive sonar)

A device that served as the U-boat's ears. Whenever the U-boat was submerged, it could use the hydrophone to hear sound waves traveling through the water, enabling the operator to calculate the bearing and distance of enemy vessels by listening to their propeller sounds. An experienced operator could even determine the course and speed of the vessel.

The hydrophone was a primary target acquisition system for the Type VIIC U-Boat. In poor weather conditions it could provide more reliable data than visual observation.

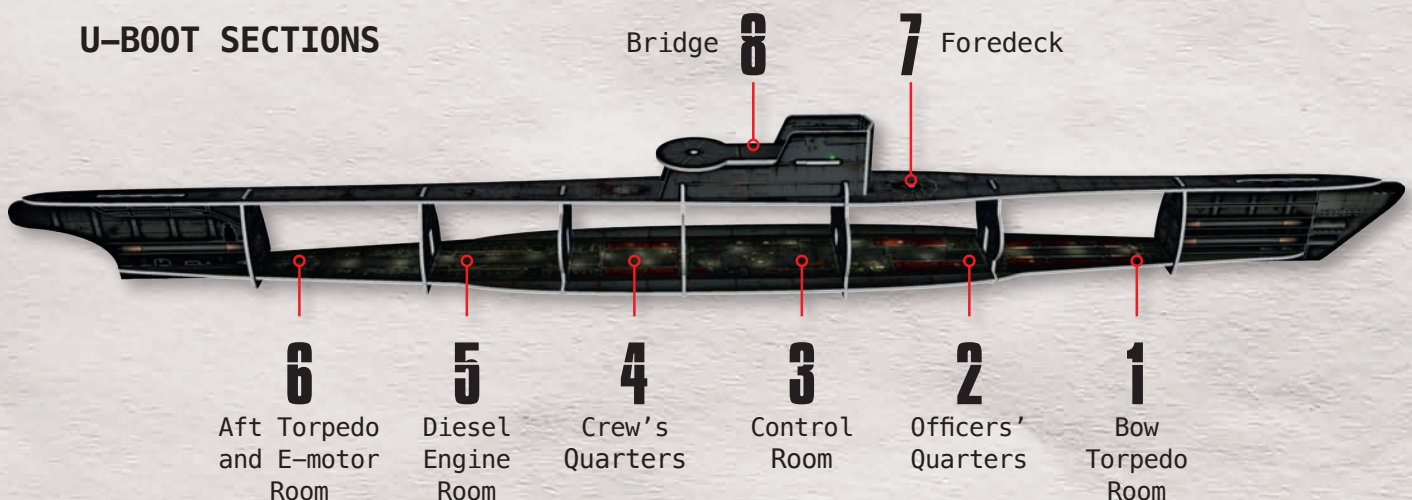
TDC (Torpedo Data Computer)

This device, known as the 'Torpedovorhalterechner', served as the torpedo targeting system of the U-boat. The optimal firing solution was calculated based on the enemy contact's bearing, distance, course, and speed.

Section

The U-boat is divided into eight sections. Six of them are inside the hull, and the remaining two are outside. Below is a diagram of how they are numbered and where each section is located.

U-BOOT SECTIONS



4. GAMEPLAY OVERVIEW

4.1. The goal of the game

In U-BOOT, players are young German submariners who strive for the fame and glory of the greatest U-boat aces. They must prove themselves by fulfilling missions, thus earning victory points called Renown. Renown is scored by:

- completing mission objectives,
- sinking enemy shipping.

Each mission has a primary objective and one or more secondary objectives. The primary objective is explained in the pre-mission briefing, while secondary objectives will be sent by HQ during the course of the mission. Fulfilling the primary objective enables scoring large amounts of Renown, while secondary objectives provide additional scoring opportunities.

The final score can also be vastly improved by sinking encountered enemy shipping. The amount of Renown scored this way is determined by how much GRT players sink before the mission ends.

Ending a mission

The mission ends when any of the following happens:

- * mission time has run out,
- * the U-boat has returned to base,
- * the U-boat has been destroyed or otherwise lost. In that case, all players lose the game. This happens when:
 - * the U-boat is rammed by an enemy vessel,
 - * the U-boat hits an underwater object or runs aground in coastal waters,
 - * the U-boat sustains enough structural damage to be sunk by flooding,
 - * an enemy attack kills the entire crew.

When the mission ends, the app will calculate your total Renown and evaluate your efforts. The possible mission results are:

- | | |
|---------------|--------------------|
| S – superb | D – unsatisfactory |
| A – excellent | E – bad |
| B – good | F – mission failed |
| C – decent | |

Your goal is to achieve the best result possible. If you truly seek fame and glory, then settling for anything less is not an option!

4.2. Returning to base

You can return to base by choosing to do so in the app menu, as long as the U-boat is not engaged by the enemy. This 'fast travel' option has been included if you wish to end the game before mission time runs out. You may want to finish a mission early because you are already happy with the result, or, conversely, abandon the mission if all hope of success has been lost.

When returning to base, all your achievements during the mission (i.e. the GRT which you sank and the objectives which you fulfilled) are recorded by the app.

4.3. Game modes

Single Mission

Single Mission is the simplest game mode. You can choose any mission available in the game and attempt to obtain the best score you can. Try out different tactics, improve your strategy, and find out about new secondary objectives. Once you feel comfortable playing single missions, it is a good moment to give the other game modes a try.

Linked Mission

Linked Missions are full-scale patrols taking place over a couple of weeks. As they may be too long for a single gaming session, they have been divided into several missions. Each of them may be played in Single Mission mode, but they may also be linked together to give a complete patrol experience over a few gaming sessions.

The game's app lets players save the game state between sessions, and the Captain's log is used to note down all the essential in-game information.

Linked missions are much more demanding than single missions, because they re-

quire players to survive at sea for much longer. In return, they deliver a more complete experience and allow more seasoned crews to put their skills to a real test. Some linked missions may require completing the primary objective to advance to the next mission.

Campaign Mode

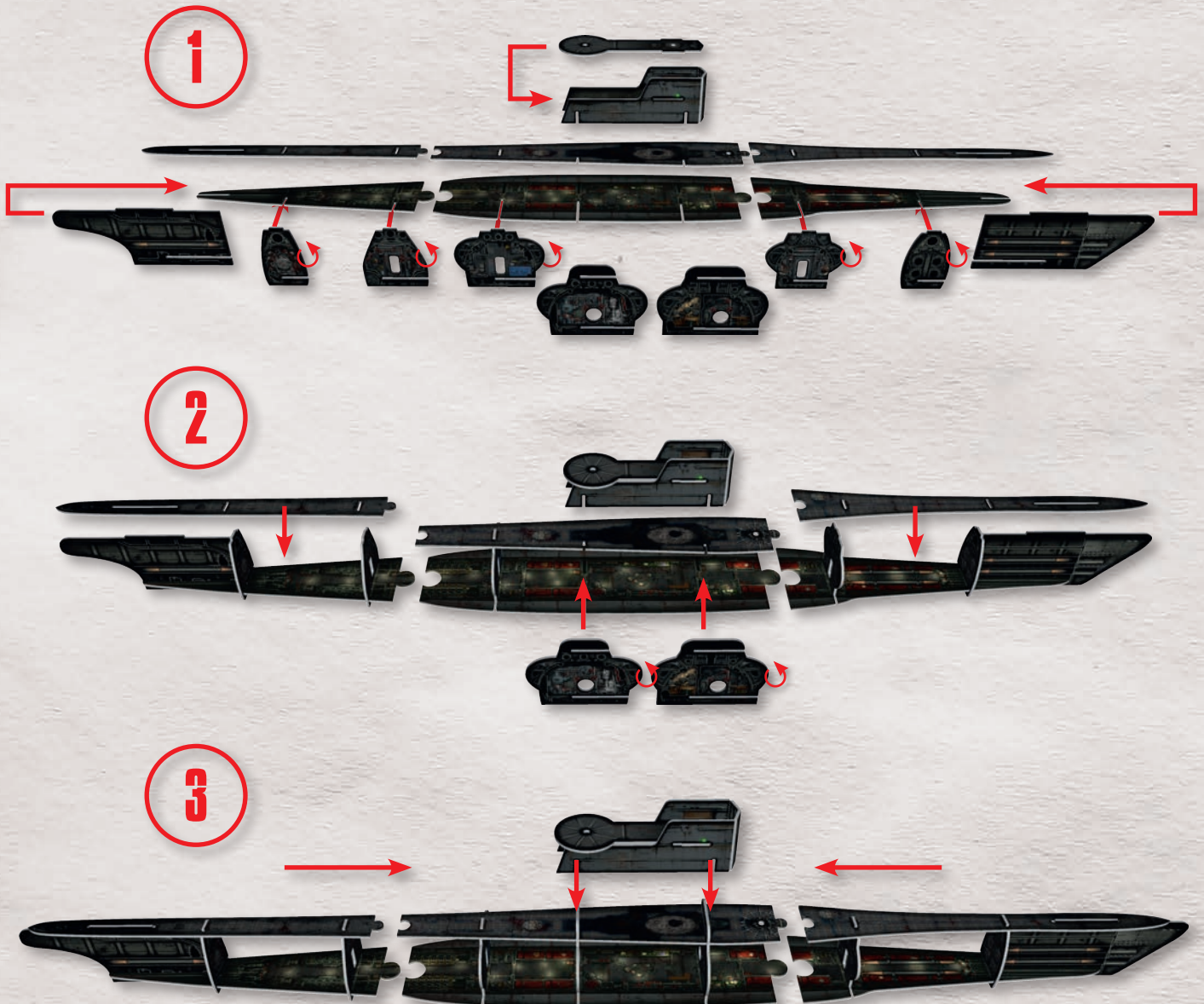
The Campaign Mode will take you through all the missions in the game. The app will save your progress between missions, as well as track your renown,

GRT, and your evaluations for each mission. All missions featuring the linked mission mode will be played in accordance with linked mission rules. On top of that, you will need to achieve at least an 'E' at the end of a mission to advance to the next one.

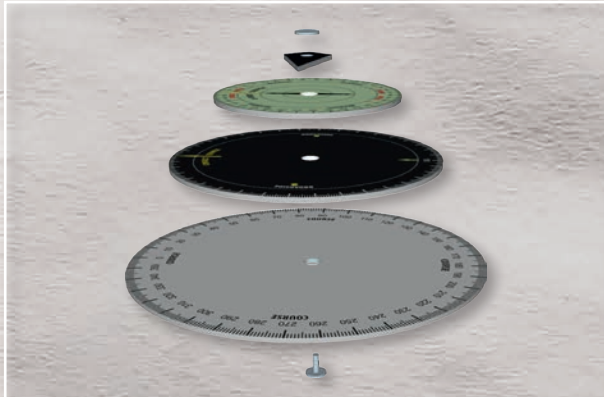
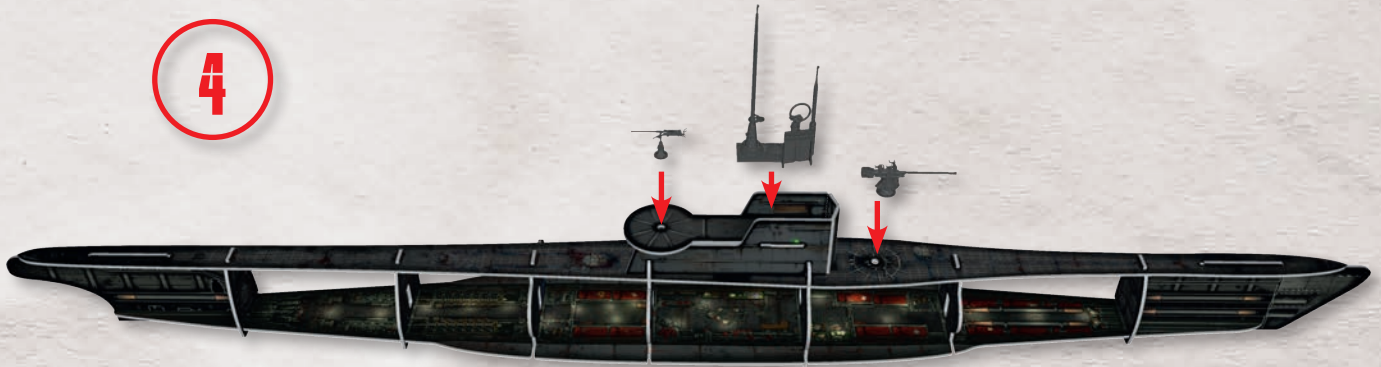
After you complete the campaign, the app will compute your final campaign score. If you have sunk enough GRT and performed well, you may find yourself among the greatest aces of the U-Bootwaffe!

5. SETTING UP THE GAME

Before your first game, assemble the 3D U-boat model, the Attack Disk and the Chief Engineer's player panel as shown in the diagrams below:



4



Please note that the black disk is double-sided. One of its sides has numbers in red and green, while the other side doesn't. The side with the numbers is recommended for experienced navigators, as it is mostly used on hard difficulty. The side without the numbers is recommended for beginner navigators, as the additional information could needlessly confuse them. Please bear that in mind when assembling your Attack Disk.

Place the disks on top of each other as shown in the diagram (with the largest at the bottom and the smallest on top). Place the arrow on top of the three disks. Now, thread the connector through the center and snap it together with its other half. Your Attack Disk is now ready!

Attach the depth gauge and engine room telegraph arms to the Chief Engineer's player panel as shown in the diagram:



Follow the steps below to set up the game:

1. Choose roles
2. Prepare game components
3. Choose game mode and difficulty levels
4. Read mission briefing

5.1. Choose roles

When choosing roles, you should consider the following recommendations:

- * **Captain** – for natural-born leaders and quick decision-makers.
- * **First Officer** – for players with solid communication and some software skills.
- * **Navigator** – for players with good spatial awareness (or sailing experience).
- * **Chief Engineer** – for players who excel at resource management and prioritizing.

If there are fewer than four players, then we recommend:

- * setting all difficulty levels in the app to easy or medium, especially when learning the game,
- * distributing the roles as follows:

3 Players

One of the players controls the Captain, as well as the Chief Engineer or the Navigator.

2 Players

One player controls the Captain and the Navigator, and the other player controls the First Officer and the Chief Engineer.

1 Player

One player takes on all four roles.

Those recommendations are not mandatory; as you gain experience, you may distribute the roles as you wish.

For ease of reading and clarity, the rules assume that four players are playing the game. The only difference when playing with fewer than four players is that all 'per player' rules and effects should be applied as 'per role'.

5.2. Prepare game components

1. Place the 3D model in the middle of the table and arrange the section cards on both sides, lining them up with the sections of the model as shown in the setup diagram (pp. 16–17).
2. Arrange the player panels as shown in the setup diagram.
3. Hand out each player's components:

The Captain

- * 4 sailor figures with white bases
- * Captain's panel
- * Captain's crew tile
- * Captain's player aid
- * 2 plastic order tokens
- * 3 decks of morale cards
- * 16 crew tokens
- * Cloth bag
- * Captain's cards
- * 12 Activation tokens
- * Captain's log sheet
- * 2 cigarette tokens

The First Officer

- * 4 sailor figures with blue bases
- * First Officer's panel
- * First Officer's crew tile
- * First Officer's player aid
- * Device running the companion app
- * Event cards
- * Wound cards
- * Medical supply tokens
- * Health condition tokens
- * KIA tokens
- * 12 Activation tokens
- * Medkit tokens (if campaign /linked mode)
- * Identification sheet
- * Enigma code sheet
- * 2 cigarette tokens

The Navigator

- * 4 sailor figures with green bases
- * Navigator's panel
- * Navigator's crew tile
- * Navigator's player aid
- * Strategic Map
- * Attack Disk
- * Pencil, 360 protractor, and distance ruler
- * Provision tokens
- * 12 Observation tokens
- * U-boat marker, Enemy marker, and the remaining Tactical Map markers
- * 2 cigarette tokens

The Chief Engineer

- * 4 sailor figures with brown bases
- * Chief Engineer's panel
- * Chief Engineer's crew tile
- * Chief Engineer's player aid
- * Technical condition tokens (11 of each color)
- * Environmental condition tokens
- * Flooded section token
- * Supply tokens
- * Toolbox markers
- * Chief Engineer's cards
- * Technical puzzle pieces
- * 2 cigarette tokens

4. Shuffle and place all card decks as shown in the setup diagram. Specifically:

- * Divide the morale cards into three decks, shuffle each separately, and place them in their designated spaces on the Captain's panel.
- * Shuffle the event cards and place them in their designated space on the First Officer's panel.
- * Shuffle each wound card deck separately and place each deck near the First Officer's panel.
- * Place the Captain's cards near the Captain's panel.
- * Place the Chief Engineer's cards near the Chief Engineer's panel.

5. Place all tokens as shown in the setup diagram. Specifically:

- * Place crew tokens in the cloth bag (or other opaque container) next to the Captain's player panel.
 - * Shuffle all the provision tokens and place them face down on the Navigator's panel in the Food Supply box. Next, draw 6 tokens one by one from the Food Supply to fill the 'Available Products' pyramid from top to bottom, from left to right on each row.
 - * Place all the medical supply tokens on the medkit space on the First Officer's panel. If playing in Linked Mission or Campaign Mode, add one medkit token for each additional mission you wish to play after the first mission.
 - * Place all the Health Condition and KIA tokens within reach of the First Officer.
 - * Place the supply tokens and toolboxes on the Technical View. Place one of the toolboxes in section 2, and the other in section 4. The supply tokens are placed however you wish in sections from 1 to 6, maximum one token per section.
 - * Each player places 2 Cigarette tokens near their player panel.
6. Place the sailor figures on the 3D model as shown in the sailor starting setup.
 7. Place all the remaining components according to the setup diagram (p. 16-17), using player aids for reference.



Sailor Starting Setup

SECTION 4
(Crew's Quarters)



SECTION 3
(The Control Room)



SECTION 2
(Officers' Quarters)



SECTION 1
(The Bow Section)



5.3. Choose game mode and difficulty levels

Launch the app on your device and choose the desired game mode and mission. Next, follow the in-app instructions and proceed to difficulty settings. Each player now selects the difficulty level for their role(s) as they see fit. The app menu allows each player to choose their preferred level, listing all the game-play differences between them. The app will also guide each player how to complete their setup. After each player selects their difficulty level, players can proceed with the next step.

5.4. Read mission briefing

Read the mission briefing in the app. It contains everything you need to know about your mission objectives. Once everyone is ready, the First Officer can press the 'Start Mission' button.

SETUP DIAGRAM



1. 3D model and Hull Section cards
2. Device running the app
3. Event cards
4. KIA and health condition tokens
5. Activation tokens
6. The First Officer's crew tile
7. Wound cards
8. Medical supply tokens
9. The First Officer's panel

10. Tactical map markers
(plastic and cardboard)
11. Observation tokens
12. Provision tokens
13. The Navigator's crew tile
14. The Navigator's panel
15. Pencil
16. Strategic map
17. 360 protractor and ruler
18. Attack Disk
19. Cloth bag with crew tokens
20. The Captain's cards
21. Captain's Log
22. Captain's Log
23. Captain's Log
24. Captain's Log
25. Captain's Log
26. Captain's Log
27. Captain's Log
28. Captain's Log
29. Captain's Log
30. Captain's Log
31. Captain's Log
32. Captain's Log
33. Captain's Log
34. Captain's Log
35. Captain's Log
36. Captain's Log
37. Captain's Log
38. Captain's Log



21. The Captain's panel
22. Order tokens
23. The Captain's crew tile
24. Morale cards
25. The Chief Engineer's panel
26. The Chief Engineer's crew tile
27. Technical condition tokens
28. Environmental condition tokens
29. Flooded section token
30. Supply tokens
31. Toolbox (I)
32. Toolbox (II)

33. Technical Puzzle pieces
34. Sailor figures
35. Cigarette tokens
36. Enigma code sheet
37. Identification Sheet
38. Captain's Log Chart
39. The Chief Engineer's cards

6. CORE RULES

6.1. Player Responsibilities

Each player:

- * controls four sailor figures in their own color and may move only their own figures.
- * is responsible for carrying out orders printed on their player aid.
- * may use their sailors to help another player carry out their order.

6.2. Sailors

Players move their sailors around the U-boat to carry out orders.

- * The sailors are represented by plastic figures. The figures' base shapes and colors correspond with those on the players' crew tiles.
- * Each player controls two watches of 4 sailors each. Only one watch of figures is available to a player at a time. This is represented by double-sided crew tiles: one side shows the first watch, and the other side shows the second watch.
- * For the first watch (beginning of the game), the crew tiles are placed on the player panels as shown below.
- * The watch currently on duty is called the active watch. The other watch is called the inactive watch.

- * Unless explicitly stated otherwise, all game effects apply only to the active watch. Please remember this when resolving card effects.
- * Each sailor has two specialization icons printed in his sailor space on the crew tile, and three activation spaces on the player panel. The sailor spaces on the crew tile align with the activation spaces on the player panel.
- * Specializations allow sailors to carry out orders more efficiently. All the specialization icons are listed beside (p. 19).

6.3. Basic Gameplay Elements: Mobilization and other orders

During the game, the Captain issues orders to other players. There are many orders that allow sailors to do various things, but there is also one order which allows them to move around the U-boat.

That order is called 'Mobilization.' It is a special order with its own rules, since any number of sailors move to new locations in the U-boat, instead of specific sailors doing a specific task at their current location. Regardless, Mobilization is an order and it is paid for in the exact same way as all the other orders.



SPECIALIZATION ICONS

	Periscope		Meal preparation
	Address the crew		Hydrophone
	TDC		Enigma
	Reload tubes		First aid
	Flood/Fire torpedoes		Repair
	Observation		Ballast tanks
	Sextant		Helm
	20mm gun		Engines
	80mm gun		

6.4. Mobilization

Mobilization must follow the sequence below:

1. Pay for the order and announce Mobilization.
2. Move sailors.
3. Resolve crew damage (if necessary).
4. End Mobilization.

- * The Captain mobilizes the crew to enable players to move their sailors around the U-boat.
- * The Captain must pay for the order by moving the order token on the Order Track to the right by one space for each announced Mobilization. This cost must be paid before players can move their sailors.
- * Do not activate the sailors who are mobilizing.
- * Any number of sailors can be moved during a single Mobilization.
- * Sailors can move from any number of starting sections to any number of destination sections which are connected by an unbroken chain of adjacent sections. **Sailors cannot enter or move through flooded sections.** See section 10.3.6 'Hull Breach' for details.

- * The lower sections 1, 2, 3, 4, 5, 6 are mutually adjacent in a long row. The upper sections 7 and 8 are adjacent to each other. Sections 3 and 8 are adjacent only when the U-boat is surfaced. While the U-boat is underwater, sailors cannot move between sections 3 and 8.
- * Orders can never be issued or carried out during Mobilization. Only after Mobilization is finished can orders be issued and carried out again. See 'ending Mobilization' for details.
- * Mobilization also allows the Chief Engineer to reposition their resource tokens (i.e. toolboxes and supplies). Any sailor moving from or through a section with a resource token may take it with him and place it in any section he moves into or through.
- * Both the Chief Engineer's and other players' sailors may move resource tokens.
- * A given sailor can move only one resource token per Mobilization.

Hazardous sections



A section becomes hazardous when there is a fire, toxic gas, or electrical hazard token placed in it.

- * Sailors may move into, through, and out of hazardous sections.
- * After finishing movement, resolve crew damage for each hazardous section. Sailors who moved into or through a hazardous section and all sailors remaining in that section after movement has finished are affected by its environmental condition effects simultaneously. See section 6.12. 'Resolving crew damage' for details.

Ending Mobilization

- * Once all sailors have finished moving and resolved crew damage (if necessary), the Captain must receive a verbal confirmation from each player.
- * Once all the players involved have confirmed their readiness, it means the end of the current Mobilization. Once that has happened, no sailors can move until the Captain announces another Mobilization.

The sailors are in their starting positions and the Captain announces Mobilization to maneuvering stations: 'Crew mobilize! Engines, ballasts, helm, observers, man your stations!'

1



The sailors have repositioned in accordance with the Captain's orders. The observers are all on the bridge, the engine and ballast crew, as well as helmsmen are all in position. The crew is now ready to carry out orders.

2



The Captain then asks: 'Crew in position?' and the remaining players confirm with 'yes sir!', 'jawohl, Herr Kaleun!', or any other way they wish. This is the end of Mobilization.

6.5. Carrying out orders

Carrying out orders must follow the sequence below:

1. Pay for the order and issue the order.
2. Select the order in the app (if necessary).
3. Confirm verbally whether sailors are in position.
4. Activate the sailor(s) carrying out the order.
5. Carry out the order (in the app if necessary).

* The Captain must pay for the order by moving the order token on the Order

Track to the right by one space for each issued order.

* Each order has requirements which must be fulfilled before the order can be carried out. To fulfill the specific order requirements, the sailor(s) carrying out the order must:

- be present in the specified section(s).
- collectively match the number of specialization icons required by the order.

* **All sailors carrying out an order must be activated** (see section 6.6. 'Activation' for details). If a sailor does not have enough empty activation spaces, he cannot be activated and cannot carry out the given order.

- * Sailors without a required specialization icon may carry out the given order, but each such sailor receives one additional activation token per activation. These sailors count as each having one icon required by the order.
- * Some orders allow a sailor to be activated more than once per order,

i.e. 'First Aid', 'Enigma', 'Prepare Meal', and 'Fire Torpedoes'.

- * Players should collectively confirm their sailors are ready to complete the order. If they are, the order is carried out. If necessary, the First Officer executes the order in the app.

The available orders are listed below:

Maneuvering

ORDER	SECTION(S)	REQUIREMENTS
New Speed	5 (diesels) or 6 (e-motors)	 
New Course	3	 
New Depth	3	   
Dive/Resurface	3, 5, 6	     

Armament

ORDER	SECTION(S)	REQUIREMENTS
TDC	3	
Flood Tubes	1 and/or 6	
Fire Torpedoes	1 and/or 6	
Reload a Torpedo	1 or 6	  
88mm gun	7	  
20mm gun	8	 

Safety and Crew Management

ORDER	SECTION(S)	REQUIREMENTS
Repairs	any	depend on repair type*
First Aid	any	
Address the Crew	3	
Prepare Meal	4	
Mobilize	all sections	none

Targeting, navigation and mission intel

ORDER	SECTION(S)	REQUIREMENTS
Assign Observation Sectors	8	max 6x 
Periscope	3	
Hydrophone	2	
Sextant	8	
Enigma	2	

*Technical condition: app repair menu

Environmental condition:  +required supply token

Hull Breach:     



Two helmsman are already in position when the Captain decides to change course.



He pays for the order and issues the order: 'New course: 330 degrees'.



The First Officer activates the sailors carrying out the order.

The First Officer quickly selects the order in the app and sets the given course. The app always asks whether the crew is in position. In this case, these are the First Officer's sailors, so there is no need to confirm with the other players.

6.6. Activation

- * Each time a sailor carries out an order, he is activated. Activation can also result from card effects.
- * To activate a sailor, place an activation token (or any other token with its activation side up) in that sailor's empty activation space.
- * If a sailor does not have a required specialization icon for an order, then he must have space for two activation tokens.
- * A sailor without enough empty activation spaces cannot be activated.
- * A sailor can never have more than three activation tokens.
- * When placing a token in a sailor's activation space, make sure you place it on the corresponding edge of the panel (top or bottom edge, for whichever watch is currently active) and in an empty activation space from among the three activation spaces aligned with the particular sailor space on the crew tile.
- * If you ever run out of activation tokens, use suitable substitutes instead.



The First Officer has not yet carried out an order this watch, so all his activation spaces are empty. The Radio-man has already carried out three orders and cannot carry out any more as all his activation spaces are taken. The two helmsmen on the right have performed one course change, so each of them has a single order token.

- * Players can remove activation tokens from sailors when they rest.
- * Sailors rest when the watch changes. A watch change occurs at 0600, 1200, 1800, and 0000.
- * A watch change is indicated by the app with a bell sound. See section 6.8. 'The Watch System' for details.

6.7. Busy Sailors

- * Observation and repairing technical conditions differ from other orders in that they take place over a longer time period, and sailors carrying out these orders are activated using the corresponding observation or technical condition tokens instead of regular activation tokens.
- * Observation and technical condition tokens are double-sided and have an activation icon on their back side. Make sure to flip such tokens to their activation side once the order in progress has been carried out or stopped.
- * To activate a sailor for an observation or Repair order, take the token corresponding with the order being carried out, placing it in an activation space the same way you would normally place an activation token, but with the order side up (e.g. if the sailor is repairing a technical condition, then place a technical condition token of the matching color with the wrench side up in an empty activation space on the player's panel). This is to show that a given sailor is busy.
- * **If a busy sailor moves, he immediately stops carrying out his order.** Flip his 'busy' token to its activation side and update the repairs or observation in the app.
- * A busy sailor may carry out orders **in his current section** without flipping his 'busy' order token to its activation side. However, a sailor can never carry out two 'busy' orders at the same time.
- * When activating sailors for observation or repairs, remember to place one additional activation token in an activation space of a sailor who doesn't have the required specialization icon in his sailor space.
- * If a busy sailor dies or can no longer participate in carrying out the order, update the order information in the app as soon as possible.
- * Updating order information in the app may result in finishing observation or pausing repairs. For details, please see 8.3. and 9.3. 'Observers on the bridge' and 10.3.2. 'Repairing technical conditions'.



The three sailors with technical condition tokens are busy, having been ordered to repair a technical condition. They have been activated using the appropriately colored technical condition tokens.



When the sailors finish repairs or move, the technical condition tokens are flipped to their activation side.

6.8. The Watch System

Changing the watch must follow the sequence below:

1. Adjust the Order Track.
2. Resolve crew damage (if necessary).
3. Manage tokens and flip crew tiles.
4. Return or remove KIAs (if necessary).

The watch changes over at 0600, 1200, 1800 and 0000. At those times the active watch becomes inactive and vice versa. The app announces the change with a bell. When players hear this bell:

- * The captain adjusts the Order Track by moving the order token to the left by 3, 4, or 5 spaces, depending on the chosen difficulty level. The order token can never go further to the left than space VIII of the Order Track.
- * Players resolve crew damage from all hazardous environmental conditions. See section 6.12. 'Resolving crew damage' for details.

- * Each player then discards one activation token from each sailor of the active watch.
- * If a sailor has a busy token in his space, transfer the busy token to the next watch sailor on the opposite side of the panel. **If you transfer a sailor's busy token, then do not discard an activation token from that sailor.**
- * Place the transferred busy token in an empty activation space of the sailor's next-watch counterpart. (the sailor's colleague is taking over his duties).
- * Incoming watch sailors who have received a transferred token and do not have the required specialization icon take an additional activation token.
- * If there are not enough empty activation spaces or the next-watch counterpart is KIA, then the sailor cannot take over and the observation or Repair order in the app must be updated as soon as possible.



The sailors on the left are carrying out repairs, and the sailors on the right have one activation token each. It is now time for the other watch to take over.



The technical condition tokens are transferred to the new watch, while activation tokens are discarded (maximum one per sailor).

- * If a sailor has a health condition AND the required medical supplies have been placed on the health condition card, then you can discard one of the health condition tokens resulting from this card instead of an activation token. This health condition token is discarded **EVEN IF** you have already transferred a busy token.



The sailors on the right each have a Health Condition, but only one of them has received the required treatment.



When the other watch takes over, only sailors who received their required medications can get rid of health condition tokens (one per sailor).

- * The First Officer updates the observation and repair values in the app if they have changed for any reason (including when sailors from the incoming watch cannot continue orders due to lack of enough free activation spaces, or being KIA).
- * Flip the crew tile over once you are done with updating the tokens. The new watch is now active.
- * If any sailors are KIA, sailor figures may need to be returned to or removed from the 3D model at the end of a watch changeover. See section 6.10. 'KIA' for details.

OPTIONAL RULE – Simple watch change

Players who have chosen easy difficulty may slide their crew tiles instead of flipping them when changing the watch. This makes for an easier game with fewer Mobilizations necessary.

DESIGNER NOTE: the differences in specialization icon allocation between the watches mean that the crew has to mobilize before they can resume duty after a watch change. Although it might seem like an abstract mechanic, it attempts to portray the logistics part of the watch change process without complicating the rules too much.

6.9. Health

- * Assigning a health condition card to a sailor indicates that he is sick or wounded.
- * Health condition cards are found among event cards, morale cards, and wound cards.
- * Health condition cards have an information bar at the top and bottom. When a sailor is assigned a health condition card, tuck it under the affected sailor's activation space, leaving the top or bottom information bar visible.
- * The information bars list a card's effects on a sailor, as well as the medical supplies required to treat it. When counting the number of icons, use only one bar, not both.



The bottom bar of a health condition card.

- * The information bar may contain activation icons (silhouette), fatigue icons (head with gear), wound icons (red cross), or special effect icons (exclamation mark).
- * When a health condition card is assigned to a sailor, take a corresponding wound, fatigue or activa-

tion token for each wound, fatigue and activation symbol on the card and place them in the affected sailor's activation spaces.

- * If there are not enough spaces, then discard enough activation tokens to place all tokens listed on the card. Wound tokens must be placed first, followed by fatigue tokens, with activation tokens placed last. Any excess fatigue and activation tokens are ignored and have no effect.
- * 'Busy' tokens should only be discarded if there are no activation tokens left to discard. If a 'busy' token is discarded, the sailor stops carrying out the order, and it must be updated in the app as quickly as possible.



One of the sailors is already fully activated when he becomes wounded and receives the corresponding health condition card.



The health condition card requires placing a wound token and a fatigue token, so two of his activation tokens must be removed to make enough space.

- * Some health condition cards prevent a sailor from carrying out a particular order. Such cards contain that particular order icon with a prohibitive sign (red circle with slash) over it.
- * Some health condition cards contain a ! icon. Its effect is explained

on the card. This effect is active for as long as the card is assigned to a sailor.

- * Health condition tokens remain in effect until they are treated. See section 8.6. 'First Aid' for details.

6.10. KIA

- * If a sailor receives a second wound token, then he is dead and removed from the game. Place a KIA token in one of his activation spaces and remove his figure from the 3D model, placing it in the corresponding sailor space on the crew tile. This sailor is no longer a part of the game.
- * If a KIA sailor's counterpart is still alive, then when a watch change brings the live counterpart back into play, return the figure to the 3D model in a freely chosen section. This is done at the end of the watch change. Do not resolve crew damage on a sailor returned in this way to a hazardous section.
- * Similarly, when a watch change would bring a KIA sailor back on duty, remove their figure again.
- * **Each time a sailor becomes KIA, the Captain must decrease morale by two.**
- * All sailors in Section 7 and 8 become KIA after the U-boat dives. **Morale cannot decrease by more than six when that happens.**



During a watch change, the oncoming watch has a sailor who is KIA. The player controlling this sailor removes his figure from the 3D model and puts it on the crew tile. Once the watch changes again, this will help the player remember to return the figure to the 3D model.

6.11. Repairs

The U-boat may suffer a variety of malfunctions and damage. The Chief Engineer manages repairs. There are three categories of problems which a 'Repair' order can resolve:

Technical Conditions



Technical conditions represent various components of the U-boat requiring maintenance or repairs. They will increase in severity with time if left unattended. See section 10.3.1. 'Technical conditions' for details.

Environmental Conditions



Environmental conditions directly influence the crew's health, morale, and performance. They are placed on the Technical View and must be dealt with using the appropriate supplies. Three of them (fire, electrical hazard, and toxic gas) cause sections to become hazardous and may require players to resolve crew damage.

It is the Chief Engineer's responsibility to monitor the Technical View and remind other players to resolve crew damage. See section 6.12. 'Resolving crew damage', and section 10.3.4. 'Environmental conditions' for details. When the crew is exhausted, environmental conditions become a deadly threat.

Hull Breaches

A breached hull is the most severe type of failure on a submarine. The integrity of the pressure hull has been compromised and the U-boat is taking on water. Each time a hull breach occurs, a countdown starts in the app; this is how much time the players have to seal the breach. See section 10.3.6. 'Hull Breach' for details.

6.12. Resolving Crew Damage

Crew damage must be resolved when sailors become exposed to environmental conditions or enemy attacks. Sections with fire, toxic gas, or electrical hazard tokens are called 'hazardous sections'.

Resolve crew damage when:

- * A fire, electrical hazard, or toxic gas environmental condition token is placed in a section where there are any sailors. The section becomes hazardous.
- * Any sailors move into or through a hazardous section.
- * Any sailors are located in a hazardous section at the end of a Mobilization or when a watch changeover begins.
- * The app instructs the players to resolve crew damage as a result of enemy attack.

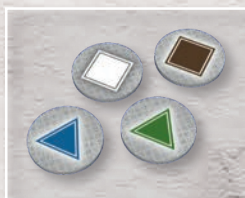
Resolve crew damage as follows:

- * The Captain draws as many crew tokens as there are sailors in the affected section.
- * If any of the tokens drawn match any of the sailors there, then those unlucky sailors become wounded. The First Officer draws and assigns a wound card of the indicated type for each unlucky sailor. Fire causes burns, electrical hazard causes electric shock, toxic gas causes poisoning, and enemy attacks cause gunshot wounds.
- * When resolving crew damage during a Mobilization, it is resolved simultaneously for all sailors who have moved into or through a section during this Mobilization together with sailors who remain in that section after movement has been completed. Make sure to include all of the above sailors when counting the number of crew tokens to be drawn when resolving crew damage in that section. Sailors who have moved out of a section are not affected by its environmental conditions.
- * Draw and assign wound cards to sailors one by one in the order of your choice. Do not reveal a wound card before choosing which sailor to assign it to.

- * Resolve crew damage from each token type per section in the order of your choice. If there are multiple environmental condition tokens of **various types** in a section, the sailors will be affected multiple times.
- * If there are multiple environmental condition tokens of **the same type** in a section, then draw as many crew tokens per affected sailor as there are tokens of that type (e.g. if there are two 'fire' tokens and three sailors, then draw two crew tokens per sailor for a total of six tokens).
- * When resolving crew damage in **Section 7 and Section 8**, these sections are treated as one section (i.e. all sailors located outside are affected by crew damage from enemy attacks).



A Fire token has just been placed in Section 5. There are four sailors in that section...



...so the Captain draws four crew tokens. Unfortunately, one of the sailors from Section 5 is among them! The fire has burned the sailor

with the brown square base.



This sailor receives a wound card from the 'Burns' deck. The card shows that the player must now place a wound token and an activation token in that sailor's activation spaces.

6.13. Cigarettes



Each player receives 2 cigarette tokens during setup. They can be used to alleviate crew stress.

- * A player who has at least one of their sailors in sections 7 or 8 can discard one cigarette token.
- * This enables up to four sailors (not necessarily that player's) in Sections 7 and 8 to each discard one activation token (but no other token type) from their activation spaces.
- * Smoking can be done only once per watch, but players can collectively discard more than one cigarette token during that smoking break. Each discarded cigarette token allows up to four sailors in Sections 7 and 8 to each discard one activation token. Any excess has no effect.
- * The player discarding a cigarette token decides which sailors benefit from its effect.
- * A given sailor may discard only one activation token during a smoking break.
- * Smoking is not an order, and it is completely cost-free.

6.14. Timing Conflicts

Due to the real-time nature of the game, there might be situations where several things happen within a close timeframe. It might also happen that a player is required to draw and resolve cards while they are preoccupied with more pressing issues. Whenever this happens:

- * Resolving event, morale, and wound cards may be postponed until the Captain has stopped issuing orders. The cards are nonetheless drawn as normal, but placed face down within easy reach until they can be resolved.

- * All such pending cards must be resolved **as quickly as possible** once the Captain pauses and is not issuing orders.
- * The First Officer should remind players of any pending issues in the app. Regular checks of the last few entries in the app's information feed are recommended, especially after a moment of intense action.
- * If there is any doubt or disagreement regarding the timing or order of dealing with pending issues, then the Captain decides how to resolve it.
- * Certain player activities (such as plotting the course) are not orders and are completely cost-free. These activities may be performed any time.

Making mistakes

If you have forgotten to resolve a card, some other game effect, or anything else you should have done, then do your best to correct it. This is not a big deal. The game runs in real-time and there are various things to remember, so it might happen that you occasionally forget something (especially during your first games).

If you realize you have omitted something, then correct your mistake and carry on with the game. As long as you don't intentionally cheat, then everything is fine – what matters is that you enjoy the game.

In any case, follow this principle:

- * **Always finish carrying out one order or resolving one game effect before moving on to the next.**

If, for example, you get caught off guard by an air patrol while changing the watch, then you must continue with changing the watch, and only after finishing changing the watch should you resolve the air patrol (applying its effects to the new watch).

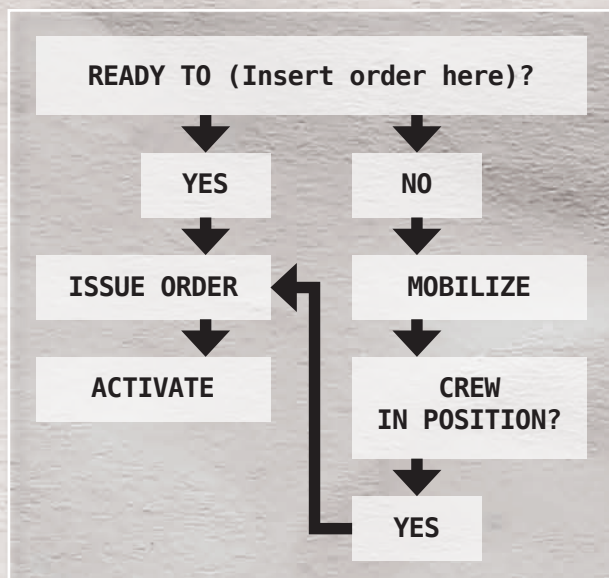
DESIGNER NOTE: if you find any part of the game too quick (even on the slowest time setting), you can always hit the pause button. Overdoing it will hurt the pace and the mood of the game, but it is up to you to decide.

7. THE CAPTAIN

Playing as the Captain is one of the most demanding tasks in the game. It requires strategic planning, leadership skills, and at least a basic understanding of WWII U-boat tactics. The Captain is responsible for commanding the crew, tracking morale, and executing torpedo attacks. To get started, read the section below on how to issue orders to fellow players. For a detailed explanation on how to conduct successful U-boat operations, please consult the Tactical Guide included with the game.

7.1. Commanding the Crew

The Captain either mobilizes the crew or issues other orders. Mobilization lets the crew move, typically to sections where they will fulfil subsequent orders. Each captain will have their own style and can issue orders however they like. The flowchart below should help a new Captain determine when to mobilize the crew and when to issue other orders.



Let's assume that the Captain wishes to dive the U-Boat. They begin by making sure the crew is ready:

CAPTAIN: Ready to dive?

CHIEF ENGINEER: Ballast not ready.

CAPTAIN: Alright, everybody mobilize. Diving stations!

(The Chief Engineer repositions his ballast crew to assume positions in the Control Room)

CAPTAIN: Everybody in position?

CHIEF ENGINEER: Yes sir!

CAPTAIN: Alright, dive to periscope depth.

DESIGNER NOTE: A more experienced Captain can check himself whether everybody is in position and announce Mobilization or issue other orders straight away. That will speed up the process, but also require more attention from the Captain. Sticking to the above diagram is not mandatory, but it's a good idea to keep it in mind if the Captain does not have a clear idea of how to command the crew.

7.2. The Order Track

- * The Order Track has 9 spaces, starting with VIII and ending with a blank space.
- * The Captain pays for an order by moving the order token to the right on the Order Track. Each order costs one space on the Order Track.



So far, the Captain has announced Mobilization once, and then issued two orders.

- * The order token starts the game in space VIII of the Order Track. When the order token has reached the final (blank) space of the Order Track, the Captain must pay for further orders on the Morale Track. (See 'Morale Track' below for details).



The Captain has reached the end of the Order Track, and is now paying for orders on the Morale Track.

- * The First Officer should make sure that the Captain adjusts the Order Track each time the watch changes over. To adjust the order track, the Captain moves the order token to the left by the number of spaces determined by the chosen difficulty level. The exact number is given by the app during setup.
- * The Captain can use the Order Track to pay for orders whenever there are available spaces on the Order Track. If there are none, orders must be paid for on the Morale Track.



It is 0600 and the Captain has heard the bell. The Captain adjusts the Order Track in accordance with the chosen difficulty level.



7.3. The Morale Track

The Morale Track functions like the Order Track and is also marked with an order token.

- * The Morale Track has 12 spaces, starting with XI and ending with a blank space.
- * If there are no more available spaces on the Order Track, the Captain must pay for orders on the Morale Track by moving the order token one space to the right per order.
- * Morale decreases when the token moves to the right, and increases when it moves to the left.
- * Morale can increase or decrease due to other game effects, not just because of orders. Increase or decrease morale when instructed by cards, the app, or the rules.
- * When increasing morale, the order token can never go further to the left than space XI of the Morale Track or affect the Order Track in any way.
- * **Increase morale by three each time you sink an enemy vessel.**
- * **Decrease morale by two for each sailor who becomes KIA.**
- * Whenever the order token moves to the right and goes into or through space X, VIII, VI, IV, II or the final space of the Morale Track, the Captain must draw and resolve a morale card from the connected card deck space. This happens both when the Captain pays for an order and when the morale has decreased due to any other game effect.
- * Draw cards from the first deck for spaces X and VIII, from the second deck for spaces VI and IV, and from the third deck for space II and the final space of the track.
- * Do not draw morale cards when increasing morale.
- * If morale decreases so that the order token moves into or through more than one space that instructs the Captain to draw a morale card, then draw an appropriate card for each of the spaces and resolve them as soon as possible.
- * When resolving a morale card, assign it to a random sailor if instructed by the card, or resolve its effect and discard it to the bottom of its deck. Similarly if a sailor gets rid of a morale card which was assigned to him.



The Order token is already in the last available space of the Order Track, but the Captain still needs to issue an order. As a result, the morale decreases and the token moves to a space connected to a morale deck below. The Captain must draw a card from that morale deck.

- * Reaching the end of the Morale Track may have severe consequences. Once the order token on the Morale Track has reached its final space, the crew is exhausted. See next paragraph for details.
- * If both the token on the Order Track and the token on the Morale Track have reached the final (rightmost) spaces on their respective tracks, the Captain cannot issue orders until at least one space on either of the tracks becomes available.

7.4. Exhausted crew

Once the order token reaches the end of the Morale Track, the crew is exhausted and on the verge of breaking down. The Captain may still use the Order Track (as long as there are available spaces on it), but using the Morale Track to pay for orders is no longer possible.

The crew remains exhausted for as long as the order token remains in the final space of the Morale Track. This is an extremely dangerous situation, especially when under attack. If the U-boat sustains heavy damage which causes an environmental condition or a hull breach, an exhausted crew will not be able to handle the situation.

If an exhausted crew is faced with a new environmental condition or hull breach, they are unable to contain the threat. Despite their struggle, all sailors perish and the U-boat is sunk.

Remove the order token from the Morale Track and press 'all hands lost' in the app menu. The mission is immediately over and all players lose the game. **Please note that only environmental conditions and hull breaches can cause this to happen.** Any other game effects affecting morale (e.g. food, event cards, KIAs, etc.) **DO NOT** remove the order token from the Morale Track, allowing the game to continue.

DESIGNER NOTE: Thematically, this shows that sailors, no matter how well-trained and unrelenting, may ultimately reach a point when they can no longer keep on performing their duties. We chose the term 'morale' due to its broad meaning, but you could also consider deteriorating morale to represent 'combat stress' or 'exhaustion'. If the Captain takes good care of the crew, everything should stay fine. If, however, the Captain continuously drives them beyond their limits and exposes them to excessively stressful situations, they will ultimately lose their focus, discipline, or even sanity. Once that has happened, a sudden fire, leak, or any other unexpected crisis quickly becomes a death sentence.



The order token is already in the final space of the Morale Track. If the U-boat now sustains damage resulting in an environmental condition or hull breach, then there is no further space to move the order token to – it is removed from the Morale Track and it is GAME OVER.

7.5. Order List

All the available orders are detailed below. They have been organized into categories to help you learn more quickly. The list is also abbreviated on the Captain's player aid for quick reference.

- * Each order is the responsibility of one or more players. Their sailors may need to be mobilized before the order to be in position.
- * The assigned players ensure that the order is entirely completed before any other activity starts.
- * **The Captain must pay for each order that is issued.** This means **each time** you extend the periscope, use the hydrophone, etc.
- * For the purpose of all torpedo-related orders, please bear in mind that torpedo tubes 1 to 4 are located in Section 1, while tube 5 is located in Section 6. Therefore, if you wish to fire, flood, or reload the stern torpedo tube to have a shot at the enemies behind you, all of the above orders will have to be carried out in Section 6.

7.5.1. Maneuvering



x2

New Speed

Chief Engineer

Change the speed of the U-boat. The possible throttle settings are: Full Astern, Stop, Slow Ahead, Half Ahead, and Full Ahead.



x2

New Course

First Officer

Change course. Discuss each new course with the Navigator if time permits, or speak directly to the First Officer.



x2

Dive/Resurface

First Officer and Chief Engineer



x2



x2

Submerge or resurface. This is more complex than changing to a New Depth when already underwater, because this involves switching propulsion between diesels and electric motors. Note that Dive/Resurface and New Depth have different requirements.



x2



x2

New Depth

First Officer and Chief Engineer

Change depth when the U-boat is already underwater. This does not involve switching between diesels and electric motors. To resurface, the Dive/Resurface order must be used.

7.5.2. Targeting, Navigation and Mission Intel



max
6x

Assign Observation Sectors

Navigator

Sailors in Section 8 start observation.



Periscope

Captain

While the U-boat is at periscope depth (within 10 meters of the surface), enter the periscope first-person view.



Hydrophone

First Officer

While underwater, engage the hydrophone.



Sextant

Navigator

The Navigator confirms the U-boat's position on the Strategic Map. The U-boat must be surfaced and the sky must be clear.



Enigma

First Officer

The First Officer can send or receive messages to and from HQ.

7.5.3. Armament



TDC

Captain

Program the Torpedo Data Computer (open the torpedo attack menu in the app). The TDC must be programmed before launching torpedoes.



Flood Tubes

Captain

Flood as many torpedo tubes as you like in one order. This order requires only one activation, regardless of the number of tubes being flooded. Tubes must be flooded before launching torpedoes.



Fire Torpedoes

Captain

More than one sailor may participate in this order, and you can launch as many torpedoes as you

like (including a full salvo from the four bow tubes and the fifth tube at the stern). Each torpedo requires a sailor activation. A single sailor may launch more than one torpedo per order if he has enough activation spaces available.



x3

Reload a Torpedo

Captain

Reload one new torpedo into an empty tube (only one per order).



x3

88mm gun

First Officer

Fire the 88mm deck gun.



x2

20mm gun

Navigator

Fire the anti-aircraft gun.

7.5.4. Safety and Crew Management



Repairs

Chief Engineer

Repair technical and environmental conditions and Hull Breaches.



First Aid

First Officer

Deal with health conditions.



Address the crew

Captain

The Captain plays one Captain's card.



Prepare Meal

Navigator

The Navigator prepares food for the crew.

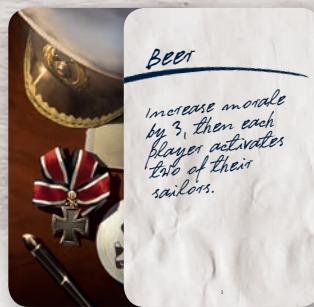
Mobilize - all officers

Players can move their sailors around the U-Boat. They should get into correct locations to fulfill subsequent orders.

7.6. Crew Tokens

- * Crew tokens are used whenever a sailor or is to be randomly selected for any game effect. These include event and morale card effects, as well as crew damage resulting from environmental conditions and enemy attacks.
- * When a card instructs you to 'assign this card to a random sailor', draw a random crew token and assign the card to the sailor whose symbol you drew.
- * When drawing crew tokens, remember that card effects cannot be resolved on KIA sailors. For example, if a morale or event card would affect a KIA sailor exclusively, it is discarded without effect (there is no sailor to resolve the effect on). If a card targets multiple sailors, non-KIA sailors are affected as normal.

7.7. The Captain's Cards



The Captain has a hand of Captain's cards. These cards represent special resources and abilities to influence the crew in various ways.

- * The Captain can play one card during each 'Address the crew' order. The order must be paid for and the Captain (or another sailor carrying out this order) must be activated as normal before applying the card's effects.
- * Return the card to the box after playing it.
- * The number of cards the Captain receives during setup depends on the chosen difficulty level.

DESIGNER NOTE: Captain's cards, especially those improving morale, are much more effective when paid for on the Order Track than on the Morale Track. Keep that in mind, so that you can use them to their fullest!

8. THE FIRST OFFICER

The First Officer is the Captain's second in command. The First Officer's main task is maintaining the flow of information and interacting with the app to enter orders and report events. They are also responsible for the helm, the Enigma, the 88mm deck gun, and keeping the crew healthy by providing first aid. On top of that, the First Officer is tasked with target identification. A lot of what the First Officer does is connected with the app, and is explained in detail in the in-app tutorial.

DESIGNER NOTE: it is important that the First Officer goes through the in-app tutorial at least once before their first game. Learning the app interface and its particular functions is much easier and more natural when using the device, and so we decided to move all the app details to the tutorial. Therefore, this rulebook only gives general information about app functions. To learn details, please use the in-app tutorial.

8.1. Companion App Basics

Main Screen

The Main Screen has the information feed (top), the maneuver buttons (left), target acquisition (center), and other options (right). This is where you will learn about all the threats and opportunities facing the U-boat.

Information feed (top)

This is the most important part of the main screen. The First Officer should always keep up to date with what's happening here. It is the primary source of information to which the crew must react, so **the First Officer should always report EVERYTHING they learn from the information feed to the other players.**

Maneuvering (left)

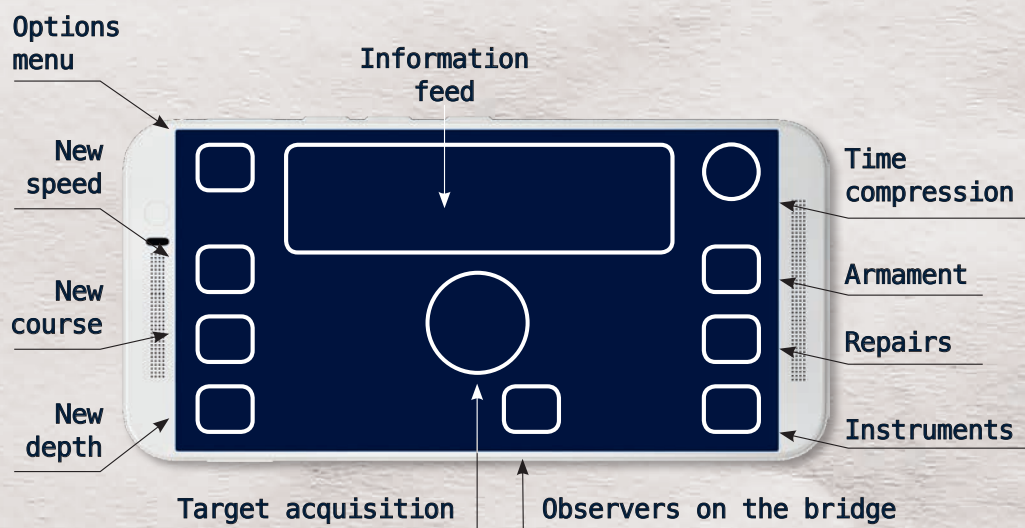
The three buttons on the left are maneuvering options: speed, course, and depth. Each option brings up the necessary controls to input new orders.

Target acquisition (center)

This area becomes very important once contacts have been detected. The First Officer checks contact information: bearing, course, and distance here. All these should be reported to the Navigator.

Other options (right)

The buttons on the right are for armament, repairs, and instruments. Armament lets you manage torpedoes and man the deck guns, while Repairs open the repair



menu. Instruments allow you to monitor battery charge levels, check for incoming and outgoing radio messages, as well as use the sextant.

Sharing the app

Other players may request access to the app, but they can do so only when sailors under their control are carrying out the order in question. For example, the Navigator might want to see the view from the bridge to get better situational awareness, the Captain may wish to fire torpedoes, or the Chief Engineer may need to look at the repair list. Don't forget to take the device back and check the Information Feed after they are finished using the app.

8.2. The First-Person View (FPV) and visual identification

The app lets you look through five distinct first-person views (FPV): observer view, periscope view, torpedo targeting (TDC) view, and the 88 and 20mm deck guns.

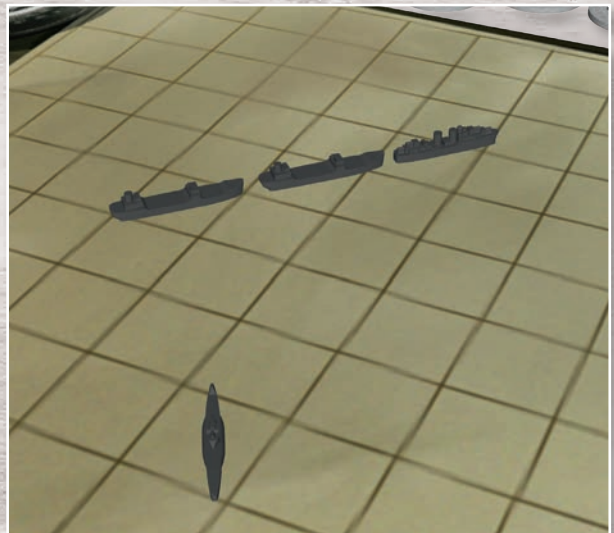
Looking at enemy units allows for visual identification of targets. It should always be performed before an attack takes place. It allows the Navigator to update the tactical map and the Captain to decide on which targets to attack. It can be done via observer or periscope view. Identification is not an order and is completely cost-free.

The First Officer should tell the Navigator how many escorts and merchants they see. The Navigator then replaces the enemy marker with the appropriate tactical map miniatures. This is the first step of visual identification.

Once the Navigator has updated the map, the First Officer should use the identification sheet to determine how much GRT each target is worth. Upon choosing a target (typically the heaviest), the First Officer should guide the Navigator to attack that target.



The First Officer looks through the binoculars and reports two merchant vessels (visible left and center in the example above) as well as one escort (on the right).



The Navigator replaces the enemy marker with the appropriate tactical map miniatures (two merchants and one escort).

8.3. Observers on the Bridge

- * When observers are in Section 8, the Captain can order them to watch their sectors and relay contact information. This gives access to the observer FPV.
- * Each of the participating sailors must be activated with an observation token.
- * Once observers have been activated, the First Officer inputs the number of observers in the app.
- * Each time the number of observers on duty changes, the Navigator must report the current number of observers to the First Officer. The higher the number (up to a maximum of 6), the more efficient the observation will be.
- * When there is at least one busy observer in Section 8, the First Officer can click on the binoculars button to

enter the observer FPV for a better picture of the tactical situation.

- * Entering the observer FPV is not an order and is completely cost-free.
- * While in observer FPV, you can access the TDC and the deck guns.

DESIGNER NOTE: As previously mentioned, details regarding app functionalities are explained in the in-app tutorial. This applies especially to the following section.

8.4. Other orders featuring app functionality

Periscope

At periscope depth (when the U-boat is submerged within 10 meters of the surface), this order allows entering the periscope FPV. The TDC view can also be engaged from periscope view.

Enigma

The app will inform the players if an incoming message has been received, or if an outgoing message can be sent. This order is used to decipher and encipher them, respectively. Messages can be accessed from the instruments menu by choosing 'Enigma'. Only one sailor may be activated by a single 'Enigma' order. However, that sailor may be activated multiple times per this order, with each activation allowing him to send or receive one message.

TDC

This order allows access to the TDC FPV by pressing the Attack button in either the periscope FPV or the observer FPV.

Deck guns

When the 88mm or the 20mm deck guns are to be fired, the gun crew must take their position (the 88mm is on the foredeck; the 20mm is on the bridge). Observers may use the 20mm gun WITHOUT stopping their observation.

Hydrophone

When the U-boat is submerged, the Hydrophone can be used to detect and track enemy vessels.

Sextant

If the U-boat is surfaced and the sky is clear, the app will reveal the U-boat's current square on the Strategic Map.

Repairing Technical Conditions

When asked by the Chief Engineer, the First Officer should check the repair list by pressing 'Repairs' on the main screen. When a 'Repair' order is issued, select the desired repair, input the number of sailors assigned by the Chief Engineer, and then confirm.

Repairing Environmental Conditions and Hull Breaches

Repairing environmental conditions does not require entering any information into the app. Hull breaches, on the other hand, will display clear instructions on the screen. Follow them and remember not to confirm anything before you are 100% sure.

Launching Torpedo Attacks

Torpedoes are launched from the TDC view, which can be engaged from the observer FPV or the periscope FPV. Press the red attack button and follow the Captain's orders.

Reloading Torpedoes

Select 'Armament' in the app and then click on an empty tube to reload it.

8.5. Time Compression

Setting the right time compression for the given situation is an important task entrusted to the First Officer. It should always be discussed with the Captain. There are 4 possible time compression settings:

- * **real-time** – perfect for combat situations or making difficult decisions
- * **action** – good for maneuvering or approaching the enemy
- * **fast-forward** – recommended when you plan to stalk a target for an extended time period
- * **transit** – suitable only for long distance travel

Changing time compression is not an order and is completely cost-free. In addition, time compression will automatically revert to real-time whenever a new message appears in the information feed.

8.6. First Aid

- * The First Aid order is not managed by the app.
- * A sailor activated to give First Aid must be in the same section as the sailor receiving treatment.
- * Only one sailor may be activated by a single 'First Aid' order. However, that sailor may treat multiple sailors located in his section, one sailor per activation.
- * Any number of health conditions may be treated per sailor at a time.
- * Each health condition card lists the medical supply tokens required to treat the condition. There are five kinds of medical supplies: pills, ointments, bandages, shots, and surgical instruments.
- * After the First Aid order has been given, treat the sailor by placing all the required medical supply tokens on the sailor's assigned health condition card(s).
- * Once a card has been treated, one health condition token resulting from it can be discarded instead of an activation token during a watch change. A health condition token is discarded EVEN IF a sailor has transferred a 'busy' token during the current watch change.
- * Once a sailor has no more health condition tokens resulting from a particular card, discard the health condition card they resulted from and the medical supply tokens used to treat it.

Running out of medical supplies

When playing a single mission, the First Officer's supplies are limited by the number of tokens in the medkit space located on their player panel. In linked missions, however, additional medkits can be opened to replenish the token supply. This is done by discarding a medkit token and returning all of the discarded medical supply tokens back to the medkit space. Using a medkit token is not an order and is completely cost-free.

8.7. Event cards

The app will signal when event cards are to be drawn. The First Officer must draw the top card from the event deck and resolve its effects. Some cards have an immediate effect, while others are added to the Captain's hand of cards and can be played during an 'Address the crew' order. Once an event card has been resolved, return it to the bottom of the event deck. The Captain's cards, including event cards added to the Captain's hand, are returned to the box after being played.

8.8. Wound cards

These cards comprise four decks and are assigned to sailors affected by crew damage. When resolving crew damage, wait for the Captain to draw Crew tokens. If any sailors should receive a wound, shuffle the appropriate wound card deck once, then draw and assign one card to each sailor receiving a wound. When discarding wound cards, discard them to the bottom of the appropriate wound card deck.

If you ever need to assign a wound card of a given type and there are no more cards of that type, then choose a different wound deck and draw a card as normal.



9. THE NAVIGATOR

The Navigator advises the Captain about steering the U-boat. This includes strategic plotting of transit routes to reach patrol areas, tactical maneuvering to acquire perfect firing angles on enemy contacts, and updating the Strategic and Tactical Maps. The Navigator is also responsible for observers and the crew's food consumption.

9.1. Strategic Navigation

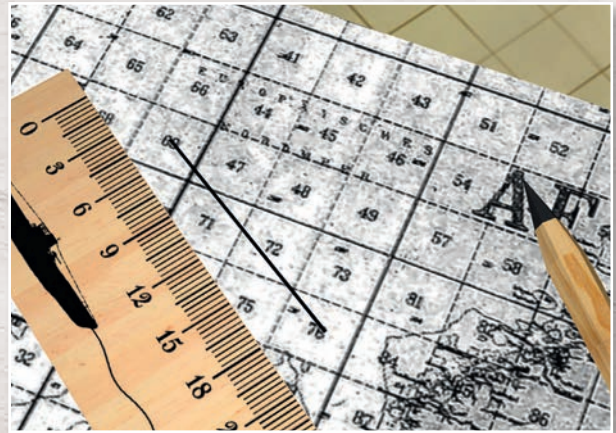
The Strategic Map is divided into squares, and the mission briefing always indicates the U-boat's starting square. Once the mission begins, the Navigator calculates the optimal route towards mission objectives. This is not an order and is completely cost-free.

In order to plot a course:

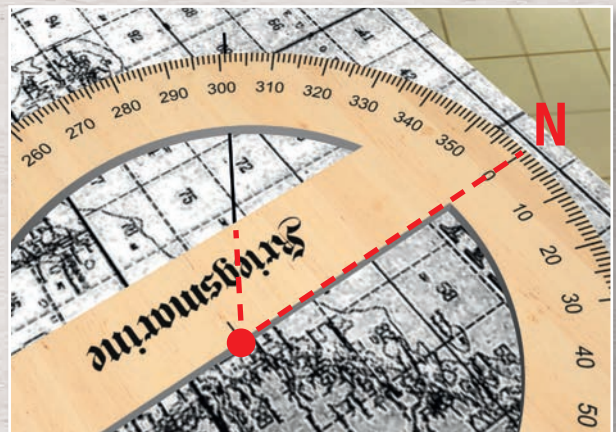
1. Confirm the current destination with the Captain.
2. Find the square where the U-boat is located.
3. Find the destination square and draw a line connecting the centers of the two squares.
4. Center the protractor over the line you have drawn and align 0/360 with the North. Read the result on the protractor – this is the course to the destination.
5. Report the course to the Captain and the First Officer.



The U-boat is located in AF76 (blue arrow) and the Navigator wishes to plot a course towards AE69 (red arrow).



The Navigator draws a line connecting the squares...

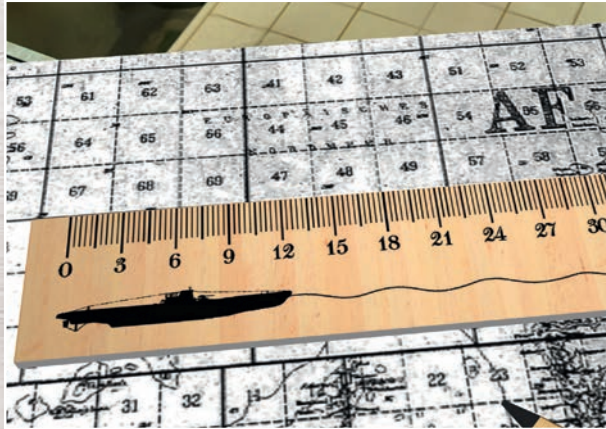


...and rotates the 360° protractor so that '0' is aligned North and the drawn line goes through the center of the protractor. The Navigator reads the result: the optimal course from AF76 to AE69 is 301 degrees.

DESIGNER NOTE: When playing as the Navigator, you can and you will get lost on the Strategic Map. This is no big deal and is a part of the experience. Remember that navigation was far less accurate during World War II than it is today, and navigation errors were very typical. Keep this in mind and don't try being too accurate. You can always blame the sea currents if the Captain gets mad at you...

9.1.1. The Distance Ruler

The ruler's scale equates to the U-Boat's 'Ahead-Full' speed on the Strategic Map (surfaced on one side, and submerged on the other). This permits a dead-reckoning of the U-Boat's position if the sextant is not an option. The submerged side may also be used to calculate distances covered by convoys, as many convoys traveled at roughly the speed of a submerged U-boat.



When held against the map, the ruler can be used as a time-to-distance converter. The above example shows that when starting from AE67 and traveling at full speed on the surface, it will take the U-boat roughly 9 hours to reach AE69, and about 24 hours to reach AF57.

9.1.2. The Sextant

The Sextant can help plot the U-Boat's accurate position. This order must be carried out in Section 8, so not when the U-boat is submerged. When carrying out the order, the First Officer checks the sextant in the 'Instruments' menu. Weather conditions may sometimes make it impossible to use the sextant.

9.2. Tactical Navigation

If you wish to play as the Navigator, study this section carefully. As soon as contacts are detected, tactical navigation becomes the Navigator's top priority. They will need to use the Attack Disk to work out the enemy's location and course. This information allows the Navigator to update the Tactical Map, which is a very important source of information for the Captain.

There are four parameters which must be taken into account when updating the Tactical Map:

- * **U-boat course** (the direction where the U-boat is heading)
- * **Enemy course** (the direction where the enemy is heading)
- * **Bearing** (the direction where the contact has been detected)
- * **Distance** (the distance between the U-boat and the contact)

9.2.1. Using the Attack Disk

The Attack Disk is the Navigator's best friend. To use it effectively, they must understand the difference between enemy bearing and course. Please note that **courses** (both of the U-boat and the enemy) relate to east, west, north, and south. They must be set based on the **white disk's values**.

Conversely, **bearing** is relative to the U-boat's bow (ahead of it, to the left, to the right, etc.) and must be set based on the **green disk's values**. Below you can find detailed descriptions of the first three tactical navigation parameters and how they should be marked on the Attack Disk:

U-boat course must be set with the green disk. The yellow arrow on the green disk must point to the current U-boat course value on the white disk.

Enemy course must be set with the black disk. The yellow arrow on the black disk must point to the current enemy course value on the white disk.

Enemy bearing must be set using the arrow on top of the Attack Disk. Bearing refers to the direction where the enemy is located. It is calculated in relation to the U-boat's bow. Bearing 0/360 means that the enemy is straight ahead, bearing 90 degrees means that the enemy is exactly to the right, bearing 180 degrees means that they are directly behind the U-boat, etc. Use the arrow on top of the Attack Disk to set the bearing using the values on the green disk.

Once the Navigator completes the above steps using the Attack Disk, they are ready to update the tactical map.

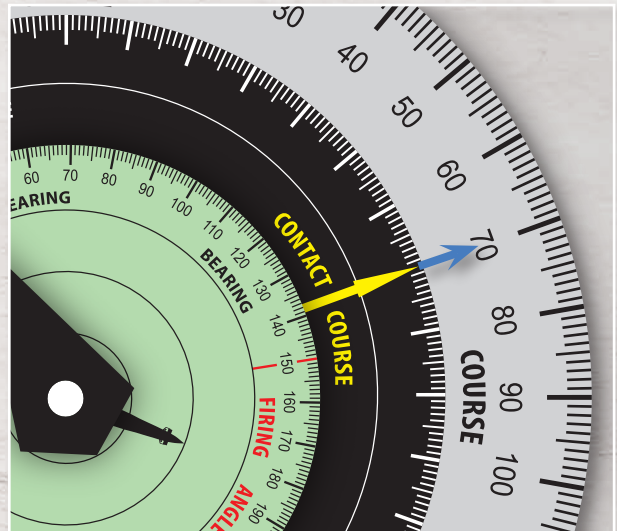
The U-boat is following course 290 (northwest) when the First Officer reports a contact: Bearing 40 degrees (ahead and to the right), distance four miles, course 70 degrees (northeast).



The Navigator starts with the green disk, making sure that its yellow arrow is pointing at the current U-boat course (290 degrees on the white disk).



He then turns the black arrow in the center to point towards the bearing value on the green disk.



He then turns the black disk so that its yellow arrow (enemy course) is pointing at 70 degrees on the white disk. The Navigator is now ready to update the tactical map.

DESIGNER NOTE: The Attack Disk may look intimidating at first, but once you understand it, it is very easy to use. If you don't confuse the enemy's bearing with their course, and you understand that bearing is relative to the U-boat's bow, while courses are absolute, then the rest is easy.

In addition, you can change the order in which you set the values on the Attack Disk: it doesn't matter if you set enemy course first, then update the U-boat course, and finally enemy bearing. The only thing that matters is for all three values to be in place. Work closely with the First Officer and agree on a cooperation scheme which will be effective for you both.

ONE LAST TIP: If you have already set a value on one of the disks, then it is a good idea to hold it down with your thumb so that you don't accidentally change it while you rotate the remaining parts of the tool. Good luck, and have fun lining up those perfect shots!

9.2.2. Updating the Tactical Map

The Tactical Map is a grid of squares, with each square representing one square mile. Once the Navigator has used the Attack Disk, they must place the U-boat

marker and the enemy marker on the Tactical Map in a way that recreates the current battlefield situation. This need not be a precise representation as the situation is constantly changing, but should allow all players to have a general view of the situation.

The Navigator can tell the relative orientation and facing of the markers by looking at the Attack Disk. The Navigator first lays down the U-boat marker, and then adjusts the position and facing of the enemy marker based on Attack Disk data. The final parameter is distance. The Navigator counts the number of squares between the U-boat marker and the enemy marker and corrects their po-

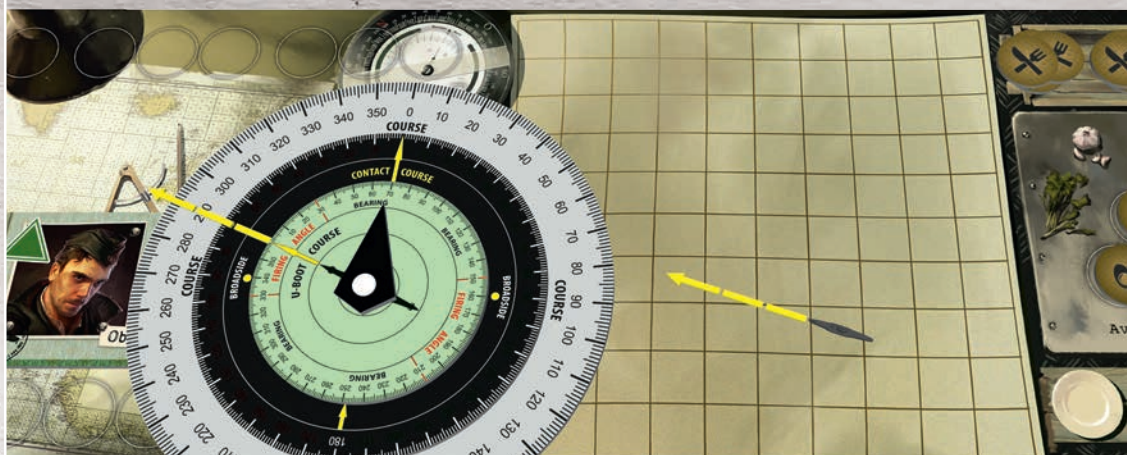
sitions. The Navigator then reports the situation to the Captain.

DESIGNER NOTE: You can orient the markers on the map in any way you like, as long as you roughly recreate the relative positioning and facing of the U-boat and the enemy. You can either assume that the farther end of the map is the North (and rotate the U-boat miniature accordingly), or you can always point the bow of the U-boat 'forward' and move the contacts around it as the situation develops. You could also use a combination of both methods.

The Navigator places the U-boat marker on the Tactical Map, and then places the enemy marker in a way that represents its location in relation to the U-boat.

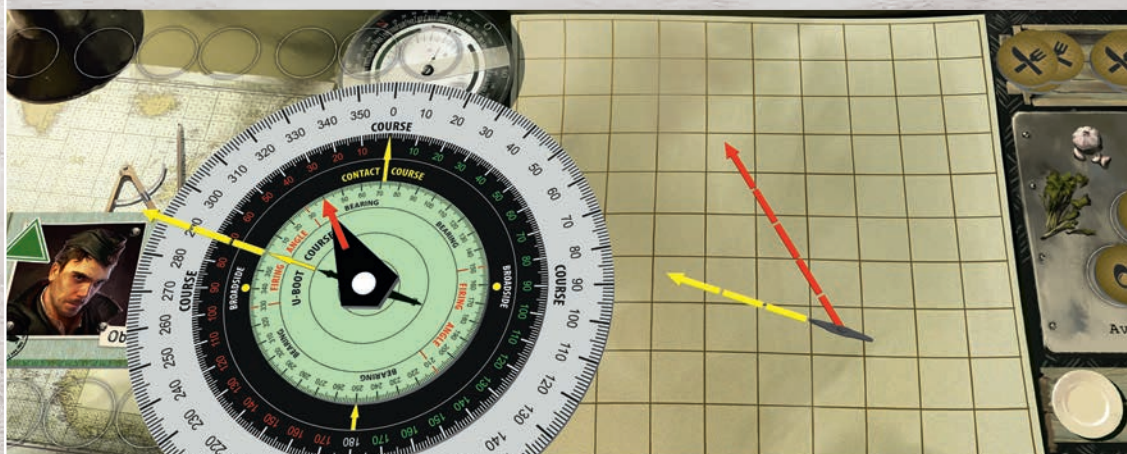
1

U-boat course: 290°



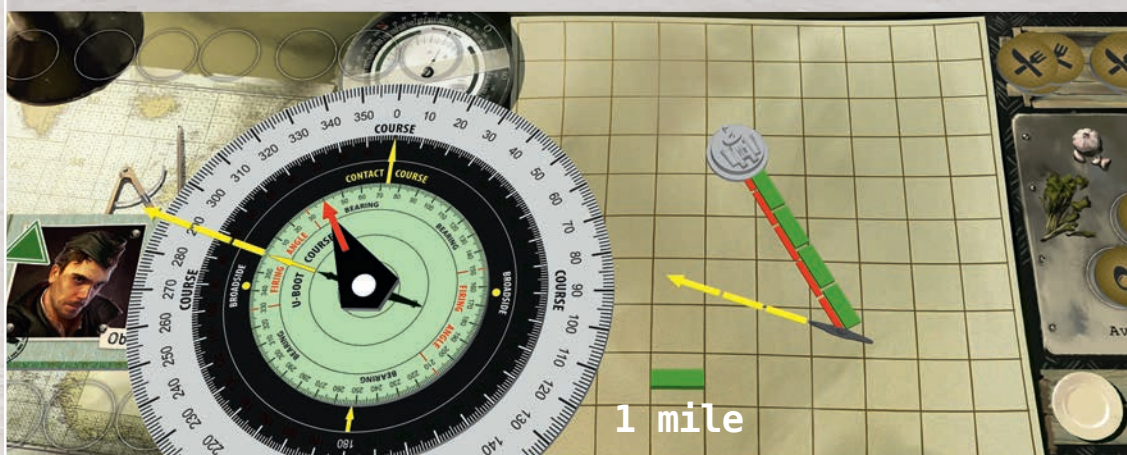
2

Bearing: 40°



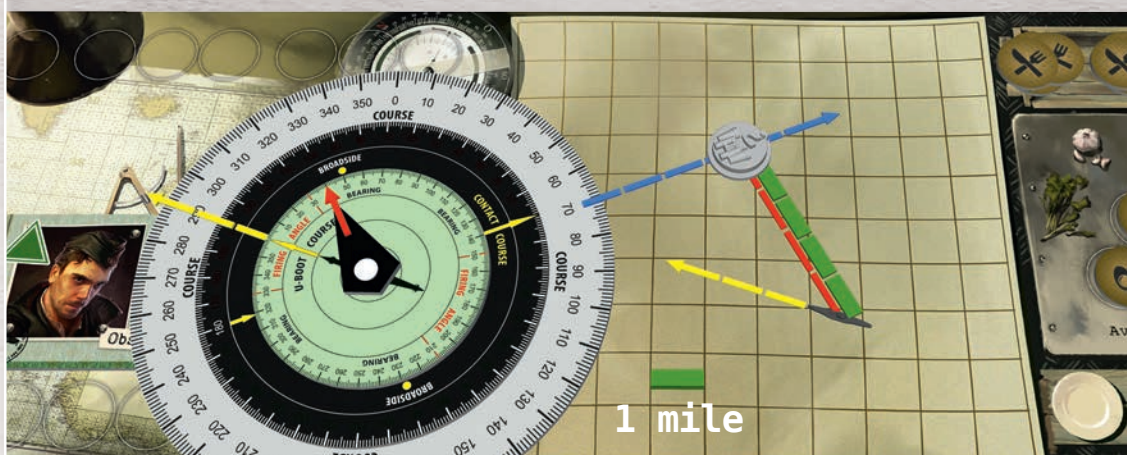
3

Distance: 4 miles



4

Enemy course: 70°



After placing the enemy marker, the last thing to do is to correct the distance and facing of the markers. The tactical map is now updated!

The enemy marker is used only initially, before target identification has been carried out. Once the First Officer has had the chance to take a good look at enemy ships, they will tell the Navigator what kind of other markers the enemy marker should be replaced with.

DESIGNER NOTE: remember, there are no strict rules on how the Navigator should use the Tactical Map. It should give the Captain and the rest of the players a clear view of the battlefield, so the only real criterion is efficiency.

9.3. Observers on the Bridge

Once sailors have been mobilized to Section 8, the Captain must issue the 'Assign Observation Sectors' order. The number of observers is then passed to the First Officer, who updates it in the app. The more observers are on duty (up to a maximum of 6) the more efficient the observation will be.

- * All observers on duty are considered 'busy' and must be activated with an observation token. Remember that carrying out the 'Sextant' order is possible without stopping observation.
- * **Observers must get inside before the 'Dive' order is carried out. All**

sailors located in sections 7 and 8 are KIA if the U-boat dives.

- * If there is at least one busy observer, then increasing the number of busy observers does not require a separate order. It is enough to activate additional sailors in Section 8 with observation tokens to mark new observers.
- * When a busy observer moves out of Section 8, he stops observing. When that happens, his observation token must be flipped to its activation side.
- * Whenever the number of busy observers changes, the new number of observers must be updated in the app as quickly as possible.

9.4. Food

Besides navigation, the Navigator also manages the crew's food consumption. Good food fosters good morale. If this is neglected, morale will quickly suffer. Meals are prepared using the 'Prepare Meal' order. Once daily, the app will ask about what has been prepared. A meal may consist of 1, 2, or 3 ingredients represented by the following provision tokens:



Onions, bread, lemons, eggs, tinned fish, meat, and potatoes.

3 tokens make a good meal, 2 tokens make a decent meal, and 1 token means a bad one. The worst situation is when there is no meal at all.

The possible token combinations are:

- + = wurst with bread
- + = tinned fish sandwiches
- + = scrambled eggs
- + = ham omelette
- + = bangers and mash
- + + = casserole
- + + = stew
- + + = potato pancakes

A meal has the following effects on the crew's morale:

Meal Size	Effect
no meal	decrease morale by 2
1 token	decrease morale by 1
2 tokens	no effect
3 tokens	increase morale by 1

- * Lemons are not used in combination with any other tokens, but they must be included in the diet (see below for details).

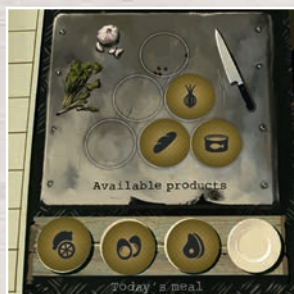
9.4.1. Meal Preparation

- * To prepare a meal, a sailor must be present in Section 4 and ordered to 'Prepare Meal'. Only one sailor may be activated by a 'Prepare Meal' order.
- * Before selecting tokens, the Navigator may either switch the positions of any two tokens or discard any one token and draw one token from the Food Supply to replace it. Taking either option will activate the sailor one additional time.
- * The meal consists of one, two, or three tokens from the 'Available Products' pyramid. If the Navigator selects more than one token, they must form a connected group, i.e. the first token must be adjacent to the second, and the second token adjacent to the third.
- * If there is at least one lemon token within the pyramid, then the Navigator must collect a lemon together with the rest of the selected tokens (even if not adjacent to the rest of the combo). The lemon never counts for the purposes of counting the number of products within a meal.
- * Collect all the selected tokens and put them on the 'Today's Meal' space of the Navigator's panel.
- * Inform the Captain that the meal has been prepared. Randomly replenish the 'Available Products' pyramid with new provision tokens drawn from the Food Supply.





A very good draw, giving the Navigator four different options.



They choose the omelette and add the obligatory lemon when preparing the meal.



This example shows a less fortunate draw, as there is no combo.



The Navigator decides to swap the positions of two tokens at the cost of one additional activation.

9.4.2. Eating

Once daily, the app will ask what the crew has eaten. As soon as the First Officer asks that question, the Navigator should report the meal in the 'Today's Meal' box. The morale effect is then applied. After applying the morale effect, the Navigator discards all the tokens from the 'Today's Meal' box into a discard pile next to the Navigator's panel.

9.4.3. Food getting stale

Each time the Navigator must replenish one or more empty spaces of the food pyramid and there are no more tokens in the Food Supply, spoilage occurs as follows:

1. Each time spoilage occurs, remove all provision tokens of one type from the 'Available Products' pyramid and the discarded food provision tokens. Return all tokens of that type to the box.
2. Meat is the first type of product to spoil. Once meat has spoiled, each successive spoilage will eliminate

the next type of food, in order: onions, eggs, bread, lemons, potatoes, and tinned fish.

3. After returning the spoiled food to the box, flip the remaining tokens in the discard pile face down, randomize them, and return them to the Food Supply.
4. Replenish the empty spaces of the 'Available Products' pyramid.

Once all food has spoiled, no further meals may be prepared.



The Navigator wants to replenish the 'Available Products' pyramid, but there are no more tokens in the 'Food Supply'.



The Navigator removes all the meat tokens and returns them to the box.



After that, the Navigator randomizes all the remaining tokens, forms a new 'Food Supply' and replenishes the 'Available Products' pyramid.

10. THE CHIEF ENGINEER

The Chief Engineer is responsible for operating and maintaining the U-boat's propulsion and ballast systems. They also coordinate repairs, deal with hazardous occurrences on board, and may even have to patch up the U-boat after it sustains structural damage. The Chief Engineer is responsible for marking all issues and threats appearing on the Technical View and dealing with them swiftly. They have various resources at their disposal and must use them wisely to maximize the repair crews' potential.

10.1. Engines

There are two means of propulsion on board the Type VIIC: diesel engines (in Section 5) and electric motors (in Section 6).

Generally:

- * When the U-Boat is surfaced, it uses diesel engines and charges the electric motors' batteries.
- * When the U-Boat is submerged, it uses electric motors, drawing from the batteries.

To change speed, the engines need **TWO sailors in the appropriate section: Section 5 (diesel) when surfaced, or Section 6 (electric) when submerged. Be sure to update the engine room telegraph on the Chief Engineer's player panel after changing speed.**

Each time the U-boat Dives from the surface or Resurfaces, the Chief Engineer must switch propulsion. **This requires one sailor in Section 5 and one sailor in Section 6.** Merely changing depth while submerged does not require switching propulsion: the U-Boat always runs on electric motors when submerged.

For example, when the U-boat is running at periscope depth and the Captain's orders are to go deeper, there is no need to switch propulsion. However, if the dive were to be performed from the surface, that would require changing from diesels to electric motors. The Chief Engineer must remember this difference and always make sure that their sailors are where they need to be.

10.2. Ballast Tanks

The U-boat can change depth only when the ballast tanks are filled or emptied.

This requires TWO sailors in Section 3. This applies **both** to changing depth while submerged **and** to diving/resurfacing. **Make sure to update the depth gauge on the Chief Engineer's player panel after changing depth.**

10.3. Repairs and resources

The Repair order has very broad applications. It is used to deal with three different categories of problems:

- * technical conditions
- * environmental conditions
- * hull breaches

Technical conditions result from wear and tear. They begin as maintenance tasks, but escalate over time. If unattended, they can lead to a component's complete breakdown. **Environmental conditions** result from enemy attacks and are much more dangerous. They have a negative effect on morale, can cause crew damage, and will have disastrous consequences if the crew is exhausted. **Hull breaches** require immediate action and mean watery death for the entire crew if not sealed quickly.

Regardless of which type of problem is being handled, a single Repair order allows the Chief Engineer to tackle only one problem, i.e. one technical condition, one environmental condition token, or one hull breach.

The Chief Engineer has various resources to help repair crews. These resources can increase the repair crew's efficiency, or let them tackle otherwise unsolvable problems.

These resources are:

- * cards
- * toolboxes
- * supplies

Cards represent tools, spare parts, and other small helpful items. They are carried in two different **toolboxes**. **Supplies** help with environmental conditions. Both supplies and toolboxes need to be moved around the U-boat. See section 6.4. 'Mobilization' for details.

10.3.1. Technical Conditions

Technical Conditions have three levels of severity:



Maintenance: Routine tasks to keep the U-boat in working order. If neglected, they will likely result in a failure.



Failure: This is a more serious condition – if left unrepaired, a major failure is imminent.



Major failure: The situation has gone from bad to worse. The component is completely out of order and will not work until repaired.

10.3.2. Repairing Technical Conditions

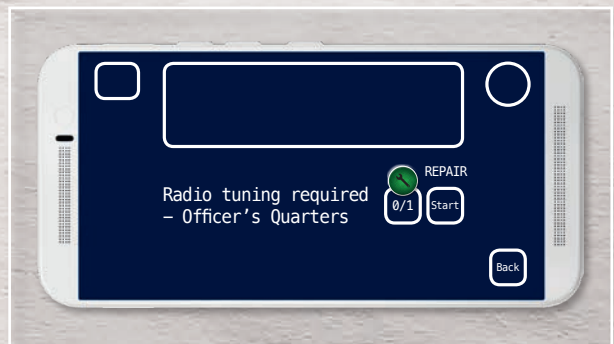
- * As soon as the First Officer reports a technical condition, the Chief Engineer must mark it with the appropriate technical condition token on the Technical View.
- * Each technical condition has a severity level: green is minor, yellow is moderate, red is most severe.
- * More severe conditions require more sailors for repair. The First Officer will find the exact number needed in the app Repair Menu.
- * Activate each sailor in the repair crew with a technical condition token of the corresponding color (instead of an activation token). Please note that game components use ⌚ to mean 'a technical condition token of the corresponding color'.
- * As usual, if a sailor does not have the necessary specialization icon ('repair' in this case), then the sailor must be activated with an additional activation token.
- * A sailor with a technical condition token is busy. See section 6.7. 'Busy sailors' for details.
- * The app will indicate when repairs have been completed. You can then

remove the corresponding technical condition token from the Technical View, and flip the repair crew's technical condition tokens to their activation side.

- * The number of sailors in a repair crew may drop due to crew damage, watch change, or because the Captain mobilizes the crew. If a technical condition is being repaired and the number of sailors in the repair crew drops below the level required by the repair, then the order is stopped.
- * When repairs are stopped, all the technical condition tokens in the repair crew's activation spaces must be flipped to their activation sides, and the repair must be paused in the app.
- * A paused repair can be resumed if enough sailors are activated for repairs in the corresponding section. It does not require another 'Repair' order from the Captain.
- * If a new watch is unable to continue the repairs (due to not having enough activation spaces available), then discard the technical condition tokens instead of transferring them to the new watch.
- * The Chief Engineer may play a card when repairing a technical condition. See the following paragraph for details.



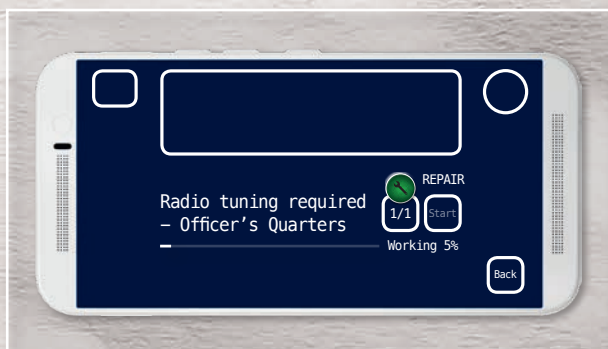
When the First Officer reports a Technical Condition, place the required token in the specified section on the Technical View.



The First Officer checks the severity level in the repair menu.



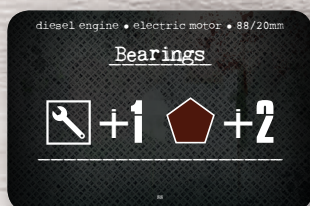
The Chief Engineer confirms the number of sailors in the repair crew and the First Officer inputs that into the app.



Once the number is confirmed, the repair starts immediately. Its progress can be tracked in the Repair menu.

10.3.3. The Chief Engineer's cards

- * The Chief Engineer's cards give bonuses to a repair crew. They either increase the effective number of sailors in the repair crew (+1 and +2 cards) or modify the repair crew's activation (cards with the ⏸ icon).
- * Each card has a basic and an advanced effect. The basic effect requires that at least one sailor with the 🛠 specialization is in the repair crew. The advanced effect requires that the most experienced sailor from the Chief Engineer's current watch (🏠) is in the repair crew.
- * During setup, the cards must be evenly distributed between the two toolbox spaces on the Chief Engineer's player panel. Each of these spaces corresponds with one of the toolbox markers located on the Technical View. Cards located in toolbox I can only be played to boost repairs in the section where toolbox marker I is lo-



cated, and cards from toolbox II only where toolbox marker II is located.

- * All sailors may carry the toolbox markers around the U-boat.
- * When the 'Repair' order has been issued and the Chief Engineer is declaring the number of sailors in the repair crew, the Chief Engineer can play one card and apply its bonus.
- * Cards which list specific repairs (e.g. the periscope, the electric motor) can be used ONLY for the repairs listed on them.
- * There must always be at least one real sailor in the repair crew: a bonus card alone cannot repair.
- * Only one card per repair may be played.
- * When playing a +1/+2 card, place it face up in the section of the Technical View where the 'Repair' order is being carried out. The card stays there and its effect applies to that particular repair (and no other repair) until that repair is completed, even if paused and then resumed. Once the repair is completed, the card is discarded.
- * Cards with the ⏸ may be used multiple times and always stay in their toolbox spaces on the Chief Engineer's panel. When playing a ⏸ card, flip it face down for the duration of the repair, and flip it back face up if the repair is paused or completed. Do not move a toolbox marker if its corresponding toolbox space on the Chief Engineer's panel has a facedown card.
- * When a new watch takes over the repairs, apply the effects of the 'U-boat blueprints' card to the new watch as well.



The Chief Engineer is repairing a broken diesel engine. As not many sailors are available, the Chief Engineer decides to play a card to boost the repair crew's efficiency. The Chief Engineer makes sure that the required toolbox

is in place, that the card matches the repairs to be done, and that there is a sufficiently qualified personnel to use the card's ability (a  sailor, or, better still, the  sailor). If everything is correct, then the card's bonus is added to the number of sailors in the repair crew.

10.3.4. Environmental Conditions

Environmental conditions directly influence the crew's health, morale, and overall performance. They are marked on the Technical View and must be solved with appropriate supply tokens.

- * When instructed by the app, place the appropriate environmental condition token in the specified section of the Technical View and decrease morale by one. **If that happens to an exhausted crew, the game is over. See 7.4. 'Exhausted crew' for details.**
- * After placing the token, resolve crew damage for that section (if necessary).
- * A section may have multiple environmental condition tokens.

10.3.5. Dealing with Environmental Conditions

The Chief Engineer uses five supply tokens to deal with environmental conditions. During setup, they can allocate them in any sections they wish on the Technical View.



Above from left to right: wire, rebreathers, water pump, light bulbs, fire extinguisher.

- * The repair requirement of all environmental conditions is 1  and the required supply token. All sailors may carry and use supply tokens.
- * The sailor carrying out the order and the supply token must be present in the section where the environmental condition token is located.
- * Activate the sailor carrying out the 'Repair' order with a regular activation token (or two activation tokens if they don't have the repair spe-

cialization icon). One environmental condition token is then removed.

- * **When removing an environmental condition token, increase morale by 2.**
- * Dealing with environmental conditions does not require the app.
- * Having the necessary supplies **does not** protect a sailor against the effects of fire or electrical hazard. (Toxic gas is an exception.)

The list below shows which supplies are necessary to deal with each environmental condition and which wound deck to draw from when resolving crew damage:

Hazardous

Electrical Hazard



Crew damage: electric shock
Eliminated by: wire

Fire



Crew damage: burns
Eliminated by: fire extinguisher

Toxic Gas¹



Crew damage: poisoning
Neutralized by: rebreathers
Eliminated by: Surfacing

Non-hazardous

Lighting Failure



Eliminated by: light bulbs
Special effect: one additional sailor in this section must be activated whenever an order in this section is to be carried out².

EXCEPTION: a lighting failure cannot cause a 'game over' effect when the crew is exhausted. The game continues as normal – **DO NOT** press 'all hands lost' in the app.

Leak



Eliminated by: water pump

¹ Toxic gas is somewhat different from other hazardous conditions. It can only be removed by being vented out of the U-boat

after surfacing. Therefore, rebreathers allow the crew in the affected section to avoid resolving crew damage (it is enough for the rebreathers to be in the section to prevent the crew from resolving crew damage from toxic gas). This environmental condition will linger until the crew can open the hatch and let in fresh air. If toxic gas ever occurs while the U-boat is sailing on the surface, then resolve crew damage once in the affected section **without placing a toxic gas token.**



The U-boat has just been attacked with depth charges, and leaking batteries have released toxic gas. A toxic gas token is placed in the affected section, morale is decreased by one, and crew damage is resolved. The U-boat will need to surface in order to vent the gas outside.



In this example, the U-boat is sailing on the surface, when a seriously damaged diesel engine starts spewing toxic fumes inside the hull. Crew damage is resolved once, but a toxic gas token is not placed and the Morale Track is unaffected.

² This also applies to repairing lighting failure itself. A single activation token is placed regardless of the affected sailor's specialization icons.

10.3.6. Hull Breach

A Hull Breach means the U-boat is taking on water. This is far more serious than a minor leak and must be sealed immediately. If it is ignored for too long, the flooded section will need to

be isolated with a watertight bulkhead. **If a second section becomes flooded, the U-Boat will sink!**

A Hull Breach starts a countdown in the app. The countdown shows the remaining time the Chief Engineer has to seal the breach. This is done by solving the Technical Puzzle. The Technical Puzzle has 16 puzzle pieces showing the U-Boat schematic in sections.

The Chief Engineer must assemble three adjacent sections of the puzzle. These sections are where the Hull Breach oc-



curred and the sections forward and aft. Note: For the purpose of the Technical Puzzle, Section 1 and Section 6 are adjacent to the bow and the stern, respectively. See 10.3.8. 'Other rules related to Hull Breach' for details.

If the Technical Puzzle is not completed in time, the app will tell you to flood the section where the Hull Breach occurred. This is a last ditch effort to save the U-Boat from sinking. Below is a description of how the whole process is handled.

10.3.7. Sealing a Hull Breach

When a hull breach occurs:

1. Decrease morale by one. **If that happens to an exhausted crew, the game is over. See 7.4. 'Exhausted crew' for details.**
2. Assemble enough sailors in the section where the Hull Breach has occurred, and then start sealing the breach. This will most likely require the Captain to issue Mobilization, and then a 'Repair' order.
3. A Hull Breach requires a repair crew of 5  in order to be sealed. The repairing sailors must be in the breached section to seal it. Activate them with regular activation tokens. Remember that sailors without the 'Repair' specialization must take two activation tokens.
4. Only AFTER the repair order has been issued and the repair crew has been activated can the Chief Engineer start solving the puzzle.

5. Once the Chief Engineer has solved the puzzle, they must flip the pieces to confirm that it has been solved correctly. If the puzzle has been solved correctly before the timer runs out, then the breach is sealed and players can continue with the game.

Failing to seal a Hull Breach

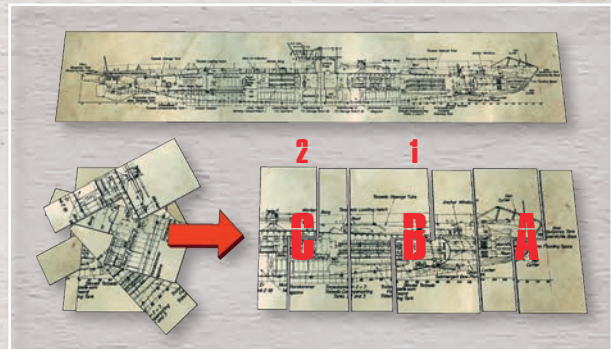
- * If the puzzle has not been solved and flipped before the timer runs out, then the Chief Engineer has failed and must immediately stop solving the puzzle.
- * If the Chief Engineer flips the pieces to check their solution and an error is found, then the Chief Engineer has failed and must immediately stop solving the puzzle.
- * All sailors and resources must be evacuated from the section using Mobilization before the timer runs out.
- * After the timer runs out, place a flooded section token in the breached section. Any sailors remaining inside are now KIA, and any resources left inside are lost and are returned to the box.

10.3.8. Other rules related to Hull Breach

- * Sealing a breach requires a 'Repair' order.
- * The Chief Engineer should have the Technical Puzzle pieces in a face-up pile within reach. After each attempt to solve the puzzle, randomly mix them again.
- * **Three sections** must be put together before the timer runs out: the section where the Hull Breach occurred, and the sections forward and aft of it. For example, Sections 1, 2 and 3 must be assembled to repair a Hull Breach in Section 2.
- * A Hull Breach can occur only in Sections from 1 to 6. Each section is comprised of two puzzle pieces. The pieces have letters on their back, so that the Chief Engineer can use the diagram on his player aid to make sure whether the puzzle has been solved correctly or not. See the Chief Engineer's player aid for a complete diagram of how to solve the Technical Puzzle.
- * The bow (comprised of two 'A' puzzle pieces) and the stern (comprised of two 'H' puzzle pieces) are not U-boat sections, but they are a part of the

puzzle and are used in the exact same way as the remaining pieces. For example: if a Hull Breach occurs in Section 1, then the correct result is 'C,B,A', as seen on the diagram.

- * A flooded section is inaccessible: sailors can never move into or through it. No game effects can target it. It is inaccessible for the rest of the mission. For Linked Missions, that means until the end of the whole patrol.
- * If Section 2, 3, 4 or 5 becomes flooded, then one part of the U-boat is cut off from the other part.
- * Sections which have been cut off, but are NOT flooded, may be used as normal.
- * The app retains all its functionalities for the duration of a Hull Breach.
- * The Chief Engineer may play a card when sealing a Hull Breach. See 10.3.3. for details.



The above example shows how to complete the Technical Puzzle if Section 1 was breached.

10.3.9. Access to sections which have been cut off

After Section 2, 3, 4 or 5 has been flooded, the U-boat is split into two parts. The flooded section cannot be entered, but there is still a way to get to the other side. A mobilized sailor can bypass the flooded section by using one of the torpedo loading hatches (located in the ceilings of Section 1 and Section 6). This is possible only if:

- * the U-boat is surfaced, and
- * the sailor bypassing the flooded section is activated. (This is the only situation when players activate sailors to move them).

If the above conditions are met, then the movement is otherwise carried out as normal.



As Section 2 is flooded, several sailors have been cut off in Section 1. When the U-boat is surfaced, those sailors can leave Section 1 and other sailors may move into Section 1, as long as each of those sailors is activated.

10.4. The Technical View

The Chief Engineer is also responsible for monitoring the Technical View of the

U-boat. Technical and Environmental conditions must be marked for everyone to see, and the Chief Engineer should monitor the Technical View during Mobilization to check whether any sailors move into or through hazardous sections. If so, the Chief Engineer must report it immediately.

Toolboxes and supplies are also placed on the Technical View, and the Chief Engineer should check which resources are needed for repairs and whether Mobilization is necessary to move resources to a different U-boat section. The Chief Engineer should always be aware of what is happening on the Technical View and work closely with the Captain so that repairs and maneuvers can proceed smoothly.

11. Closing comments

We sincerely hope that you will enjoy playing U-BOAT. A lot of thought, research, and love went into this game, and we are confident that it will give you many unforgettable gaming memories. However, if you find anything that is not in line with your understanding of the theme, then we encourage you to find solutions which suit you and your group's playstyle. The rules already incorporate a few customization possibilities (e.g. difficulty levels and simplified watch changes), so if there is anything else which you would like to try changing to enhance your experience with the game, then we say 'go for it'! This is your game and the most important thing is that YOU have fun with it!

Happy hunting, and stay tuned for more World War 2 games by
Artur Salwarowski & Bartosz Pluta from Iron Wolf Studio

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Mobilization

1. Pay for the order and announce Mobilization.
2. Move sailors.
3. Resolve crew damage (if necessary).
4. End Mobilization.

Carrying out orders

1. Pay for the order and issue the order.
2. Select the order in the app (if necessary).
3. Confirm verbally whether sailors are in position.
4. Activate the sailor(s) carrying out the order.
5. Carry out the order (in the app if necessary).

Changing the watch:

1. Adjust the Order Track.
2. Resolve crew damage (if necessary).
3. Manage tokens and flip crew tiles.
4. Return or remove KIAs (if necessary).

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