
U-BOOT
THE BOARD GAME
Tactical Guide

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1. INTRODUCTION

The intention behind this guide is to walk you through the most essential aspects of U-boat operations. It is assumed that you have read and understood the rules. While they teach you how the game works, this guide explains how to behave in various situations you may find yourself in while playing the game. It also provides a brief historical introduction to help you understand the nuances of World War 2 submarine warfare.

Historical Background

The year is 1940. Germany is about to unleash its surprise offensive on the western front. The fall of France is at hand, and U-boat aces are decimating the unprepared British merchant navy. While the Kriegsmarine is no match for the British Home Fleet and could never win in a decisive sea battle, the U-boat force is enjoying its happy time, sending tons and tons of British supplies to the bottom.

Germany almost succeeded in cutting British supply lines during the First World War, and adopted a similar approach with their U-boat campaign as soon as the Second World War broke out. U-boats were meant to sink as much Allied shipping as possible, which applied first and foremost to merchant vessels carrying wartime supplies to Great Britain. Initially, the Allies lacked equipment and procedures to defend their cargo, but things were soon to improve with the introduction of convoys, new anti-submarine warfare technology, and the increase in RAF Coastal Command's capabilities.

The happy time is drawing to a close, and a new storm is brewing in the Atlantic. This is when the players and their brand new type VIIC U-boat enter the fray.

The Type VIIC U-boat

You will be serving on the iconic Type VIIC – the workhorse of the German U-boat force. Fast and nimble, it was the type of submarine that sank the most Allied shipping, was produced in larger numbers

than any other U-boat, and also sustained the highest losses during the war. It was a medium range submarine, and it operated primarily in the North Sea and the Atlantic. It carried 14 torpedoes, an 88mm naval gun, as well as a 20mm anti-aircraft cannon. It could also lay mines.

What may be surprising at first is that the VIIC was more of a submersible than a true submarine in the modern sense of the term. It could stay underwater for a maximum of 18-20 hours, and then had to recharge its batteries while on the surface. Furthermore, its top speed of 17 knots was reduced by half when submerged, as it had to rely on electric motors. This meant that it stalked its prey primarily on the surface (while running on diesel engines) and dived only to approach targets stealthily, or when threatened by escort vessels or aircraft.

The U-boat was no match for convoy escorts in a surface exchange of fire and was forced to dive immediately if spotted. That gave the escorts a substantial speed advantage, and allowed them to close in quickly to hunt the U-boat down using ASDIC (active sonar) and drop depth charges on its position. This is why the U-boat must stay undetected for as long as possible in order to use its advantages to the fullest.

The following chapters explain how to turn your Type VIIC into a well-oiled fighting machine. Study them well, and remember: you are the hunter for as long as you avoid detection.

2. GETTING STARTED

The U-boat always starts a mission on the surface, either having been escorted out of the harbor by a German minesweeper, or in the open sea if the mission is a part of a longer patrol. You will be covering long distances to reach mission areas, and diesel engines are the favored means of propulsion for fast transit. Being surfaced also makes it easier to be aware of what's going on around you.

Typically, the beginning of each mission should involve:

- plotting a course
- setting course and speed
- readying the observers

Plotting a course

This is the first thing that should happen once the mission begins. The Captain asks the Navigator to come up with a route to the mission objective, and may also give him specific instructions on which map quadrants to go through (or avoid). The Navigator then plots the patrol route as described in the 'strategic navigation' section of the rulebook. It is recommended for the Navigator to note down the plotted course, as it is a crucial piece of information which many other maneuvers depend on.

Once in transit, the Navigator can track the progress made towards the chosen destination. This is done either by using the sextant to confirm the map quadrant where the U-boat is located, or by checking the time and using the ruler included with the game to measure the approximate distance covered. While the knowledge of the submarine's position on the strategic map is often essential to mission success, it might not be precisely known at all times. Navigation errors and inaccuracy were commonplace in the World War 2 era, as in later decades before the invention of the GPS, and high precision was simply not possible.

The Navigator may and will get lost due to intense maneuvering under water, or because of bad weather (as it makes the sextant useless). If that happens, you have to rely on the ruler. Above all, don't panic - you will be able to check your position sooner or later.

Setting course and speed

In order to change the course, it has to be set on the helm. Once the Navigator is sure what the course should be, the next step is to alter course and set the

engines to the desired speed. It doesn't matter if you alter course or change speed first – however, both of these orders must be carried out if you wish to move in the chosen direction.

Readying the observers

Sending observers to the bridge and ordering them to watch their sectors is the third thing that The Captain should do at the beginning of each mission (after setting the desired course and firing up the engines). Observers are the eyes of the U-boat, so they must always be on duty whenever the U-boat is surfaced. A smart Captain will mobilize everybody (the engine crew, the ballast crew, the helmsmen, and the observers) using one mobilization so as no to waste more orders than necessary.

3. AT SEA

In transit

While in transit, you will have a number of things to care about on board. When traveling to the intended destination, it is important that you let the crew rest as much as possible, feed them, perform all the necessary maintenance and repairs, read pending messages from the HQ, and treat the ill and wounded. All of these are important, so prioritize and start with the most pressing issues. On top of that, you must always remember that there is an enemy out there who will be trying to sink you. However, they must find you before they can do that.

Avoiding detection

As you already know, it is much faster to travel on the surface. Unfortunately, this leaves the U-boat more vulnerable to detection. You may be spotted by surface vessels and aircraft or, in later missions, picked up by radar or HF/DF (more on which later). In any case, a smart Captain will always be ready to dive while on the surface.

While under the surface, your position can be found by sonar or the hydrophone. These are most efficient at medium to close range, and may be very difficult to avoid if the enemy is already aware of your presence. The U-boat is never completely immune to enemy detection, but the chances of being detected underwater are smaller, especially at long ranges.

However, cruising under the surface is not fast enough for efficient transit or maneuvering into attack position. What is more, you cannot operate underwater forever, as this draws power from the batteries (which never last as long as you would like them to).

Batteries

The Type VIIC can cruise under the surface for a maximum of 20 hours. That's how long its batteries can last when they are fully charged. Once they are depleted, the U-boat will have to resurface and recharge (which may take up to 6 hours, depending on how much power was left). Try not to deplete your batteries completely, as it may force you to resurface at the least favorable moment. As a rule of thumb, batteries should be recharged on the surface at night, as it is much harder for the enemy to spot the U-boat in low visibility conditions. Unfortunately, that also works the other way round.

Visibility

The day and night cycle, as well as the weather, affect range of vision, both for your observers and those of the enemy. Moreover, night and weather effects are cumulative. In extreme conditions, like a storm at night, your ability to spot contacts and theirs to spot you will be severely limited. In those situations, it is advised to dive and rely on the hydrophone to acquire targets.

If weather conditions make the attack too difficult, then it is advised to continue pursuit until it is possible to commence the attack. In fact, when the

weather is very rough, it may be a good idea to just hide under the surface, especially as there are other ways the enemy can detect a surfaced U-boat, not just by eye.

Radar and HF/DF

During the course of the war, the Allies developed two very potent technologies: the radar and the HF/DF (High Frequency Direction Finder, 'huff-duff' for short). The radar emits radio waves and picks up their reflections bouncing off objects in the distance, while the HF/DF can intercept high frequency radio signals and pinpoint their source of origin.

While these technologies do not pose a threat in the early missions in the game, they will become more and more dangerous as the war progresses and the Allies upgrade their technology. In the final missions of the game (i.e. nearing 1943), the enemy will be able to detect your presence on the surface from well beyond the range of vision, even in low visibility conditions. Bear that in mind and try not to get caught with your guard down.

Mines

Enemy mines pose a deadly threat to the U-boat and may cause heavy damage if the crew doesn't react in time. If you ever run into a minefield, try getting out of it as soon as possible! Most of the time, you will be notified of minefield locations in mission briefing or messages from the HQ, so make sure that the Navigator is aware of where they are and steers clear of them when plotting courses.

Some missions, on the other hand, will require you to lay mines. These are very dangerous assignments, as magnetic mines must be laid in shallow waters in order to allow their fuzes to react to enemy vessels passing over them. The minelaying procedure is very similar to launching torpedoes, although it does not require using the TDC to lock on to a particular target. It is enough to lay mines while in the map quadrant(s) designated in the briefing.

4. FRIENDLY UNITS

It might so happen that you encounter friendly units during a mission. You will always be notified of such encounters beforehand, either in mission briefing, or through the radio.

Wolfpacks

Wolfpacks are U-boat groups which patrol and hunt together. They form so-called reporting lines to maximize their chances of detecting enemy convoys, and then make synchronous attacks against them to achieve a shock effect, confusing the escorts. When being a part of a reporting line, it is crucial to obey patrol guidelines and maneuver as precisely as you can. After all, the whole idea behind the reporting line is to cover as much area as possible, so keeping your position within formation is essential.

If you spot a target, then you will need to inform the HQ. If another U-boat spots a target, you will receive further instructions through the radio. Stay in touch with the HQ and attack the enemy when an opportunity presents itself.

Supply ships

Certain missions allow for resupply at sea. This will enable the crew to replenish their supplies, but will also cost precious mission time. As always, it is up to the Captain to decide whether to resupply, although it may become clearly necessary, especially in Linked Mission mode. The HQ will let you know where to look for a supply ship - either the mission briefing or a message from the HQ will reveal the map quadrant where the supply ship can be encountered. Approach it and follow on-screen instructions in the app to perform the resupply.

5. ENEMY CONTACTS

The enemy vessels you encounter are either merchant ships or escorts. The former are your prey, while the latter will try sinking you the moment they spot you. You may also come across armed merchant vessels. Although they are quite rare, they may pose a serious threat if you approach them unprepared. Always be careful when identifying enemy vessels, so that you don't charge straight into enemy counterattack.

Detecting

There are several means of detecting contacts. While on the surface, you must rely on observers watching the horizon from the bridge. As soon as they spot contacts, they report to the First Officer (a message will pop up in the app's information feed). Keeping at least four observers on the bridge is definitely a good idea, but you do not always have so many at hand. Regardless, with more sailors allocated to observer duty, you are more likely to spot the enemy before they spot you. Remember that your observers' range of vision may be limited by weather and night conditions.

When the U-boat is submerged, there are two methods of contact acquisition: the periscope and the hydrophone. While the periscope provides a better view of the situation (allowing for identification of enemy vessel types), the hydrophone has much better range and gives more precise information regarding the distance and course of a given contact.

What is more, the hydrophone can pick up large shipping groups from very long distances, way beyond the range of vision. Use this to your advantage when trying to find enemy convoys. The hydrophone can also be used at any depth, while the periscope can be used only when submerged up to 10 meters under the surface. Last, but not least, the periscope can be spotted! Of course that is possible only from close range, but it should be taken into consideration when approaching the intended target.

Identifying

After detecting a potential target, you should identify it. The First Officer uses the identification sheet to determine the best targets. This is done by comparing them with the silhouettes on the sheet and should give players valuable information as to which targets to attack. It requires using the observer view or periscope view in the app. If possible, always perform this step before making an attack approach.

The vessels you are going to encounter generally fall into three categories: large, medium, and small. The large ones are your prey, as the big merchant vessels carry the goods that you want to sink. The medium-sized ones are the most dangerous, as they are escorts whose primary task is to sink you, or chase you away from the shipping group they are protecting. The small vessels are generally the least dangerous, but even they can ruin your day. Though not purpose-built for anti-submarine warfare, some of them may be equipped with sonar and depth charges. Even if unarmed, they might alert their bigger siblings, so you should avoid unnecessary encounters whenever possible.

Attack considerations

Once a contact has been detected and identified, several important questions have to be discussed. How much GRT is there to attack? How many escort vessels are there? Is it worth taking the risk now? Won't the attack take the submarine too far off its course? Are the torpedoes ready? Is the crew in good enough shape to carry out the attack? What time of day or night is it? How long is it until the next watch? Are the batteries charged? These are all important factors that the players should talk over with each other before committing to attack.

Once the decision has been made, the attack should be carried out as described in the Captain's section of the guide. When playing as the Captain, make sure you understand this procedure, or you will be hunted by escort vessels long before you even think of saying *'Torpedo los!'*.

6. FACING ESCORT VESSELS

Despite all your efforts at remaining undetected, sooner or later the enemy may become aware of your presence. Once that happens, enemy escorts will do everything they can to send you to the bottom, so stay focused if you wish to make it home alive. There are several kinds of escort vessels with varying degrees of threat: some of them are fast and maneuverable, while others launch more devastating attacks.

As a general rule, smaller vessels are more nimble, but their depth charge attacks have a narrow area of effect. Conversely, destroyers are much faster and their depth charge barrage covers a much larger area, but their turning radius is usually wider than that of the U-boat. Regardless of what you come up against, certain principles always apply and they should become second nature.

On the surface

If an escort attacks you on the surface, dive immediately! The U-boat is severely outgunned by surface vessels, so your chances of emerging victorious from an open exchange of fire are close to none. Moreover, escort vessels will attempt to ram the U-boat. You must avoid that at all cost, as the U-boat is immediately destroyed if that happens.

When submerged

You are safe from the escort's guns when submerged (with the periscope retracted), and from ramming while below periscope depth. However, an escort vessel is much faster than a submerged U-boat, so the enemy will try detecting your position with sonar and hydrophone in order to close in and drop depth charges. Try avoiding the attack by making a sharp turn and diving deeper before the escort makes its final approach. You will most probably hear the sonar 'ping' a few times before the attack commences. Once you hear it, it means that trouble is fast approaching and you need to act immediately.

If possible, try to determine the escort's approach vector with the hydrophone. Knowing which direction the enemy is coming from will allow you to make a more conscious evasive maneuver. If you catch a contact which is closing in fast, then be prepared to make a sharp turn and/or dive deeper just before the escort passes over the U-boat.

If you turn too early, the escort might reestablish contact, make a course correction and still get you. If you turn too late, you might not make it in time to escape from the kill zone. The closer you are to the epicenter of the barrage, the greater your chances of receiving a direct hit are.

It is worth noting that the escort will lose sonar contact just before the attack, as the sonar will no longer be able to pick up the U-boat (the sonar beam faces forward and down, so can no longer track its target once the escort has passed over it). Furthermore, some escorts are equipped with the sonar, while others aren't. The latter are definitely less accurate when it comes to depth charge attacks, but without the characteristic 'ping', their attacks may take you completely by surprise (unless you use the hydrophone to track them). If you survive an attack, this is a great opportunity to either sneak away under the surface, or return to make another attack attempt (as the escort has now left the shipping group, trying to hunt you down).

Another important factor to consider is the escort's hydrophone. Just like the U-boat, enemy escorts use the hydrophone to listen to what's going on under the surface. Therefore, it is very important not to make too much noise when an escort is around. Half ahead or slow ahead are recommended speeds for reducing the U-boat's propeller noise level, increasing your chances of sneaking away unscathed. When playing the game with the noise dosimeter enabled, it is also crucial to remain as quiet as possible, as each noise made at the table might be heard by the enemy, revealing your position and most likely eliciting an aggressive response.

Two more things worth noting regarding an enemy's hydrophone are that it cannot hear you while depth charges are exploding, and that an escort cannot hear you if you are behind it. The latter is caused by the escort's own propellers which impede its ability to hear contacts behind the stern.

Last, but not least, you should remember about diving deeper to avoid attacks. Turning to lose the escort and get out of the kill zone is an important tactic, but diving below 165 meters often allows you to avoid close range sonar detection. On the other hand, such depths expose the U-boat to tremendous pressure and may result in leaks or more serious malfunctions if maintained for too long.

Fighting an escort vessel can be a nerve-wracking experience. However, if you keep your composure and maintain discipline, the U-boat and its crew will hopefully live on to fight another day.

Attacking escorts

It might seem like a good idea to eliminate escort vessels, but unfortunately it is not easy. They are rather difficult targets for German torpedoes for a number of reasons, including small displacement, degaussing, and more. Fuzes in German torpedoes were already error-prone, so sinking relatively small escort vessels is an exceptionally difficult feat. Please bear that in mind if you ever think of attacking an escort.

7. DEALING WITH AIR PATROLS

Whenever you hear *'Flieger alaaarm!'*, it means that an airplane has been spotted. Early-war planes were not very efficient against U-boats, but such encounters may hold nasty surprises nonetheless. Even if a plane does not attack directly, it may relay the position of the spotted U-boat and alert nearby escorts, along with the shipping group you were about to attack. Furthermore, aircraft can spot your periscope, so remember to hide it to decrease the chances of getting detected at periscope depth. Aircraft will become increasingly deadly as the war progresses.

Remaining on the surface

When faced with an air patrol, staying on the surface is never advised, but sometimes there is no other choice. There may not be enough time to react, or the technical condition of the submarine might not allow for a fast dive. If that is the case, then it is crucial to man the 20mm anti-aircraft gun as quickly as possible.

Diving

This is the only recommended course of action, and the dive has to be fast enough in order to avoid detection and attack. The unexpected appearance of aircraft is the main reason you should always have the crew ready to dive when sailing on the surface.

8. HOW TO PLAY

This chapter focuses on how to play as each role, because each of them is unique and requires a different approach and mindset. Role allocation is very important, so take the time to discuss it with other players to make sure that everybody knows what is expected of them, and that the roles are well-suited to each player's abilities. Throughout this chapter, 'you' is used with the meaning of 'the player playing as that particular role'.

THE CAPTAIN

Suitable for: natural-born leaders and quick decision-makers.

You are responsible for:

- commanding the submarine
- keeping track of orders and crew morale
- mobilizing the crew
- issuing orders
- carrying out torpedo attacks
- addressing the crew

1. COMMANDING THE SUBMARINE

Being the Captain means much more than simply telling everybody what to do, so be prepared to test your leadership skills to the fullest. To be an efficient leader you must:

- **Keep everyone focused and organized.** If you don't, then chaos will ensue long before you enter combat.
- **Make yourself clearly understood.** Issue one order at a time and make sure it is carried out from start to finish.
- **Think in advance**, and give everybody enough time to react to your orders.
- Remember that **each watch has differently allocated specialization icons.** This means you must reorganize the crew after each change of the watch to keep stations manned.
- Your sailors don't have many other responsibilities than torpedo attacks. This is to help you focus on the big picture, but also enables you to **help other players.** Whenever their sailors start running low on activations, make sure you are ready to step in and lend a helping hand. The same applies to the Navigator's observers once the U-boat is underwater.
- **Prioritize:** not all issues demand immediate action. For example, don't worry about minor repairs if an enemy is escaping! First set the pursuit course, and then you will have plenty of time for everything else that you might need to do.
- **Discuss possible solutions with other players.** Don't stifle their initiative, as they may remind you about something you have missed. Make sure they know they can request orders to be given, for example by saying 'Captain, permission to start repairs?', and the Captain may respond by saying 'granted' (accompanied by paying for the order).
- **Maintain initiative in combat.** Stay undetected and act fast, or the enemy will overwhelm you! If you don't make quick decisions, then instead of attacking, you will be fighting to survive.
- **Use the day and night cycle to your advantage.** It is especially important in convoy battles, where you may need to stalk the enemy for long periods of time while making repeated attacks. Resurface at night time to recharge your batteries, and remember to dive or increase distance before sunrise to avoid detection.

2. KEEPING TRACK OF ORDERS AND CREW MORALE

- **Don't forget to pay for an order each time you issue one.** It is a good habit to put your hand on the order token each time you are about to command the crew.
- **Make each order count,** or you will soon find yourself paying costs on the Morale Track. This is not the end of the world, but the more you do it, the more difficult your situation might later become.
- **Try limiting your command ambitions with the actual capabilities of your crew.** Don't attack if your men are on their last legs. You can buy them some time if you stalk the target for a little longer. Attack when your men

are well-rested, and you will have a much better chance of succeeding.

- Don't forget to **adjust the order track when you hear the bell.** This is very important for your commanding ability, so don't miss that signal!
- **Attempt to synchronize the rhythm of your commands with the watch changes.** Don't forget to regularly consult the First Officer regarding the upcoming change of the watch – this will allow you to plan accordingly and will help you achieve your long-term goals.
- It is not so bad if you reach the orange section of the Morale Track, but red usually means serious trouble. **Remember to use your Captain's cards** to alleviate crew stress and improve morale when necessary.
- **It is not recommended, however, to play the cards while you are paying order costs on the Morale track.** They are far more effective when you play them while paying costs on the Order Track. Try not to get caught in a situation where you really have to play one of the Captain's cards while paying on the Morale Track, as this will severely limit the bonus that you get from the card.
- **If you ever reach the final space of the Morale Track, then you are in deep trouble.** If you have any cards and/or orders left on the Order Track, then try increasing morale immediately, or the next enemy attack may be the last.

3. MOBILIZING THE CREW

When you announce mobilization, always communicate which orders you intend the crew to do next, so sailors will move to the correct locations. The more you can achieve with a single mobilization, the better. Always try thinking two or three moves ahead, so that you really use each mobilization to the fullest.

What is more, you and your crew can develop your own communication scheme that will make things go faster. For example, instead of saying 'everybody mobilize. Helm, diesels, ballast, observers, get ready', you can say 'mobilize to maneuvering stations'. As long as the remaining players know what is required of them, mobilization will be much smoother and effective.

4. ISSUING ORDERS

Once sailors are in position, you can issue particular orders. **It is advised that you issue orders one by one** and make sure each one is carried out from start to finish. Giving players more than one order at a time makes keeping track of everything much harder and may induce chaos among the crew.

5. CARRYING OUT TORPEDO ATTACKS

Launching a torpedo is a multistage process. It is worth the effort, however, as it allows you to unleash the most vicious of the submarine's weapons. In order to fire a torpedo, you will need to locate your prey, approach it skillfully, program the targeting computer, prepare the tubes, and finally fire. The Navigator and the First Officer will be heavily involved in the preparations but, in the end, it is your torpedo crew who will be responsible for making things happen.

The golden rule of a successful attack is to remain undetected, even if the target is a lone merchant. It is therefore advised to close in on the target submerged (preferably at periscope depth if by day), and stay as far away from escorts as possible. Night attacks can be carried out from the surface, as the U-boat is very difficult to spot (even from as close as a few hundred meters!). Use this to your advantage and attack enemy shipping at night whenever possible.

Please note that due to the game's development schedule, certain precise information was not final at the time of printing. Such information, including exact tactical data (torpedo ranges, visibility, etc.) is detailed in the in-app tutorial.

Procedure

Here are the steps of a torpedo attack:

- acquire target
- maneuver into approach position
- calculate intercept vector
- approach target
- man battle stations
- program the TDC
- flood torpedo tube(s)
- fire torpedoes

Acquiring the target

This is possible either through the periscope, the hydrophone, or the observers' binoculars. Have the First Officer identify the target(s) as soon as possible and discuss your maneuvering ideas with the Navigator so that they can work out an optimal approach. All of this is to help you get the most valuable ships on the receiving end of the attack.

Maneuvering into approach position

The ideal position for approach is ahead of the target and from the side. The easiest way to get into that position is to assume the same course as the target and overtake it on the surface while keeping outside of its visibility range. This will then allow you to close in on a line perpendicular to its course as explained below. The best moment to turn is when the enemy is three quarters to the rear, i.e. bearing around 225 or 135 (again, assuming the U-boat is going along the same course).

Calculating intercept vector

The Navigator has to work out the correct intercept vector, i.e. the angle of approach. The most desirable attitude is perpendicularly to the target, straight 90 degrees in relation to its course. This sort of approach exposes the target's broadside, thus considerably increasing hit probability. The more the intercept vector diverges from the 90 degrees, the smaller the chance to hit becomes. Attacking a vessel directly from the front or the rear makes for a very small target, with very low torpedo hit probability.

Approaching the target

Once the intercept vector has been calculated, the approach begins. If it is day, then you must dive to avoid being spotted. If it is night, then the enemy should not be able to spot you, even if you get very close (unless they have radar, which you should not worry about in the early missions). Regardless, enemy position must be monitored at all times when approaching. Either the hydrophone, the observers, or the periscope must be used to keep track of how the relative position of the enemy is changing so that course or speed corrections can be applied. In general, the speed of a submerged Type VIIC is not much different from the speed of a typical convoy.
If the Navigator has read the Attack Disk properly, then, with a little practice, the required corrections will be minimal. If, however, the shipping group you are after becomes aware of your presence, then not only will its escorts (if any) attack you but, on top of that, the merchants will start zig-zagging. This notably decreases your torpedo hit probability, so remember the golden rule and avoid detection at all costs.

Manning battle stations

As soon as the course has been corrected for the final approach, get your torpedo crew to stations. Don't wait until the last minute and try to have a fresh crew in the torpedo room. Launching a full salvo and reloading requires a lot of their effort, so it's best to have a well-rested torpedo crew, or they might need help from the other players.

Programming the TDC

This device is responsible for torpedo targeting, and the appropriate information has to be entered into it before torpedoes can be launched. Make sure the distance is at least 300 meters, or the attack will not be possible.

Flooding torpedo tubes

Once the tubes are 'programmed' via the TDC, you must flood them. After that happens, the torpedoes are ready for launch.

Firing torpedoes

This is the moment everybody has been waiting for! Launch the torpedoes and perform an evasive maneuver, because the escorts (if any) will be on high alert as soon as the first torpedo explodes.

Torpedo types

You have two torpedo types at your disposal: the steam G7a and the electric G7e. Each type has its advantages and

disadvantages. The steam torpedoes are more reliable and are much faster than their electric counterparts. However, they leave a bubble trail on the surface, and can be spotted by enemy observers, especially during the day. Therefore, the steam torpedoes are best used at night time. Their advantage is their speed and reliability, as the electric torpedoes are more faulty, often not exploding at all. The electric torpedoes, however, are much harder to detect, and thus can be used to good effect both during night and day operations, provided they don't malfunction.

6. ADDRESSING THE CREW

This order allows you to play a Captain's card. You begin each mission with a few, but you may gain more from the event deck. Use them wisely, as they are your only reliable way of boosting morale, apart from sinking enemy vessels.

THE FIRST OFFICER

Suitable for: players with solid communication and some software skills

You are responsible for:
- operating the companion app
- manning the helm
- administering first aid
- identifying enemy vessels
- receiving and sending radio messages
- carrying out 88mm gun attacks

1. OPERATING THE COMPANION APP

The app is an integral part of the game, and being the First Officer lets you play with arguably the best toys on board the U-boat: the hydrophone, the Enigma, torpedoes, and more! You are also entrusted with reporting information to the remaining players (such as events, enemy activity, etc.), target identification, as well as inputting the Captain's commands into the app. Below you will find a few helpful hints to get you started:

- **Report everything that appears in the information feed.** The remaining players will be counting on you to deliver the information in a timely manner – there are situations where it can make the difference between life and death!
- **When the Captain issues an order, key it in straight away,** but always make sure the crew is in position before hitting 'OK'.
- **A bell sound means a watch change,** allowing the Captain to adjust the Order Track. Make sure that the Captain knows when that happens.
- **Pay attention to what is being said, especially by the Captain.** Monitoring communication is an essential skill for the First Officer, as missing an important message may have severe consequences for the entire crew.
- Conversely, as the First Officer, you should **ensure that the other players hear and understand your reports.**

2. MANNING THE HELM

In order to steer the submarine, you need to have two helmsmen in the control room. This is the most mission-critical part of commanding your crew, so it is best that you make sure your helmsmen are in position at all times. The remaining sailors under your command are mostly needed in Officer's quarters, so make sure to reposition your men each time you have the option to do so.

3. ADMINISTERING FIRST AID

When you decide to treat sailors' wounds, be sure that it is absolutely necessary, because **medical supplies are scarce and usually non-replenishable.** Your top priority should be sailors with wound tokens in their activation spaces, because a second wound token will kill them. It is a good idea to get multiple ill or wounded sailors in a single section, so that you can help them more efficiently.

4. IDENTIFYING ENEMY VESSELS

Target identification is a very important responsibility of the First Officer. First, it distinguishes between merchants and escorts. Secondly, it determines how much GRT a given target might be worth. It's better to sink heavier ships, so take your time to choose torpedo targets wisely instead of taking potshots at whatever appears in the crosshairs.

The identification sheet lists different ship type silhouettes, along with their rough GRT values. Some ship types

are difficult to tell apart, so if you are having a hard time deciding, try comparing the number and arrangement of smokestacks and masts, as well as other details (including the shape of the bow or stern). It is also worth checking whether a lone merchant you are approaching is armed.

With a little practice, you will be able to tell enemy ship types and identify the most valuable heavy targets even without the help of the ID sheet.

5. RECEIVING AND SENDING RADIO MESSAGES

The Enigma cipher machine is necessary to send and receive messages to and from HQ. You will receive new secondary objectives, as well as threat reports. These messages will often offer scoring opportunities that may change your whole mission strategy altogether. Warnings can reveal mines or increased enemy activity. Sometimes the reports may be less valuable, informing you of things happening miles away, but it is always good to stay in the loop and keep your options open.

In any case, deciphering and reading messages from HQ is strategically important and should be done as soon as the situation permits. Sending messages, on the other hand, will allow scoring additional Renown, as you inform the HQ and other steel wolves of your activities.

6. CARRYING OUT 88mm GUN ATTACKS

Whenever you encounter a lone merchant, the 88mm cannon comes into its own. It is a very cost-effective way of sending the enemy to the bottom, so use it when you can. Watch out for guns on enemy merchants, though, as some of them may carry one or more guns, luring the U-boat into a trap.

THE NAVIGATOR

Suitable for: players with good spatial awareness or sailing experience

You are responsible for:

- navigation (strategic and tactical)
- managing observers on the bridge
- meal preparation
- manning the 20mm cannon

1. NAVIGATION

The role of the Navigator is much easier than it initially looks, and offers perhaps the most satisfying gameplay experience of all. It requires understanding a few key concepts but, fortunately, there is very little math involved. Below you will find a few pointers to help you get started as the Navigator:

- **Precision is important, but you need not overdo it.** WW2 took place long before the invention of the GPS, and sailors still relied on the sextant, the sun and the stars for navigation. Although that system was rather precise, they often could not determine their position in bad weather, and would often end up miles away from their assumed location. This is a part of the experience – not knowing exactly where you are is no big deal and may happen more often than not!
- **The game features strategic, as well as tactical navigation.** Strategic navigation lets you determine the course towards mission objectives, as well as your position on the strategic map. You can check it using the sextant or the distance ruler. It is a good idea to note down certain mission-critical information on the map (such as the current course, or the time and date when the mission began).
- Tactical navigation, on the other hand, is used in combat situations. You do tactical navigation on the tactical map. It lets you determine the position of the U-boat in relation to other vessels around it. This is your most mission-critical skill: if you make a mistake or lose focus, then the whole attack plan could fail. Thankfully, you have a very powerful tool at your disposal: the Attack Disk. It will provide all the solutions you need, provided you know how to use it. Therefore, **make sure to familiarize yourself with the Attack Disk before beginning your first mission**!

- **Directions in UBOOT The Board Game are given in a 360 degree scheme.** It works similar to how airmen used to call directions, where 12 o'clock means straight ahead, three o'clock is to the right, six o'clock to the rear, etc. The same applies to the 360 degree system: 0/360 degrees is the North (or straight ahead), 90 degrees is the East (or to the right), 180 degrees is the South (or to the rear), and 270 degrees is the West (or to the left). 0 and 360 are the same direction. If you have ever used a compass, then the concept is probably clear.
- **You must differentiate between the two most important navigation parameters: course and bearing.** A **course** is calculated in terms of absolute cardinal directions. 0/360 degrees is always North, 90 degrees is East, 180 degrees is South, and 270 degrees is West. However, when speaking of bearing, the degree values are counted **from the U-boat's bow. The bow (straight ahead) is 0/360 degrees.** So, if the First Officer reports 'enemy bearing 90 degrees', it means that the enemy is directly to our right, a different concept from directly East of us! That's why you must never confuse the green (bearing) and white (course) parts of the Attack Disk. If you do that, then you will keep making mistakes.
- **Stay away from the shoreline.** If you get too close to the land, the First Officer will see a notification in the app, warning about shallow waters. If this warning is neglected, the U-boat may run aground. If that happens, it is the end of the mission and all players lose the game!
- **Approaching the shores of Great Britain is dangerous for several reasons.** You will be faced with coastal patrols, mines, and strong aircraft presence. What is more, don't forget that the operational range and anti-submarine capabilities of enemy planes will increase as the war develops.

Using the Attack disk and the tactical map

If you have read the rules, then you already know how the Attack Disk works. It is not a difficult tool to master. In fact, if you REALLY wanted, you could imagine it all in your head and not use the Attack Disk at all, but you would be making your life much harder. Most people find it handy to record navigation data, and the Disk is almost like a translation tool. It converts figures into directions, so as long as you do everything right, updating the Tactical Map will be rather easy.

Another thing that could help you is looking through the binoculars. The observers are under your command, so you can always ask the First Officer to give you the app device if you wish to take a look through the observers' eyes. This may help you get a clearer idea of how to arrange pieces on the Tactical Map.

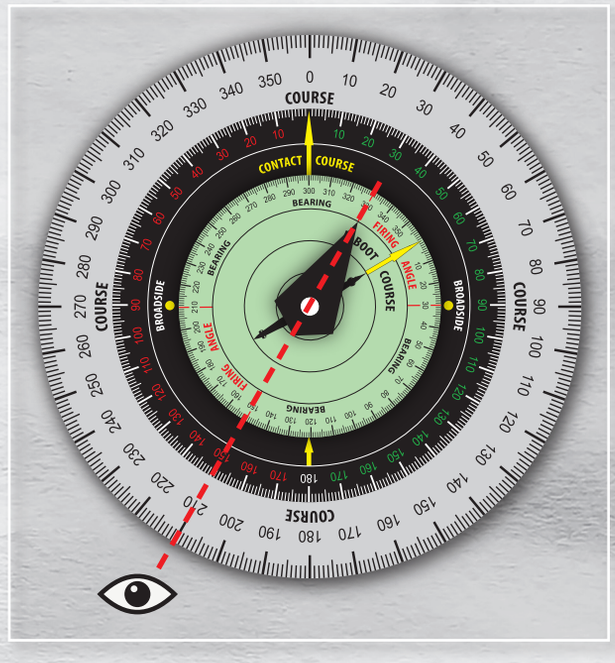
Playing the Navigator on 'hard'

DESIGNER NOTE:
you can skip to 'setting up for the attack' if you don't intend to play on 'hard' difficulty.

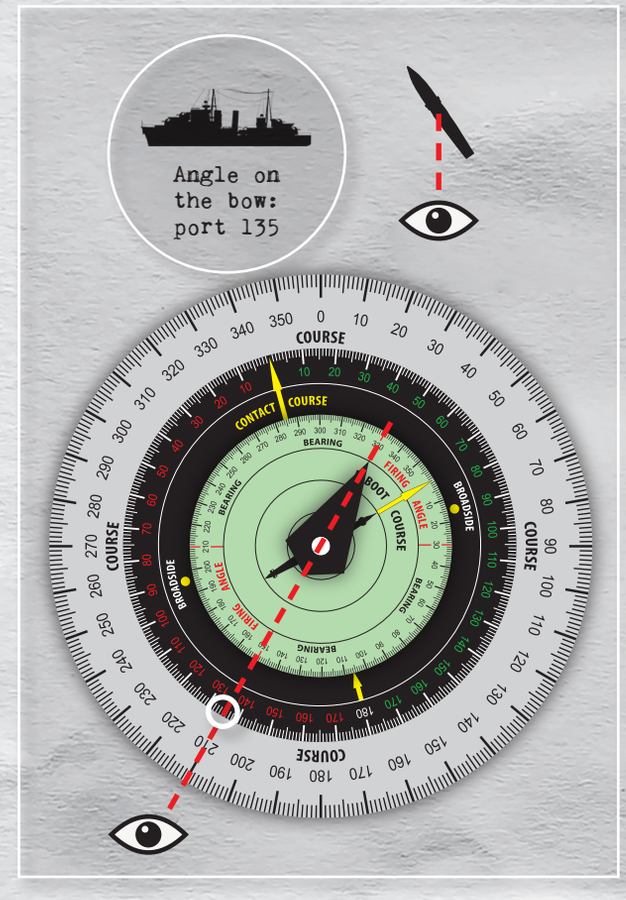
Being able to look through the binoculars yourself will be especially important on hard difficulty, where the app won't be giving enemy courses to the First Officer. You will have to figure them out yourself, either by following the changes in contact navigation data, or by using the advanced side of the Attack Disk's black disk.

The side with the numbers in red and green is to help you calculate the course of the target by means of visual identification. It is done by determining the 'angle on the bow' (AoB) of the target, i.e. the angle from which you are looking at it. If you are looking at the target's left side (port side), then you are looking at its red side. If you are looking at its right side (starboard side), then you are looking at its green side.

Take a good look at the silhouette of the target and compare it with the ones on the Identification Sheet. This should give you a rough idea of what the AoB value should be. For example, if you are looking at the target's left rear quarter, then the AoB should be somewhere around 'port 135' (i.e. red 135).



Once you have estimated the approximate AoB, you can attempt to determine the contact's course. First, set the U-boat course and the target bearing, and then imagine that the arrow that shows bearing extends both ways, all across the attack disk. Now, look at the black disk from the perspective of the outer edge of the entire disk, opposite to where the bearing arrow is pointing.



This is the perspective you should look at the black disk (the enemy) from, and it is worth noting where this point is located on the white disk. Having done that, rotate the black disk until your assumed AoB value on the black disk aligns with your point of view on the white disk. You should now be able to read the approximate course of the enemy by looking at where the yellow arrow on the black disk is pointing.

Setting up for the attack

In order for the attack to succeed, you must plot an intercept vector. Take a look at the Tactical Map and discuss the necessary maneuvers with the Captain. There are several factors to consider here (the target's course relative to the U-boat's course, distance, speed, etc.). Ideally, maneuvering should position the U-boat ahead of the target and to the side, perpendicularly to the target's course, as well as within torpedo firing arc and range.

Pursuit course

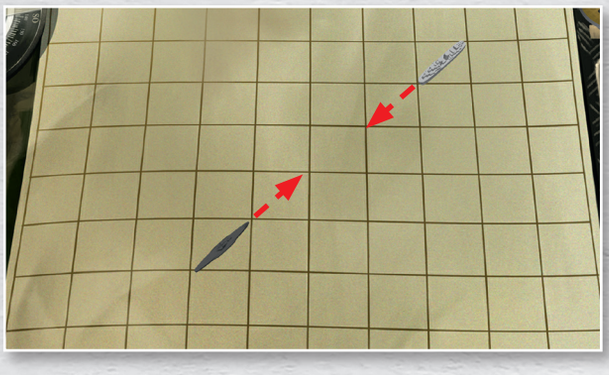
If the target is moving away, then assuming the same course for pursuit purposes is a good decision, as long as the U-boat maintains enough distance not to be seen. It is also better to stalk the prey on the surface, thus gaining a significant speed advantage. It may also happen that changing course to open or close the 'V' will be necessary to increase or close the gap between the U-boat and its target.

Intercept vector

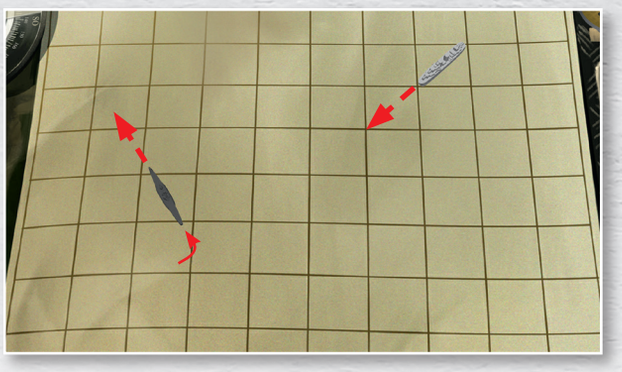
Once the enemy has been overtaken, the crew must prepare to make a turn, assuming a 90 degree intercept vector while diving to avoid detection (at least during the day). The Attack Disk will help you find the perfect approach – it is marked by the yellow dots on the black disk. The firing angle extends from –30 to +30 degrees from the bow/stern and is marked on the green disk. The crew must stay focused while approaching the target, as course and speed corrections will be necessary more often than not. Observe the target through the periscope or use the hydrophone to make sure that your approach is as precise as possible.

Maneuvering examples:

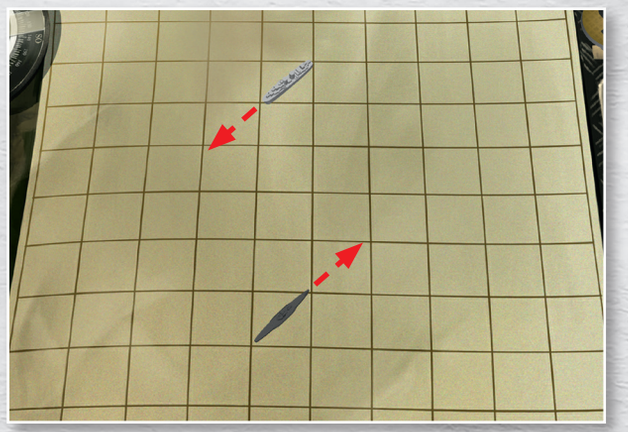
Here are some helpful examples. They assume that the U-boat is on the surface and that it has not been detected by the enemy.



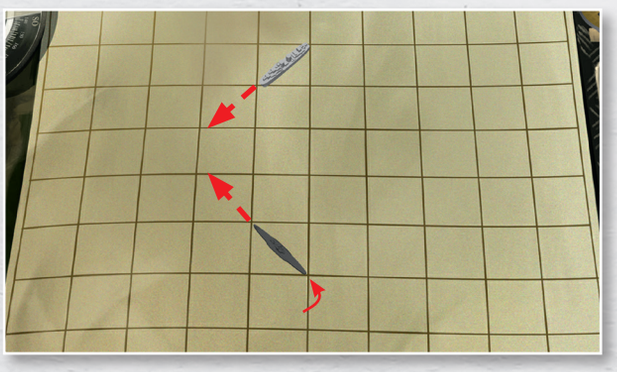
When on a collision course with the enemy, it's never advised to continue - the accumulated speed of the U-boat and the enemy will result in the distance closing much faster than you would expect.



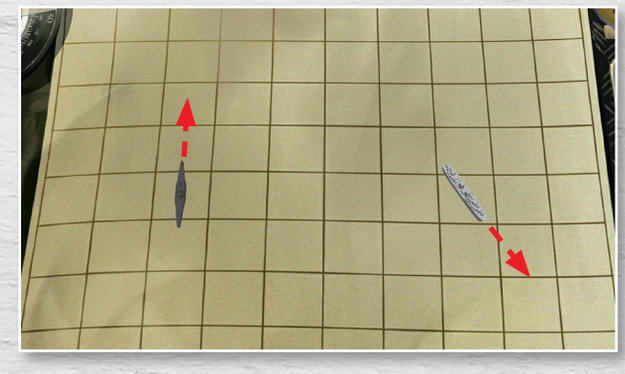
Diving seems like a good idea, but it's much better to turn first, and then dive. The reason is that if there are escorts in the group, then they will most likely detect the U-boat with their sonar.



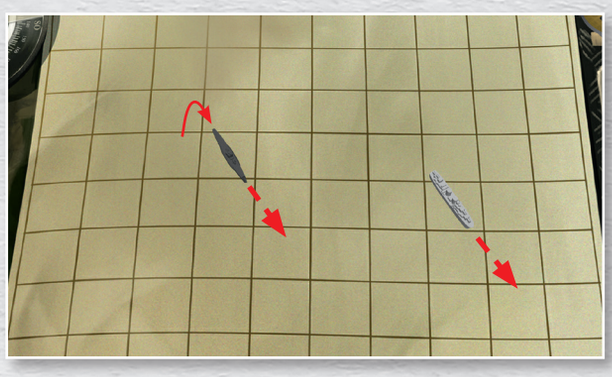
When passing by, diving is enough to stay safe.



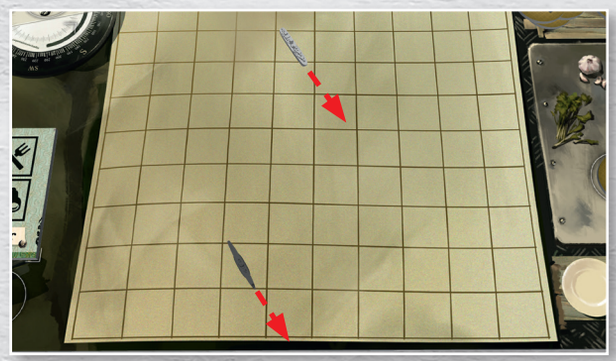
If, however, you decide to attack, you should arrange a broadside approach to attack the enemy.



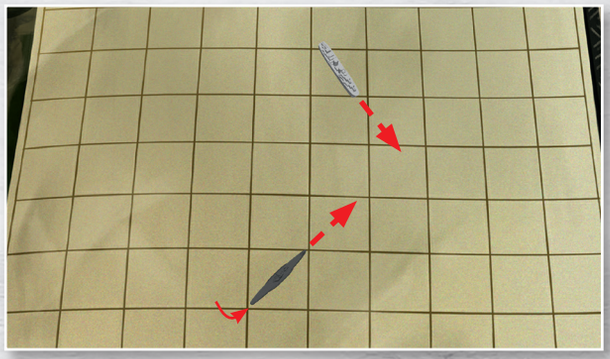
If the enemy is getting away and you wish to chase them...



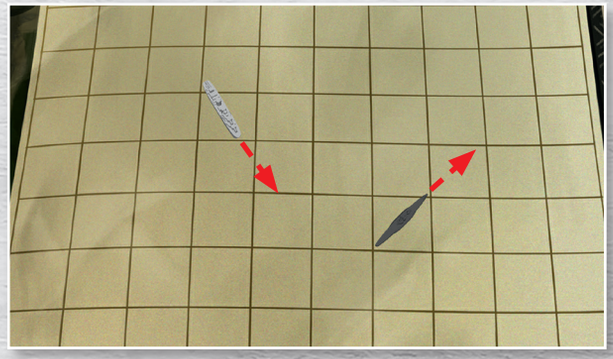
...then it is best to assume a pursuit course (their course) while staying outside visible range.



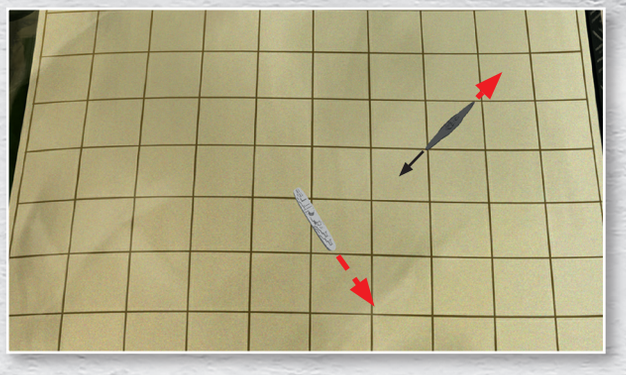
When running on diesels at full speed, the U-boat is much faster than most merchant vessels, and you will overtake them in a few hours of game time.



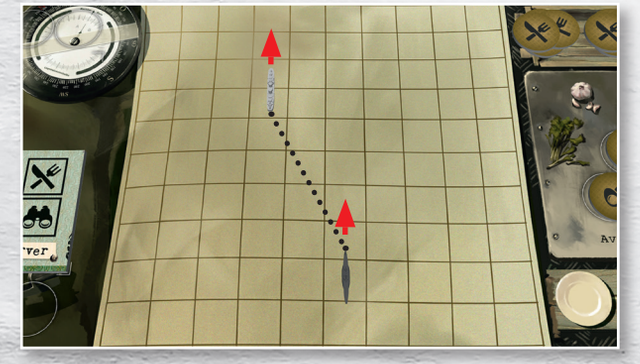
Once you are ahead of the target, turn to the intercept vector for a broadside approach and dive if necessary. At this point, it is important to use the hydrophone and/or the periscope to make course and speed adjustments.



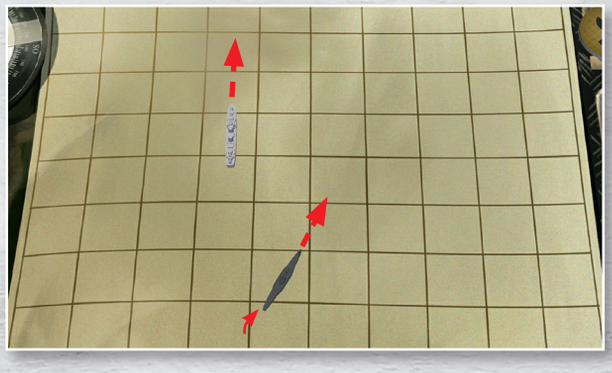
If you ever end up with the enemy behind you...



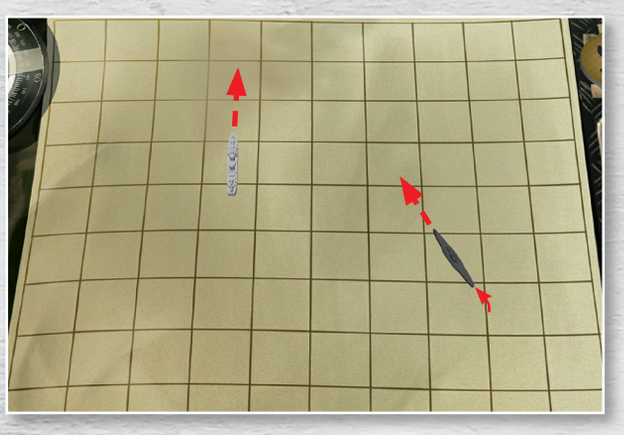
...then don't forget that you have an aft torpedo tube as well!



When you are closing in on the target, but the distance is getting dangerously small…



You need to alter course in order to 'open the V' and diverge a little.



If, on the other hand, you need to close the gap, then you can make small adjustments towards the target, making the courses converge.

2. MANAGING OBSERVERS ON THE BRIDGE

During mobilization, you will typically send observers to the bridge. The U-boat will spend a lot of its time on the surface, and your crew members must keep watch on the bridge when surfaced. But don't forget to get them inside before the Captain orders a dive! Once the U-boat dives, your observers won't have a lot on their hands. This is a great opportunity to help other players, especially once their sailors start running low on activations.

3. PREPARING MEALS

Another one of your responsibilities is to prepare meals for the entire crew. You should prepare meals once daily. The menu may affect crew morale. If you have several combos available, don't go for the best ones immediately, when crew morale is good. It's better to cook something delicious when the morale has started deteriorating.

4. MANNING THE 20mm CANNON

The AA gun is a last resort when an air patrol catches you off-guard on the surface. If you see the enemy closing in and diving stations are not manned yet, then it might be better to put some fire on the strafing enemy aircraft in a last-ditch attempt to chase them off (or maybe even shoot down).

THE CHIEF ENGINEER

Suitable for: players excelling at problem solving and prioritizing.

You are responsible for:

- repairs
- commanding the engine and ballast crew
- updating the depth gauge and the engine room telegraph
- monitoring the Technical View

1. REPAIRS

You are a very important person on board the U-boat. Being in charge of repairs and handling the lion's share of maneuvers means that mission success largely depends on your performance. Moreover, you are responsible for neutralizing dangerous environmental conditions on board, and even saving the U-boat from certain doom if it sustains critical damage! Before things go that far, however, you will be entrusted with performing routine maintenance tasks – do not ignore these, as they will escalate into more serious problems as time passes. A few starting tips follow:

- **Immediately mark all the reported technical and environmental conditions on the Technical View.** As the officer in charge of repairs, you need to evaluate each problem and decide on the best combination of people and resources to deal with it.
- The First Officer will report all technical matters to you, so **make sure you pay attention** to what they say.
- **When the First Officer reports a technical condition, you should ask them to investigate how bad it is.** After a few games you will have a rough idea of the number of sailors you need for particular repairs, but even then it is good to make sure how things are.
- **Maintain a healthy balance between making repairs yourself and asking other players to help you.** Your crew is much more efficient at fixing things and can use card bonuses, but it's never a good thing to leave engines and ballast controls unattended. Therefore, make sure to provide adequate substitution whenever you leave your posts.
- Ensure that sailors have the right supplies to deal with environmental conditions. **Always keep track of where your supply tokens are,** so that you don't need an additional mobilization order just to move them.
- The same applies to your toolboxes. **Learn how to optimize repair processes using cards,** so that fewer sailors become busy or activated.
- If the number of sailors performing repairs changes during a repair in progress, then you must report it to the First Officer, who will note it in the app.

Hull breaches

When a depth charge explodes very near the U-boat, it may cause severe damage, including a hull breach. If that happens, it is your duty to save the submarine from sinking. Whenever a hull breach occurs, you must remain calm and act as quickly as possible.

First, you must know which section is breached. Don't frantically grab the puzzle pieces, because you first need to assemble the repair crew in the right section and get them activated. ONLY THEN can you reach for the Technical Puzzle pieces.

Second, don't panic. If you gather the repair crew quickly enough, then you will have plenty of time to solve the puzzle. When solving it, try eliminating the pieces which you are sure you don't need. For example, if a hull breach has occurred in Section 1, you can immediately rule out pieces showing such things as the diesel engine or the galley (after all, they are on the opposite end of the U-boat).

If you realize that you are running out of time and will not solve the puz-

zle, then it is crucial to evacuate the breached section before it is flooded. Ask the Captain to mobilize the crew and remember to grab any resources that were left inside.

2. COMMANDING THE ENGINE AND THE BALLAST CREW

All four of your crew members participate in maneuvers, so it is best if you keep them ready throughout the game. This also means that you will need to reposition your men after each watch change, so make good use of every mobilization (or request one from the Captain if necessary).

3. UPDATING THE DEPTH GAUGE AND THE ENGINE ROOM TELEGRAPH

The two gauges that you can find on your player panel are the depth gauge (on the left) and the engine room telegraph. Update them whenever their values change. While not mission-critical, they are helpful visual information for you and the other players, allowing you to save time instead of asking the First Officer (who might have more pressing matters to attend to).

4. MONITORING THE TECHNICAL VIEW

As the Chief Engineer, you will need to be aware of the Technical View at all times. You should monitor the locations of your supplies, technical conditions, and (most importantly) environmental conditions, which pose the biggest threat to the crew. When an environmental condition exists, you must remind other players about hazardous sections, as well as about resolving crew damage in them during mobilization and watch change.

Closing comments

Hopefully, this guide has shed some light on how to prepare for your first mission. You already know how to get started, how to set up for an attack, what to do when detected by the enemy, and much more. Now it is time to put theory into practice. Once you start playing, you should soon realize that the game system is, in fact, rather easy to understand, and that the true challenge behind the game lies in being aware of the situation, prioritizing, and carrying out orders in the most optimal way. You probably won't master it all in one evening, but we really hope that this little book will help you make the first step towards becoming the greatest U-boat ace in history.

Thank you once again for purchasing U-BOOT, and happy hunting!

Artur Salwarowski & Bartosz Pluta

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