

1. INTRODUCTION

The Battle of the Atlantic was one of the most prolonged and pivotal naval campaigns in history. Spanning the years from 1939 to 1945, it was a conflict waged over control of the sea lanes connecting North America to the British Isles and, by extension, to the entire European theater. The outcome of this battle would impact the course of the war significantly.

At the heart of this long and arduous struggle were submarines, particularly the German U-Boats (short for Unterseeboot, meaning "undersea boat"). These deadly vessels played a decisive role in the success and challenges faced by both Allied and Axis powers. The U-Boats, capable of stealthily prowling beneath the waves, brought a new dimension to naval warfare, creating an ever-present threat to the shipping convoys so vital for supplying the Allied war effort.

The German U-Boats, under the command of experienced and often daring officers, used tactics of wolf-pack hunting to devastating effect. These submarines targeted and sank thousands of Allied cargo ships and military vessels, inflicting severe losses and disrupting supply lines. In response, the Allies undertook extensive efforts to counter the U-Boat menace, including deploying escort vessels, aircraft patrols, and developing advanced anti-submarine warfare technologies.

The Battle of the Atlantic was a tough fight that tested endurance and innovation. The fate of nations depended on controlling these crucial sea routes, making it a key part of World War II.



Dixie Arrow torpedoed off Cape Hatteras by U-71.
U.S. Navy (photo 80-G-45376)

2. BOARD GAME OR BOOK?

In this game, you can play directly in the book by drawing and making notes, or you can play it more like a regular board game by copying or cutting the maps and counters provided at the end of the book.

Playing in the Book:

You can engage with the game by drawing and writing in the book itself. Use pens or markers to mark your U-Boat's movements and record important information directly on the book's pages. This way, you can immerse yourself in the game's experience.

Traditional Tabletop Play:

If you prefer a classic board game setup, you can copy, scan or cut the maps and counters found at the end of the book. Use these copies to create a physical game board and components on a table. This gives you a more hands-on, traditional gaming experience.

You have the flexibility to choose the style that suits you best, but the game's core mechanics and gameplay remain the same in both options. So choose your way of enjoying the challenges of submarine warfare in World War II.

Additionally you can access all the game's materials, including maps and components on our website, www.turgaliungames.com, or in the files section of the game page on BoardGameGeek (BGG).



<https://boardgamegeek.com/boardgame/394053>

YOUR U-BOAT

U-boat: Type VIIA U-33	Max Range per turn:	Max. 3 Torpedoes/turn
Torpedoes: 11	-Surface: 2 grids Spend 1/2 Fuel	Max. 1 Ammo/turn
Crew: 42 men	-Submerged: 1 grid Spend 50% Battery	Max. 2 Actions/turn

SEQUENCE OF PLAY

1. U-Boat movement phase: Move your U-Boat on the map up to your maximum range
2. Sighting phase: Roll 2d6 on the Sighting Table. Check the color where you ended your movement
 - Ships: If you spot a ship, proceed to the Encounter phase and Ship movement phase
 - Aircraft: If an aircraft has detected you, roll the dice on the Aircraft Attack Table.
 - No sighting: Continue with your U-Boat movement
3. Continue your patrol with the U-Boat movement phase

Detection Table

Time	Surface	Submerged
Roll 4-6	Sighted D3	Sighted D2
Day	Detected D2	Detected D1
Roll 1-3	Sighted D2	Sighted -
Night	Detected D1	Detected D1

For this first mission, detection ranges only have implications for the movement of the ships. In order to learn, during this initial mission, the weather is always favorable and the ships do not radio aircraft or escorts when they detect a submarine.

When a ship detects a submarine, it will attempt to move away from its trajectory. In the next Ship movement phase, if the ship has not yet been sunk, it will move one space in the direction that facilitates its escape from the submarine. A ship is never allowed to move backward. Please refer to the Ship movement section for more information.

Sighting Table

2d6	Blue	Yellow	Red
2	-	Aircraft	Aircraft
3	-	-	Aircraft
4	-	Ship (x1)	-
5	-	-	Ship (x1)
6	-	-	-
7	-	-	-
8	-	-	Ship (x1)
9	-	-	-
10	-	Ship (x1)	Ship (x1)
11	-	-	-
12	Aircraft	Aircraft	Aircraft

Aircraft Attack Table

2d6	Attack result
2	4 Damage
3	3 Damage
4	2 Damage
5	1 Damage
6	1 Damage
7	Roll on Damage Table
8	Roll on Damage Table
9	Failed attack
10	Failed attack
11	Failed attack
12	Failed attack

Escape Maneuver Table

1d6	Escape result
1	2F*Roll on Aircraft Table
2	1F*Roll on Damage Table
3	2F*Successful evasion
4	1F*Successful evasion
5	Successful evasion
6	Successful evasion

2d6 S-Engine damage (-) 1F Spend 1 Fuel, 2F Spend 2 Fuel After evading the threat is successful (-) After roll on the corresponding table=Successful evasion. If you roll 2-6 on Aircraft Table again, then the damage and don't roll again, submerge and the aircraft has lost you.

Attack Table

2d6	D1	D2	D3	D4
2	Miss	Miss	Miss	Miss
3	Miss	Miss	Miss	Miss
4	Miss	Miss	Miss	Miss
5	Miss	Miss	Miss	Miss
6	Hit	Miss	Miss	Miss
7	Hit	Hit	Miss	Miss
8	Hit	Hit	Hit	Miss
9	Hit	Hit	Hit	Miss
10	Hit	Hit	Hit	Hit
11	Hit	Hit	Hit	Hit
12	Hit	Hit	Hit	Hit

Hit Table

2d6	Torpedo	Deck Gun
2	Dud	-
3	Dud	-
4	Dud	-
5	Dud	-
6	Dud	1 Damage
7	1 Damage	1 Damage
8	1 Damage	1 Damage
9	1 Damage	2 Damage
10	2 Damage	2 Damage
11	2 Damage	2 Damage
12	3 Damage	2 Damage

Damage Table

2d6	Damage
2	No damage
3	No damage
4	B-Engines
5	Deck Gun
6	Periscopes
7	Torpedo Tubes
8	Radio
9	Diesel
10	Fuel Tank
11	No damage
12	No damage

Encounter Map available actions (Max.2/turn)

Submerged	Surface
Go to Surface	Submerge
Maneuver max. 1	Maneuver max. 2
Advance max. 1	Advance max. 2
Launch Torpedoes	Launch Torpedoes
-	Fire Deck Gun*
Repair Attempts**	Repair Attempts**
Escape	-

*Only at distance 1 and max. 1/turn
**Submerge, Diesel and Torpedo Tubes
*Repair Attempts
**Repair Attempts roll 2d6. Choose the chance to repair attempt roll 2d6. Choose the chance to repair attempt roll 2d6. Only one attempt per damage type. With a result of 10-12 the repair has been a success. Remove the damage. If it has not been repaired you can no longer try to repair that damage. Escapes: If escorts within sighted distance receive 1 Damage

- Patrol Log: The sinking log is your record of success. Use this notepad to keep a tally of the enemy ships you've successfully sunk during the mission. It's your personal victory log to showcase your accomplishments.

The collage shows several key game elements:

- Encounter map:** A circular radar-like map with concentric rings and radial lines, used for detecting ships.
- Patrol Log:** A table with columns for Ship name, Damage, and Tonnage.
- U-Boat Status Diagram:** A detailed schematic of the U-33 showing various components like Torpedoes, Battery, Radio, Deck Gun, Ammo, Reserve, Fuel, and Repair attempts.
- Map:** A map of the Atlantic Ocean with a coordinate grid (AM, AN, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ) overlaid on it.

Maps for the first mission

Tables for the first mission

3.1.3 Map, U-Boat and encounter map

On the next page, you'll encounter essential game components to help you track your U-Boat's movements, resources, and encounters:

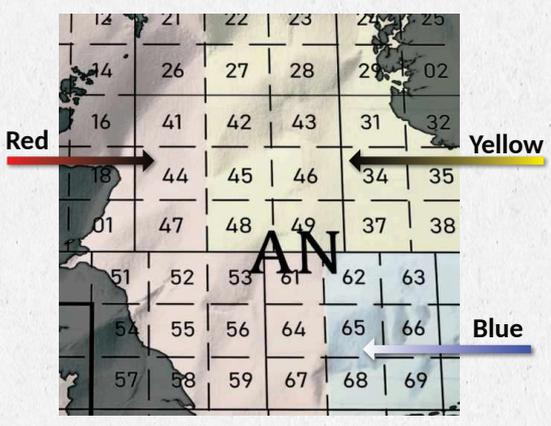
- Mission Map: This map is the backdrop for your U-Boat's operations during the mission. It provides the geographical context for your journey and serves as the canvas upon which you'll mark your movements and encounters.

The maps provided in the game are reproductions of original Kriegsmarine maps used during World War II. Every effort has been made to capture the essence of these historical documents, ensuring a deep sense of immersion in the era.

- U-Boat Status Diagram: Here, you'll find a schematic representation of your U-Boat. Use this diagram to track crucial information about your U-Boat's status, including torpedoes expended, fuel consumption, and damage sustained during the mission.
- Encounter Map: This map is where you'll navigate your U-Boat to engage with enemy ships. It's the battleground where you'll employ your tactics and launch torpedoes to target and potentially sink enemy vessels.

3.1.4 Map Zones

The map is divided into zones of various colors, each representing different degrees of danger and enemy presence.



3.1.5 Ships, events and victory points

- Mission Events: This section outlines the events and developments specific to the mission. It provides context for your objectives and the challenges you'll face.
- Enemy Ship Tables: These tables detail the types and quantities of enemy ships you may encounter during the mission. They reflect the historical context and the specific challenges of the given scenario, adding an element of unpredictability to your encounters, ensuring no two missions are alike.
- Victory Points: The number of victory points you can earn depends on your achievements within the mission.

Ship Table

2d6	Ship name	Type	Size	Hull	Nationality	Tonnage
2	Stambrook	Steam merchant	Small	1	British	1202t
3	Bowling	Steam merchant	Small	1	British	797t
4	Fensilva	Steam merchant	Medium	3	British	4298t
5	Arne Kjøde	Motor tanker	Big	4	Norwegian	11019t
6	Kausas	Steam merchant	Small	1	Lithuanian	1966t
7	Siedrecht	Motor tanker	Medium	2	Dutch	5137t
8	Ove Toft	Steam merchant	Small	2	Danish	2139t
9	Kawazota	Steam merchant	Medium	3	British	8799t
10	Britta	Motor tanker	Medium	3	Norwegian	6214t
11	Ionian	Steam merchant	Small	2	British	3114t
12	Royston Grande	Steam merchant	Medium	3	British	5144t

Detection Table

Time	Surface	Submerged	
Roll 4-6	Sighted D2	Sighted D2	For this first mission, detection ranges only have implications for the movement of the ships. In order to learn during this initial mission, the weather is always favorable and the ships do not radio aircraft or escorts when they detect a submarine.
Day	Detected D2	Detected D1	
Roll 1-3	Sighted D2	Sighted -	When a ship detects a submarine, it will attempt to move away from its trajectory. In the next Ship movement phase, if the ship has not yet been sunk, it will move one space in the direction that facilitates its escape from the submarine. A ship is never allowed to move backward. Please refer to the Ship movement section for more information.
Sight	Detected D1	Detected D1	

Events

2d6	E1	E2
2	You can attempt a repair now at no action cost	Aircraft spotted. Roll 1d6 on Escape Table
3	Fuel leak. Losses 1/2F	A hidden minefield is discovered. Roll a die on a 1-3, your U-boat navigates through safely; on a 4-6 the U-boat hits a mine and receives 1 damage
4	You can attempt a repair now at no action cost	Fuel leak. Losses 1F
5	U-boat spotted. If you are in a yellow zone, roll in the red column instead	Supplies Afloat: Spot a drifting supply crate - roll a die on a 1-3, resupply 1F; on a 4-6, it's empty or a decoy.
6	Navigation Error: Navigation calculations go wrong - roll a die on a 1-2, correct course; on a 3-6, can't move this turn. Still roll on Sighting Table	You can attempt a repair now at cost 1F
7	Hidden Reef: Accidentally approach a shallow reef - roll a die on a 1-3, navigate through safely; on a 4-6, run aground and take 1 damage	Innocent Depth Charges: Enemy ships drop depth charges - roll a die on a 1-3, evade successfully; on a 4-6, take 1 damage
8	Diesel Malfunction: Roll a die - on a 1-3, the engine is repaired next turn; on a 4-6, it remains malfunctioning.	B-Battery malfunction. See Battery for the rest of the patrol. 75%. It can't be repaired
9	Radio operator intercepts coded enemy communication. Roll a die on a 1-3, data valuable intelligence and data 1F; on a 4-6, deciphered message is a trap; roll on Aircraft Attack Table	Enemy aircraft conduct an anti-submarine sweep. Roll a die on a 1-4, you evade detection; on a 5-6, you're spotted and attacked. Roll on Aircraft Attack Table
10	Fuel leak. Losses 1F	You can attempt a repair now at cost 1F
11	You can attempt a repair now at no action cost	Hull Breach: Roll a die - on a 1-2, the breach is patched; on a 3-6, water intake continues, causing 1 damage.
12	Diesel malfunction. Next turn move max. 1 grid	Sea Alarm: Hidden dive alert sounds - roll a die on a 1-3, it's a false alarm; on a 4-6, enemy aircraft are nearby. Roll on Aircraft Attack Table

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As your U-boat covertly slips into the shadowed waters of Ocean Scotland, you've achieved a critical victory in your mission. This sea base, unsuspecting of your presence, offers a unique opportunity to gather invaluable intelligence. The intelligence gathered in Ocean will undoubtedly tip the scales in your favor. As you quietly depart this enemy harbor, you carry with you the secrets that will bring your adversaries to their knees.

Roll a die; on a 1, nothing happens; on a 2-3, 1F; on a 4, 2F

Tonnage	VP	VP	VP
<1500	0	0	Critical Failure
1500-4000	1	1-2	Severe Setback
4000-8000	2	3-4	Partial Success
8000-10000	3	5	Mission Accomplished
>10000	4	6	Outstanding Success

Ship table, events and victory points for mission 1

With ever-changing tables and conditions, you'll need to adapt your strategies and decision-making to the unique challenges of each mission.

Each mission may feature a slightly different structure and will introduce new elements and rules as we advance through the game.

At the end of the book, you'll find a journal to record all the data from your game sessions. Use these journals to attempt to beat your own records and keep track of every game you've played

3.2 DICE, PEN AND ERASER

3.2.1 Material needed

All you need to start playing the game are a couple of six-sided dice, a pencil and an eraser.

3.2.2 Dice basics

When you see **1d6** it means rolling one six-sided die. When you see **2d6** it refers to rolling two six-sided dice.

- Example:

If the table says *Roll 1d6*:



Result 4

If the table says *Roll 2d6*:



Result 8 (5+3)

The core of the entire game are the dice and tables. When the game instructs us to roll the dice on a specific table, we will look at the total result of the dice and refer to the corresponding row in that specific table. The dice result can be subject to modification by certain modifiers, which we'll explore in more detail later.

These instructions will feel like old hat to experienced wargamers but will be very useful for newbies!

In the following pages, we'll delve into the various phases of the game.

4. U-BOAT MOVEMENT PHASE

4.1 Grid System

The maps are divided into grids, and each grid is numbered for reference. It's important to note that the grids you move through must be adjacent to one another. When moving your U-Boat, you'll count the maximum number of grids per turn as specified by the mission's instructions.

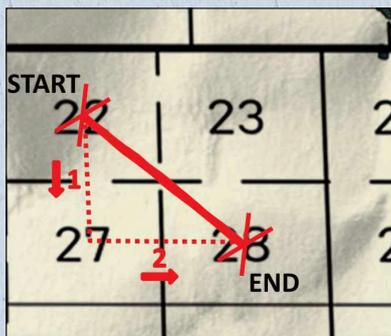
4.2 Plotting U-Boat Movements

To move your U-Boat you'll use a pencil to draw a path on the map, following the maximum distance specified by the technical data for each mission. It's important to note that this distance may be subject to modifications due to events or damage sustained by the submarine during the mission.

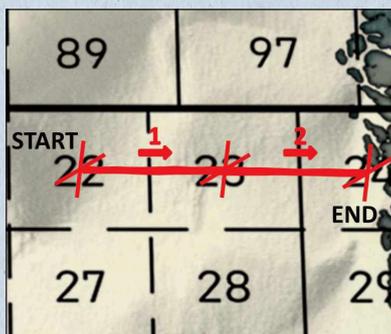
Your drawn path should consist of segments of straight lines, but you have the flexibility to create multiple segments to reach the maximum movement distance. Each straight line segment should **begin** and **end** at the **center** of a grid square on the map. To keep track of your movement, you can use a circle or a cross to mark where your movement ends.

Some grids are larger than others. This design choice reflects the reality that the speed of U-Boats during World War II depended on various factors, including weather conditions, operational depth, and engine performance.

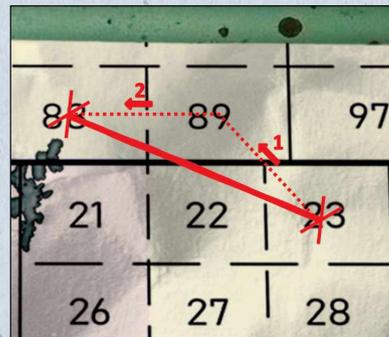
- Examples:



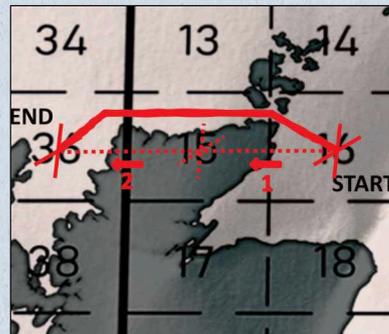
Starting grid **22**. We want to travel to grid **28**. Our max. range in this mission is 2 grids on surface. The path has to be made between adjacent grids. We end our turn in the center of grid 28.



Starting grid **22**. We want to travel to grid **24**. Our max. range in this mission is 2 grids on surface. The path has to be made between adjacent grids. We end our turn in the center of grid 24.



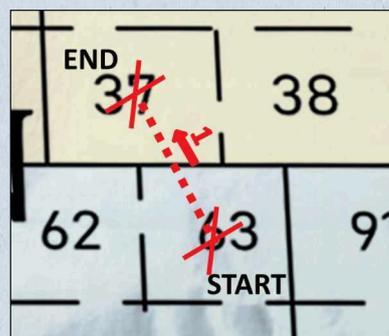
Starting grid **23**. We want to travel to grid **88**. Our max. range in this mission is 2 grids on surface. Grids 23 and 89 are adjacent, so we can take advantage of this to travel further this turn.



Starting grid **16**. We want to travel to grid **36**. Here, we need to skirt the coasts, so we draw an imaginary line between the two centers and travel with our U-boat along the land's edge.



Starting grid **02**. The mission objective is the port of Oban, in grid 61. For the purposes of the game, objectives within a grid are considered the point where we conclude our movement.



In this example, we are traveling submerged from grid 63 to 37. Our maximum movement range is 1 grid. To keep track of our submerged status, we can draw a dotted line as a reference.

The dotted lines and the arrows in the examples serve solely as a reference to keep track of the number of grids the U-boat has moved.

4.3 Day and Night Cycle

In this game the distinction between day and night is very important, affecting various aspects of gameplay. Day and night conditions play a pivotal role in how you conduct attacks on enemy ships and how enemy aircraft and escorts can detect your U-Boat.

As we progress on the map and consume fuel, time will be passing. The transition between day and night will be indicated by the icons found on the fuel table.



Aircraft attacks and events, as well as enemy ship sightings and attacks, will occur during the time of day **currently** indicated by the fuel table. If you are submerged the current time is also indicated in the battery table. In the encounter map, you can also note the current time of day directly on the day and night icons located there.

The day and night system in this game is an abstraction for gameplay purposes and doesn't precisely simulate real-time duration.

4.4 Fuel and Battery Usage

To move your U-Boat, you must manage two critical resources: fuel for the diesel engines while surfaced and batteries for the electric motors while submerged.

In this table each square for fuel represents one unit of fuel consumed, and each square for batteries represents 25% of your battery capacity.

Before you start moving your U-boat, you have the option to change from submerged to surface state or vice versa. If you spot an enemy ship or an enemy aircraft detects you, this is the state you'll begin the encounter in.

4.5 Fuel units

In each mission the provided data specifies how much fuel is required to cover the maximum distance per turn. To manage your fuel usage, follow these guidelines:

If the data indicates one unit of fuel consumption, you'll cross out one complete square in the fuel consumption table.

If the data specifies half a unit of fuel consumption, you'll cross out only half a square.



In this example we have spent 1,5 units of fuel, and it's night.

As you navigate the map and reach squares marked with an "E" (E1, E2, etc.) in the Fuel Table, you'll roll the dice on the corresponding event table and apply the results immediately.

In some missions, there may be events that offer the opportunity to refuel your U-Boat. However, this option is only available if you haven't reached the "Reserve Zone" yet. When you reach the "Sunk" square on the Reserve Fuel Track you have lost the mission immediately. **To make the game easier, you can add one or two days to the fuel track table.**

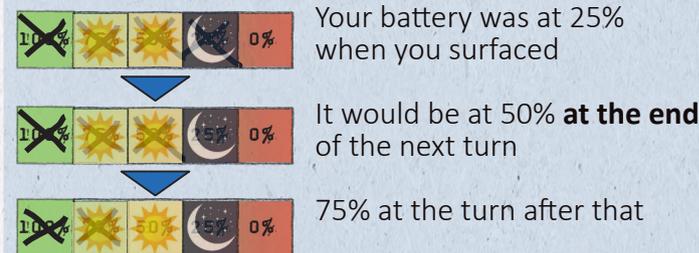
4.6 Battery Management

Submarines rely on electric motors when submerged and each mission specifies the amount of battery power needed to move the submarine each turn. Managing your battery power is crucial because if your battery reaches **0% at any point** during the mission, it results in failure.

To recharge your batteries, you'll need to surface. While surfaced, your batteries recharge at a rate of 25% per turn.

It's important to note that your battery can suffer damage during the mission, reducing its overall capacity. Effective battery management, including when to surface for recharging is essential for your U-Boat's success and survival during the mission.

• Example



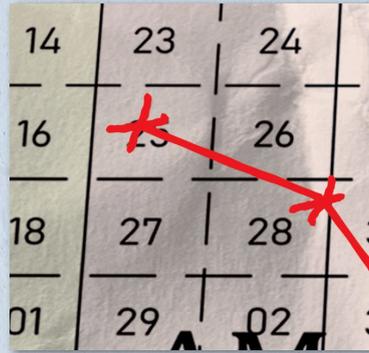
It's important to note that battery usage and diesel consumption are only considered on the movement map, not on the encounter map. In other words, you'll manage your batteries and diesel when moving through the open sea, not during combat encounters.

5. SIGHTING PHASE

After completing your movement, check the color of the area in which the U-boat is located and roll the dice on the Sighting Table.

- Example:

The U-boat finishes its movement in a red area.



We roll two six-sided dice and get a result of 5



We check the Sighting Table and the result for 5 in the red column is **Ship (x1)**. This means that our crew has sighted an enemy ship.

Sighting Table

2d6	Blue	Yellow	Red
2	-	Aircraft	Aircraft
3	-	-	Aircraft
4	-	Ship (x1)	-
5	-	-	Ship (x1)
6	-	-	-
7	-	-	-
8	-	-	Ship (x1)
9	-	-	-
10	-	Ship (x1)	Ship (x2)
11	-	-	-
12	Aircraft	Aircraft	Aircraft

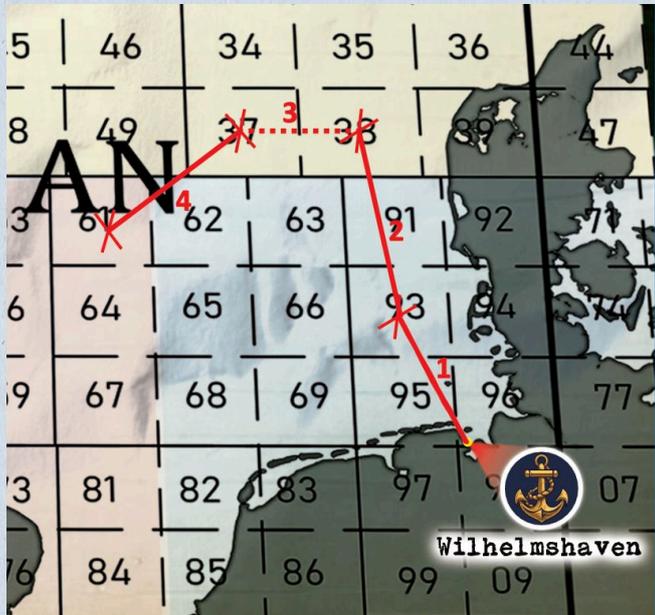
-If Aircraft: Roll 2d6 on Aircraft Attack Table
 -If Ship: Go to Encounter Map and place your U-boat at the desired angle (before knowing where the ship is). Roll 2d6 on Encounter map for ship position. Then roll on Ship Table for each ship

In this situation, we'll need to choose the angle at which you place your U-Boat on the Encounter Map, representing its initial orientation. We'll then roll the dice to determine the initial position of the enemy ship. However, we will get into these mechanics in more detail later in the rules.

If the table result shows **-**, it indicates that your U-Boat has not spotted any enemy ships, and no enemy aircraft have detected your presence. In this case, you can **proceed to the next turn** of your patrol, continuing to move your submarine through the mission without any immediate encounters.

- Example:

In the following example, we will follow four complete turns of movement to see the U-boat's consumption. Remember to charge the batteries while on surface (25% per turn)



The mission specifies the normal consumption (without damage or events) of our U-Boat

Max Range per turn:

-Surface: 2 Grids Spend 1/2 Fuel

-Submerged: 1 Grid Spend 50% Battery

- Turn 1: AN96→AN93. Surface (2 Grids). We spend 1/2 Fuel



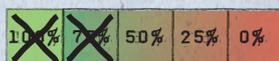
- Turn 2: AN93→AN38. Surface (2 Grids). We spend 1/2 Fuel



- Turn 3: AN38→AN37. Submerged (1 Grid). We spend 50% Battery



- Turn 4: AN37→AN61. Surface (2 Grids). We spend 1/2 Fuel and recover 25% Battery



5.1 AIRCRAFT

In the Battle of the Atlantic, aircraft played a crucial role in the Allied defense strategy. If the result on the Sighting Table is "Aircraft," it means that your U-Boat has been detected by an enemy aircraft. In addition to alerting other surface vessels, enemy aircraft posed a direct threat to submarines by initiating aerial attacks.

When your U-Boat is subjected to an aircraft attack, you need to roll two dice on the Aircraft Attack Table. After rolling, you'll apply any relevant modifiers (DRM) to the resulting dice values.

Nighttime air attacks were nearly impossible until 1944, so in this game, if it's nighttime and the result on the sighting table is 'aircraft,' then we won't roll the dice and will continue our patrol.

5.1.1 What are Die Roll Modifiers (DRM)

In many wargames, including this one, a common concept is Die Roll Modifiers (DRM). These modifiers are applied to dice rolls.

Some tables in the game provide DRM values explicitly. DRM can also be influenced by events that occur during the mission, upgrades or enhancements made to your U-Boat, or damage sustained during encounters.

- Example

We roll a 9 (5+4) on the Aircraft Attack Table



Aircraft Attack Table

2d6	Attack result
2	4 Damage
3	3 Damage
4	2 Damage
5	1 Damage & Roll on Damage Table
6	Roll on Damage Table
7	Roll on Damage Table
8	Roll on Damage Table
9	Failed attack
10	Failed attack
11	Failed attack
12	Failed attack

DRM: Night (+1), Submerged (+1), E-Engines damage(-2) 2-8: Apply damage to the U-boat. Then roll again on Air Attack Table or Try to escape (Roll on Escape Maneuver Table)

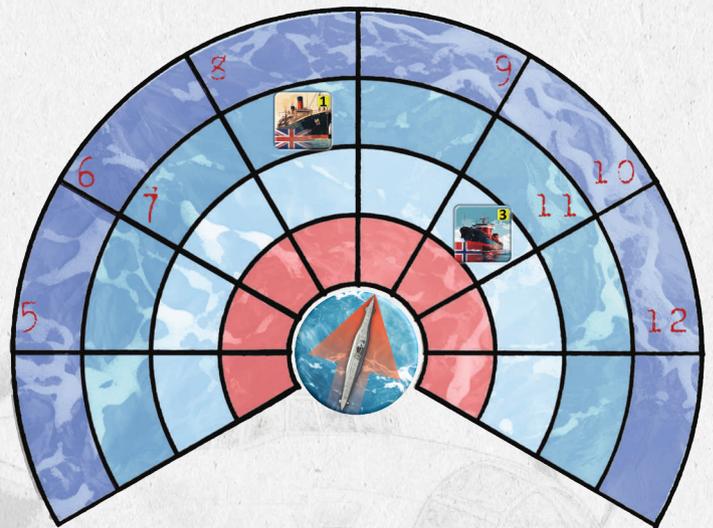
The result is **Failed attack**. But our E-Engines are damaged (-2), so the final result with DRM is 7 (9-2) **Roll on Damage Table**

5.2 SHIPS

The primary mission of U-Boats during the Battle of the Atlantic was to disrupt Allied supply routes by relentlessly hunting and sinking enemy ships and convoys. Your U-Boat patrol in the game will be dedicated to this goal.

When the result on the Sighting Table indicates the presence of one or more enemy ships, you immediately transition to the Encounter Phase. **But you can always choose to ignore the sighting and continue your patrol.**

This phase represents the critical moment when you engage with the enemy, where your tactical decisions and dice rolls will determine the outcome of the encounter.



In the upper image, you can see the Encounter Map, which serves as the battlefield where the movements and attacks of your U-Boat and enemy ships will take place.

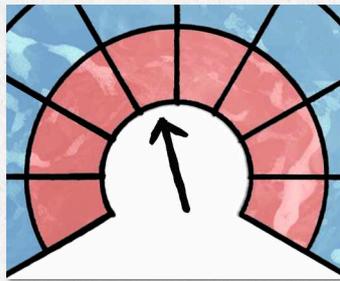
The Encounter Map is divided into various zones. Your U-Boat is positioned at the center, serving as your reference point while enemy ships move in relation to your U-Boat's position. In the following points we will explain how an attack on enemy ships unfolds and how these ships move relative to your U-Boat's position on the map.

5.2.1 Positioning your U-boat

When you encounter enemy ships in the Sighting Table, the first step **before** identifying the ships is to position your U-Boat on one of the eight possible positions of the Encounter Map. You can either place the U-Boat counter at the center of the map or draw an arrow to indicate its direction.



U-boat counter



Drawn U-Boat

5.2.2 Determining Enemy Ship Positions

The next step in the encounter phase is to roll two dice to determine the positions of the enemy ships. If the result on the Sighting Table indicates the presence of multiple enemy ships, you'll roll the dice individually for each of them.

These dice rolls will determine where each enemy ship is located on the Encounter Map.

The Encounter Map has numbers from 2 to 12 printed on it. These numbers are used to determine the positions of the enemy ships. It's possible for two or more enemy ships to occupy the same position on the map.

However, if the result of the dice roll for an enemy ship is 2, 3, or 4, it means a false sighting, and you don't need to position any enemy ships.

• Example:

The result of the Sighting Table is Ship (x2), this means that our crew has sighted two possible enemy ships. We have to roll 2d6 for each one:

First roll result is a 3, that's a False Contact



Second roll result is a 7, we have found an enemy Ship!



After establishing the positions of the enemy ships on the Encounter Map, your next step is to roll two dice on the Ship Table.

These dice rolls will determine the type of enemy ship or ships you have encountered.

We roll two six-sided dice and get a result of 9



The Ship Table tells us that we have found the Navasota, a medium size British merchant.

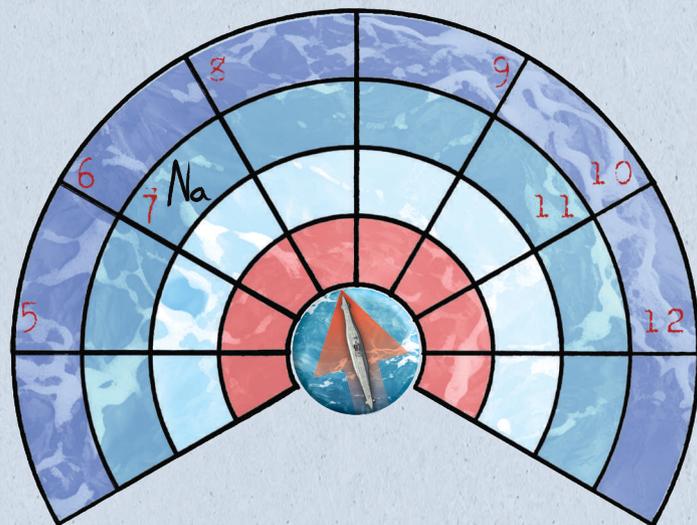
Ship Table

2d6	Ship name	Type	Size	Hull	Speed	Nationality	Tonnage
2	Stanbrook	Steam merchant	Small	1	1	British	1383t
3	Bowling	Steam merchant	Small	1	1	British	793t
4	Fensilva	Steam merchant	Medium	3	1	British	4258t
5	Arne Kljode	Motor tanker	Big	4	1	Norwegian	11019t
6	Kaunas	Steam merchant	Small	1	1	Lithuanian	1566t
7	Slidrecht	Motor tanker	Medium	2	1	Dutch	5133t
8	Ove Toft	Steam merchant	Small	2	1	Danish	2135t
9	Navasota	Steam merchant	Medium	3	1	British	8795t
10	Britta	Motor tanker	Medium	2	1	Norwegian	6214t
11	Ionian	Steam merchant	Small	2	1	British	3114t
12	Royston Grange	Steam merchant	Medium	3	1	British	5144t

Now it's time to place the ship on the Encounter Map position 7. We can write the name on it (for example *Na*) or use one of the counters.

When playing the game directly on the mission sheet, it's often more convenient to write and erase the names of the encountered enemy ships.

Alternatively, if you choose to use the larger maps provided at the end of the book for a more traditional board game experience, employing counters can be a simpler way to manage the positions and types of enemy ships. For the purpose of this example, we will use the writing method for tracking enemy ships and their positions.



6. ENCOUNTER PHASE AND ACTIONS

Engaging enemy ships involves a series of attack turns, which continue until one of the following conditions is met:

- Sinking all enemy ships: You successfully sink all the enemy ships or they are removed from the Encounter map.
- Deciding to disengage: You choose to end the attack and withdraw from the combat voluntarily.
- Destruction of your U-Boat: Unfortunately, your U-Boat is destroyed, leading to the end of the mission.

During the attack phases, **you are constrained by a limited number of actions** available. The specific number of actions you can take during each turn is determined by the mission sheet.

6.1 Actions

- **Go to surface/Submerge:** Depending on whether your U-Boat is on the surface or submerged, the distance at which you can be seen and detected by your enemies varies. These distances are also influenced by whether it's day or night.

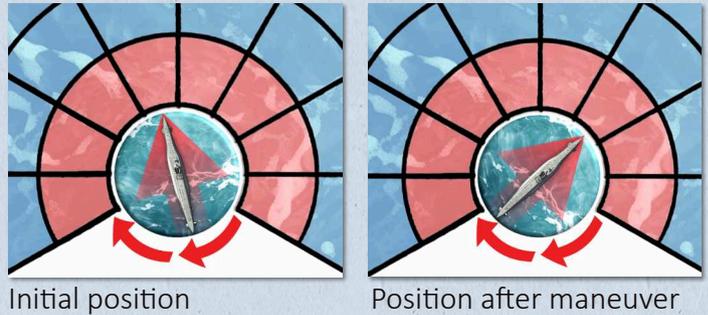
To change the depth of your submarine, use one action and mark the U-Boat's new depth on the map. You can do this by either writing the depth or using a counter, depending on your preferred method of gameplay.



- **Maneuver:** This action allows you to change the direction of your submarine. Depending on whether you're on the surface or submerged, there is a maximum number of spaces you can turn. To execute a maneuver, expend one action, and rotate your submarine the maximum number of spaces allowed by the action table.

- Example:

In the following example, we use the "Maneuver max.2" action, which allows for a maximum of two spaces to change the direction of our U-Boat. We rotate our U-Boat two spaces to the right.

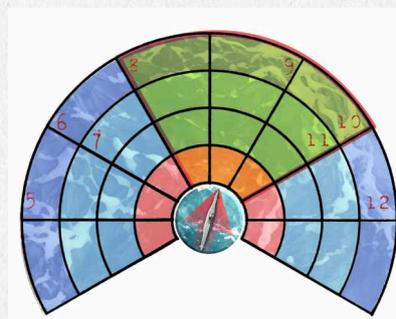


- **Advance:** This action is similar to the "Maneuver" action but is used to move your submarine forward. You spend one action to advance a number of spaces (the maximum number of spaces is specified by each mission). When you advance your U-Boat, you're either getting closer to or moving farther away from enemy ships. As you make movements, it's important to remember that the positions of enemy ships are determined relative to your U-Boat's location. You'll then move the other ships on the map according to their speed and relative positions to your U-Boat

To illustrate how the "Advance" action works and introduce the concept of the U-Boat's reference arc, let's explore a simple example:

On the next example your U-Boat is positioned at the center of the Encounter Map, and you want to advance it forward. You have a mission-specific maximum advance distance of two spaces on the surface.

Reference Arc: The reference arc consists of the central column that your submarine is facing, as well as the two adjacent columns on either side. In other words, the three columns that are directly in front of your U-Boat.

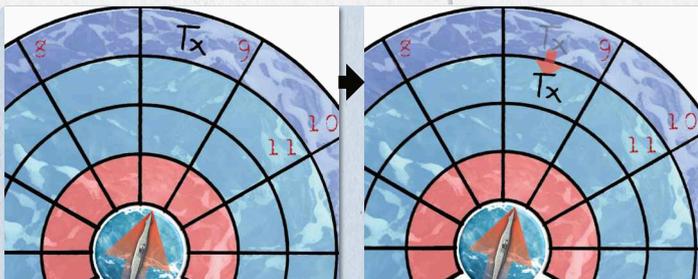


In this example the U-boat is facing the column 9, and the arc consists of the columns 8, 9 and 10.

Advancing: Use one action to move your U-Boat forward up to two spaces along the reference arc. Remember, you don't physically move the U-Boat counter on the Encounter Map. Instead, you use the U-Boat counter as a reference point for the movement of all the other ships on the map. The positions of enemy ships are relative to this counter.

The movement of ships on the Encounter Map depends on whether they are within or outside of the reference arc. Here's how it works:

Ships Inside the Reference Arc: When you advance your U-Boat by one position, all the ships located within the reference arc move one position closer to your U-Boat in the same column. Exception: Ships in the red zone move right or left. In the middle position roll a die. 1, 2, 3 right and 4, 5, 6 left

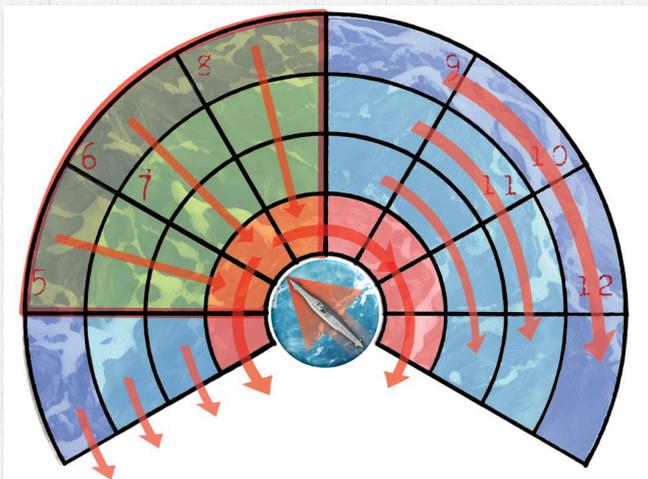


The ship Tx is inside the Reference Arc. We advance one space, so the ship Tx moves one position closer to the U-boat.

Ships Outside the Reference Arc: For ships located outside the reference arc, their movement follows the circumference of the Encounter Map in a direction opposite to the U-Boat's position. In other words:

Ships to the right of the reference arc will move along the circumference to the right.

Ships to the left of the reference arc will move along the circumference to the left.

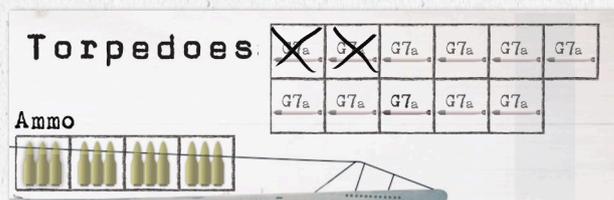


While real naval encounters involve intricate maneuvering, this game aims to capture the essence of those movements in a way that is straightforward without getting bogged down in complex mechanics.

In the game, if a ship's movement causes it to exit the Encounter Map, that ship is considered out of play and no longer affects the game.

- **Launch torpedoes:** This action allows you to attack enemy ships using the torpedoes you have on board. The ship has to be **inside the reference arc**. To execute this action, follow these steps:

Choose the Number of Torpedoes: Decide how many torpedoes you want to launch for your next attack. Refer to the maximum number of torpedoes that can be launched per turn as specified on the mission sheet. It's important to note that regardless of the attack's success, these torpedoes will be subtracted from your torpedo reserve. For example, if you choose to launch 3 torpedoes for the attack, you must roll the dice for all three torpedoes.



In this case we use two G7a torpedoes

Determining the Success of the Torpedo Attack: The next step in the torpedo attack process is to check the distance between your U-Boat and the target. After identifying the distance, you'll proceed to roll the dice on the Attack Table and apply the DRM to determine the success of your torpedo attack. The result of the dice roll will determine whether your torpedoes hit the target or miss.



The ship Ri is at distance D3

7.1 Sighting and detection

Both enemy ships and escorts can spot or detect your U-Boat. The conditions for this detection vary and are specified on each mission sheet, taking into account factors such as distance, time of day, weather and submersion status.

Sighted: Your submarine has been spotted by the enemy. It means they are aware of your presence, but they may not have pinpointed your exact location.

Detected: Your submarine has been detected by the enemy. This typically occurs when escorts or other enemy units have a clear idea of your submarine's position.

The main difference between being sighted and being detected lies in how enemy ships and escorts react:

If you are **sighted** by a ship and there are **no escorts**, this doesn't trigger any specific actions or changes. However, if you are **sighted** and **there are escorts**, they will be alert to our attacks. Any escort within the "Sighted" distance will detect our U-boat **when we initiate an attack**, and our U-boat will automatically change to the "Detected" state for that escort.

When your U-Boat is **detected** and there are **no escorts** present, we follow the ship movement rules. **If there are escorts, they will initiate an attack against your submarine.** In this case, at the end of each of your turns, in the ship movement phase, the escorts will move one space toward your U-boat and will attack you by rolling a die on the Detection Table. Please note that for the first three missions, you won't need to consider these rules, so you won't find these tables.

Detection Table

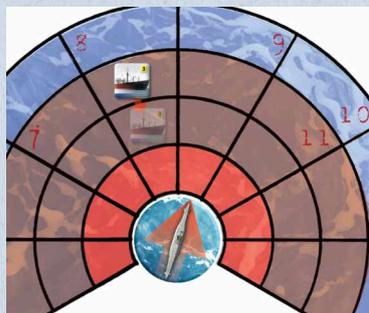
Time	Surface	Submerged
Roll 4-6 ☀ Day	Sighted D3 Detected D2	Sighted D2 Detected D1
Roll 1-3 🌙 Night	Sighted D2 Detected D1	Sighted D1 Detected -

We will cover that in more detail in future missions. For the first three missions only consider that when a ship detects us, it will change its course in the ship movement phase to the right or left to evade the attack (See *Ship movement phase*).

Examples:

In these examples, we will consider the detection distances as shown in the previous image

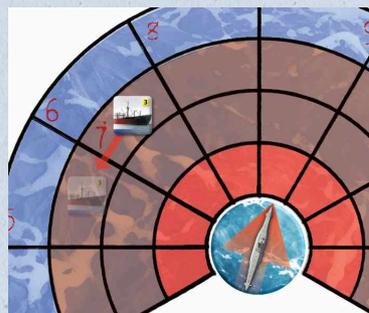
Sighted and no escorts. Ship inside reference arc. Day, surface. (Sighted D3)



As we can see in the table, the 'sighted' distance is D3 for day and on the surface. Any ships within that distance (as indicated by the red arc in the example) will spot us. In this case, with no escorts, the ship will move one space

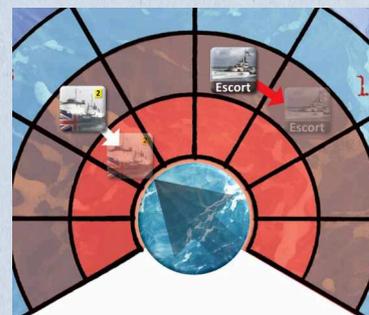
towards the U-boat in the ship movement phase, since it's within the reference arc.

Sighted and no escorts. Ship outside reference arc. Day, surface. (Sighted D3)



In this example, we have the same conditions, but the ship is outside the reference arc, so in the ship movement phase it will move along the circumference to the left since it's positioned to the left of the arc.

Sighted and escort. Ship inside reference arc. Day, submerged. (Sighted D2)

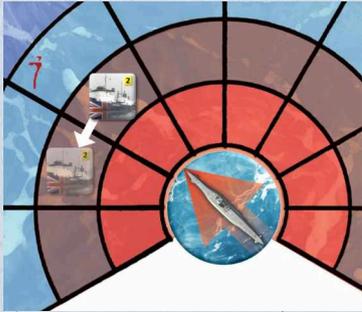


In this example, both the ship and the escort are within the 'sighted' distance (D2) since we are submerged. In this case, the escort and the ship will detect us only if we initiate an attack. In the event that we do not initiate an

attack and remain in the 'sighted' state, the ship, being inside the reference arc, will move one space towards our submarine, while the escort, positioned outside the arc, will move one space to the right. This movement will position the ship at D1, which means that during the next ship movement phase (next turn), it would have detected us.

8. U-BOAT DAMAGES

Detected and no escorts. Day, surface. (Detected D2)



In this case, the ship has detected us because the detection distance under these conditions is D2. The ship will attempt to flee from the submarine's path in its next movement phase. Instead of moving one space toward the U-

boat, it will move along the circumference to the left or right, depending on its position relative to the U-boat. If it's right in the middle, we will roll a die, with 1, 2, 3 indicating a move to the right and 4, 5, 6 signifying a move to the left

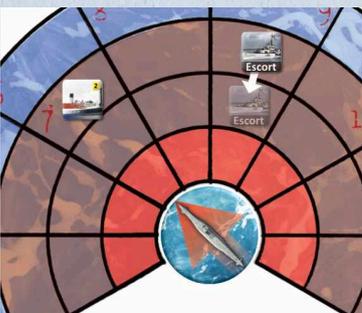
No detection. Night, submerged. (Detected -)



In this example, the detection distance is 0, which means that even nearby ships won't detect us. Ships that reach the red zone (D1) will continue moving either to the right or left based on their position relative to the reference arc.

Any ships that move out of the encounter map due to their movement will be considered out of the game automatically.

Sighted and escorts. Ship inside reference arc. Day, surface. (Sighted D3)



In this example, both the escort and the ship are within the 'sighted' distance. However, we initiate a torpedo attack against the ship. Since the escort is within the 'sighted' distance, we have alerted it, and it will move one space

towards us and we will need to roll a die on the detection table.

Remember that you cannot attack escorts, but you can attempt to escape from them during your action phase.

During your patrols your U-Boat may sustain various types of damage. These damages can result from enemy attacks, escape maneuvers, or events encountered during the mission. Each type of damage can have specific effects on your submarine's performance, and they may introduce modifiers (DRM) that affect your dice rolls in certain tables. Mark any damage received on the U-Boat's diagram. Here are the possible damage types and their effects:

E-Engines (Electrical Engines): Damage to the electrical engines can affect your submarine's movement while submerged.

Diesel Engines: Damage to the diesel engines can lead to slower movement and a reduced range of movement per turn.

Radio: Damage to the radio equipment prevents you from sending or receiving messages and intercepting enemy messages. This can be crucial in some missions.

Periscope: Damage to the periscope can affect your torpedo attacks when submerged.

Deck Gun: Damage to the deck gun prevents you from using it for surface attacks.

Torpedo Tubes: Damage to the torpedo tubes significantly hampers your ability to launch torpedo attacks against enemy ships.

Each mission will have specific modifiers for these damages, which will be indicated on the mission sheet and their respective tables.

In addition to specific component damage, your submarine can sustain hull damage, which you'll mark in the *Damage* column. If your damage track ever reaches the *Sunk* square, it means an automatic mission failure.

If we receive damage that we already have marked, we will mark this damage on the 'Damage' table.

You've Got the Basics!

At this point, you have all the information you need to embark on Mission 1. In the subsequent missions, additional rules will be introduced and lead you back to this rulebook to add more depth to the game. You'll learn these rules gradually as you play. Good luck, Commander!

9. WEATHER

Weather conditions played a pivotal role in the daily operations of both U-boats and the Allies during the Battle of the Atlantic.

Clear skies and calm seas favored torpedo and deck gun attacks, yet they made Allied detection systems more effective and increased the visibility of submarines. On the other hand, rainy and stormy weather with rough seas made it harder to spot submarines but significantly complicated torpedo attacks due to the unpredictable nature of waves and visibility.

Also, allied aircraft encountered significant difficulties when patrolling during storms or at night. The adverse weather conditions significantly hindered their ability to conduct reconnaissance and anti-submarine operations, providing U-boats with advantageous cover during these periods.

Each time you make a sighting and proceed to the encounter map, you'll roll a die to determine the prevailing weather conditions for the duration of that encounter. These weather conditions will persist throughout the encounter.



The specific weather conditions you'll encounter depend on the mission.

9.1 Weather DRM

Each mission comes with a weather DRM table. Depending on the prevailing weather conditions, we will either keep the detection distance value as is or subtract the value.

This simulates the real-life conditions experienced by U-boats and ships at sea. For example, it will be much more challenging for a ship to detect a U-boat during a severe storm.

Clear	Rainy	Stormy
Sighted - Detected -	Sighted - Detected -	Sighted -1 Detected -1
Sighted - Detected -	Sighted -1 Detected -	Sighted -2 Detected -1

Example of Weather DRM Table

10. ESCORTS

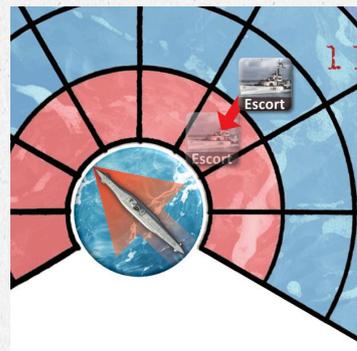
We've already covered how escorts move, but in this section we'll explain what happens when an escort has detected us. We'll outline the two possibilities that can lead to an escort detecting us.

- The escort is within **sighted** distance, and we initiate an attack on a ship



In this example the sighted distance is D3. If we attack the ship, the escort will automatically detect us since it's within the sighted distance.

- The escort is within **detected** distance



In this example the detected distance is D2. The escort will detect us and it will move one space towards us (See the next section 10.1 Detection table).

Detection check: The check to determine whether ships and escorts have sighted or detected us takes place just before starting the ship movement phase. In the encounter map, you'll find boxes to mark whether we are 'sighted' or 'detected'.

10.1 Detection table

If during the detection check we find that an escort has detected us, it will move one space towards the U-Boat and we will roll a die on the Detection Table **before** moving the ships.

If the result is 'Not Detected,' the escort will continue its normal movement, and we will perform another check before starting the ship movement phase of the next turn. If the result is anything else, apply the outcome and proceed with the ship movement phase.

If there are escorts within the detected distance, we must remain on the encounter map until we initiate the escape action.

11. ENIGMA

In some missions, players will receive encrypted information about coordinates. To decode this information, they will need to navigate the map and reach grids with specified numbers as outlined in the mission instructions.

When you reach a grid with a numbered coordinate, roll two dice and refer to the corresponding table. The dice roll outcome will determine the amount and quality of information gathered about a specific segment of the convoy's route.

Example:

56	54	65	66
59	67	68	69
83	91	92	93
90	94	95	96
89	97	98	99

The U-Boat reaches the grid 3. We roll 2d6 on the Coordinate 3 table and the result is 9.



Coordinate 3	
2d6	Route
2-4	No intel
5-8	WY42 WY36
9-11	HI91 HI01
12	HI91 HI49

The result are the coordinates HI91 HI01. We need to decode these coordinates using the table attached.

A - H	I - U	2 - 1
B - Q	J - M	3 - 6
C - W	L - P	4 - 9
D - E	M - I	5 - 0
E - X	N - O	6 - 4
F - Y	O - R	7 - 2
G - T	R - S	8 - 7
H - Z	1 - 8	9 - 3

In this case the coordinates are AM42 AM52

42	43	51	52	53
45	46	54	55	56
48	49	57	58	59

We draw a straight line between the coordinates received from intelligence. By connecting many small segments, we can form a more concrete representation of the entire route.

12. CAMPAIGN

In the campaign mode you will embark on patrols, earning experience points that can be exchanged for various upgrades. You can choose between shorter six-month campaigns or chain multiple campaigns together, progressing through the war until 1942.

You can earn experience points by sinking ships and laying mines. The experience points acquired are persistent across campaigns, providing a continuous progression system.

Earned experience points can be allocated to various upgrades. When gaining an experience point, it must be mandatory assigned to one of the available upgrades:

- **Crew Level:** The crew level provides DRM for the Aircraft Table and Repair Roll. Roll a 1d6 when consulting these tables and determine the DRM based on the crew level. For the Repair Roll, you need a 10, 11, or 12 to succeed in the repair, factoring in the appropriate DRM adjustments.
- **Captain Level:** The captain's level works similarly to the crew level but applies to the Attack Table and Maneuver Table.
- **Deck Gun capacity:** You can increase the gun's capacity up to 7 Ammo. This upgrade only applies after completing the current patrol and reaching a friendly port.
- **Repair attempts:** In the campaign mode, you can only attempt to repair a specific type of damage **once**. If the repair is unsuccessful, you cannot attempt to repair that damage again. You can allocate experience points to increase the number of repair attempts per type of damage.
- **Re-roll:** You can gain the ability to make a re-roll per turn. This re-roll can be used for any of the rolls during the turn. For 2d6 you must roll both dice again.

Example:

We spend 5XP to reach **Captain Level** the Captain level 3

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From now on, apply the DRM obtained in column L3 on the Attack Table and Escape Maneuver Table.

Captain Level	Crew Level	1d6	L1	L2	L3	L4	L5
1 2 3 4 5	1 2 3 4 5	1	-2	-2	-1	0	0
DRM is applied on Attack Table and Escape Maneuver	DRM is applied on Aircraft Table and Repair Roll	2	-2	-1	0	0	1
		3	-1	0	0	1	2
		4	0	0	1	1	2
		5	0	1	2	2	3
		6	1	2	2	2	3

12.1 Torpedoes

In the campaign mode, we can choose how to load our torpedo slots. Here are the three options:

- **G7a Torpedo:** This is the type of torpedo we have used during the game missions. It operates on steam and leaves a trail of bubbles on the water surface, making it detectable when we initiate an attack even if we miss the target. It has good range and reliability.
- **G7e Torpedo:** This torpedo runs on batteries, making it silent and leaving no bubble trail on the surface. The drawback is that it has less range than the G7a, and the reliability is poorer. In this game it means that we can attack at a maximum distance of D3, and we have a -1 DRM on the Hit Table. On the positive side, escorts will not detect us if we initiate an attack within their sighting zone, only if we cause a hit on the target.
- **Mines:** You can use torpedo tube slots to load them with mines. You will receive 2 experience points in your patrols if you use your submarine to lay mines. On the maps, you will find coordinates marked with an M and a number, for example, M6. This means that if we manage to reach this point on the map and lay six mines, we will receive 2XP point.

12.2 Patrols and Ports

In this game a patrol lasts from when we leave a friendly port of our choice until we return to a friendly port or the same port. For game purposes and in an abstract sense, this will be considered one month.

Each campaign map consists of 6 months (6 patrols). If your U-boat is sunk, you will immediately lose the game, and you won't be able to continue the campaign.

After each successful patrol, you'll have the opportunity to restock your U-boat with torpedoes or mines, replenish your ammo supplies, and refuel the submarine. During this time, any damages incurred during the patrol will be repaired.

However, if your U-boat sustains **7 or more damages** (including both hull and equipment damage), you'll require an additional month in port for more extensive repairs, leading to the loss of one month of patrol. For example, if you return to port in January with 7 or more damages, your next patrol will commence in March.

12.3 Ship Table

Now we have a ship table for the entire campaign. Roll two dice, one for the tens and one for the units. The ships will now have a new value, XP. If we manage to sink the ship, we will earn the experience points indicated there.

Depending on the year there will be more chances for ships to have escorts. You will find an additional table for escorts alongside the ship table.

12.3 Events

For campaign events, choose the table of your preference included in the missions; the only consideration is to ensure that the mission's year is the same that the current campaign year.

12.4 Campaign log

You will find a diary to keep track of all patrols, damage, and ships sunk.

Campaign Log					
Captain:					
Year:					
U-Boat:					
Patrol	Ships Sunk	Tonnage	XP	Damage	Notes
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Total					

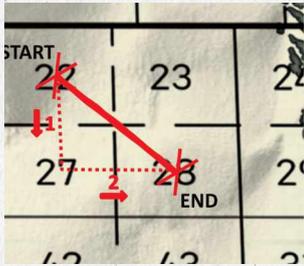
You will find several of these sheets in the book, but you can also copy or download them from www.turgaliugames.com or on the files section on BGG.

13. SEQUENCE OF PLAY

1. U-Boat Movement Phase

- Move your U-Boat on the map up to the maximum distance specified by the technical data for each mission.

Your drawn path should consist of segments of straight lines. Each straight line segment should **begin** and **end** at the **center** of a grid square on the map. Before you start moving your U-boat, you have the



option to change from submerged to surface state or vice versa. If you spot an enemy ship or an enemy aircraft detects you, this is the state you'll begin the encounter in.

- Spend fuel or battery depending if you are on the surface or submerged. Aircraft attacks and events, as well as enemy ship sightings and attacks, will occur during the time of day **currently** indicated by the fuel table.



Remember that you need to surface in order to recharge the batteries. While surfaced the batteries recharge at a rate of **25% per turn**.

If you reach squares marked with an "E" in the Fuel Table, roll the dice on the corresponding event table and apply the results immediately.

2. Sighting Phase

After completing your movement check the color of the area in which the U-Boat is located and roll the dice on the Sighting Table. If the result is a ship or an aircraft proceed to roll the dice on the corresponding table. If the result is (-) continue your patrol.

2.1 Aircraft

If the result of the dice is *Aircraft* roll two dice on the Aircraft Attack Table and apply any DRM. But take into account that if it's nighttime an aircraft attack is not possible, in this case continue your patrol.

- If the result on the Aircraft Attack Table is *Damage*, apply this damage to the U-Boat immediately. Then you have two options: roll on Aircraft Attack Table again or try to escape rolling the dice on the Escape Maneuver Table.

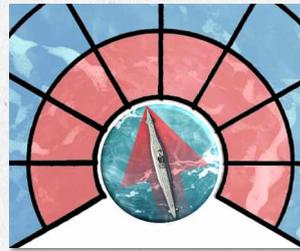
- If the result is *Roll on Damage Table* apply the damage after rolling the dice on the Damage Table.

- If the result is *Failed Attack* continue your patrol.

2.2 Ship

If the result of the dice is *Ship* follow the next steps:

- Position your U-Boat on one of the eight possible positions of the Encounter Map before identifying any ship.



- Roll two dice to determine the positions of the enemy ships. If the result is 2, 3 or 4 it means a false sighting.

- Roll two dice on the Ship Table for each ship sighted and continue with the encounter phase.

3. Encounter Phase

This phase only occurs if you have sighted a ship. Play turns using the available actions until one of the following conditions is met:

- You have sunk all enemy ships
- You decide to disengage
- Your U-Boat is destroyed

The available actions are Go To Surface/Submerge, Maneuver, Advance, Launch Torpedoes, Fire Deck Gun, Repair Attempt and Escape.

3.1 Weather

Roll a die to determine the weather conditions for the duration of the encounter (after Mission 2)



4. Ship Movement Phase

At the end of each player's turn, after all available actions per turn are used, it's time for the enemy ships to move. Follow the next steps:

- Detection check: First check if any ships or escorts have sighted or detected your U-Boat. Each mission has a Detection Distance Table with the weather DRM.

- Move the ships one space following these rules:

	No Escorts	Escorts (after mission 3)
Sighted	Nothing changes. Ships move following the ship movement rules taking into account whether they are inside or outside the reference arc	Any escort within the <i>Sighted</i> distance will detect our U-boat when we initiate an attack and our U-boat will automatically change to the <i>Detected</i> state for that escort
Detected	The enemy ship will change its trajectory either to the right or left, based on its position in the reference arc. If it's directly in the middle of the reference arc, roll a die: 1, 2 or 3 indicates a right turn, while 4, 5 or 6 indicates a left turn	The escorts will move one space toward the U-boat and will attack by rolling a die on the Detection Table

- After all the ships and escorts have moved, we move on to the next U-Boat turn. You can continue attacking the remaining ships on the map or escape. If there are escorts within the detected distance, you must remain on the encounter map until you initiate the escape action.

On the following page, the first mission begins. If you are playing for the first time, it is recommended to play the first three missions in order as new rules will be introduced gradually. Once you are familiar with all the rules, you can play the missions in any order and replay them to try to improve your score.

Each mission is highly replayable as both the events that occur and the enemy ships you encounter vary in each game.

If you have any questions about the game or the rules, feel free to reach out to me through www.turgaliungames.com or on the game's page on BGG. I'll be happy to help!