ATLANTIC FLEET

COMMANDER'S MANUAL

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GAMES

The Battle of the Atlantic

On September 1, 1939 Germany invades Poland. Two days later Britain and France declare war and the Battle of the Atlantic begins. Over the next five years and eight months a deadly struggle would be fought on the high seas, from the frigid waters of the Arctic to the South Atlantic.

At the heart of the conflict was the tonnage war. Britain required a continuous supply of imported war materials to keep on fighting and the Kriegsmarine (German Navy) was tasked with preventing the arrival of these goods from across the Atlantic.

Atlantic Fleet

Atlantic Fleet is a turn-based tactical and strategic simulation of the Battle of the Atlantic. Take command of surface ships, submarines as well as carrier and land based aircraft in a deadly struggle for control of shipping lanes during World War II. Protect allied convoys as the Royal Navy and her Allies or go on the offensive with deadly submarine wolf packs and surface raiders of the German Kriegsmarine.

"The Battle of the Atlantic was the dominating factor all through the war. Never for one moment could we forget that everything happening elsewhere, on land, at sea or in the air depended ultimately on its outcome." - Winston Churchill

Getting Started

If this is your first time playing Atlantic Fleet, it is recommended to begin by completing the Training Missions. To do so, simply select Training Missions from the main menu.

Continue with some Single Battles to get a feel for combat and gunnery. The Battle of the River Plate and Convoy HX-106 battles (playing Germany for both) make for excellent initial practice.

Controls

Camera	
RIGHT CLICK + DRAG	Pan Camera
W, A, S, D, ARROW	Pan Camera
=, -, Mouse Wheel	Zoom In/Out
F1	Focus on Player
F2	Focus on Target
C	Camera Follow Mode
Actions	
SPACE	Do Current Action
TAB	Next Action
1	Primary Guns
2	Secondary Guns
3	Torpedoes
4	Aircraft
5	Anti-Submarine
6	No Action
Sliders	
J, K, [4], [6]	Horizontal Slider/Rudder
U, I, [2], [8]	Vertical Slider/Speed
HOLD Crtl or MIDDLE	Coarse Adjust Slider
O, P [7], [9]	Elevation 0.1 Degrees

General	
M	Map
X	Binoculars
Z	Zoom Binoculars
Q	Set Aim to View
G	Set Target
F	Fleet Mode
V	Mark Torpedo
H	Splash History
N	Fine Tune
M or X	Return to external view
Escape	Commands Menu
1, 2, 3, 4, 5, 6	Set Ship Speed
O	Select Wing Load Out
P	Select Carrier Wing
9	Hide Interface
Tactical Map	
LEFT CLICK + DRAG	Pan Map
W, A, S, D, ARROW	Pan Map
Z, -, =	Zoom In/Out
X	Centre Map
C	Go to Selected Ship
H	Shot History

Numbers in [ ] are keypad numbers.

Controls may be reassigned using the startup configuration panel.

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1. Combat

Camera & Views

LEFT CLICK any ship in the 3D world does one of the following:
1) If ship is not the current target, sets that ship as target and displays Target Solution.
2) If ship is the target and camera is elsewhere, moves camera to that ship.
3) If ship is the target and camera is focused on that ship, opens ship's statistics/damage report.

Mouse Wheel or [- KEY], [= KEY] to zoom in and out.
RIGHT CLICK and drag to pan camera. Camera may be panned below water.

Default 3D view

(1) Camera Follow On/Off [C KEY]
On: Camera will follow all ship movement and weapons/attacks to their target.
Off: Camera remains stationary at current position or in the case of player aircraft, remains with the aircraft. Note that camera will always automatically switch to player aircraft and "Off" mode keeps camera on plane rather than following dropped payload.

(2) Tactical Map [M KEY]
Provides a top down overview of the current battle.
Provides access to Options and in-game manual.
Provides access to Commands Menu for leaving combat or scuttling ships.
See Tactical Map section for more details.

(3) Active Player Ship Information [F1 KEY]
LEFT CLICK ship name to focus camera back to player ship.

(4) Target Solution [F2 KEY]
LEFT CLICK ship name to focus camera on target ship.
Points camera at target in Director / Periscope View.

(5) Director / Periscope View [X KEY]
Fixes the camera to the active ship's director (lookouts) or periscope.
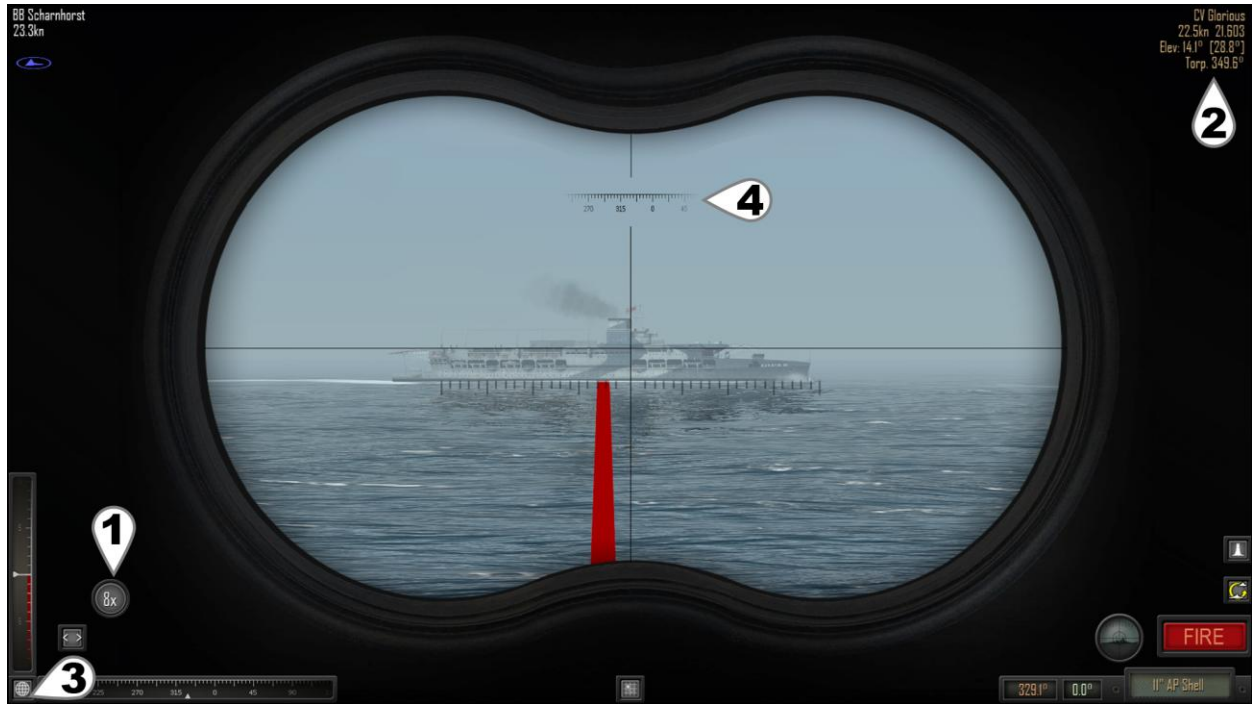
(6) Snap Bearing to Camera Angle [Q KEY]
LEFT CLICK to set attack angle (bearing) to current camera direction.

While in Director/Periscope View:
RIGHT CLICK and drag pans camera left/right only.
LEFT CLICK on target information (upper left or right) points camera at that ship (rather than moving camera to that ship as it does in 3D world).
Note that weapons still fire along red bearing line when in Director / Periscope View.

Director view (periscope for submerged submarines)

(1) Zoom Toggle [Z KEY, Mouse Wheel]
Toggles zoom level 2x, 4x, 8x in Director/Periscope view only.

(2) Target Solution [F2 KEY]
LEFT CLICK ship name to look at target.

(3) Return to 3D world view [X Key]
from Director / Periscope view or Tactical Map.

(4) Snap Bearing to Camera Angle [Q KEY]
LEFT CLICK to set attack angle (bearing) to current camera direction.

Movement

Atlantic Fleet is a turn-based game. Each turn, both sides move and take an action with each of their ships before the other side then takes their turn. Movement always comes before the action and only a single action is available per ship per turn. Some Special Actions during movement or using Fleet mode prevent an action that turn.

To move your ship:
• Set telegraph (speed).
• Set rudder angle.
• Select a Special Action.
• Select Single Ship or Fleet mode.
• LEFT CLICK Move.
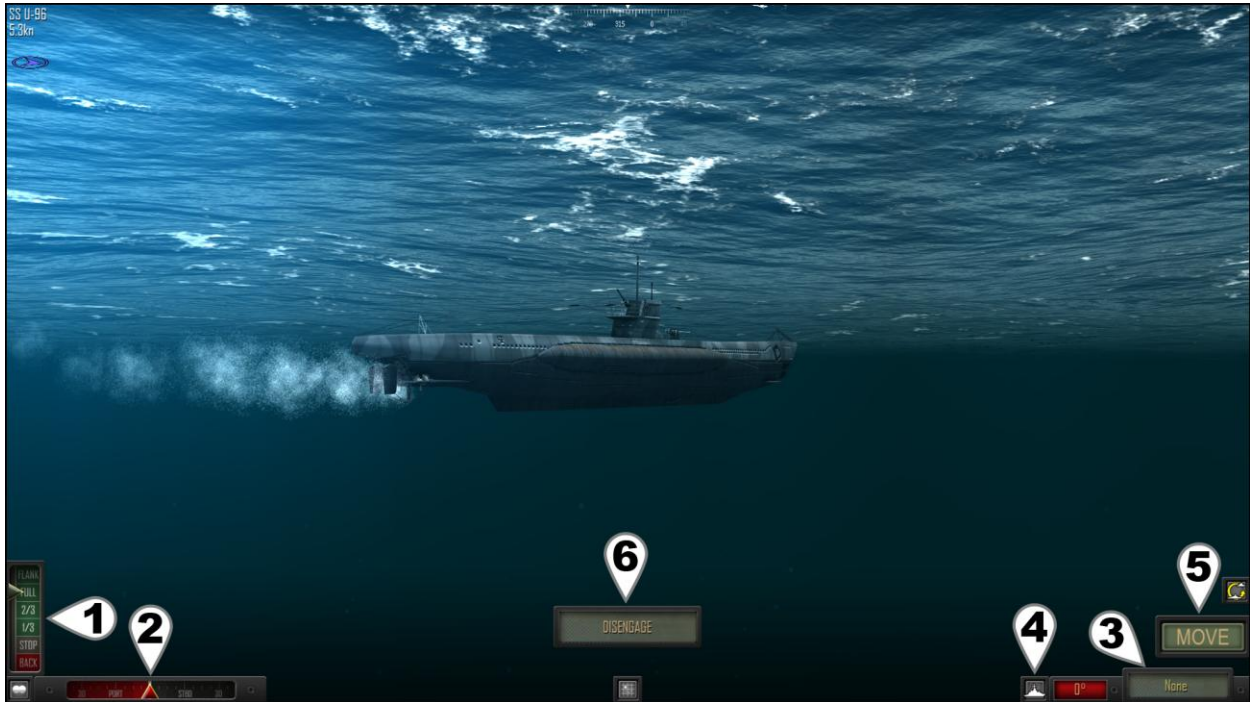
Default 3D view (underwater)

(1) Telegraph [1-6, U, I KEY]
LEFT CLICK upper half to increment speed
LEFT CLICK lower half to decrease speed.

> **TIP** Ships have inertia. A dramatic change in speed may take several turns. To 'brake' swiftly, set telegraph to BACK.

(2) Rudder [J, K KEY]
Set rudder angle. Grayed out when rudder damaged.

(3) Special Actions [TAB KEY]
Red box shows current rudder angle.

LEFT CLICK green Action button or [TAB KEY] to cycle through special actions
1. None
2. Smoke (warship only, lays smoke screen, no attack).
3. Surface (submarine only, decreases depth by one).
4. Dive (submarine only, increases depth by one).

(4) Single Ship / Fleet Mode [F KEY]
Single Mode allows current ship to move and then attack.

Fleet Mode moves all remaining ships using the current Telegraph and Rudder settings (dive or surface special action only applied to current ship). Fleet Mode can quickly close distances or move merchant convoys.
Fleet Mode skips the Attack Phase of all ships moved as a group.

> **TIP** Fleet Mode can be used to quickly get into position at the start of an engagment.

> **TIP** Attack individually with your larger ships, then use fleet mode to quickly move any smaller ones as a group.

> **TIP** Fleet Mode can be used to quickly move a convoy.

(5) Move [SPACE KEY]
Executes movement with rudder, telegraph (speed) settings and any Special Action.

(6) Disengage
Appears when the active ship is able to leave combat.

Laying Smoke
Smoke prevents another action for that turn by the ship laying smoke.
Smoke for 3 consecutive turns may allow the ship to Disengage.
Smoke prevents targeting if blocks line of sight.

Submarine Depths
Submarines can travel at the following depths:
1. On the Surface (can fire deck gun and torpedoes)
2. Periscope Depth (can fire torpedoes)
3. Shallow
4. Deep
5. Very Deep

Using the Surface action increments the depth of the submarine by one, so a submarine at deep depth (4) would move to shallow depth (3). A submarine at Periscope Depth (2) would surface and travel on the ocean surface itself (1).

Using the Dive action decreases the depth of the submarine by one, so a submarine at deep depth (4) would move to very deep depth (5). A submarine traveling on the ocean surface (1) would dive to periscope depth (2).

Gunnery

Gunnery in Atlantic Fleet is fully controlled by the player using information provided by the crew of the active ship. It is relatively easy to get started with and start landing some hits, but can be difficult to master and landing consecutive hits on a ship laying smoke at long range can be quite the challenge!

To fire guns:
- Select type of shells/guns to fire using the Action Button or [1 KEY], [2KEY] or [TAB KEY].
- Select target for firing solution.
- Set bearing (attack direction).
- Set gun elevation.
- Fire guns.

Gunnery View

(1) Action Button / Gun Settings [TAB KEY]
(1a) Red number shows current gun bearing (attack angle).
(1b) Green number shows current gun elevation (distance).

LEFT CLICK green Action button or [TAB KEY] to cycle attack options:
1. AP Shells (primary guns)
2. HE Shells (primary guns)
3. AP Shells (secondary guns if applicable)
4. HE Shells (secondary guns if applicable)
5. Star Shell (illumination round available in low light conditions)

Star shells can only be fired by 8" guns or smaller. Star shells increase visibility range and increase Target Solution accuracy against lit targets. A star shell lasts for 2 turns.

> **TIP** Always use HE (High Explosive) shells against unarmoured targets such as Merchants, Destroyers, Corvettes and Submarines.

> **TIP** Always use AP shells againsts targets with armour greater than about half of the shell's calibre.

(2) Bearing Line (Attack Direction)
Line extending from ship shows direction weapons aimed. Not all guns can fire in all directions and sometimes damage to a gun may make it unable to fire that turn. The bearing line will change colour based on whether the currently selected guns can fire in that direction:
Red   weapon can fire in current direction
Gray   weapon cannot fire

(3) Adjust Bearing (Attack Angle)
[J, K KEY] + [Middle Mouse or Control]
Adjust bearing (attack angle) until bearing line points at an enemy ship.
LEFT CLICK and drag the slider to adjust.
LEFT CLICK bearing display button **(3a)** to snap bearing to camera direction.
See **(10)** below to adjust slider sensitivity.

> **TIP** LEFT CLICK on the bearing display (3a in previous image) will snap the bearing line to the camera's durrent direction. Use this to quickly bring your guns onto a target, then fine tune the angle as per (3) above.

(4) Set Target [G KEY]

LEFT CLICK to set closest ship intersected by aiming line as current target (equivalent to LEFT CLICK on a ship that is not already the target).
- Target set and information displayed in upper right, see (5) below.
- No Target: no ship was found along current attack direction.
- Smoke: a smoke screen blocks line of sight.

> **TIP** Use the Tactical Map to target a ship behind a closer ship or LEFT CLICK on that ship directly.

(5) Target Solution

The target solution shows information about the current target. Note that damage to directors (Spot) and RADAR decreases the accuracy of the target solution.

The following information is shown in the Target Solution:

++	Turns tracking (max 5)
BB	Ship Type
Bismarck	Ship Name
26.6kn	Speed in knots
18,473	Range in yards
Elev: 14.2°	Estimated elevation of primary guns to hit target
[22.7°]	Estimated elevation of secondary guns to hit target

With each turn tracking a target, the solution becomes more accurate as the target has been observed for a longer time. For each turn spent tracking that target an additional "+" symbol is displayed next to target's name, up to a maximum of 5.

(6) Adjust Elevation (firing distance) [U, I KEY] + [Middle Mouse or Control] [O, P KEY] 0.1 Degree Adjustment

Examine Target Solution (5) and Splash History (9) for estimated elevation to target and compensate for wind (if wind effects shells option is enabled).
LEFT CLICK and drag the slider to adjust.
Turns red when elevation reaches the limits of gun.
Gun elevation limits vary by gun and are historically based. Gun barrels will stop moving at their limit once the slider turns red.
See **(10)** below to adjust slider sensitivity.

(7) Wind Meter

Deeper blue = stronger wind.
Wind can effect flight of shells and should be compensated for if this option is enabled.
Wind always effects aircraft payloads.
Wind also determines the direction of smoke screens.

(8) Fire [SPACE KEY]

Fires selected guns using set bearing (attack direction) and elevation.

(9) Splash History [H KEY]

LEFT CLICK to turn on / off splash history.
Indicates whether last salvo fired at target was long, short or straddled / hit.
Automatically adjusts for movement of ships between turns.
White numbers indicate yards long or short of target.
Coloured numbers indicate elevation of last shot.
See Tactical Map for a more detailed shot history.

(10) Slider sensitivity toggle [N KEY]

Increases/decreases slider (3) and (6) sensitivity to assist with setting their values using the mouse.

> **TIP** Remember that the Target Solution is only ever an estimate. Weather, time of day, visibility, smoke screens, damage to your ship's directors/RADARs and switching between targets all impact the accuracy of the solution data.

> **TIP** If a director/RADAR is damaged, try turning your ship to bring another director/RADAR onto the target.
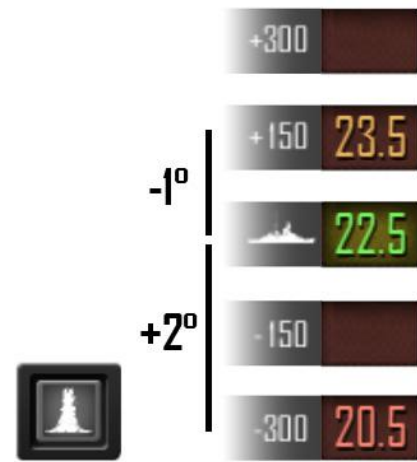
Using Splash History

Splash History is the best method for quickly determining correct gun ranges. In general a 1.0° change in elevation moves a shot into the next category.

Example 1: if at +150 yards, decreasing elevation 1.0° should put next shot into the green (on target).

Example 2: if at -300 yards, increasing elevation 2.0° should put next shot into the green (on target).

The 1-2° rule is a generalisation and works best at medium gun ranges. At longer ranges, a greater change should be made while at shorter ranges, a lesser change is usually needed.

TIP   The splash history always indicates if and by how much you may need to adjust your elevation for the current turn.

TIP   An elevation which hit last turn may be indicated as "short" this turn if both ships have moved farther apart.

TIP   An elevation which hit last turn may be indicated as "long" this turn if both ships have moved closer together.
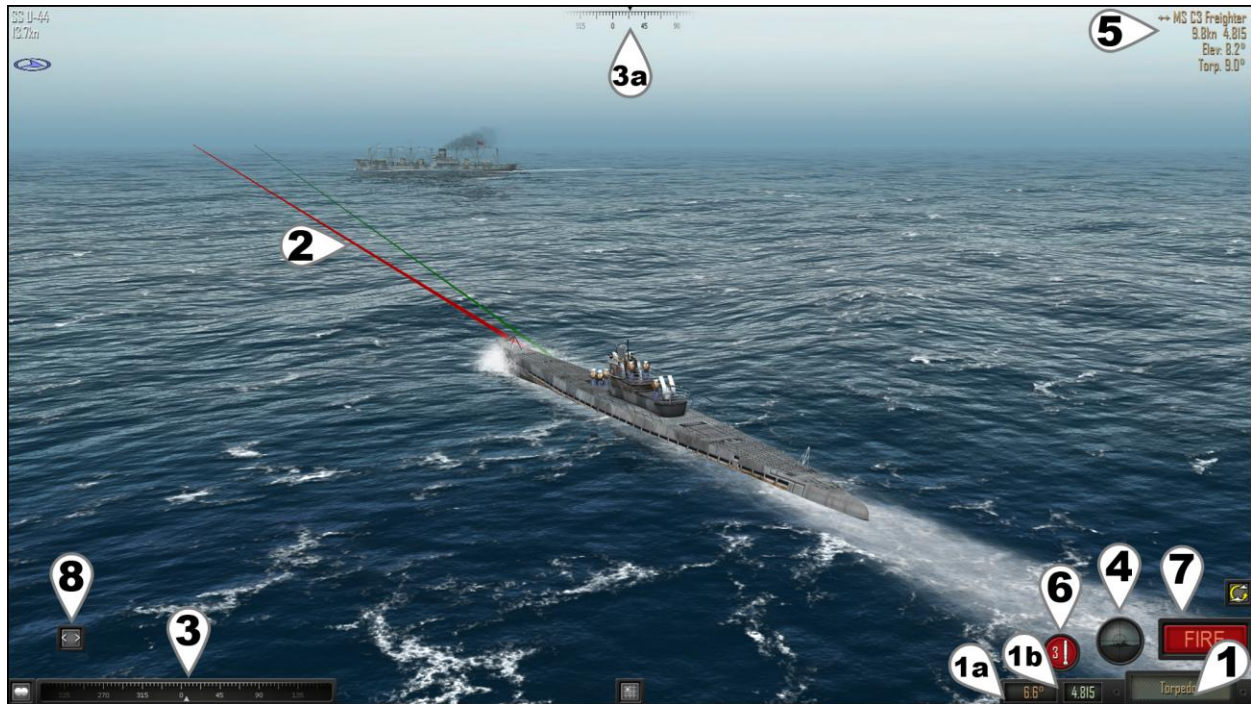
Torpedoes

Torpedoes are devastating weapons which strike a ship below the waterline and can cause extensive damage and flooding. They are slower than other weapons and may take multiple turns to reach their target. Torpedoes will "de-spawn" if they overshoot their target and no other targets could possibly be hit. Torpedo speed and range vary by type (submarine, surface ship or aerial) and navy and are historically based. See Appendix 5.2.1.

To make a torpedo attack:
• Select torpedoes using the Action Button or [3 KEY] or [TAB KEY].
• Select target for firing solution.
• Set bearing (attack direction).
• Mark one or more torpedo bearings.
• Fire torpedoes.

Torpedo Attack View

(1) Action Button / Torpedo Data [TAB KEY]
(1a) Shows current bearing (attack angle).
(1b) Shows estimated range to target based on the Target Solution. Turns red if shorter than arming distance (~1000 yards) or farther than torpedo range.
LEFT CLICK green Action button or [TAB KEY] to cycle additional attack options.

(2) Bearing Line (Attack Direction)
Line extending from ship shows direction weapons aimed. Not all torpedoes can fire in all directions and damage to a torpedo room or launcher may make it unable to fire that turn.
Red   weapon can fire in current direction
Gray   weapon cannot fire
Green marked direction for a torpedo salvo

(3) Adjust Bearing (Attack Angle)
[J, K KEY] + [Middle Mouse or Control]
As described in gunnery section.

(4) Set Target [G KEY]
As described in gunnery section.

(5) Target Solution
Same as for gunnery with the exception of an additional line:

++	Turns tracking (max 5)
MS	Ship Type
C3 Freighter	Ship Name
9.8kn	Speed in knots
4,815	Range in yards
Torp. 9.0°	Estimated bearing to fire torpedo

(6) Mark Torpedo Bearing [V KEY]
Shows the number of torpedoes able to fire along current bearing. LEFT CLICK to set bearing for a torpedo to be fired. May be used multiple times (adjusting bearing in between) to set a spread of torpedoes. Once a torpedo bearing has been marked, it cannot be unmarked. The only way not to fire along a marked bearing is to not take a torpedo attack action this turn.

(7) Fire [SPACE KEY]
Fires torpedoes along each of the marked bearings.

(8) Slider sensitivity toggle [N KEY]
Increases/decreases slider (3) to assist with setting its value using the mouse.

Air Strikes and Aircraft

Land-based air strikes may be performed by any ship. Carrier air strikes may only be performed by carrier launching the aircraft and require multiple turns to set up.

To make an air strike attack:

- Select Air Strike using the Action Button or [4 KEY] or [TAB KEY].
- LEFT CLICK target ship.
- Set attack point along length of ship.
- Set attack direction.
- Launch Aircraft.
- Dive/Drop Payload.
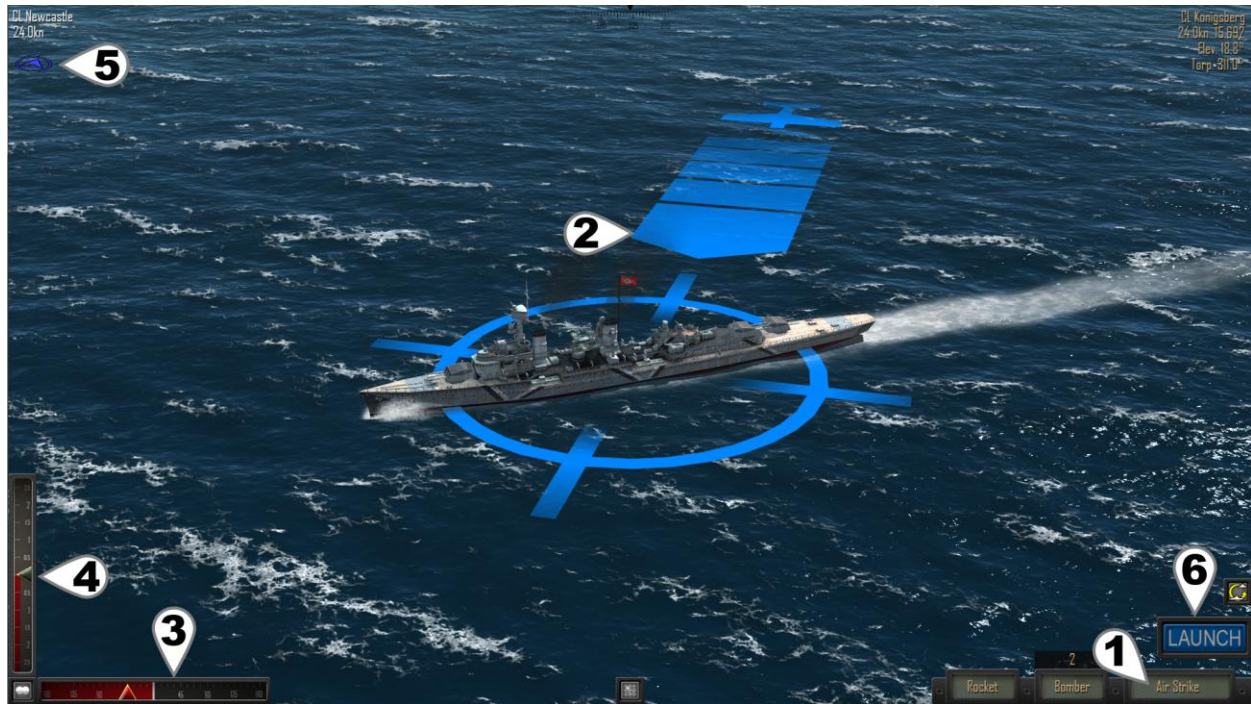
Aircraft Attack View

(1) Action Button: Air Attack [TAB KEY]
Left panels show aircraft load out and type. Number above aircraft type = number available. LEFT CLICK green Action button or [TAB KEY] to cycle through attack options.

(2) Aircraft Attack Marker
Shows the angle and position of the incoming air attack. LEFT CLICK enemy ship to place marker over it or [F2 KEY] if ship is already targeted.

> **TIP** LEFT CLICK the Target Solution or [F2 KEY] to set the attack marker onto target or use the Tactical Map to target any ship.

(3) Adjust Attack Location
[J, K KEY] + [Middle Mouse or Control]
LEFT CLICK and drag the slider to adjust point along length of target ship which aircraft will attack.

> **TIP** For aerial torpedo attacks, set the attack location 0.5-1.5 ship lengths ahead of the target to "lead" your attack.

(4) Adjust Attack Angle
[U, I KEY] + [Middle Mouse or Control]
LEFT CLICK and drag the slider to adjust angle from which aircraft will attack.

> **TIP** Find an attack angle that minimises your aircraft's exposure to anti-aircraft fire. Avoid passing close to other enemy ships.

(5) Wind Meter
Deeper blue = stronger wind.
Wind always effects payloads dropped by aircraft and should be compensated for.

(6) Launch Air Strike [SPACE KEY]
Automatically focuses camera onto your incoming aircraft. Once the aircraft is in the air:

Dive [SPACE KEY]
Puts attacking aircraft into a dive for an attack run. Not all aircraft need to dive before releasing their payload.

Release Payload [SPACE KEY]
Payloads are historical and not all aircraft can carry all payloads.

Cancel Air Strike
"X" button in the top right will cancel an air strike. Cancelled or aborted air strikes are available for attack again on a subsequent turn.

Carrier Air Operations

Unlike land-based aircraft, carrier aircraft are not already in the air at the start of combat and are launched, attack and are recovered as part of air operations. Air operations are suspended under the following conditions:

1) carrier is on fire
2) flight deck is damaged or destroyed

Aircraft carriers can perform air operations in 4 steps. Each step requires a full turn by LEFT CLICK on the "Launch" Button or [SPACE KEY].

| Torpedo | Hanger (8) Bomber | Ready |

1) Ready wing, selecting aircraft type and payload.
Moves wing from hangar to flight deck.
Hangar (4) = Wing of 4 Bombers currently in hangar.

| Torpedo | Flight Deck (8) Bomber | Unready |

1b) Unready wing (optional).
Returns a wing on the flight deck back to hangar.
Flight Deck (4) = Wing of 4 Bombers currently on flight deck.

| Torpedo | Flight Deck (8) Bomber | Launch |

2) Launch wing
Moves wing from flight deck to air.
Flight Deck (4) = Wing of 4 Bombers currently on flight deck.

| Torpedo | 8/8 Bomber | Air Strike |

3) Air Strikes
Attack target as described in Air Strikes section above. One air strike per turn.

4/4 = air strikes available / wing size

| Torpedo | 0/8 Bomber | Recover |

4) Recover wing
Moves wing in air back to hangar.
0/4 = air strikes available / wing size.
A wing may be recovered prior to all aircraft being used.
Requires the flight deck to be clear.
[O KEY] Cycles wing load out.
[P KEY] Cycles through air wings.

Only one wing may be on the flight deck at any time.
Air Ops will be suspended due to fires or excessive damage, but aircraft already in the air may continue to attack.
Only the carrier launching aircraft can perform attacks with those aircraft.

All aircraft carriers carry a Fighter and Bomber wing.
Wing Size:
4 Escort Carrier
8 Aircraft Carrier

Combat Air Patrols

Any unused carrier aircraft in the air will automatically defend against enemy aircraft.

Fighters with no payload are best at shooting down enemy aircraft.
Fighters with a payload have a moderate chance.
Bombers have the lowest chance of shooting down enemy aircraft.

Scout Aircraft

Aircraft on battleships and cruisers are scouts and cannot be launched or used directly in combat. In Battle of the Atlantic mode, they provide a bonus for detecting enemy ships in the same zone. Carrier aircraft also contribute to the detecting of enemy ships in Battle of the Atlantic mode.

Anti-Submarine Warfare

Enemy submarines can be sunk by aircraft, gunfire, torpedoes as well as a variety of specialised anti-submarine weapons: depth charges, hedgehog and squid. Anti-submarine weapons are only available on Destroyers (DD) and Corvettes (DC). These ship types are called escorts.

Attacking submarines with gunfire, torpedoes or aircraft is performed as outlined previously. With the following exceptions:

1) A submerged submarine can be targeted by a LEFT CLICK directly on it. However, this may be difficult due to range or the submarine's depth so instead, open the tactical map and target the sonar contact. However working sonar must be equipped on at least one ship in your fleet or aircraft must be in the air (including land-based) to detect and target submerged contacts.

2) Torpedoes fired at a submerged submarine automatically have their running depth adjusted to be deeper. However torpedoes cannot run deeper than periscope depth.

Depth Charges

Depth charges are explosives dropped or fired from a surface vessel which explode at a set depth. They have a relatively small "kill radius" meaning one has to explode quite close to a submarine in order to damage or sink it. This "kill radius" decreases with depth due to the increase in water pressure. The depth to explode is automatically set based on the nearest enemy submarine.

To make an anti-submarine attack using Depth Charges:
• Move over enemy submarine, placing it behind the attacking vessel.
• Select Depth Charge using the Action Button or [5 KEY] or [TAB KEY].
• LEFT CLICK FIRE to release a grid of depth charges.

Depth Charge Attack

(1) Action Button
LEFT CLICK to cycle to Depth Charge or [5 KEY] or [TAB KEY].

(2) Sonar Contact Marker
Sonar contact showing position of enemy submarine.

(3) FIRE [SPACE KEY]
Drops a grid pattern of depth charges behind the ship. Depth charges automatically explode around the depth of the nearest enemy submarine.

Hedgehog - Allies Only

Hedgehog is a forward firing ring of mortars which explode only on contact. This weapon was developed later in the war by the Allies and is available on Destroyers (DD) and Corvettes (DC).

Squid - Allies Only

Squid fires as a staggered ring of mortars which explode above and below the desired depth to generate a massive shockwave with a large "kill radius". Like depth charges, this "kill radius" also decreases with depth due to the increase in water pressure. This weapon was developed later in the war by the Allies and is available on some Corvettes (DC). The depth to explode is automatically set based on the nearest enemy submarine.

To make an anti-submarine attack using Hedgehog or Squid:
• Move towards the enemy submarine.
• Line up the red circle (shows where weapon will fall) onto the green sonar contact marker.
• Select Hedgehog or Squid using the Action Button.
• LEFT CLICK FIRE to fire the mortars.

Hedgehog (or Squid) Attack

(1) Action Button
LEFT CLICK to cycle to Hedgehog (or Squid) or [TAB KEY].

(2) Anti-Submarine Weapon Zone
Red area indicates hedgehog (or Squid) deployment zone.

(3) Sonar Contact Marker
Sonar contact showing position of enemy submarine.
Note the overlap with anti-submarine weapon deployment zone.

(4) FIRE [SPACE KEY]
Fires the anti-submarine weapon into the deployment zone. Hedgehog mortars explode on contact with a submarine while Squid mortars automatically explode at the depth of the nearest enemy submarine.

TIP Never approach a periscope depth submarine from the front or rear!

TIP Diving deep can protect against Depth Charges and Squid, but the increased water pressure will crush your submarine very quickly if it takes a hit!

TIP Fire guns at a periscope and attempt to drive a submarine deeper before closing in to attack. At longer range the submarine might disengage but at closer range there is a much better chance of establishing strong sonar contact to prevent it escaping.

Sonar Disruption
Underwater explosions from depth charges or squid disrupt the water around them and interfere with sonar. This gives the submarine being attacked a chance to break sonar contact and automatically disengage next turn.

Tactical Map

The Tactical Map [M KEY] provides an overview of the battle and can be used to set targets, navigate between various ships and view a detailed history of up to the last 6 shots fired.

LEFT CLICK any ship to select it.

Selecting a ship will set it as the target of the currently active ship, similar to LEFT CLICK in the external view. When in attack phase (after movement) white bearing line shows attack direction to target.
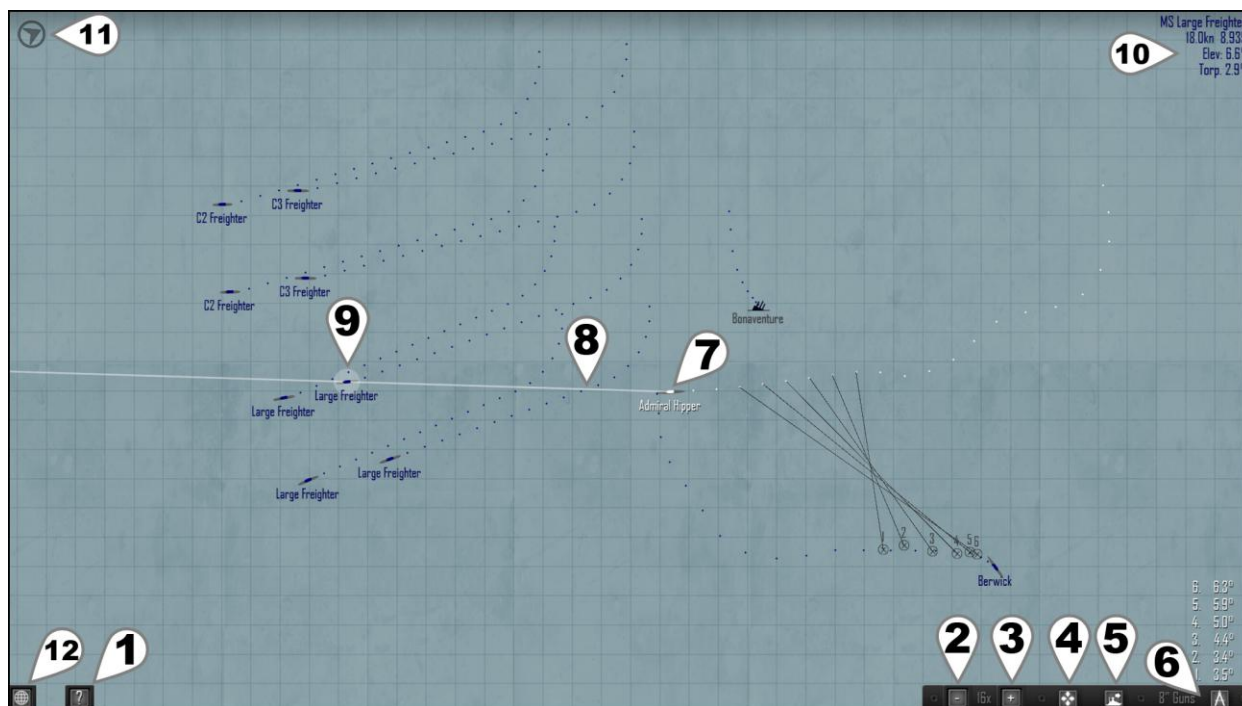
Tactical Map View

The Tactical Map is tinted red for battles at night or under low light conditions.

Icon Colours:

White	Active player ship
Blue	Allied ship
Red	Axis ship
Gold	RADAR contact
Green	Submerged
Gray	Disengaged ship
Black	Sunk ship

Detecting submerged contacts requires a ship in range with functional sonar. Aircraft can also reveal periscope or shallow depth contacts.

(1) Help, Options and Special Commands Menu [ESCAPE KEY]
Used for leaving combat, scuttling ships or accessing game options and help.

(2, 3) Zoom Map Out/In
Zooms map between 1x and 128x.

(4) Centre Map
Places currently selected ship in centre of map.

(5) Go To Ship
Return to 3D world with camera focused on currently selected ship.

(6) Shot History
Off / Primary Guns / Secondary Guns. Displays up to the last 6 shots fired by the active ship. Shows firing position and salvo hit location. Shots are numbered and their corresponding elevations shown. Shots marked with an "X" scored at least one hit by the salvo.

> **TIP** Shot history is the most accurate data for previous shots. Comparing the length of the shots to their corresponding elevation and examining the relative positions of your ship and a target can give a very good idea on how to land the next shot.

> **TIP** Shot history is not impacted by smoke and can be used to successfully land hits through smoke screens and fleeing ships.

(7) Active Ship
Player ship currently taking the turn is show in white.

(8) Bearing Line (Attack direction)
The bearing line from the 3D world is
superimposed on the map.
Not available during movement mode.

(9) Selected Ship
LEFT CLICK on any ship or contact icon on the
map will select that ship.
Selecting a ship sets it as the target for the player
ship.

(10) Target Solution
Target solution information for the player ship's
current target.

(11) Wind Meter
Displays direction of wind.

(12) Exit Tactical Map [M KEY]
LEFT CLICK to return to 3D view.

Ship Details and Damage Report

LEFT CLICK the ship currently targeted by the camera to open the damage report.
Not available for enemy ships if No Enemy Damage Reports option is on.

Damage Report and Ship Information

(1) Ship Information
Displays ship name, class, experience
rank and current speed (upper far right).
Experience Rank Display shows a 1-5 star
rating of rank as well as gray/green bar
showing progress to next rank.

(2) Ship Statistics
Displays ship weapons, armour,
displacement, maximum speed and how
many aircraft it carries.

(3) Ship Ammunition
Shows the remaining number of each
weapon type for the ship. Aircraft and
anti-submarine weapons are always
available as long as the flight deck or
anti-submarine weapons are not
damaged.

**(4) Toggle subsystem damage report
on/off.**

(5) Subsystem Damage Report
Subsystems of a ship may be knocked
out for several turns or
destroyed. Damage control crews
automatically attempt to repair each
damaged subsystem each turn. However
some specific subsystems as well as
destroyed subsystems cannot be
repaired.
Gray   No damage
Yellow   Light damaged
Orange   Moderate Damaged
Red   Destroyed

In Battle of the Atlantic game mode,
destroyed subsystems as well as overall
ship damage and flooding are permanent
and can only be repaired by visiting a
port.

The effects of subsystem damage are as follows:

Propulsion
Decreased speed of ship. Hits to the rear (propellers and shafts), middle (engine room and boilers) and funnel of a ship can impact propulsion. Cannot be destroyed.

Steering
Cannot adjust rudder during movement. Cannot be destroyed.

Pumps
Greatly increases flooding and chance to sink. Cannot be repaired.

Main Spot / RADAR
Decreases accuracy against targets in any direction.

Fore Spot / RADAR
Decreases accuracy against targets forward of the ship.

Aft Spot / RADAR
Decreases accuracy against targets to the rear of ship.

Sonar
Cannot detect submerged submarines. Submarines can no longer detect ships if below periscope depth.

Aircraft
Suspends carrier air operations.

Turret / Deck Gun
Gun can no longer move, reload or fire.

Secondary Guns (port and starboard)
All secondary guns on damaged side no longer move, reload or fire.

Torpedo (port, starboard, fore and aft)
Torpedo launcher (or room) can no longer reload or fire.

ASW (Anti-Submarine Weaponry)
Cannot deploy depth charges, hedgehog or squid.

Pressure Hull (submarines only)
The amount of damage the hull of a submarine has taken. Cannot be repaired.

Anti-Aircraft
Decreased effectiveness of shooting down enemy aircraft. Cannot be repaired in battle.

Ending Combat

Combat automatically ends when:
- all player ships sunk, scuttled or disengaged
- all enemy ships sunk, scuttled or disengaged
- player withdraws all ships from combat

Disengaging

Disengaging allows a vessel to leave combat. However disengaging is not automatic and certain conditions must be met for a vessel to leave combat as outlined below.

By default, enemy ships cannot disengage. There is an option "Enemy Ships Can Disengage" to enable this. Turning this option on greatly increases the tactical complexity of the game.

A button allowing a ship or submarine to disengage will appear during the movement phase when the following criteria are met:

Warships:
- must lay smoke for at least 3 consecutive turns
- be moving at least 10 knots
- be > 25,000 yards from the closest active* hostile vessel
- at > 40,000 yards enemy warships will automatically leave combat

Submarines:
- may disengage whenever > 5,000 yards from the closest active* hostile vessel
- depth charges and squid disrupt sonar increasing the chance for submarines to disengage after an attack

Merchants:
- cannot disengage
- may leave combat by Withdrawing
- moving > 40,000 yards from an enemy will forcing the enemy to disengage

* Note that an "active" hostile vessel is one that is currently engaged in combat. Namely it is not sinking or capsizing and not laying smoke/attempting to disengage itself. Merchant ships are not considered to be "active" as they possess no weapon systems in the game, aside from anti-aircraft guns.

TIP Deliberately damage a target's propulsion by hitting the engine room/boilers, propellers and shafts in order to delay or prevent it from being able to disengage.

TIP Enemy ships defend themselves and may sometimes stop laying smoke/disengaging in order to attack back.

TIP Forcing all enemy ships to disengage allows you to leave combat immediately by Withdrawing.

Withdrawing and Scuttling Ships

Press [ESCAPE KEY] or from the tactical map LEFT CLICK on the "?" button in the bottom left to enter the Options/Help and Special Commands menu.

Options/Help and Special Commands Menu

Options/Help
Opens the options page and in-game documentation.

Withdraw/Sink merchants and withdraw
This command appears only when no enemy ships can attack. Either they are merchants, are warships laying smoke and in the process of disengaging or are sunk, scuttled or have disengaged. Withdrawing all ships immediately ends combat.

"Sink merchants and withdraw" appears in Battle of the Atlantic game mode only and allows you to withdraw from combat, counting any remaining unescorted merchant ships as sunk.

Scuttle "Current Ship"/SCUTTLE all ships
These commands are always available and will deliberately sink either the currect active ship or all player controlled ships in combat.

WARNING: Scuttling ships in Campaign and Battle of the Atlantic modes removes those ships from your fleet. Lost ships may be re-purchased in Campaign mode, but are lost permanently in Battle of the Atlantic mode.

2. Playing Atlantic Fleet

Three game modes are available:
1. Single Battles (including Historical Battles, Custom Battles and Training Missions).
2. Campaign
3. Battle of the Atlantic

Single Battle

Single Battles are stand alone historical scenarios, custom scenarios or training missions where player ships do not acquire experience or ranks and Renown is not earned. Aside from Custom Battles, all mission parameters are preset with the exception of choosing which navy to play.

- LEFT CLICK mission of interest to select it.
- LEFT CLICK Next.
- LEFT CLICK Navy flag to select faction to play.
- LEFT CLICK Attack to begin mission.

Single Mission Selection

(1) Mission List
LEFT CLICK and drag to scroll through missions.
LEFT CLICK a mission to select it.

(2) Mission Briefing

(3) Mission Location

(4) Go to ship Listing
Here you can see the lists of ships for the battle, weather and time conditions.

For Historical Missions, only the Navy being played and setting Player 2 on/off can be adjusted.

(5) Back to Main Menu

Custom Battles

The first Single Mission is a scenario editor for setting up to 10 vs 10 ships in battle.
Here you may:
• Adjust weather, time, ships on each side and number of land-based aircraft.
• Select initiative (which navy acts first) and a navy to control.
• Disable AI to allow multiplayer on the same device/hardware.

Custom Battle Editor

(1) Weather
LEFT CLICK to cycle to desired weather conditions.

(2) Time
LEFT CLICK to cycle to desired time of day.

(3) Toggle AI / Player 2
LEFT CLICK to toggle Player 2 on or off.
Both players use the same device.

(4) Add Ship from Navy's Shipyard
See Shipyard for more information.
Duplicates of the same ship are allowed.

(5) Remove highlighted (yellow) ships from corresponding navy's list.
LEFT CLICK listed ships to toggle highlight.

(6) Toggle number of land-based aircraft available per navy (max 10) and set payload.
Aircraft type and payload can be toggled by LEFT CLICK on the textual description.
Aircraft not available in combat if time set to Night.

(7) Set Initiative
LEFT CLICK to assign which navy takes the first turn.

(8) Set Navy
LEFT CLICK to assign which navy to play as.

(9) Begin the Battle

(10) Return to Mission Selection List.

Campaign

In Campaign mode, you'll take on the role of the Admiral of a Task Force. Your goal will be to sink enemy shipping and use the Renown earned to buy ships and build up your fleet. However your resources are limited. There are over 2 million Renown points to be earned per campaign which makes building up your fleet fairly easy, but any ships lost will have to be re-purchased and battles become very difficult in the late stages. Thus it is possible to run out of Renown and fail a campaign.

Campaigns are a series of 50 missions increasing in difficulty and are saved separately for each navy. Games are saved automatically at the end of each battle and whenever purchasing a new ship or releasing a ship from command.

Goal

Sink enemy shipping to earn Renown points in order to purchase more and better ships as well as replace those lost in action.

Rules

Maximum player fleet size is 10 ships.
Maximum player ships in battle is 3.
Player ships sunk are removed from fleet (may be re-purchased).
Cannot own duplicates of the same ship.

Renown is earned for warships, submarines and merchants sunk.
Earn ★★★ in zone 50 to win the campaign.
Scores:
★   at least 33% of tonnage sunk for that zone.
★★   at least 66% of tonnage sunk for that zone.
★★★   100% of tonnage sunk for that zone.

Repeating a zone will generate Renown only if the outcome is greater than the current highest previous attempt.

Due to limited Renown it is possible to lose a campaign.

Initiative, weather, zone locations and time of battle are randomly assigned to each zone at the creation of a new campaign. Land-based air strikes are available in zones with air cover.

The Campaign Mission list is similar to Single Battles and displays the current best score ranging from ★ to ★★★.
LEFT CLICK a mission to begin it.
At least ★ must be earned on a mission to unlock the next mission and remember;
Renown is only earned if a mission score is greater than any previous best score.

> **TIP** Don't spend all your Renown on powerful expensive ships too early! If they are sunk the lost Renown can leave you in a very bad situation. Always keep enough Renown in reserve to field at least 3 destroyers or submarines at a time.

Campaign Mission

(1) Player Fleet
Lists player owned ships.
Highlighted (blue or red) ships are readied to enter the next battle. Player fleet is listed on the side corresponding to the faction being played.
LEFT CLICK Player Ships to toggle Highlights:
Gray — Unassigned
Blue — Allied ship assigned to battle
Red — Axis ship assigned to battle
Yellow — Marked for removal from fleet

Up to 3 player ships can be assigned to enter battle.

(2) Shipyard
Enter the Shipyard to purchase new ships with Renown points.

(3) Examine Ships
Displays ship statistics.
On the ship information panel:
>>> Examine next ship.
<<< Examine previous ship.
LEFT CLICK on DONE in the bottom right to exit ship information panel.

(4) Remove Ships
Removes highlighted (yellow) ship/s from player navy.
LEFT CLICK listed ships to toggle highlight.
Renown is not refunded, but released ships may be re-purchased.

(5) Battle Location
The location of the battle influences which navies might have land-based air attacks available. A location must be near land occupied by a particular faction for a chance to have land-based air attacks during the battle.

(6) Enemy Ship List
Enemy ships listed on the side corresponding to the faction not being played.

(7) Attack
Begin the battle.
At least one player ship must be highlighted for battle (blue or red).
LEFT CLICK player ships in list to toggle highlights.

(8) Back to Campaign mission list

TIP — While it might be easy to earn a lot of Renown in the early to middle stages of the campaign, beware! The later missions can become extremely hard and you may find yourself replacing a lot of sunk ships.

Battle of the Atlantic Dynamic Campaign

Turn-based tactical and strategic simulation of the tonnage war that was the Battle of the Atlantic during World War II. Your goal is to protect (or destroy) merchant shipping as it brings valuable war materials to Britain across the Atlantic. Unlike the regular Campaigns, the Battle of the Atlantic is fully dynamic and evolves over time into a very unique experience. Be prepared to think, be adaptable and make sacrifices to keep the war in your favour.

Campaigns for each navy are saved separately. Games are saved automatically at the end of each battle and whenever purchasing a new ship or releasing a ship from command.

> **TIP** Spread your forces thin to cover as many shipping routes as possible, but be prepared to react to and defend against heavier surface ships if and when they appear.

Goal

Sink enemy warships and submarines to earn Renown points in order to purchase more and better ships.

Allies - Protect merchants carrying war materials across Atlantic.

Axis - Sink allied merchants preventing delivery of war materials.

Rules

Maximum player fleet size is 30 ships (option available to decrease this to 20).

Maximum player ships in battle is 10.

Any ship sunk is permanently removed from campaign.

Cannot own duplicates of the same ship.

Renown earned for warships and submarines sunk (not merchants).

Merchant ships sunk do not provide Renown points, but instead go to the tonnage tally (see War Summary).

Land-based air strikes sometimes available in zones with air cover.

Atlantic Map

LEFT CLICK in the centre of a zone to manage it, see Zones below.
LEFT CLICK at edges of zones (or on land areas) and drag to pan around map.

Atlantic Map

(1) War Summary Bar
Indicates the balance of the tonnage war.
Allies - Blue, Axis - Red

(2) War Summary
See below for more details.

(3) Display zone names ports/supply vessels
Zones with a red tanker symbol contain supply vessels. Ending the turn in this zone will automatically rearm ship (Axis only).

(4) Show allied convoy routes.
Darker blue indicates increased convoy traffic through zone.
Convoy routes and frequency change and are historically based.

(5) Zone Weather
Ranges from clear to snow storms.
Follows meteorological patterns of the Atlantic with Westerlies, Trade Winds and seasonal changes. Poor weather decreases detection of enemy ships in the same zone. Impacts maximum visibility for combat in that zone.

> **TIP** Use bad weather as cover to move about the map with less chance of detection.

(6) Show player warships and submarines
Default view for every turn.
Shows the number of player warships and submarines in each zone.

Warships and submarines act independently in combat. If an encounter occurs in a zone containing both warships and submarines, either all the warships or all the submarines will engage the enemy.
Enemy warships or submarines encountered in a battle or from an event during the last turn are shown in red (Axis) or blue (Allies) to indicate their activity in that zone.

(7) Next Turn
Each campaign turn = ~3.5 days (8 turns per month).
After each player turn the following happens:
- Enemy ships move.
- Combat may occur in zones containing warships/submarines of both factions.
- Events (non-merchants may be damaged, but not sunk by events).

Events include: attacks on unescorted merchants, submarine attacks on unescorted warships, air attacks against shipping and naval bases. Merchant tonnage sunk during events count towards the tonnage tally of the war. Warships and submarines cannot be sunk by events, but can be damaged. This damage is permanent until repaired in a port.

(8) Return to Main Menu

War Summary

Shows overall status of the tonnage war, all warship and merchant
tonnage sunk to date and a roster of all player ships and their locations.

Since merchant vessels sunk in combat (or events) do not earn Renown, their tonnage is applied to the War
Summary instead.

Britain may come to terms from mid-late 1940 onwards where war materials become crucial for her to win
the "Battle of Britain". Going forward, if at least 300,000 tons of allied merchants per month is consistently
sunk, Britain may withdraw from the war and Germany wins the Battle of the Atlantic. 700,000 tons required
once the United States enters war.

Britain may win the Battle of the Atlantic if over 150,000 tons of Axis Naval shipping is sunk and Axis forces
fail to sink at least one third their current goal (100,000 tons before the US enters the war and ~230,000
tons after).

In the case of a draw, the Allies will eventually launch the Normandy invasion and ultimately win that game
since enough war materials have arrived to re-take Europe.

Once the Battle of the Atlantic is ended, a victory (or defeat) screen is shown and the campaign can not
progress past that turn as it is over.

War Summary View

(1) Navy Roster
Lists all player ships, damage status and their
location.
LEFT CLICK a ship to select it.

(2) Examine Selected Ship
Displays ship statistics.
On the ship information panel:
>>> Examine next ship.
<<< Examine previous ship.
LEFT CLICK on DONE in the bottom right to exit
ship information panel.

(3) Go to zone of selected ship
Opens the zone containing the currently selected
ship.

(4) Sunk Ships Roster
Displays a list of all naval vessels (not merchants)
lost by each side in the conflict to date.

(5) Return to Atlantic Map

Zones

LEFT CLICK the centre of a zone on the Atlantic Map manage it.
LEFT CLICK again to open the Port if that zone contains them (see Ports below).
Zones adjacent to the current zones are also highlighted.

Moving Ships

To move ships between zones:
1. LEFT CLICK ships on list to toggle highlight (blue for Allies, red for Axis).
2. LEFT CLICK an adjacent zone (blue circles) to move highlighted ships into it.
3. Adjacent zone now becomes the managed zone and ships are moved into it.

Ships may only move once per turn.
Ships that have moved this turn cannot be highlighted and are listed in pale gray.

Zone Management

(1) War Summary Bar
Indicates the balance of the tonnage war.
Allies - Blue
Axis - Red

(2) Examine Ships
Displays ship statistics.
On the ship information panel:
>>> Examine next ship in zone.
<<< Examine previous ship in zone.
LEFT CLICK on DONE in the bottom right to exit
ship information panel.

(3) Select / Deselect All
Toggle to select all or deselect all ships in zone.
Ships that have already moved this turn cannot be
selected.

(4, 5, 6, 7) See above section on Atlantic Map for
a description of these.

(8) Next Turn
Each campaign turn = ~3.5 days (8 turns per
month).
After each player turn the following happens:
- Enemy ships move.
- Combat may occur in zones containing
warships/submarines of both factions.
- Events (non-merchants may be damaged, but
not sunk by events).

Events include: attacks on unescorted merchants,
submarine attacks on unescorted warships, air
attacks against shipping and naval bases.
Merchant tonnage sunk during events count
towards the tonnage tally of the war (see War
Summary below).
Warships and submarines cannot be sunk by
events, but they can be damaged. This damage is
permanent until repaired in a port.

(9) Return to Atlantic Map

Ports

Ports allow buying and releasing of ships as well as repair and rearming. To open a port:
LEFT CLICK the Display Zone Names and Ports Icon to determine which zones contain a port for your faction.

1) LEFT CLICK a zone on the Atlantic Map.
2) If the zone has a port, LEFT CLICK on the zone again (gray circle in centre) to enter the port.
OR
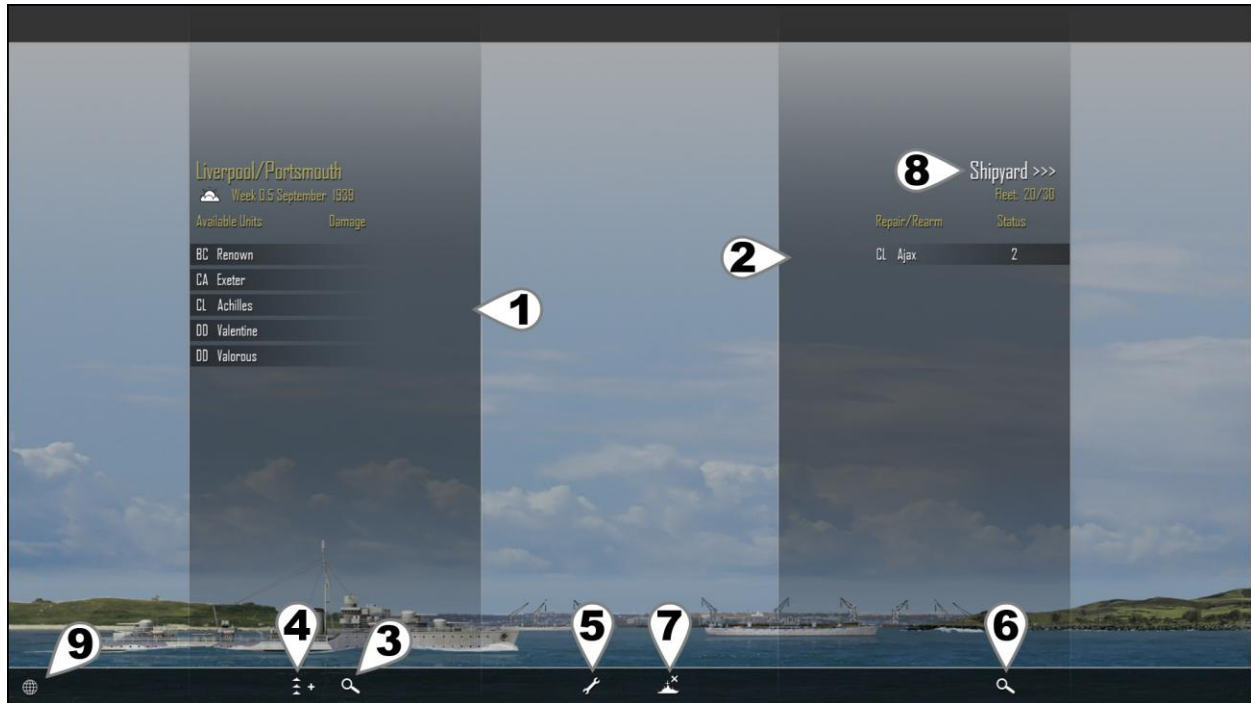3) LEFT CLICK the port icon which automatically appears whenever managing a zone that has a port for your faction.

Re-supply Vessels (Axis only)

When playing Axis (Germany), several zones contain re-supply vessels. These zones are marked with a red tanker icon. Moving any ship into such a zone will automatically replenish all shell and torpedo ammunition.

Port View

(1) Ships in Zone
LEFT CLICK ships to highlight (yellow).

(2) Ships currently being repaired and rearmed
LEFT CLICK ships to highlight (orange).
Status indicates the number of turns until work on the ship is complete.
Once complete the ship becomes active and is released back into the zone.
Bombing raids by enemy air forces can cause delays to ships undergoing repairs/rearming.
Number of turns required to repair/rearm based on ship size and damage amount.

(3, 6) Examine ship statistics & damage
On the ship information panel:
>>> Examine next ship on list.
<<< Examine previous ship on list.
LEFT CLICK on DONE in the bottom right to exit ship information panel.

(4) Select / Deselect All
Toggle to select/deselect all ships in zone of port.

(5) Repair / Rearm Ships
Sends highlighted ships (yellow) from the list of ships in zone to the repair list.
LEFT CLICK ships in zone list (left) to toggle highlight.
Numbers indicate turns required for ships in repair list.
Ships are automatically released to the zone once repaired/rearmed.

(7) Release ships from command.
Removes any highlighted ships (yellow/orange) from command.
Renown is not refunded and released ships can be re-purchased at a later time.

(8) Shipyard
Opens the shipyard to examine and purchase additional ships.

(9) Return to zone management

Shipyard

Displays a view of the selected ship class, information about it and a list of available ships for that class.

To purchase a ship / add it to combat:
1. LEFT CLICK <<< or >>> to move to desired ship class.
2. LEFT CLICK the name of the individual ship on "Available Ships" list.
3. LEFT CLICK Add Ship / Buy Ship for Renown.

Shipyard View

(1) Next / Previous Ship Class

(2) Individual ships available for that class
LEFT CLICK highlight any ship (green).
LEFT CLICK and drag a ship to scroll list up and down.
For lists greater than 50 ships, LEFT CLICK on NEXT >>> (bottom right) to display more ships.

(3) Buy Ship

(4) Availability Date
In Battle of the Atlantic mode, some ships are not available until a certain date.

(5) Leave Shipyard

Depending on the game mode being played, the following rules apply when using the Shipyard:

Single Battle – CUSTOM Battle
Adding a ship costs no Renown.
Any ship, including merchants may be added.
Duplicates of the same ship may be added.

Campaign
Purchasing a ship costs Renown.
Merchants cannot be purchased.
Already owned ships are not no longer available.

Battle of the Atlantic
Purchasing a ship costs Renown.
Merchants cannot be purchased.
Already owned or sunk ships are not available.
Some ships are unavailable until a specific date.

Battle of the Atlantic:
Barracuda, Hedgehog and Squid Upgrades
November 1942: Hedgehog available to Allied Destroyers and Flower/Temptress/Action Class Corvettes.

January 1943: Barracuda replace Swordfish bombers for Illustrious Class.

September 1943: Squid available to Allied Castle Class Corvettes.

These upgrades are added automatically to newly purchased ships.
Repair/Rearm to refit existing ships with these upgrades.
These upgrades are automatically installed in Campaign and Custom Battles.

Ship Repair Times

Table shows number of turns required to repair/rearm ships of various sizes with various damage amounts.

	Damage:	None	Light	Medium	Heavy
Small	SS, DD, TB, DC	1	2	3	4
Medium	CL, CVE, HK	2	4	6	8
Large	CA	3	6	9	12
Very Large	BB, BC, CV	4	8	12	16

Ship Rank and Experience

Experience earned is equal to the displacement of any enemy ships sunk.
Experience earned is shared by all ships participating in the battle, including sunk ships.
All experience and rank is lost if ship is sunk.
Single Battles do not earn experience.
Battles not earning any Renown still generate experience for the participating ships.

Experience Rank Display
The current rank of a ship can be seen when examining the Ship Details/Damage Report screen.

Tons of shipping required and bonuses per rank

Rank	1	2	3	4	5
Tons of shipping sunk	**20,000**	**40,000**	**60,000**	**80,000**	**100,000**
Damage Reduction	2%	4%	6%	8%	10%
Extinguish Fires	2%	4%	6%	8%	10%
Magazine Explosion Chance	-2%	-4%	-6%	-8%	-10%
Subsystem Repair	1%	2%	3%	4%	5%
Aircraft Durability	2%	4%	6%	8%	10%
Anti-Aircraft	2%	4%	6%	8%	10%

3. Historical Missions

30 historical missions are currently available under Single Battle:

1. Sinking Courageous
17 September 1939
While on anti-submarine patrol in the Western Approaches HMS Courageous is spotted and stalked by U-29.
Historical Outcome:
Courageous - Sunk
Withdrawal of carriers from anti-submarine patrols.

2. Action off Haisborough Sands
7 December 1939
After a successful mine laying operation, two German destroyers turn towards home and encounter a Royal Navy patrol.
Historical Outcome:
Jersey - Heavy damage

3. Battle of the River Plate
13 December 1939
Raiding the South Atlantic since the start of hostilities, the Graf Spee has finally been cornered by three cruisers.
Historical Outcome:
Graf Spee - Scuttled
Exeter - Heavy damage
Ajax - Medium damage
Achilles - Light damage

4. Sinking of Glowworm
8 April 1940
The invasion of Norway is underway and sailing alone, HMS Glowworm encounters a destroyer and the Admiral Hipper.
Historical Outcome:
Glowworm - Sunk
Admiral Hipper - Medium Damage

5. Action off Lofoten
9 April 1940
In poor weather, the twins Scharnhorst and Gneisenau come under attack from HMS Renown and her destroyer screen.
Historical Outcome:
Gneisenau - Medium damage
Renown - Light damage

6. Sinking the Glorious
8 June 1940
The twins Scharnhorst and Gneisenau strike back when they encounter HMS Glorious and her escorts.
Historical Outcome:
Glorious - Sunk
Acasta - Sunk
Ardent - Sunk
Scharnhorst - Medium Damage

7. Hunt in the Western Approaches
17 October 1940
German destroyers sortie out to hunt convoys off the coast of Brest. When spotted by a British air patrol, the convoys are diverted and Force F is rapidly mobilised to intercept.
Historical Outcome:
Z10 Hans Lody - Light damage
Z20 Karl Galster - Light damage

8. Convoy SC-7
18/19 October 1940
Convoy SC-7 from Sydney to Liverpool suffers constant and coordinated wolf pack attacks during the crossing. On this night five u-boats close in.
Historical Outcome:
16 Merchants - Sunk

9. Action off Plymouth
29 November 1940
Operating out of Brest, German destroyers harass local shipping during night attacks. Spotting distant gun flashes a British patrol steams to investigate.
Historical Outcome:
Javelin - Heavy damage

10. Christmas Convoy
25 December 1940
After successfully sneaking through the Denmark Strait, Hipper patrols convoy routes for two weeks without sighting a target. Her luck changes on Christmas Day when she encounters convoy WS5A containing troop ships headed for the Middle East.
Historical Outcome:
Berwick - Heavy damage

11. Convoy HX-106
8 February 1941
Scharnhorst and Gneisenau encounter convoy HX-106 from Halifax to Liverpool, but it is escorted by the battleship HMS Ramillies. The Germans have been ordered not to engage enemy capital ships.
Historical Outcome:
German Ships - Disengage

12. Sinking Pinguin
8 May 1941
At sea since 15 June 1940, the auxiliary cruiser Pinguin has been raiding and laying mines for a total 154,710 tons of enemy shipping sunk or captured. HMS Cornwall picks up the distress call from Pinguin's latest victim, "British Emperor", and steams north to investigate.
Historical Outcome:
Pinguin - Sunk
Cornwall - Medium damage

13. Battle of the Denmark Strait
24 May 1941
Bismarck and Prinz Eugen are attempting to break through into the Atlantic to wreak havoc on allied shipping. Only HMS Hood and HMS Prince of Wales are in a position to intercept them.
Historical Outcome:
Hood - Sunk
Prince of Wales - Medium damage
Bismarck - Light damage

14. Swordfish Attack Bismarck
26 May 1941
HMS Sheffield shadows the Bismarck and with daylight fading and in almost impossibly bad weather, Swordfish bombers from the HMS Ark Royal launch their torpedo attack.
Historical Outcome:
Bismarck - Medium damage
Sheffield - Light damage

15. Bismarck Night Action
26/27 May 1941
During the night British destroyers manage to detect and intercept the damaged Bismarck as she attempts to reach France for repairs.
Historical Outcome:
Cossack - Light damage
Zulu - Light damage

16. Sinking the Bismarck
27 May 1941
Crippled and outnumbered, the Bismarck prepares for her final battle against impossible odds.
Historical Outcome:
Bismarck - Sunk
Rodney - Light damage

17. Sinking Atlantis
22 November 1941
Atlantis has sunk 145,960 tons of merchant shipping since her raid began on March 31, 1940. While re-supplying U-126, the British cruiser HMS Devonshire closes in.
Historical Outcome:
Atlantis - Sunk

18. Kormoran versus Sydney
19 November 1941
The auxiliary cruiser Kormoran is operating in the Indian Ocean and has sunk or captured 68,270 tons of allied shipping. Off the coast of Western Australia, HMAS Sydney investigates the Kormoran, currently posing as the Dutch merchant "Straat Malakka".
Historical Outcome:
Sydney - Sunk
Kormoran - Scuttled

19. Sinking of Barham
25 November 1941
HMS Barham, Queen Elizabeth and Valiant, along with their destroyer escort, are underway near Alexandria when intercepted by U-331.
Historical Outcome:
Barham - Sunk

20. Sinking Python
1 December 1941
The re-supply ship Python is in the middle of refueling and re-supplying U-126 when HMS Dorsetshire appears.
Historical Outcome:
Python - Scuttled

21. Convoy PQ-13
29 March 1942
Arctic convoy PQ13 is en-route from Iceland to Murmansk, Russia when three German destroyers sail out to intercept.
Historical Outcome:
Z26 - Sunk
Trinidad - Heavy damage
Eclipse - Heavy Damage
Z25 - Light damage

22. Escorting Edinburgh
2 May 1942
While escorting convoy QP11, HMS Edinburgh (carrying 4.5 tons of Soviet gold) is hit by two torpedoes from U-456. Crippled and under tow, Edinburgh comes under attack from destroyers two days later.
Historical Outcome:
Edinburgh - Sunk
Z7 Hermann Schoemann - Sunk
Foresight - Heavy damage
Forester - Heavy damage
Z25 - Medium Damage

23. Battle of the Barents Sea
31 December 1942
Convoy JW51B is sailing to Kola Inlet when intercepted by multiple German forces.
Historical Outcome:
Achates - Sunk
Z16 Friedrich Eckoldt - Sunk
Onslow - Heavy damage
Admiral Hipper -Heavy damage
Obdurate - Light damage
Obedient - Light damage

24. Convoy TM-1
9 January 1943
Convoy TM1 consisting of tankers sailing from Trinidad to Gibraltar is attacked by wolf packs.
Historical Outcome:
7 Tankers - Sunk

25. Les Sept Iles
23 October 1943
The blockade runner Munsterland and her escorts sail out from Brest.
Historical Outcome:
Charybdis - Sunk

26. Battle of the North Cape
26 December 1943
Scharnhorst and her escort are searching for arctic convoys to attack. After sending her escort south to scout, the now alone Scharnhorst is cornered by two British forces.
Historical Outcome:
Scharnhorst - Sunk
Norfolk - Medium damage
Duke of York - Light damage

27. Ile de Batz
26 April 1944
After laying mines in the English Channel, three torpedo boats are intercepted by an Allied patrol.
Historical Outcome:
T29 - Sunk
Ashanti - Medium damage
Huron - Light damage
Athabaskan - Light damage
Haida - Light damage
T24 - Light damage
T27 Light damage

28. Ile de Vierge
28 April 1944
After protecting a mine laying operation in the English Channel, Allied escorts detect enemy contacts.
Historical Outcome:
Athabaskan - Sunk
T27 - Sunk
T24 - Light damage

29. Action off Brittany
9 June 1944
An allied patrol intercepts enemy ships in the English Channel.
Historical Outcome:
Z32 - Sunk
Tartar - Medium damage
Z24 - Medium damage
Eskimo - Light damage
Haida - Light damage

30. Action off Bergen
28 January 1945
The 4th flotilla has been ordered to vacate the Arctic. Allied intelligence intercepts these orders and two light cruisers are sent to intercept.
Historical Outcome:
Z31 - Medium damage
Diadem - Light damage
Mauritius - Light damage
Z34 - Light damage
Z38 - Light damage

4. Game Options / Help

Game Options can be accessed from the Main Menu by LEFT CLICK on "Options / Help".
In addition, they can be accessed during combat via the Special Commands Menu of the Tactical Map or [ESCAPE KEY].

Here you can adjust sound and music volume, camera sensitivity as well as various difficulty and realism settings. In addition, the Help section contains chapters describing the various aspects of the game.
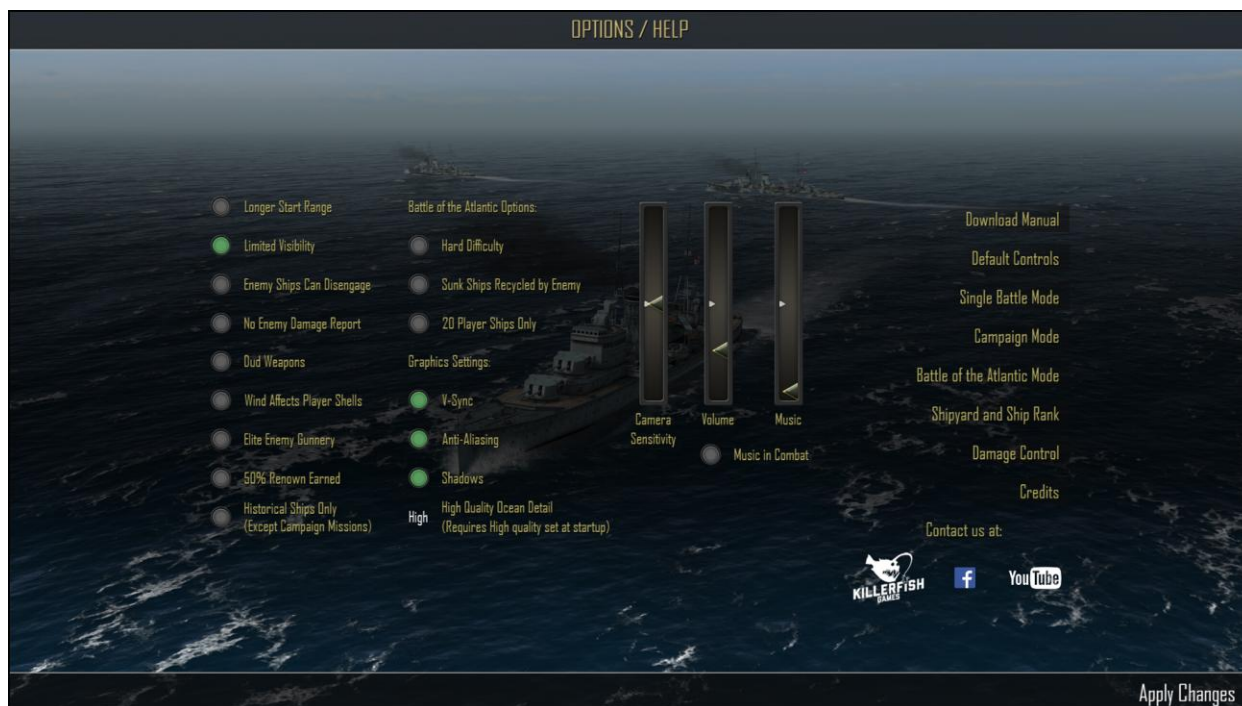
Options Page

By default, all options are off. Turning them on makes the following changes:

Longer Start Range
Increases starting distances by about 20%.

Limited Visibility
Based on weather and time of day, you can only see so far. Ships outside this range will be RADAR contacts (or sonar) and can't be seen in the 3D world.
Typical ranges are from ~6000yd at night to ~40,000yd on a clear day.

Enemy Ships Can Disengage
Enables enemy ships to lay smoke and attempt to retreat from combat if too heavily damaged.

No Enemy Damage Report
LEFT CLICK on an enemy ship will give you the name and statistics, but not tell you which subsystems are currently damaged or destroyed.

Dud Weapons
Approximately 4% of all shells, torpedoes and bombs do not explode on impact.

Wind Affects Player Shells
Shells fired by player ships now drift in the direction of the wind. Both direction and strength of the wind must now be manually compensated for by the player.

Elite Enemy Gunnery
Increases the accuracy of enemy gunfire, torpedo and aircraft attacks.

50% Renown Earned
When playing a Campaign or Battle of the Atlantic, only half the Renown points are earned.

Historical Ships Only
Removes the Lion and H-39 classes from the shipyard as these ships were designed, but were never completed.
In Campaign mode the enemy will always use these ships in the hardest zones and ships purchased before changing this option will remain in the player fleet.
In Battle of the Atlantic mode, the AI will not purchase these ships, however ships already purchased by the player or AI before changing this option will remain in play.

Battle of the Atlantic Options:
Hard Difficulty
Increases the number of enemy ships on the map and increases the amount of merchant tonnage sunk by events (decreases event merchant tonnage if playing Germany).

Sunk Ships Recycled by Enemy
Allows the enemy to resurrect sunk ships and eventually put them back into battle. This is particularly useful for increasing the difficulty when playing the Royal Navy to compensate for the lower number of German ships available.

20 Player Ships Only
Player fleet size is 30 by default. Turning this option on reduces it to 20 for a more challenging game. Changing this setting during a game makes it possible to have more than the allowed number of ships, however new ships cannot be purchased unless below the current maximum fleet size.

Graphics Settings:
In addition to the settings here, there are 4 global graphics quality settings which can be set in the configuration panel at game startup.

1) Low Ocean - Shadows
2) Low Ocean + Shadows
3) High Ocean - Shadows
4) High Ocean + Shadows

Low Ocean uses simplified ocean graphics suitable for older hardware.
High Ocean runs the game with complex and more detailed ocean graphics.

- Shadows disables real time shadows.
+ Shadows enables real time shadows.

V- Sync
Vertical Synchronization, may decrease "tearing" artifacts on screen and improve performance.

Anti-Aliasing
Increases smoothness of graphics.

Shadows
Enables real time shadows. Changing this setting will also change the global graphics quality setting in the startup configuration.

High Quality Ocean Detail
Only available if playing with "High Ocean" enabled in the startup configuration panel. Low, Medium or High settings are available to adjust the resolution and detail of the ocean surface.

5. Appendicies

Torpedo Data

Arming distance: ~1000 yd. Note that under this distance, a torpedo will not arm and be a dud.
Torpedo data below indicates torpedo type, speed in knots and maximum range.

Royal Navy:			
Aerial	18" Mark XIV	33kn	3,500 yd
Submarine	21" Mark VII / VIII	41kn	7,000 yd
Surface	21" Mark IX	35kn	14,000 yd

Kriegsmarine:			
Aerial	H6	24kn	6,500 yd
Submarine	G7a	40kn	8,750 yd
Surface	G7a	30kn	15,300 yd

Aircraft & Payloads

Land Based Aircraft:		
Lancaster:	Heavy Bomber	1 x 14,000 lb Grand Slam Bomb
Liberator:	Heavy Bomber	6 x 500 lb Bomb
Liberator:	Heavy Bomber	6 x Depth Charge
Liberator:	Heavy Bomber	8 x FFAR
Liberator (US):	Heavy Bomber	6 x 500 lb Bomb
Liberator (US):	Heavy Bomber	6 x Depth Charge
Sunderland:	Bomber	6 x 500 lb Bomb
Sunderland:	Bomber	6 x Depth Charge
Fw200 Condor:	Heavy Bomber	10 x 500 lb Bomb
Fw200 Condor:	Heavy Bomber	2 x Hs293 (homing glide bomb)
Dornier Do217:	Bomber	1 x Torpedo
Dornier Do217:	Bomber	6 x 500 lb Bomb
Dornier Do217:	Bomber	2 x Hs293 (homing glide bomb)
Dornier Do217:	Bomber	1 x FritzX (homing glide bomb, armour piercing)
Ju87 Stuka:	Dive Bomber	1 x 500 lb, 4 x 100 lb

Carrier based Aircraft:		
Avenger (US):	Bomber	4 x 500 lb Bomb
Avenger (US):	Bomber	4 x Depth Charge
Avenger (US):	Bomber	8 x FFAR
Barracuda:	Dive Bomber	1 x Torpedo
Barracuda:	Dive Bomber	6 x 250 lb Bomb
Barracuda:	Dive Bomber	4 x Depth Charge
Seafire:	Fighter	(none) can strafe with guns
Seafire:	Fighter	3 x 250 lb Bomb
Swordfish:	Bomber	1 x Torpedo
Swordfish:	Bomber	3 x 500 lb Bomb
Swordfish:	Bomber	4 x Depth Charge
Swordfish:	Bomber	8 x FFAR
Wildcat (US):	Fighter	(none) can strafe with guns
Wildcat (US):	Fighter	3 x 250 lb Bomb

Barracuda replaces Swordfish in January 1943 for the Illustrious Class Aircraft Carrier only and is a full dive bomber as opposed to shallow dive of the Swordfish.

Carrier aircraft (fighters) with "none" payload act as a Combat Air Patrol and are best at shooting down incoming enemy aircraft. Can still be used in strafing attacks.

FAQ

1. Gunnery is too hard! Why is it so difficult to land hits?

The Target Solution is only an estimate, it can often be wrong so just use it as a guide.
Be sure to use the Splash History and Tactical Map Shot History. They are powerful tools that can give you a lot of information about how to plan your next shot.

Using the Splash History can land hits about 75% of the time. It tells you whether the last elevation you fired at will be long, short or on target this turn. Adjusting elevation 1 to 1.5 degrees is usually enough to bring the shot into the next category and once in the "green zone" only minimal adjustments should be necessary. Do the "Gunnery Training" mission for more information.

2. Ships just disappear in combat! How am I supposed to sink them?

Ships can leave combat if they meet the Disengage criteria and "Enemy Ships Can Disengage" option is enabled.

The ability for the enemy to disengage adds an additional challenge. If you want to drive off an enemy, you can. If you want to sink an enemy, you will need to deliberately target the propulsion systems to prevent it from escaping. Shots that you might have otherwise just targeted the magazines with...

3. Where are the ship upgrades like Pacific Fleet had?

Instead of upgrades, there are now hundreds of ships to choose from and you now have to replace ships as they are lost giving the opportunity to buy new ships that suit your needs.
Want a destroyer with good guns? Buy a Tribal.
Want a destroyer with excellent torpedoes? Buy a J,K,N Class.
A few automatic upgrades occur during the Battle of the Atlantic for Hedgehog, Squid and Barracuda dive bombers.

4. When is a game saved so that I can leave and resume later?

Single Battle: never.
Campaign: after each battle and after purchasing or releasing any ships.
Battle of the Atlantic: after each battle, after purchasing or releasing any ships and at the end of each campaign turn.

5. Where can I find my save game files?

On PC: C:\Users\[username]\AppData\LocalLow\Killerfish Games\Atlantic Fleet

6. Why are torpedo bombers so hard to use? The enemy just sails past aerial torpedoes...

Aerial torpedoes usually run over several turns to their target. This means you don't have to get too close to the enemy ship before dropping (although allied torpedoes do have a fairly short range).

Most importantly make sure to set the aircraft attack marker 0.5-1.5 ship lengths in front of the target so it sails into the torpedo. Remember you can adjust both the angle of the attack and the point along the ship's path you wish to strike.

7. Depth Charges and Hedgehogs do nothing, how do they work?

LEFT CLICK the FIRE button or [Space KEY] to launch an anti-submarine attack.

8. Why are Campaigns so easy, I have lots of Renown and nothing to spend it on?

Save it! The later levels become very difficult and you will need it to replace lost ships.
It is possible to lose a campaign due to being unable to replace your ships.

Still too easy? There's an option to reduce Renown rewards by 50% for both Campaign and Battle of the Atlantic modes.

9. Why don't I earn Renown for sinking ships in the Campaign?

Renown is earned only when the score is higher than any other previous attempt for that mission. In cases where a previous high score exists, only the difference of the current higher score and the previous score is earned.

10. Why don't I earn Renown for sinking ships in Battle of the Atlantic?

Renown is earned only for enemy warships and submarines sunk, not merchants.
Merchant tonnage instead goes to the War Summary tally and is used to determine how the war is progressing.

11. There are enemy ships in the same zone as mine, why won't they engage?

In Battle of the Atlantic mode a zone represents a large area of ocean, so there is a change that the ships don't find each other. Having more ships, the total number of aircraft carried by ships (including aircraft carriers) and good weather all increase the chances of the two forces detecting each other.

12. Why do aircraft attack my own ships? Why is the aircraft attack marker on my ship?

By default the aircraft attack marker initially appears on the ship launching the attack.
If your ship already has a target, simply LEFT CLICK the Target Solution or [F2 KEY].
Or go into the Tactical Map, LEFT CLICK a target then LEFT CLICK the Go To Ship button to target any ship.

13. Why can't I launch the aircraft on battleships and cruisers?

Aircraft on battleships and cruisers are scouts and cannot be launched or used directly in combat. In Battle of the Atlantic mode, they provide a bonus for detecting enemy ships in the same zone.

14. Why won't ships sink? I've hit them so many times...

Atlantic Fleet does not use hit points, but actual buoyancy physics. This means you have to hit the ship near the water line in order for water to flood it. Multiple hits away from the waterline cause damage, but cause very little flooding.

Also be aware of counter flooding. Try to avoid hitting a ship on both sides or at both ends. Concentrate on one side or one end to capsize it or force the ship under.

Use the right tool for the job. Small calibre guns or HE shells won't penetrate heavy armour.

Finally distance plays a major role in armour penetration. At long range you want to plunge your shells into the deck rather than have them glance the belt. Belt armour penetration decreases with longer distances, while deck armour penetration increases and vise versa.

15. Why do torpedoes or shells pass through ships?

There is no "friendly fire".

16. Why can't I progress in a Battle of the Atlantic game, I keep getting the same screen every time I press "Next"?

The ending criteria have been met for that campaign and it is finished.

Glossary & Abbreviations

AAA	Anti-Aircraft Artillery
AP	Armour-Piercing shell, best used against armour thickness > 50% shell calibre
ASW	Anti-Submarine Warfare
BB	Battleship
BC	Battlecruiser
BotA	Battle of the Atlantic
CAP	Combat Air Patrol, carrier-based fighters constantly in the air vs. enemy aircraft
CA	Heavy Cruiser
CL	Light Cruiser
CV	Aircraft Carrier
CVE	Escort Carrier
DC	Corvette
DD	Destroyer
Dud	Non-exploding shell, bomb or torpedo warhead
Elev.	Elevation (Target Solution suggested gun elevation to hit target)
FFAR	Forward Firing Aircraft Rocket
HE	High-Explosive shell, best used against lightly or unarmoured targets
HH	Hedgehog, forward firing anti-submarine mortar
HK	Hilfskreuzer, German auxiliary cruiser, merchant raider
KM	Kriegsmarine, German navy
Kn	Knot, unit of nautical speed
MS	Merchant Ship
lb	Pound, unit of weight
RN	Royal Navy
SS	Submarine, U-boat (German submarine)
t	Tons of water displaced (also called displacement or tonnage of a ship)
TB	Torpedo Boat
TDC	Torpedo Data Computer
Torp.	Torpedo Bearing (Target Solution suggested bearing to fire torpedo)
TT	Torpedo Tubes, either launcher or a torpedo room
yd	Yard, unit of length