

U-Boat Simulator

Submarine simulator for Android

USER MANUAL - PDF generated 17 February 2015

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About

U-Boat Simulator is a game for Android™ set in World War 2, you can control a U-Boat VII-C German submarine, search enemy ships and engage in dangerous battles to sink them with torpedoes. This is not an "arcade" game but a complex and realistic *simulator*, a bit difficult at the beginning but after a little practice you will enjoy hours and hours of fun. It has options that you can enable to make the game more realistic and difficult, you can look around your submarine with the 3D views, and so on...

In this web site you will find the [instructions](#) for this game, several [screenshots](#) and a [forum](#) where you can post comments, ideas, report bugs, ask for help or add your stories and screenshots !

You can also [contact](#) me directly (I am able to write only in italian and english) :-)

Game requirements :

- *Android* : version 2.3 and above.
- *Memory* : about 10 MB of free storage space (for the app and for saving the game) and about 30-40 MB of free ram.
- *Screen* : at least a resolution of 320x480 pixels (more is better).

The game is made to work with most smartphones and tablets on the market for a couple of years now, is evolving and each update adds new features.

The game is available in 2 versions, **Demo** and **Full** :

- The [Demo](#) version is for **evaluating** the game, it has some little limitations and is **free**.
- The [Full](#) version is complete, is **not free** and permits longer games (it is possible to repair/replenish the submarine and reload the previous saved game if the submarine is destroyed).

IMPORTANT : I distribute this game **only** via the official *Google Play*™ store, it does **not** contain virus, malware, adware or other bad code and does **not** collect personal information. The [demo](#) version of the game does **not** require any permission and does **not** communicate with internet. The [full](#) version of the game requires **only** the "*Google Play License Verification*" permission and communicate **only** with the *Google* servers for the license checking (copy protection).

If you download the game elsewhere (not in the *Google Play Store*), it is not my game and could include malware !

Here you can download the **DEMO** version (*free*) :



Here you can download the **FULL** version (**not free**):



Social networks pages :



Video tutorials :



Note : The italian translation is in preparation, for the moment please check the old [web site](#) (traduzione italiana in preparazione, per il momento visitare il vecchio [sito web](#)).

Note : *Android* and *Google Play* are trademarks of *Google Inc.*

Important : I am not always able to keep all the pages of this site updated, but after each new release of the game I update immediately the [changelog](#) page, look there for the latest news !

[\(Next\) Instructions ->](#)

Instructions

[<- Prev. \(Home\)](#)

Welcome to the Instructions section :-)

Here you will find useful information for playing this game, some tips, screenshots and a lot of technical data. It is not a difficult game, but at the beginning it could seem complicate, I suggest to take a fast look at these pages, try to play and then return here for a better comprehension.

When you start the app on your device, you will see this main screen that allows you to :

- Start a new game (button **NEW GAME**)
- Continue the previous saved game (button **LOAD GAME**)
- Exit the game (button **EXIT**)



You can press **LOAD GAME** to load the previous saved game. The game is automatically saved when you return to this page using the *back* key, when you close your device or when an external event closes the app (for example if your phone receives a call or you press the *home* key).

If you prefer you can start a **NEW GAME**, in this case a warning will inform you that your saved game will be overwritten :



If you press **YES**, the next window will ask you if you want to use the [terrain](#) (land and sea areas with different depths, see [here](#) for details) or a flat ocean without land masses :



After pressing the button **NEW GAME** or **LOAD GAME** this screen opens with the map:



The game always starts **paused** and you can move the map, zoom in or out, view the status of torpedoes, launch them etc..

To start it, press the button on the **bottom right (PLAY)**, you will notice that the date and time at the top of the screen will begin to change, the units will start to move on the screen and the button on the **bottom right** will change its state (**PAUSE**) :



To pause the game, press the same button on the **bottom right (PAUSE)**.

This **PLAY/PAUSE** button permits you to **pause** the game when you need to think at your next moves, to explore the map, to check the status of your torpedoes... when the game is paused all units are frozen, nothing moves or happens... just remember to press **PLAY** to go on with the game...

To exit the game you can take the following steps :

- Press the **back** key of your device -> Your game will be saved and you will return to the main screen, from where you can continue the game, start another game or completely exit the game by pressing **EXIT**.
- Press the **home** key of your device -> Your game will be saved and the app will close.

Note : In the **full** version of the game, the game is **not** saved if the submarine has been destroyed. This permits you to continue your game from the previous saved point.

[\(Game Screen\) Next ->](#)

Game Screen

[<- Prev. \(Instructions\)](#)

This is the game screen with the map, the status indicators of the submarine and various other buttons:



This screen is divided into three parts:

- Above : the [upper bar](#) with the status indicators of the submarine, the current date and time acceleration.
- In the middle : the [map](#).
- At the bottom : the [lower bar](#) with buttons to switch between screens to view the status of torpedoes, to throw them, to view the 3D, to pause / resume the game and so on...

The bars at the top and bottom are always displayed in any screen, the middle part changes depending on whether you are viewing the map, the status of torpedoes, the 3D or other screens.

[\(Upper Bar\) Next ->](#)

Upper bar

[<- Prev. \(Game Screen\)](#)

This is the **Upper bar**, present at the top of the screen :



From left to right there are the following indicators:

Speed :



Indicates the speed of your submarine in knots (kn), the value is positive (e.g. 18 kn) when the submarine is moving forward, it is negative (e.g. -12 kn) when it moves back, null (0 kn) when it is stationary.

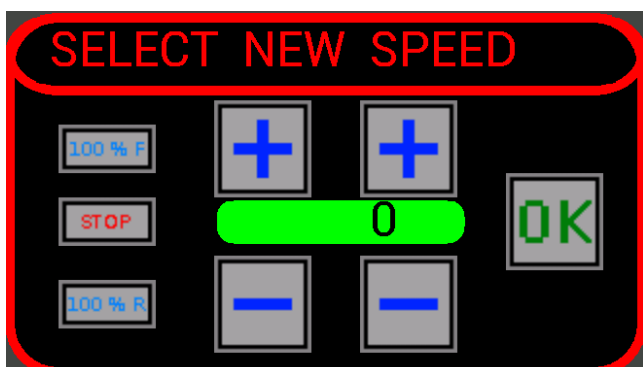
The maximum speed is **+18 kn** (forward) or **-12 kn** (backwards) at surface, **+8 kn** (forward) or **-5 kn** (backwards) at periscope depth or submerged.

If the submarine is damaged, the maximum speed is reduced, with severe damage it is impossible to move !

The speed indicator is **GREEN** when your submarine is not damaged and can proceed at its maximum speed; it is **YELLOW** when your submarine is damaged and its maximum speed is limited; it is **RED** when your submarine is severely damaged and can not move !

Near the "Speed" text, the symbol [**<**],[**=**],[**>**] indicates when your speed is decreasing, stable or increasing.

To **CHANGE** your speed, press the green/yellow/red part of the Speed ??indicator and this window will open:



The green box indicates the desired speed, you can change it using the buttons + and - to increase or decrease the tens and units of the knots, or set it quickly with the 3 buttons on the left (**100% F** = forward maximum, **STOP** = stationary, **100% R** = backwards maximum).

When finished, press the **OK** button to close the window and the speed will gradually change until it reaches the desired one (remember to press the **PLAY** button if the game is paused).

Course :



Indicates the course of your submarine in degrees (°), the value can range from **0°** to **360°** :

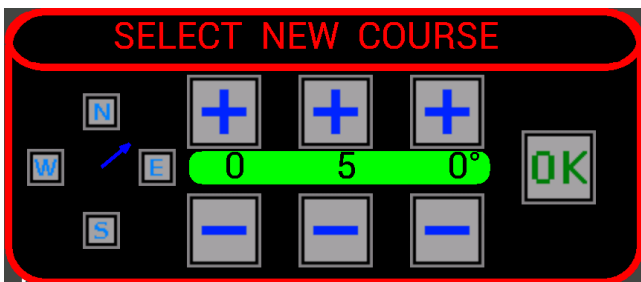
For example it is **0°** when you go to the **North** (towards the top of the map), **90°** when you go to the **East** (to the right on the map), **180°** when you go to **South** (down on the map), **270°** when you go to **West** (to the left on the map).

The submarine can not rotate when stationary, it must have a minimum speed forward or backwards, and its rotation can be slow if the submarine speed is low or if it is damaged !

The course indicator is **GREEN** when your submarine is not damaged and can change its course; it is **YELLOW** when your submarine is damaged and its steering speed is limited; it is **RED** when your submarine is severely damaged and can not steer !

Near the "Course" text, the symbol [**<**],[**=**],[**>**] indicates when your course is decreasing, stable or increasing.

To **CHANGE** your course, press the green/yellow/red part of the Course indicator and this window will open:



The green box indicates the desired course, you can change it using the buttons + and - to increase or decrease the hundreds, tens and units of degrees, or set it quickly with the 4 buttons on the left (**N** = North, **E** = East, **S** = South, **W** = West).

The blue arrow gives an immediate indication of what will be the new course.

When finished, press the **OK** button to close the window and the course will gradually change until it reaches the desired one.

Depth and Periscope:



Indicates the depth of the submarine in meters (**m**), the value can range from 0 to 999 :

A depth of **0** m indicates that the submarine is at **surface**, a depth of **8** m indicates it is at **periscope depth**, the maximum safe depth is **250** m.

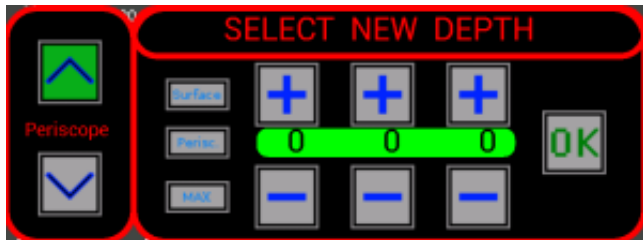
The background changes from green to yellow to red depending on the depth.

Caution: always remain in the safe area between **0** and **250** m (**green**), because in the area between **250** and **300** m (**yellow**) the submarine receives damage with the passage of time, over **300** m (**red**) the submarine implodes and the game ends immediately !

It indicates also the status of the periscope (Raised [**P**] or Lowered [**b**]).

Near the "Depth" text, the symbol [**<**],[**=**],[**>**] indicates when your depth is decreasing, stable or increasing.

To **CHANGE** the depth of your submarine or to **raise** or **lower** the periscope, press in the green/yellow/red part of the Depth indicator and it will open this window:



This window is divided in two parts, on the left there are the two buttons to raise or lower the periscope, on the right there are the buttons to change the depth of the submarine.

The green box indicates the desired depth (000), you can change it using the buttons + and - to increase or decrease the hundreds, tens and units of meters, or set it quickly with the 3 buttons on the left (Surface = **0** m, Perisc. = periscope = **8** m, MAX = maximum safe depth = **250** m).

If you try to increase the depth beyond **250** m the background changes from green to yellow, above **300** m the background turns red.

When finished, press the OK button to close the window and the depth will gradually change until it reaches the desired one. As for the course, the submarine will change its depth fastly if it is moving forward or backwards; if the submarine is stationary then its depth will change very slowly.

Note: When the submarine is at periscope depth (8 m) and the periscope is raised [**P**], the U-Boat can see the other units, and the other units can see the periscope with their sight and detect it with their radar. When the submarine is at periscope depth (8 m) and the periscope is lowered [**b**], the U-Boat can not see

the other units, and the other units can not detect it with their sight and radar.

Health :



Indicates the health of the submarine as a percentage (%), the value can range from 0 to 100 :
A health of **100%** indicates that the submarine has no damage, a health of **0%** that it is completely destroyed and the game is over.

The indicator is normally **green**, but turns **yellow** with health below 50 % and **red** with health below 25 %.

Near the "Health" text, the symbol [$<$],[$=$],[$>$] indicates when your health is decreasing, stable or increasing.

The health can decrease for several reasons:

- The submarine is located at a depth between **250** and **300** m, with the passage of time will be damaged because the water pressure is too high (over 300 m it implodes immediately!). It is advisable to always remain at a depth between **0** and **250** m.
- The submarine at surface (0 m) or periscope depth (8 m) collides with another ship, and become damaged (big or little damage, depending on the speed of the collision).
- The submarine at surface is attacked with gunfire by an enemy warship. The range of the guns of enemies is variable, you should not get too close to an enemy warship when you are at surface.
- The submarine at surface (or periscope depth with the periscope raised) is attacked with gunfire by an enemy airplane. In this case, it is better to dive below periscope depth (or at periscope depth but keeping the periscope lowered).
- The submerged submarine is hit by a depth charge and become damaged (big or little damage, depending on the distance from the explosion). When an enemy warship launches depth charges, it is advisable to move away and increase the submarine depth.

The submarine is able to automatically repair its damage (*only in the Full version of the game*) remaining at a depth between **0** and **250** m, but once damaged its health never rises above 75%, thus preventing the navigation at maximum speed.

If the submarine is damaged and is located in the safe depth (between **0** and **250** m), the damage will be repaired automatically and its health will grow.

If the submarine is between **8** m (periscope depth) and **250** m, its health will grow slowly up to **50%**.

If the submarine is at surface (**0** m), its health will grow faster up to **75%**.

If your submarine is linked with the [Torpedoes Transport](#) (an other special submarine you can call with the radio, *only in the Full version of the game*), its health will grow faster up to **100%**.

IMPORTANT: if your submarine is submerged (between **8** and **250** m) and its health is below **25%**, it will continue to get additional damage, and its health will slowly decrease up to **0%** !

So if you have a lot of damage, it is better to go up at surface !

Batteries (Batt) :



Indicates the charge status of the batteries (Batt.) of the submarine as a percentage (%), the value can range from 0 to 100 :

A charge of 100% indicates that the submarine is perfectly controllable, a charge of 0% that the submarine has a big problem, and can only change its depth (if the batteries are fully discharged, go up at surface to recharge them).

The indicator is normally **green**, but becomes **yellow** with the charge under 50 %, and **red** with the charge under 25 %.

The batteries are used both for the normal functioning of the submarine, for navigation with electric motors to periscope depth or underwater, and for its sensors.

Staying stuck at periscope or submerged will discharge very slowly the batteries, instead navigating with the electric motors will discharge them faster (depending on the speed).

The batteries are automatically recharged only by remaining at surface, does not matter whether stationary or moving, are recharged by diesel engines that can not operate underwater.

The recharge is fast when the submarine is stationary, slow at slow speeds, no recharge at high speeds !

With fully charged batteries, the submarine can stay under the surface for about 320 hours standing stationary, for about 1.5 hours surfing with electric motors at maximum speed.

Near the "Batt" text, the symbol [\ll],[\lt],[$=$],[\gt],[\gg] indicates when your batteries are discharging fastly or slowly, stable, recharging slowly or fastly.

Discharge table :

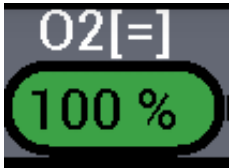
Speed(kn)	Time(h)	Distance(NM)
0	480	0
1	320	320
2	80	160
3	36	108
4	20	80
5	8.7	43.5
6	4.4	26.4
7	2.5	17.5
8	1.5	12
-1	125	125
-2	31	62
-3	10	30
-4	3.4	13.6
-5	1.5	7.5

Recharge table :

Speed(kn)	Time(h)
0	4
1 .. 12	8
13 .. 18	inf
-8 .. -1	8
-12 .. -9	inf

Note: the batteries can be recharged *only in the full version of the game !*

Oxygen (O2) :



Indicates the reserve of oxygen (O2) of the submarine as a percentage (%), the value can range from 0 to 100 :

A percentage of 100% indicates that the crew is fully operational, a charge of 0% indicates that the reserve is empty, causing the death of the crew and the end of the game.

The indicator is normally **green**, but turns **yellow** with the reserve below 50%, and **red** with the reserve below 25%.

The oxygen reserve is reduced remaining at periscope (8 m) or submerged, will restore remaining at surface (0 m).

With oxygen tanks filled the submarine can stay below the surface for about 72 hours.

Near the "O2" text, the symbol [<],[=],[>] indicates when your O2 level is decreasing, stable or increasing.

Note: the oxygen reserve can be recharged *only in the full version of the game !*

Fuel :



Indicates the reserve fuel of the submarine as a percentage (%), the value can range from 0 to 100 :

A percentage of 100% indicates that the tanks are full, a percentage of 0% that the tanks are empty.

The indicator is normally **green**, but turn **yellow** with the reserve below 50%, and **red** with the reserve below 25%.

The fuel is consumed when you navigate at surface with diesel engines, if fuel runs out the submarine can not navigate on the surface or recharge the batteries.

With full fuel tanks the submarine can navigate at surface for about 8200 NM sailing at a speed of 10 kn, about 4500 NM sailing at full speed (18 kn).

Near the "Fuel" text, the symbol [<],[=],[>] indicates when your fuel is decreasing, stable or increasing.

Note: call the [Torpedoes Transport](#) to refuel your submarine.

Note: the fuel reserve can be recharged *only in the full version of the game !*

Date and time (Date) :



Indicates the date and the current time (Date), they don't change if the game is paused.

The day is divided into Night (from 19 to 05), Sunrise (from 05 to 06), Day (from 06 to 18) and Sunset (from 18 to 19).

Depending on the time of day the color of the map changes (from blue at day to gray at night) but also changes the distance at which the units are identified on sight.

With the light of day this distance increases, it is reduced in the dark of the night, is what affects the ability of ships to see each other, to be seen when the submarine is at surface and see the enemy ships when the submarine is at surface or at periscope.

This distance is 7.5 miles (7.5 NM) in the day, decreases during sunset, 2 miles (2 NM) at night and increase again during sunrise.

Time acceleration (Time Acc.) :



Indicates the acceleration of time (Time Acc.) of the game, you need to speed up the game when you have to travel long distances or stay a long time waiting for the passage of a ship.

To change the acceleration press the green square, at every touch the value will increase up to the maximum (to return to 1x press again).

In the game the maximum value is 512x.

Attention: values too high can lead to abnormal behavior of other units (collisions with land masses, convoys problems), it depends on the cpu speed of the smartphone and the frame rate that the game can guarantee ... you can always choose the max time acceleration (512x), but the indicators becomes **yellow** or **red** to remember that some problems can arise.

[\(Map\) Next ->](#)

Map

[<- Prev. \(Upper Bar\)](#)

The central area of the game screen between the Upper bar and the Lower bar, contains the map of the game :





At the center there is the symbol of your submarine.

Size of the map :

The game takes place inside a large square area of sea with the side long 1000 miles (1000 NM) and to see it all, you can move the map on the screen and enlarge it.


To **move** the map it is sufficient to put and then move one finger across the screen, to **zoom in** or **out** just place two fingers together on the screen and then move them away or bring them closer (as in *Google Maps*, "pinch to zoom").

To zoom in or out, you can also use the 2 buttons  and ,

at the bottom of the screen.

The border of the map is marked with a yellow outline that you can see on the edge of the screen when you moves it all in one direction, and the map will change color depending on the time of day (Blue during day, dark blue during sunrise and sunset, gray at night).

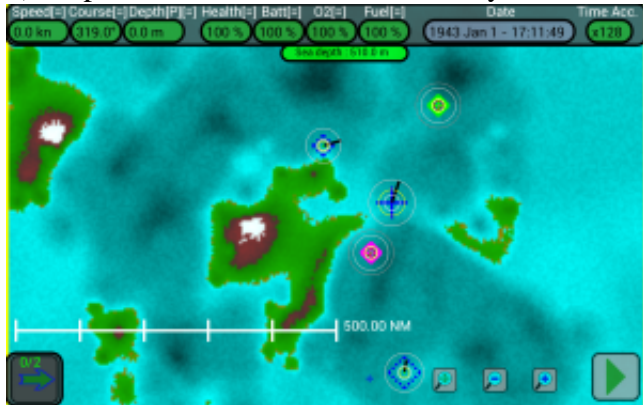
You can not rotate the map, the North is always at the top, the South at the bottom, East on the right and West on the left.

The map can be shown **with** or **without** terrain, press on the map button  in the [lower bar](#) to change the visualization mode :

1) Map **without** terrain, use this mode to not be confused by too many colors:



2) Map **with** terrain, use this mode if you like it, but the refresh can be a bit slow :



Visible and invisible units :

Your submarine is always visible in the map, while the other units are visible only if they have been detected.

The other units are first invisible, then appear in gray when they are detected and change color when they have identified (**blue** = allied, **red** = enemy, **black** = neutral).

When a unit is out of your sensors ranges, after 4 hours it disappears from the map.

Note: when units identify other units, they report it continuously via radio, if you are at surface at least 500 miles (500 NM) from an **allied** ship you are able to pick up the signal and these other units will appear on the map !!

Use this button  in the [lower bar](#) to select and center your submarine in the map.

Map scale :

To get an idea of distances, especially when you zoom in or out the map, at the bottom of the screen there is a scale drawn with a horizontal line and small vertical segments.

Looking at the figure above, the long white horizontal line is 300 miles long (300 NM) and consists of 3 segments each of 100 miles (100 NM).

In the figure below you can see the yellow border of the map and the line of the scale long 500 miles (500 NM), with 5 segments each of 100 miles (100 NM) :



In the figure below instead the line of the scale is long 0.08 miles (0.08 NM), with 8 segments each 0.01 miles (0.01 NM) :



In the middle you see the drawing of the submarine with very enlargement.

Representation of the units :

The various units are indicated on the map in a different way (see [Units](#) for full details), depending on if they are allies or enemies, the type of unit, the size of the unit, the zoom of the map and so on :

Normally they are marked with a **symbol** (*diamond, square, etc.*), but when they are identified and when the map is zoomed the ally and enemy units are indicated with a more detailed drawing.

If a unit is out of your sensors' range it is indicated with a **dashed symbol**, its position is calculated based on the last detection and is maintained on the map for 4 hours.

The **symbols** are :



Your submarine



Torpedoes Transport



Warship



Merchant or passenger ship



Airplane

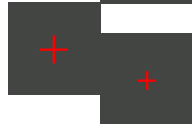
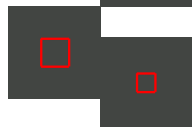
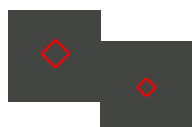


Torpedo

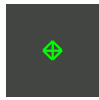


Depth Charge

The **size** of the symbol is great for large units, small for small units :



The **colors** of the symbols are :



Your submarine



Torpedoes Transport (Allied)



ALLIED



ENEMY



NEUTRAL



Not identified

When the units are detected and then identified, and the map has a great magnification, the color of the drawings is as follows :



Your submarine



Torpedoes Transport



ALLIED



ENEMY



NEUTRAL

When the units are in motion, together with the symbol appears a black line of length proportional to the speed and oriented toward the direction in which the unit navigates.

In the figure below you can see your own submarine (green) stopped at surface with a course of 70°, a large enemy warship stopped and out of range (red and dashed), a small allied warship that moves toward south (blue), a large not identified warship (gray) that moves toward north-est, a big trade ship not identified that moves toward west (gray) and a small enemy warship that moves toward nord-west (red) :



Units selection :

It is possible to select your submarine or other units by touching them on the map, when a unit is selected the **info panel** appears on the left side of the screen with useful information for that unit (see the table below):

Type	(warship, merchant, ...)
Force	(allied, enemy, ...)
Bearing	its bearing
Range	its distance
Speed	its speed
Heading	its course
Depth	its depth
Health	its health
Weight	its weight
Visual range (white)	range of its sight
Sonar range (gray)	range of its sonar
Hydro range (black)	range of its hydrophones
Radar range (yellow)	range of its radar
Gun range (red)	range of its gun
Gun AA range (purple)	range of its AA gun
Detection time	last detection time
Detection type	(by sonar, by radar, ...)

To deselect a unit, tap it again.

When a unit is selected a small yellow circle appears around its symbol, or (at high magnification) a small yellow circle in the center of its drawing.

And around its symbol other bigger and colored circles appear, they represent the range of the sensors and weapons of the selected unit; the color used are the same as in the information panel on the left (yellow for radar, white for sight, red for cannon etc.).

In the figure below you can see your own submarine (green) stopped at surface with a course of 70°, a large enemy warship stopped and out of range (red and dashed), a large not identified warship (gray) that moves toward north-east, a big trade ship not identified that moves toward west (gray) and a small enemy warship (selected, with its information at the left of the screen) that moves toward north-west (red) :



YOUR SCORE :



Your score is shown in the top left of the **Log screen**, it indicates the total tonnage of warships sunken by your submarine, the total tonnage of commercial ships sunken and the total weight of aircrafts destroyed.

The scope of the game is to destroy as much enemies units (**RED SYMBOLS**) as possible, and in future probably will be possible to use this tonnage to upgrade your submarine (or perhaps to buy other submarines to be used concurrently to perform advance attacks)...

If you destroy an enemy unit (red), its weight is added to your score (Good).

If you destroy a neutral unit (black), its weight is subtracted from your score (Bad).

If you destroy an allied unit (blue), the double of its weight is subtracted from your score (**VERY BAD**).


[\(Lower Bar\) Next ->](#)

Lower bar

[<- Prev. \(Map\)](#)

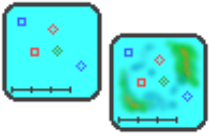
This is the **Lower bar**, present at the bottom of the screen, with the buttons to navigate through the various screens of the game :



The buttons are divided in 2 pages, press the button with the arrow  to open and switch between pages.

From left to right there are the following buttons :

Map Screen :



The icon of this button has a little map inside and some small colored zones, push it to go to the map screen :



Push again the map button to see the [terrain](#) :



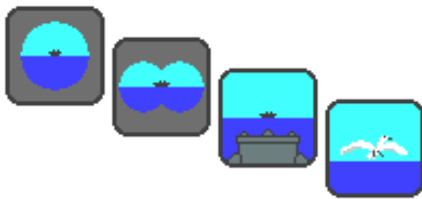
Push again the map button to hide the [terrain](#).

Note how its icon changes when the terrain is shown or not.

Note: to avoid using a really large amount of memory in your device, the terrain's points are interpolated in real-time when the map is moved or zoomed and this intensive task could cause a slowdown of the user interface; it is possible to reduce this effect by disabling the option "*Enable HiRes for terrain on map*", and the terrain will be drawn at a lower resolution in the map.

[Click here for a description of the Map screen](#)

3D Screen :



Press this button to open the 3D screens (*periscope, binoculars, deck, fly view*), press it again to cycle between the 4 available modes; its icon will change to indicate the current mode :

Periscope :



Binoculars :



Deck :



Fly-view :



[Click here for a detailed description of these windows.](#)

Torpedoes Launch-Course Offset Screens and Guns :



The icon of this button has inside 5 small squares, pressing it opens the *Torpedoes Launch window* :



Press again the same button to close the *Torpedoes Launch window* and open the *Torpedoes Course Offset window* :



Press again the same button to close the *Torpedoes Course Offset window*.

These windows have the buttons to launch the torpedoes and the buttons for the **deck gun** and the **AA gun**.

[Click here for a detailed description of how to launch the torpedoes.](#)

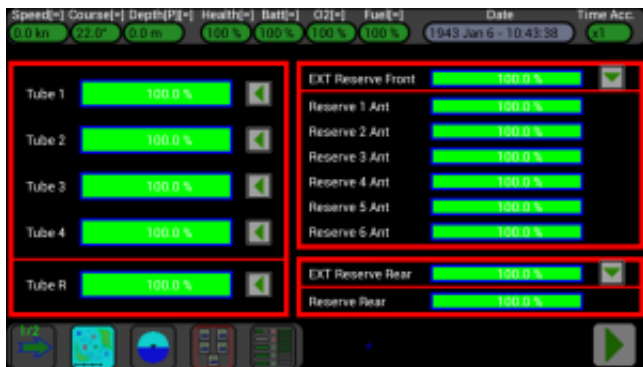
[Click here for a description of the Deck Gun.](#)

[Click here for a description of the AA Gun.](#)

Torpedoes screen :



The icon of this button has inside 9 small rectangles, pressing it will advance to the torpedo screen:



In this screen you can check the status of torpedoes and you can reload the torpedo tubes if they are empty.

The submarine can contain **14** torpedoes, **5** inside the torpedo tubes and **9** others in reserve (*backup*). 4 tubes are in the front of the submarine and 1 tube is in the rear. The 9 backup torpedoes are so divided : 6 inside the submarine (in the front, *Reserve x Ant*), 1 inside the submarine (in the rear, *Reserve Rear*), 1 external to the submarine (in the front, *Ext Reserve Front*) and 1 external to the submarine (in the rear, *Ext Reserve Rear*).

The 6 backup torpedoes inside the submarine (in the front) can be used only to reload the 4 tubes in the front of the submarine. The other backup torpedo inside the submarine (in the rear) can be used only to reload the tube in the rear.

The backup torpedo external to the submarine (in the front) can be moved inside the submarine (in the front), and the backup torpedo external to the submarine (in the rear) can be moved only inside the submarine (in the rear).

In practice, during the game, you can launch 11 torpedoes from the 4 tubes in the front of the submarine, and you can launch 3 torpedoes from the tube in the rear of the submarine (torpedoes in the front of the

submarine can not be moved to the rear, and torpedoes from the rear of the submarine can not be moved in the front). At any moment you can call the [Torpedoes Transport](#) to resupply your torpedoes (*only* in the **Full** version of the game).

In the picture above you can see on the left the 5 torpedo tubes, 4 front (Tube 1,2,3,4) and 1 rear (Tube R), the green color and the percentage to 100% indicate that the tubes are full and ready to launch.

If the rectangle of the tube is black, and the percentage is 0%, it means that the tube is empty. If the rectangle of the tube is partially green and the percentage is greater than 0% and less than 100%, it means that the tube is in charging.

On the right side you can see the 9 torpedoes of reserves that serve to reload the torpedo tubes, the rectangles are filled with green indicating that the torpedoes of reserves are present. If the rectangle is black, it means that the torpedo reserve is gone.

In the middle there are the 5 buttons to press to reload the torpedo tubes, when a tube is empty you can press the button to order to charge it, the button icon will change and will contain two red bars to indicate that the tube is being charging or waiting to be reloaded.

You can order to charge more tubes at a time, but charging takes place on a tube at a time.

When the tube has been reloaded, the icon of the button will return as before with the green arrow.

If you want you can pause the charging of a tube by pressing the appropriate button.

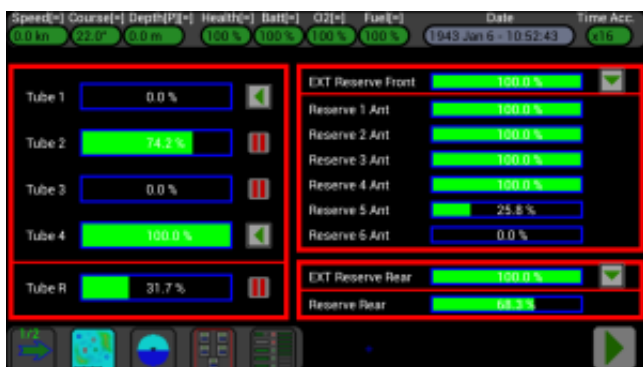
Note: you can always reload a tube when a backup torpedo is present (when you are at surface, in depth, stationary or moving), except when the [Torpedoes Transport](#) is linked (because the crew is busy). If a tube reloading is in progress, the [Torpedoes Transport](#) can not link to your submarine.

In the right side of the screen there are 2 more buttons, these are used to move the 2 external torpedoes inside the submarine.

IMPORTANT: you can move the external torpedoes inside the submarine ONLY when you are at surface. When an external torpedo is moving inside the submarine, the submarine CAN NOT go to depth until the operation is terminated, so be sure to not have enemies around !!!

It's better to move this torpedoes during night (when airplanes don't attack).

In the picture below we see another example:



On the left of the screen we see that the tube 1 is empty and the button close to it with the green arrow indicates that you can order to recharge it.

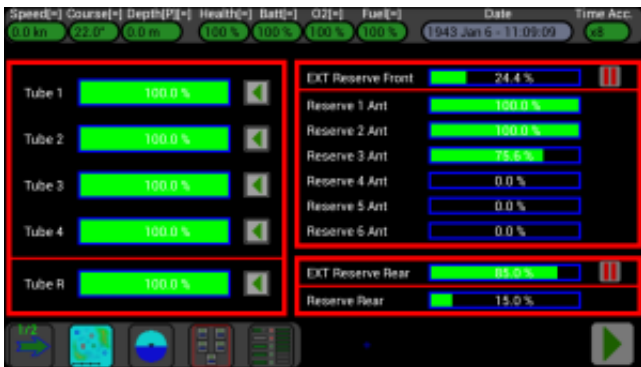
The tube 2 is being charged (74.2%) and the button with the red bars indicates that it is possible to pause charging.

The tube 3 is empty (0%) and the tube 4 is full (100%).

The rear tube is being charged (31.7%).

On the right of the screen we see that the *Reserve 5 Ant* (25.8%) is going inside the tube 2 and the *Reserve Rear* (68.3%) is going inside the rear tube.

The figure below shows the 2 external torpedoes going inside the submarine :



The *Ext Reserve Front* (24.4%) is going inside the *Reserve 3 Ant* (75.6%), and the *Ext Reserve Rear* (85.0%) is going inside the *Reserve Rear* (15.0%).

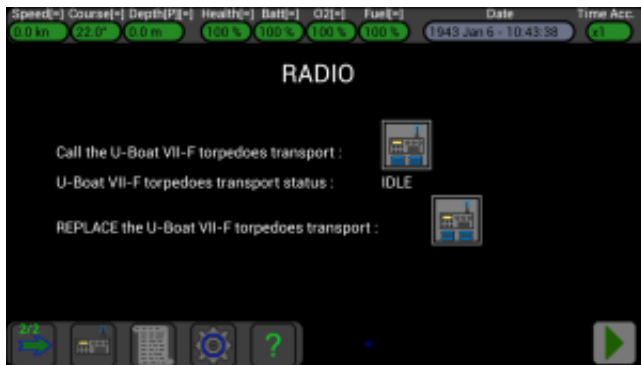
Note: you can manually order to reload a tube or to move an external reserve inside the submarine using the buttons in this window, or if you prefer you can enable the option "*Torpedo Tubes auto reload*" to reload automatically the tubes when they are empty.

Note: the external reserves can be moved inside only manually using the buttons; the "*Torpedo Tubes auto reload*" option doesn't do this, because this operation forces your submarine to stay at surface and it can be dangerous if enemies are around.

Radio screen :



The icon of this button has inside a small radio, pressing it will advance to the Radio screen where is possible to call the [Torpedoes Transport](#) (only in the **Full** version of the game) :



There are 2 buttons inside this window : the first is for calling the Torpedoes Transport, the second is for replacing it with a new one (in case it was blocked by a land mass and you had no way to meet it).

[Click here for a detailed description of how to call the Torpedoes Transport.](#)

Log Screen :



Press this button to open the Log screen :



Here all game messages are shown, the window is scrollable and they are saved and loaded with the game. Note your game score at the top-left of the screen.

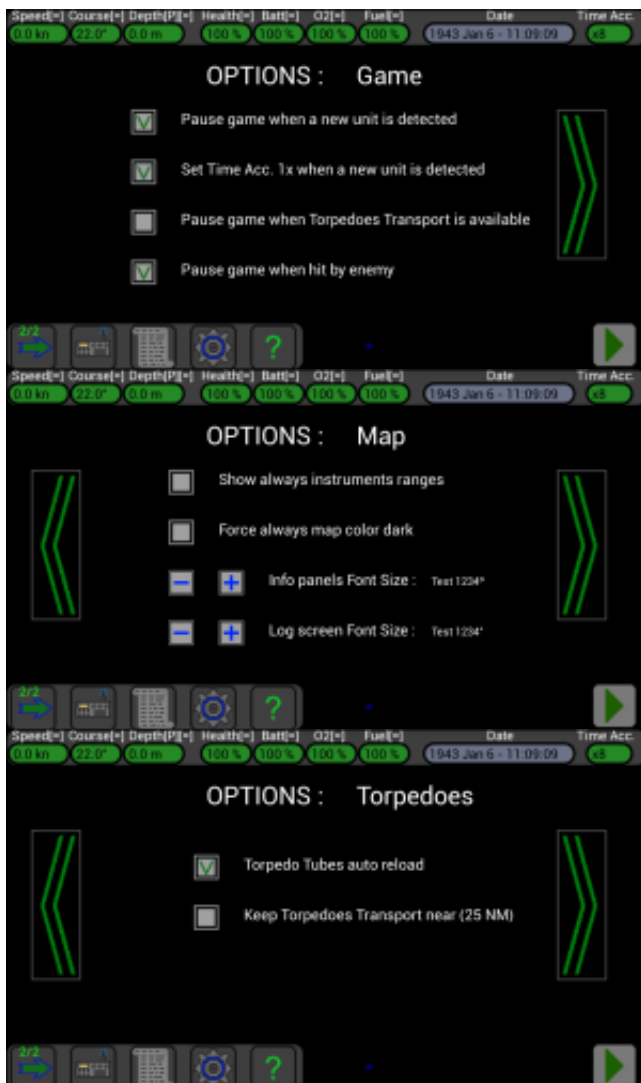
Options Screen :

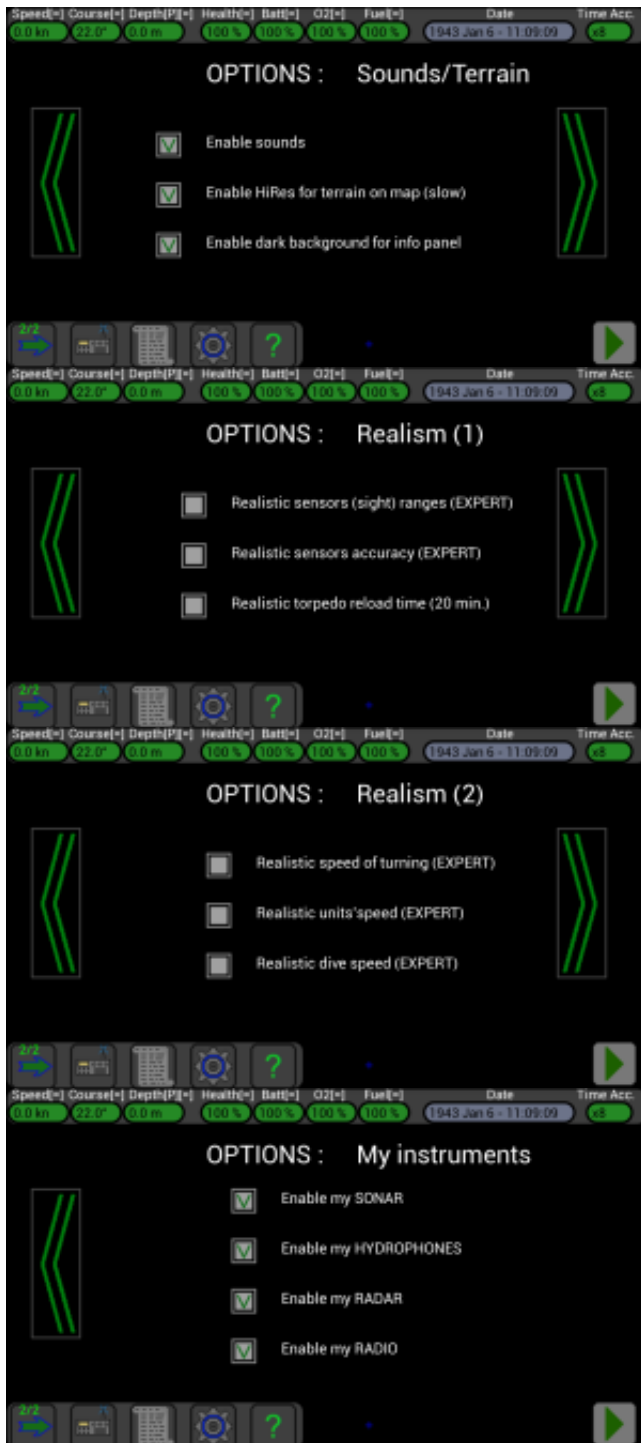


Press this button to open the Options screen, where there are selectable options to control the game behaviour.

These options are grouped in 7 pages, use the big buttons "<<" and ">>" near the screen borders to change page.

Note: some options are available *only* in the **Full** version of the game.



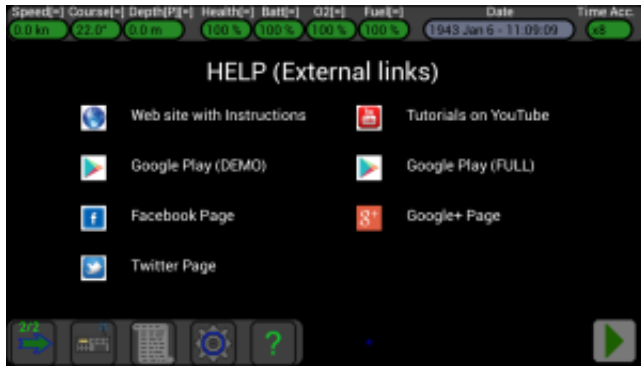


[Click here for a detailed description of all options](#)

Help Screen :



Press this button to open the Help screen :

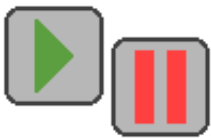


In this screen there are the links for :

- The web site with the instructions (this site)
- Tutorials videos on YouTube
- Google Play link for the Demo version of the game
- Google Play link for the Full version of the game
- Facebook page
- Google+ page
- Twitter page

Press on the icons to activate the links (an internet or wi-fi connection is needed).

Pause / Continue the game :



The icon of this button contains a green arrow when the game is paused (the date and time are stationary), the game is resumed by pressing it and the button changes icon (red bars).

The icon of this button contains two red bars when the game is in progress (the date and time are constantly changing), pressing it will pause the game and change the button icon (green arrow).

[\(Units\) Next ->](#)

Units

[<- Prev. \(Game Screen\)](#)

In the game, in addition to your submarine, there are many units of different types, each with its own characteristics and depicted on the map with different symbols and images.

The units can be either military (warships, airplanes, torpedoes, depth charges) or commercial (cargo ships or passenger ships).

They can be part of 3 groups:

- **Allied**
- **Enemy**
- **Neutrals**

At the beginning of each new game (in addition to your submarine and Torpedoes Transport) 100 random units are created on the map: 20 allied units, 20 neutral units and 60 enemy units.

When any unit is sunk or goes out of the map, a new random unit is created and enters in the game from the edge of the map, so you always have 20 allied units, 20 neutral units and 60 enemy units.

To make the game more exciting, every enemy unit is created with a route that points to your submarine, so if you remain always stop you will always have dozens and dozens of incoming enemy ships !!

Allied units :

Allied units are shown on the map with a blue symbol (except the Torpedoes Transport, in purple), they are useful because in some cases can help your submarine in the battles and especially because they can reveal via radio the position of other enemy units in their vicinity.

The submarine, Torpedoes Transport, warships, commercial ships, airplanes and your torpedoes are part of your allied units.

The allied warships look for enemy warships, report their position, go to meet them and then attack them, instead they ignore the enemy commercial ships and other neutral units.

Allied commercial ships simply follow their route.

Allied airplanes also follow their route but report with their radio the position of other units they meet.

If you sink an allied ship, the **double** of its tonnage is **subtracted** from your score.

Be careful with allied warships, if you are not identified in time they will think that you are an enemy submarine and try to attack you !!

Enemy units :

Enemy units are shown on the map with a red symbol and your task is to search for them and sink them in order to increase your score.

Warships, commercial ships, airplanes and depth charges are part of enemy units.

The enemy warships look for your submarine, Torpedoes Transport and allied warships, then go to meet them and try to destroy them.

Enemy commercial ships follow their route, they try to avoid your submarine but some of them have cannons and can attack you.

Enemy airplanes also look for your submarine, but they can attack you with their guns and depth charges.

If you sink an enemy ship, its tonnage is **added** to your score.

Neutral units :

Neutral units are composed only by commercial ships, they simply follow their route and should not be attacked or destroyed.

Are depicted on the map with a black symbol.

If you sink a neutral ship, its tonnage is **subtracted** from your score.

Convoys :

Allied and enemy merchant ships are often grouped in small or big convoys, and very often these convoys are protected by warships; be careful when you decide to attack a protected convoy, it can be really an hard task !

Biggest convoys can have up to **20** merchant ships protected by **18** warships !!

Unit types :

[Submarines ->](#)

[Warships ->](#)

[Commercial ships ->](#)

[Torpedoes ->](#)

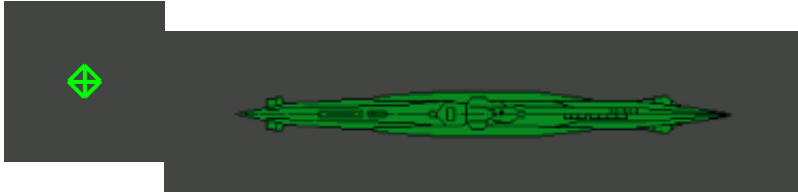
[Depth charges ->](#)

[\(Submarines\) Next ->](#)

Submarines

[<- Prev. \(Units\)](#)

U-Boat VII-C :



For the moment, the only U-Boat VIIC submarine is yours, indicated on the map with a green symbol with a diamond and a cross.

To move in the surface it uses diesel engines, or electric motors when it is at periscope or in immersion. Early in the game (or after refueling) its fuel tanks are 100% and allow you to travel on the surface for around 8700 miles.

During the dive (or at periscope) the electric motors discharge the onboard batteries, which are also used for all operations of the submerged submarine, so you have to be careful not to discharge them completely otherwise the submarine will no longer be manageable and will be destroyed .

In diving are also slowly consumed the oxygen reserves, you must be careful not to consume everything otherwise the crew dies.

Both batteries and reserves of oxygen recharge automatically remaining on the surface.

Another important feature of your submarine is its integrity (health), which is reduced remaining beyond the maximum operating depth (250m), following a collision with an other unit, or if in its vicinity a depth charge bursts.

If the submarine is not completely intact, its maximum speed, the ability to turn and the speed of immersion / emersion are reduced, if its health is less than about 33% then it is unable to move and turn. If its health reaches 0%, the submarine is destroyed.

The damage is repaired automatically remaining in the operational depth (between 0 and 250m), it can then return to a health of 50% in immersion and to 75% at surface.

The damages are repaired faster staying on the surface, but to return to 100% you must call the [Torpedoes Transport](#) with his team of mechanics on board.

Note: recharging, repairs and refuelling are available only in the **Full** version of the game.

Dimensions : 67.1 m x 6.2 m

Weight : 1070 t

Speed : 18 knots on the surface, 8 knots submerged .

Operating depth : 0 to 250 m deep, over 250 m will start to be damaged, over 300 m implodes and is destroyed .

Weapons :

- 14 G7E T2 [torpedoes](#), launchable from the 4 launch tubes in the front and from the launch tube in the rear. The torpedoes can be launched when the submarine is on the surface or at periscope, when they are finished you can call the torpedoes transport for their supply.
- One [deck gun](#), useful to hit other ships and preserve torpedoes. The cannon can be used only when the submarine is at surface, it has 220 bullets, use the torpedoes transport for their supply. Its range is 7 miles.
- One [AA gun](#), useful to hit the airplanes. It has 1000 bullets, use the torpedoes transport for their supply. Its range is 0.5 mile.

Sensors :

Periscope : allows you to locate other units at a maximum distance of 22.5 miles during the day, 6 miles at night (*extended range*). Allows you to locate and identify other units at a maximum distance of 7.5 miles during the day, 2 miles at night (*standard range*).

It can be used when the submarine is at periscope (8m).

The probability of spotting a unit will be reduced if the unit is small or far away.

Binoculars : allows you to locate other units at a maximum distance of 22.5 miles during the day, 6 miles at night (*extended range*). Allows you to locate and identify other units at a maximum distance of 7.5 miles during the day, 2 miles at night (*standard range*).

It can be used when the submarine is at the surface.

The probability of spotting a unit will be reduced if the unit is small or far away.

Sonar : allows you to locate other units at a maximum distance of 2 miles.

It can be used both in the surface and underwater.

The probability of detecting a unit will be reduced if the unit is small, far away or is at a high difference in depth (for example, if we are to a depth of 250m and the other unit is in the surface).

Hydrophones : allow you to locate other units at a maximum distance of 35 miles, which is reduced, however, as the speed of the submarine increases (at the maximum speed they are unusable).

It can be used both in the surface and underwater.

The probability of detecting a unit will be reduced if the unit is small, distant, is located at a high depth difference or at low speeds.

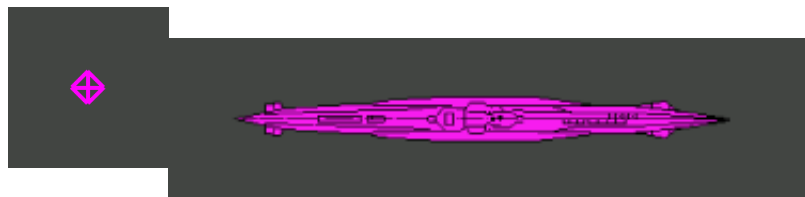
Radar : allows you to locate other units at a maximum distance of 10 miles. It can be used only when the submarine is at surface, and the probability of detecting a unit will be reduced if the unit is small or distant.

Radio : To receive broadcasts of your allied warships that indicate their position and the position of enemy or neutral units sighted by them.

It can be used only on the surface and can receive signals transmitted from a maximum distance of 500 miles.

The radio is also used to call the Torpedoes Transport, when it is on the surface.

U-Boat VII-F :



It is an allied submarine displayed on the map with a symbol equal to your submarine but blue.

It is used only as a torpedoes transport and can be called from your submarine through the radio, when both submarines are on the surface.

It also contains an additional tank of fuel and a team of mechanics, in order to replenish your submarine and to restore its health to 100% during the connection.

It is not equipped for fighting, and if it encounters an enemy warship will try to escape, even in depth.

When it is on the surface it may be called for refueling, it will then automatically come close to your submarine and connect with it.

Dimensions : 67.1 m x 6.2 m

Weight : 1345 t

Speed : 18 knots on the surface, 8 knots submerged.

Operating depth : 0 to 250 m deep, over 250 m will start to be damaged, over 300 m implodes and is destroyed.

Weapons : None, all its 39 torpedoes are used to refill your submarine.

Sensors :

Periscope : allows to locate other units at a maximum distance of 22.5 miles during the day, 6 miles at night (*extended range*). Allows to locate and identify other units at a maximum distance of 7.5 miles during the day, 2 miles at night (*standard range*).

It can be used when the submarine is at periscope (8m).

The probability of spotting a unit will be reduced if the unit is small or far away.

Binoculars : allows to locate other units at a maximum distance of 22.5 miles during the day, 6 miles at night (*extended range*). Allows to locate and identify other units at a maximum distance of 7.5 miles during the day, 2 miles at night (*standard range*).

It can be used when the submarine is at the surface.

The probability of spotting a unit will be reduced if the unit is small or far away.

Sonar : allows to locate other units at a maximum distance of 2 miles.

It can be used both in the surface and underwater.

The probability of detecting a unit will be reduced if the unit is small, far away or is at a high difference in depth (for example, if it is at a depth of 250m and the other unit is in the surface).

Radar : allows to locate other units at a maximum distance of 10 miles. It can be used only when the submarine is at surface, and the probability of detecting a unit will be reduced if the unit is small or distant.

Hydrophones : allow to locate other units at a maximum distance of 35 miles, which is reduced, however, as the speed of the submarine increases (at the maximum speed they are unusable). It can be used both in the surface and underwater.

The probability of detecting a unit will be reduced if the unit is small, distant, is located at a high depth difference or at low speeds.

Radio : allows to receive the call from your submarine for refueling.

It can be used only in the surface.

[\(Warships\) Next ->](#)

Warships

[<- Prev. \(Submarines\)](#)

Frigate :



It is a lightweight unit, not very fast but dangerous, it is equipped with the most powerful sonar and hydrophones that certainly make it difficult to appear unnoticed (but it has a small radar range) !!

When you encounter a Frigate you should try to sink it immediately, or escape to the maximum depth (250 m), at the limit of the vertical range of its sonar.

At shallower depths you must also pay attention to not be detected by his powerful hydrophones, moving very slowly to not be located.

Dimensions : 92 m x 11 m

Weight : 1370 t

Speed : 20 kn

Weapons : guns (up to 7 miles) and depth charges.

Sensors :

Sight : 22.5 NM (day), 6 NM (night) (*extended range, locate and indentify*); 7.5 NM (day), 2 NM (night) (*standard range, only locate*).

Sonar : 2 NM (horizontal), 250 m (vertical).

Hydrophones : 25 NM (horizontal), 250 m (vertical).

Radar : 6 NM.

Destroyer :



It is a unit a little bigger than a Frigate, with less powerful sensors but much faster.

When you encounter a Destroyer you should try to sink it immediately, or escape to a depth greater than 200 m, beyond the vertical limit of its sonar and hydrophones.

At shallower depths you must also pay attention to not be detected by his powerful hydrophones, moving very slowly to not be located.

Dimensions : 107 m x 10.5 m

Weight : 1692 t

Speed : 37 kn

Weapons : guns (up to 7 miles) and depth charges.

Sensors :

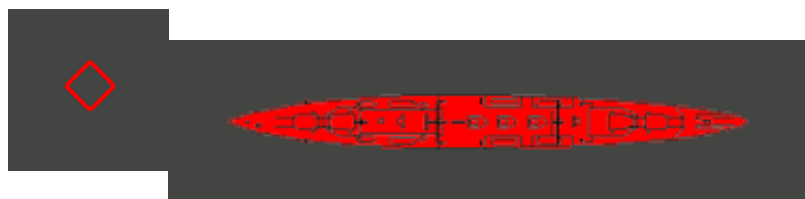
Sight : 24 NM (day), 6 NM (night) (*extended range, locate and identify*); 8 NM (day), 2 NM (night) (*standard range, only locate*).

Sonar : 1.5 NM (horizontal), 200 m (vertical).

Hydrophones : 20 NM (horizontal), 200 m (vertical).

Radar : 7 NM.

Heavy Cruiser :



It is a unit big enough, fast enough but with less powerful sonar and hydrophones than Frigate and Destroyer, and it has a standard radar.

Be careful that it is hardly to sink it with a pair of torpedoes, but with the reduced vertical range of its sonar will not be difficult to escape.

Dimensions : 193 m x 20.1 m

Weight : 9850 t

Speed : 32 kn

Weapons : guns (up to 9 miles) and depth charges.

Sensors :

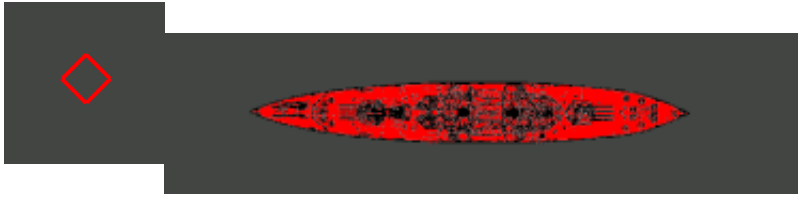
Sight : 30 NM (day), 7.5 NM (night) (*extended range, locate and identify*); 10 NM (day), 2.5 NM (night) (*standard range, only locate*).

Sonar : 1 NM (horizontal), 150 m (vertical).

Hydrophones : 10 NM (horizontal), 150 m (vertical).

Radar : 8 NM.

Battleship :



It is definitely the largest warships that will require an abundant dose of torpedoes to be sunk !!
It does not have hydrophones, it has a radar and the range of its sonar is reduced.

Dimensions : 227 m x 31.4 m

Weight : 36727 t

Speed : 28 kn

Weapons : guns (up to 9 miles) and depth charges.

Sensors :

Sight : 30 NM (day), 7.5 NM (*extended range, locate and identify*); 10 NM (day), 2.5 NM (night) (*standard range, only locate*).

Sonar : 1 NM (horizontal), 150 m (vertical).

Radar : 8 NM.

Aircraft Carrier :



It is a very large unit, fast enough, with a little sonar, a radar but without hydrophones. It doesn't have cannons or depth charges, but during day it can launch its fighters !!

Dimensions : 212 m x 34.4 m

Weight : 13190 t

Speed : 25 kn

Weapons : 37 fighters.

Sensors :

Sight : 30 NM (day), 6 NM (night) (*extended range, locate and identify*); 10 NM (day), 2 NM (night) (*standard range, only locate*).

Sonar : 1 NM (horizontal), 150 m (vertical).

Radar : 8 NM.

[\(Commercial Ships\) Next ->](#)

Commercial ships

[<- Prev. \(Warships\)](#)

Light Merchant :



It is a small merchant ship, easy to sink, without weapons.

Dimensions : 105 m x 14 m

Weight : 2490 t

Speed : 21 kn

Weapons : None.

Sensors :

Sight : 15 NM (day), 3 NM (night) (*extended range, locate and identify*); 5 NM (day), 1 NM (night) (*standard range, only locate*).

Merchant :



It is a merchant ship of medium size but slow. It has guns !

Dimensions : 134.3 m x 17 m

Weight : 14474 t

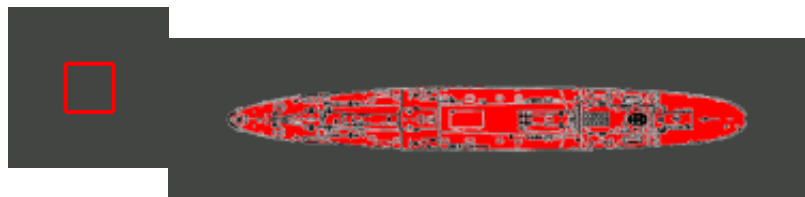
Speed : 11 kn

Weapons : Guns (4 NM).

Sensors :

Sight : 15 NM (day), 4.5 NM (night) (*extended range, locate and identify*); 5 NM (day), 1.5 NM (night) (*standard range, only locate*).

Big Merchant :



It is a big merchant ship, fast enough, it has guns !

Dimensions : 179 m x 22 m

Weight : 22850 t

Speed : 21 kn

Weapons : Guns (5 NM).

Sensors :

Sight : 18 NM (day), 5.25 NM (night) (*extended range, locate and identify*); 6 NM (day), 1.75 NM (night) (*standard range, only locate*).

Oiler :



It is a ship for the transportation of oil, big enough and fast, it has guns !

Dimensions : 152 m x 20 m

Weight : 10160 t

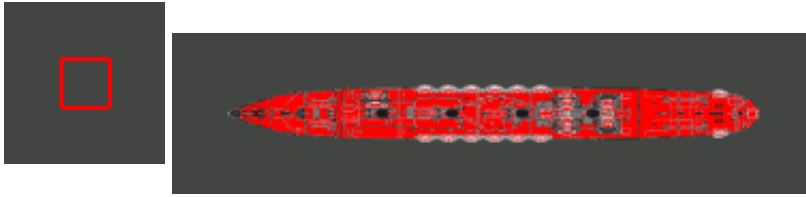
Speed : 20 kn

Weapons : Guns (5 NM).

Sensors :

Sight : 18 NM (day), 5.25 NM (night) (*extended range, locate and identify*); 6 NM (day), 1.75 NM (night) (*standard range, only locate*).

Ocean Liner :



It is the largest and fastest commercial ship, used to transport passengers on ocean routes. It needs many torpedoes to be sunk, but doesn't have weapons.

Dimensions : 275 m x 29 m

Weight : 48158 t

Speed : 22 kn

Weapons : None.

Sensors :

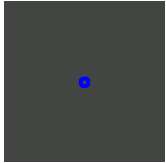
Sight : 15 NM (day), 3 NM (night) (*extended range, locate and identify*); 5 NM (day), 1 NM (night) (*standard range, only locate*).

[\(Torpedoes\) Next ->](#)

Torpedoes

[<- Prev. \(Commercial ships\)](#)

Torpedoes :



For the moment it is the standard torpedo in this game and can be launched from any of the 5 launch tubes, when the submarine is on the surface or at periscope.

When your submarine launched all 14 torpedoes, the Torpedoes Transport can be called via radio for refueling (if desired you can even call it before).

Dimensions : 7.16 m x 0.533 m

Weight : 1.6 t

Speed : 30 kn

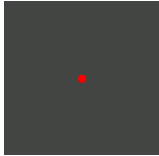
Range : 2.7 NM

[\(Depth charges\) Next ->](#)

Depth charges

[<- Prev. \(Torpedoes\)](#)

Depth Charge (Mark VII) :



It is the standard depth charge in this game, can be thrown into the sea by warships and patrol airplanes to sink submerged submarines.

Prior to the launch it is calibrated to the depth of your submarine, it is launched and then quickly descends to a depth in which it must burst.

Warning: its maximum depth is greater than the maximum safe depth of your submarine, and its blast radius is about 20 m, stay away !!

Dimensions : 1 m x 1 m

Weight : 0.1 t

Descent speed : 5 m/s

Max depth : more than 250 m

[\(Torpedoes Transport\) Next ->](#)

Torpedoes Transport

[<- Prev. \(Depth charges\)](#)

Torpedoes Transport :

The Torpedoes Transport is a U-Boat VII-F submarine which can contain within 39 torpedoes and can be called during the game to replenish your submarine at sea, without having to return to a port.

Note: The Torpedoes Transport is not available in the Demo version of the game.

After having called him, it will come near your submarine, will join and will allow you to :

- Fully charge your torpedoes (5 in the tubes and 9 as reserve).
- Recharge the fuel tank back to 100%.
- Completely repair your submarine to regain health to 100%.

How to call the Torpedoes Transport :

The Torpedoes Transport is called with the radio of your submarine, in the bottom of the game screen there is a button to switch to the radio screen :



Pressing it switches to the radio screen :



In the picture above you see the button for the call and the status of Transport (UNKNOWN).

Its status is Unknown because the radio does not work if your submarine and Transporter are not both on

the surface, then the button is disabled.

If your submarine rises to the surface (Depth = 0m) and also the Transport is located on the surface, the radio communication works and you can see (image below) that his state is IDLE :



But in order to make the call your submarine must also be stopped (in order to signal its exact location), in the image below you can see that the call button becomes enabled :



Pressing the call button (picture below) the status of the Transporter becomes INCOMING and is also indicated its distance in miles (NM) :



In summary, in order to call the Transport, it is necessary that your submarine is stationary (Speed == 0) and at surface (depth = 0).

If the status of the Transport is still Unknown, it means that the Transport probably is not at surface because it is running away from some enemy ship, in this case you can continue to play and try

again after some time.

It is always possible to call the Transport, even if you still have all your torpedoes, even if your health and your fuel are already at the maximum ...

At the beginning of each new game the Transport is placed in a random position of the map, if it is destroyed then another Transport reappears on the right edge of the map.

If you call the Transport and then move your submarine, the Transport will come anyway near the location where you have called it, but then it will stop and will wait for a new call.

To call the Transport again, your submarine must be stationary on the surface and at least 0.4 miles (0.4 NM) away from the Transport.

The Transport is often very far from your submarine, it may be convenient to call it occasionally however, so it can be always near during the game.

When the Transport is called, the map shows the 4 points of passage and the point of arrival (picture below):



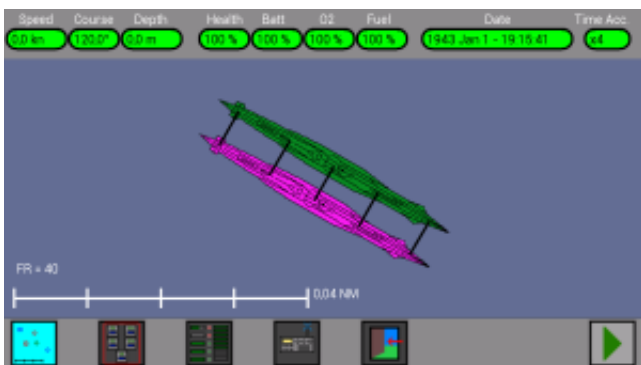
In the picture below you see the Transport that is close to the first point :



In the image below now the Transport is near, the points where it has already passed disappear from the map :



In the picture below you can see the end of the approach maneuver, the Transport is in position and connected with your submarine :



At this point start automatically refueling up to 100%, the repair of your submarine up to 100% health and, very slowly, the supply of torpedoes (it is better to increase the acceleration of time).

When fueling is completed and you want to break away from the Transport (or if you get some enemy ship !), just move your submarine forward or backward or dive.

Be careful not to bump the Transport during the maneuver, otherwise both submarines will report damage.

[\(Torpedoes Launch\) Next ->](#)

Torpedoes Launch

How to launch the torpedoes :

The torpedoes can be launched from the 5 tubes of your U-Boat (4 in the bow, 1 in the stern) when the submarine is at surface or at periscope depth, using the 5 buttons in the *Torpedo Launch window* :



To launch them press on the buttons in the right of the screen (F1, F2, F3, F4, R).

If the tubes are empty (because they are still reloading, or because your U-Boat does not have torpedoes), or if the U-Boat is not at surface (0m) and not at periscope depth (15m), these buttons are disabled :



To make the launch easy and satisfactory, some lines and circles are drawn on the map, coinciding with your U-Boat and the other ship selected :



The line of your U-Boat has 5 circles in the front of your submarine and 5 circles in the rear of it.

These 5 circles are at 0.5 NM, 1 NM, 1.5 NM, 2 NM, 2.5 NM from the tubes and indicate where a torpedo will be 1, 2, 3, 4, 5 minutes after the launch.

When an other ship is selected, a line with 5 circles is drawn in front of the ship.

These 5 circles indicate where the ship will be after 1, 2, 3, 4, 5 minutes :



So if you launch a torpedo when the 1° circle of your U-Boat coincides with the 1° circle of the ship (or the 2° with the 2°, or the 3° with 3°, or the 4° with the 4°, or the 5° with the 5°), the torpedo and the ship will be at the same position !

The figure below shows a torpedo launched at the exact moment, it will hit the ship :



Note: in the figure above there are 2 torpedoes, the first was launched too early (it will not hit the ship), the second will hit the ship because it is launched when the 4° circle of the U-Boat coincides with the 4° circle of the ship.

[Click here for a first practical example.](#)

[Click here for a second practical example.](#)

When the torpedoes are launched, they are not immediately ready to explode, they need a short time to become active.

This short time is indicated with a red line, its length is 250m (0.135 NM) :



Bigger zoom :



While the torpedo is in the red zone of the line, it is not yet active and can not explode.

Usually when you launch a torpedo you can ignore this detail, it is useful only when your U-Boat and the ship are really near.

Note: the enemy warships often (with their sonar) detect the torpedo incoming and are able to change course in time !

Sometimes, however, launching a torpedo at an enemy warship too close could prevent you to go in time down into the deep to avoid depth charges

The range of the torpedo is about 2.7 miles (2.7 NM).

How to choose the torpedoes course :

If you press again the *Torpedoes Launch* button in the *lower bar*, the *Torpedoes launch window* will close and the *Torpedoes Course Offset window* will open :



With these buttons you can set the Course Offset of the torpedoes, before the launch, from -180° to $+180^\circ$.

Use the buttons ">" or ">>" to increase the offset, and the buttons "<<" or "<" to decrease it :



When a torpedo is launched, it will run straight for 250m (0.135 NM) and then it will turn to the left or to the right, to follow the chosen course.

When a torpedo is launched it remembers its setting, so it is immediately possible to set a different course for the next torpedo without waiting :



[Click here for a practical example](#)

[\(Torpedoes Launch - Example 1\) Next ->](#)

Torpedoes Launch (Example 1)

In this example I will launch some torpedoes against a *Light Merchant*, on its side.



There are 3 units in the map : your U-Boat (green), the Torpedoes Transport (violet) and a Light Merchant (gray).

I press on the merchant unit to select it and see its information.

I don't know if the Merchant is *allied*, *enemy* or *neutral* (it is too far and I don't see it), I know that it is here because it was *Signaled by Radio* by the *Torpedoes Transport*.

I will put my U-Boat in the right position and orientation, and if the merchant will be enemy I will attack it !



I press the *Torpedoes Launch* button on the [Lower Bar](#), to show the *Torpedoes Launch window* and to show the lines that will help me with the attack.

I see that the Light Merchant and my U-Boat are both going at North-East, I will need to go near the merchant and to change my route.

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I changed the course of my U-Boat (305°) and I'm going at max speed (18kn).



I am moving, the Merchant line is near.

I will use the 4° circle of my line, I will decrease my speed and I will stop my motors when the 4° circle of my line will coincide with the line of the merchant.



I am in the right position, the 4° circle of my line coincide with the Merchant line, my speed is zero (0kn). Now the Merchant is inside my visual range and I see that it is ENEMY.



I zoom in the map to check better, it is ok.

Now I am at surface and the Merchant can not see me, because its distance is 9.6 NM and its visual range is 5 NM.

But soon it will see me and will try to escape, so I must go at periscope depth and lower my periscope, to remain invisible !



I am inside its visual range but it can not see me, infact if I look at the *Information panel*, I read "*Visual r. = 5.0 NM : 0.0%*".

The **0.0%** means that the Merchant has no chance to see me !

Now I will launch the torpedoes.

I have decided to use the 4° circle of my line, so I will launch the torpedo when the 4° circle of my line will coincide with the 4° circle of the Merchant line.

But in this example, for a better understanding, I will launch 3 torpedoes :

1. When the 5° circle of the Merchant will coincide with my 4° circle. (BAD)
2. When the 4° circle of the Merchant will coincide with my 4° circle. (GOOD)
3. When the 3° circle of the Merchant will coincide with my 4° circle. (BAD)



The 5° circle of the Merchant coincides with my 4° circle, I press the button to launch the torpedo inside the first tube (F1), it will not hit the ship.



The 4° circle of the Merchant coincides with my 4° circle, I press the button to launch the torpedo inside the second tube (F2), it will hit the ship.



The 3° circle of the Merchant coincides with my 4° circle, I press the button to launch the torpedo inside the third tube (F3), it will not hit the ship.



The first torpedo is near the Merchant, but the Merchant is still too far.



Infact the first torpedo crosses the Merchant line too early !



The second torpedo (launched when my 4° circle coincided with the 4° circle of the Merchant) will hit the ship !



Yes, if I zoom in, I see that this 2° torpedo is really near the ship and will hit it !



The ship was destroyed by the 2° torpedo, if I zoom out I see the 1° and 3° torpedo still running.

[\(Torpedoes Launch - Example 2\) Next ->](#)

Torpedoes Launch (Example 2)

In this example I will launch some torpedoes against a *Heavy Cruiser*, who is coming toward my U-Boat.



A big warship is coming near, its symbol is gray, I don't know if it is enemy.



I select it to check its information, it is a *Heavy Cruiser* and it has a **gun** (look at the **red circle**, it is the range of its gun), so it is better to remain at periscope depth, to avoid to be hit by his gun... My U-Boat is inside the **radar** range of this warship (look at the **yellow circle**), and the warship has a little probability (**2.5%**) to detect my periscope with its radar (look at its radar range : 8 NM with **2.5%** of probability to detect my U-Boat).



I press now the second button in the *lower bar* to open the *Torpedoes Launch windows*, I look at the gray lines for a better understanding of the warship course. For the moment I am not inside its *hydrophones* and *sonar* range (*black and gray circle*).



I select my U-Boat to check my **visual** range (**white circle**), the warship is inside this range, infact after some time I can identify it as ENEMY.



The warship is coming near, it should soon detect my U-Boat with its radar, I wait.



I was detected by the warship, it is coming toward my U-Boat at great speed ! I can do two things : escape or attack it... It is very fast (**24 kn**) and has a gun... if I go at surface I could use my max speed (**18 kn**), but the warship is faster... and my gun can not hit a ship behind me... if I go at a greater depth to avoid its *depth charges*, my max speed would be **8 kn**, and it is near... I will attack it ! First, I will turn my U-Boat to have the warship in front of me. Looking at its information, I see that its **bearing** is 260.2°, I will use this number for my **course**. Second, I will try to have more time as possible before it meet me, for a possible escape maneuver, so I will set for my U-Boat the max backwards speed (**-5 kn**).



I set my new course to 260° to have the warship in front of me.



I set for the new speed my max backwards speed (-5 kn).



My U-Boat is moving backwards and turning.



The warship is not exactly in front of me, and it does not point exactly at my position, I need to wait for it to adjust its course...



While I am waiting, its bearing increases to 261°, I adjust my course to 261°.



My new course will be 261°.



I wait for the warship to adjust its course...



The warship adjusted its course, the gray lines coincide !



Now that it is near, I notice that its probability to detect with its **sonar** my U-Boat is increased to **1.4%**... probably it will detect also my torpedoes... I want to wait before launching my torpedoes, to not give the warship the time to avoid them ! But at the same time, I must be sure that my torpedoes have the time to activate... there are 2 **red** lines, one in front of the warship and one in front of my U-Boat... I must launch my torpedoes before the two red lines meet, or when the torpedoes will hit the ship, they will be still inactive and will not explode !



Now the warship is at 0.5 NM, a good distance, I zoom in to check if my gray line passes in the center of the warship.

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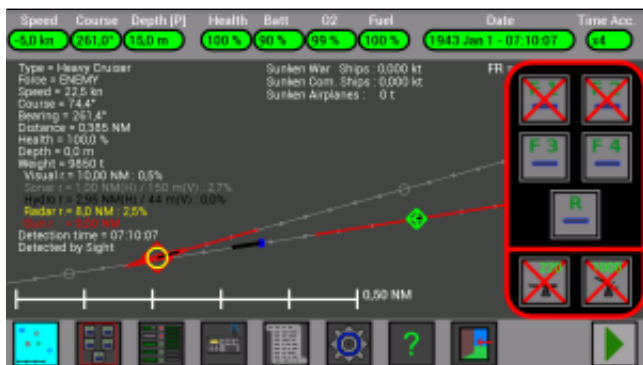
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Perfect, my gray line passes in the center of the warship, the torpedoes will hit it.



I launch 2 torpedoes from tube F1 and F2.



Mmmm... the warship detected them with its sonar... it is turning to avoid them...



Perhaps....



Good, one torpedoes hit the ship, its health now is **47.2%**. The warship is damaged and its speed will decrease.



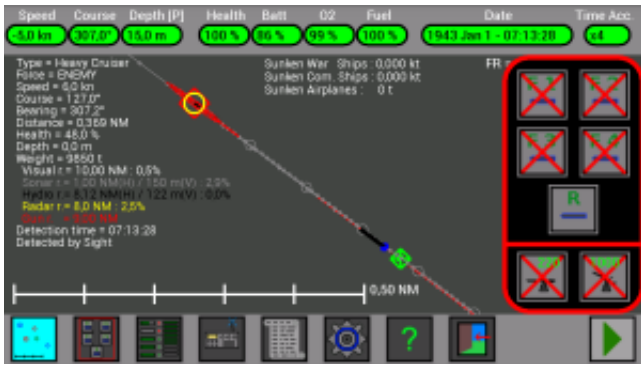
I change my route to be ready for an other launch.



The damaged warship now is slow (**6 kn**) and is turning toward me.

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Now it is the moment to launch two other torpedoes !



The warship is trying to avoid them, but now it is too slow !



Perfect launch, both torpedoes will hit the ship !



The first torpedo sunk the warship !!

[\(Torpedoes Launch - Example 3\) Next ->](#)

Torpedoes Launch (Example 3)

In this example I will launch some torpedoes against a *Oiler*, setting the torpedoes course.



A new merchant ship is coming near, it is a *Oiler*, and it has a gun !



I press the button to open the *Torpedoes Launch window*, so I can check better the ship course.



I don't know if it is *enemy*, *allied* or *neutral*, I select my U-Boat to show my *visual range* on the map, the ship is outside my *visual range*.



Now the ship is entering my *visual range*, in short time I will know if it is *enemy*, *allied* or *neutral*...



Note that the sun is raising (the time is **06:26:40**) and the *visual/gun ranges* of all units are increasing, when I will know if the ship is enemy or not, I will have to lower my periscope to remain undetected.

(I enabled the *option* to keep always the map dark to preserve the device battery, normally the map has a different color during night, day, sunset and sunrise)



Ok, the ship is **ENEMY**, I will lower my periscope to remain undetected.

I want to sink it, but I see that if I launch a torpedo now, the torpedo would not hit the ship (look at the gray lines and their circles).

I will not turn my U-Boat, but instead I will change the torpedoes course.

I press again the button on the *lower bar* to open the *Torpedoes Course Setting window*.



I increase the Course Offset using the ">>>" button, look at the gray line in front of my U-Boat, it is curved on the right.



I increase the *Course Offset* up to **51°**, to put my **2°** circle over the gray line of the enemy ship.



Now the **2°** circle on the ship line coincide with the **2°** circle on my line, I press 2 times the button to open again the *Torpedoes Launch window* and I launch one torpedo.



The torpedo runs straight and then changes its course, following the gray line.

Note: the torpedo after the launch remembers its course setting, if I want I can change the Course Offset for a next torpedo, I don't have to wait for the running torpedo to hit the ship.



Good, the torpedo will hit the ship.



The torpedo hit the ship, the ship is still on the map and its *health* is always **100%**... why ?

It is because my periscope is lowered [b] and I don't see the ship, I know that it is there because I detect it with my sonar (*Detected by Sonar*).

Note that its *health* is "(100%)", not "100%", it means that the value is not updated, I have to raise for a moment my periscope to see the ship and valuate its *health*.



Now, with the periscope raised [P], the *health* of the ship becomes "46.6%", the ship is "Detected by Sight".

I can lower again the periscope to remain undetected.

Before launching the second torpedo, I will increase again its *Course Offset*.



I increase it up to 101°, to put my 2° circle over the line of the ship, and I will wait for the 2° circle of the ship to coincide with my 2° circle.



The 2° circle of the ship coincides with my 2° circle, I launch the torpedo !

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Perfect !

[\(Options\) Next ->](#)

Deck Gun

Your U-Boat has a **deck gun** in front of the conning tower and can use it to damage and sink other ships :



It has a range of about 7 NM during day (lower during night because its range can not be greater than your visual range) and can be used only when the submarine is surfaced, using this button when the target ship is selected :



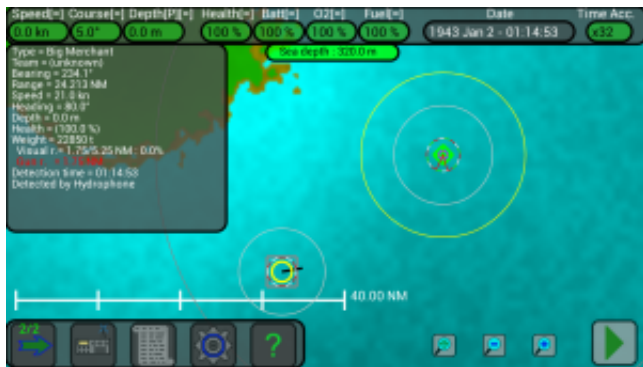
When the submarine rises to surface, your deck gun needs 4 seconds to be ready and then it can fire a round every 4 seconds; you have **220** rounds and when they are finished you can call the torpedoes transport to replenish them (*only in the **Full** version of the game*).

It can be used only against surfaced ships and is not able to hit ships located in the back of the submarine (look at the previous image, the red circle around your submarine shows the gun range and the blind angle in the back of the U-Boat).

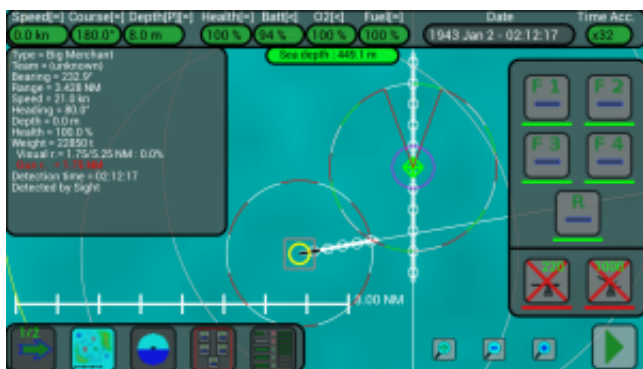
Be careful, also enemy ships can have guns and their range can be lower or greater than your gun range; always check it by selecting the other ships and looking at their range in the information panel !

Practical example of use :

Here we have a Big Merchant coming from S-W, we don't know if it is allied, enemy or neutral, its gun range is 1.75 NM :



We go at periscope depth while we are waiting for the ship to come near, note that the gun button is disabled (with a red cross); note also that the ship is inside our extended visual range (our big white circle) but outside our standard visual range (our white circle) so we still don't know if it is enemy :



The ship is now inside our standard visual range and we can identify her as enemy :



The ship is also inside our gun range (red circle) so we go at surface to attack her; note the colored line below the gun button, it shows that the gun is charging and will soon be ready :



Well, our deck gun is ready and the ship is selected, so we press the button to hit her :



We hit the ship (her health is now 88%) and our gun is recharging, we will hit her again and again :



At this point the ship's health is lower than 25% (it is 16.9%) and she is sinking :



It's very easy to use the deck gun, but always remember that the other ships can have guns with a greater range than your, so be careful !

AA Gun

Your U-Boat has an AA Gun (Anti-aircraft gun) in the back of its conning tower and can use it to damage and destroy enemy aircrafts :



It has a range of 0.5 NM and can be used only when the submarine is surfaced, using this button when the target aircraft is selected :



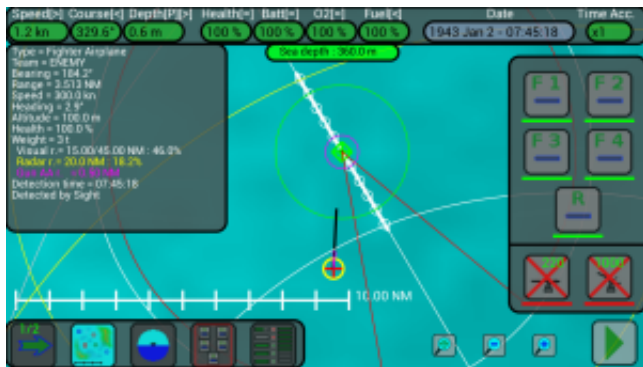
When the submarine rises to surface, your AA gun needs 4 seconds to be ready and can fire a burst of 5 rounds every second; you have **1000** rounds and when they are finished you can call the torpedoes transport to replenish them (*only in the **Full** version of the game*).

It can be used against all aircrafts incoming from every directions (look at the previous image, the violet circle shows your AA gun range).

Be really careful, also enemy aircrafts have guns (patrol aircrafts have also 8 depth charges) and they can be very dangerous for your hull; you can try to destroy patrol aircrafts but if you meet the fighters (launched by the aircraft carriers) it is better to dive very fast and avoid them !!

Practical example of use :

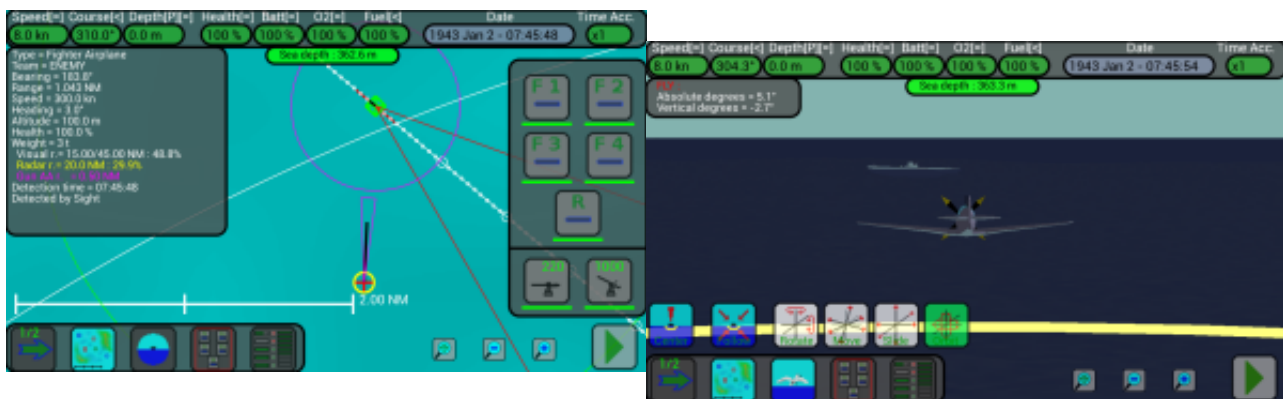
Here an enemy fighter is coming from South, we rise immediately to surface to attack it :



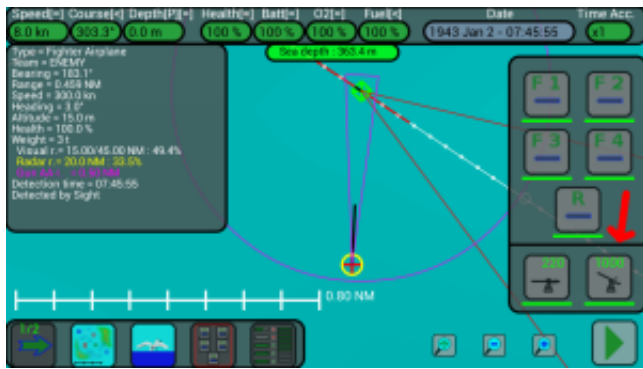
The AA gun is not yet ready, when we come at surface it needs 4 seconds to charge :



Now our AA gun is ready, the aircraft is select but it is outside our gun range (violet circle around our submarine) :



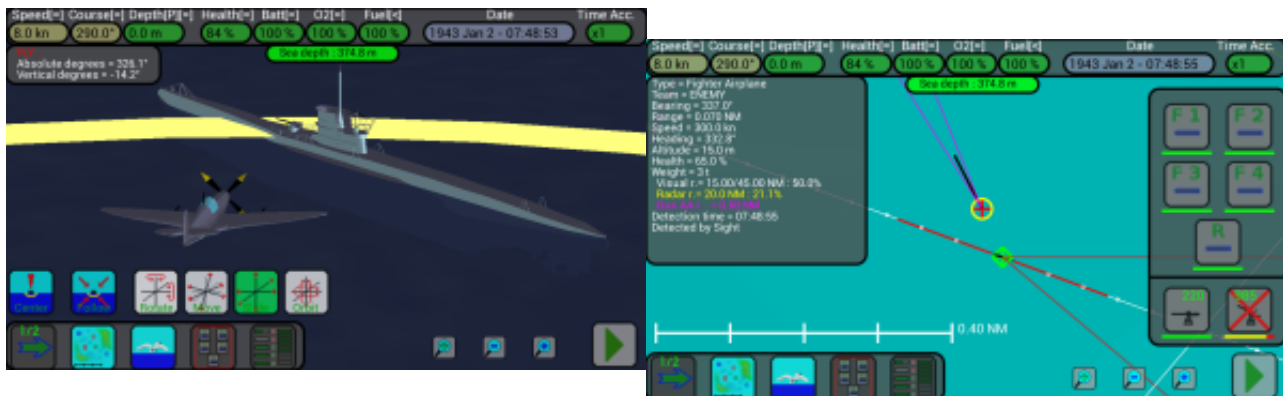
Now it is inside our range, we use the gun pressing its button :



We hit and destroyed it (the fighter disappeared from the map), the gun now needs 1 second to recharge :



An other fighter is incoming, our shot missed it, we retry and finally we damage it :



Usually a single burst can destroy a fighter, in this case the fighter was only damaged (its health is 65%) and is returning to its carrier.

Hint : when the option "*Pause game when hit by enemy*" is enabled, the game pauses when an other unit (ship or aircraft) hits your submarine and it can be boring; when I want to attack an aircraft I usually keep this option disabled, I select the aircraft on the map and I press repeatedly the AA gun button until the aircraft is destroyed !

Options Screen



Press this button on the *lower bar* to open the Options screen, where there are various options to control the game behaviour.

These options are grouped in 7 pages, use the big buttons "<<" and ">>" near the screen borders to change page.

When a "v" appears inside an icon, the option is *enabled*.

To enable/disable an option, press on the icon on the left or on its description.

Game page :



Pause game when a new unit is detected :

Default = *enabled*.

Enabled : When the U-Boat detects a new unit, the game is automatically paused.

Disabled : When the U-Boat detects a new unit, the game continues without pause.

This option (*enabled*) is especially useful when the game runs with a big *Time's Acceleration* (es. 512x), because in the time between when a new unit is detected and when the player presses the *pause* button, the new unit can travel a great distance and get close in an instant.

Set Time Acc. 1x when a new unit is detected :

Default = *enabled*.

Enabled : When the U-Boat detects a new unit, the *Time's Acceleration* is set at 1x.

Disabled : When the U-Boat detects a new unit, the *Time's Acceleration* does not change.

When (at big *Time's Acceleration*) a new unit is detected, the game pauses; if the player forgets to lower the *Time's Acceleration* and presses the *play* button, the game runs with the same big *Time's Acceleration* and the new unit could get close in an instant ! With this option *enabled*, after each new detection the *Time's Acceleration* is automatically set at 1x.

Pause game when Torpedoes Transport is available :

Default = *disabled*.

Enabled : When the *Torpedoes Transport* becomes available, the game pauses.

Disabled : When the *Torpedoes Transport* becomes available, the game continues without pause.

When there are a lot of enemy ships near the *Torpedoes Transport*, it usually stays at big depth for a long time, and occasionally rises at surface. You can call it with the radio only when it is at surface, so probably you will have to wait a lot. If you *enable* this option, you can set a big *Time's Acceleration* and press the *play* button, the game will pause automatically when the *Torpedoes Transport* will be at surface and available.

Note: this option is available *only* in the **Full** version of the game; in the **Demo** version the *Torpedoes Transport* is not available.

Pause game when hit by enemy :

Default = *enabled*.

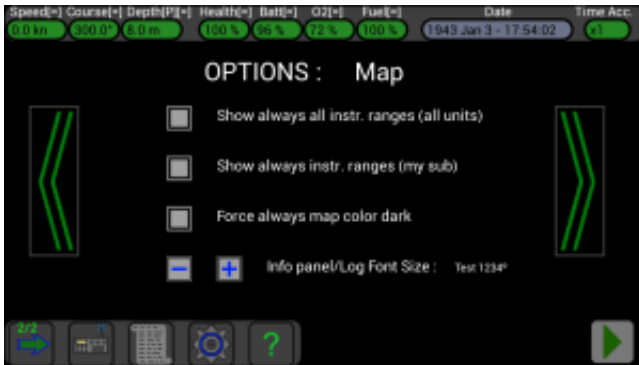
Enabled : When your submarine is hit by an enemy, the game pauses.

Disabled : When your submarine is hit by an enemy, the game continues without pause.

Normally this option is *enabled*, when you are hit by a enemy ship's cannon or aircraft's gun, the game is paused giving you the time to think at what to do to not receive other shots.

In other situations, for example when you are using your AA gun to attack an enemy aircraft, these breaks can be boring and can be avoided by *disabling* this option.

Map page :



Show always all instr. ranges (all units) :

Default = *disabled*.

Enabled : The circles indicating the instruments' ranges are drawn on the map for all units, and the circles indicating your visual, radar and guns ranges are drawn even if your U-Boat is not at surface.

Disabled : Only the circles indicating the instruments' ranges of the selected unit and of your submarine are drawn; if you select your U-Boat and it is not at surface, the circles for your visual, radar and guns ranges are not drawn.

This option (*enabled*) can be useful when there are a lot of units around your U-Boat, and you want to see all the circles on the map.

Show always instr. ranges (my sub) :

Default = *disabled*.

Enabled : The circles indicating the instruments' ranges of your submarine are drawn on the map, but the circles indicating your visual, radar and guns ranges are drawn only if your U-Boat is at surface.

Disabled : Only the circles indicating the instruments' ranges of the selected unit are drawn; if you select your U-Boat and it is not at surface, the circles for your visual, radar and guns ranges are not drawn.

This option (*enabled*) can be useful when you want to see the circles of your submarine on the map, either if it is not selected.

Force always map color dark :

Default = *disabled*.

Enabled : the map's background is always dark, as if it were night.

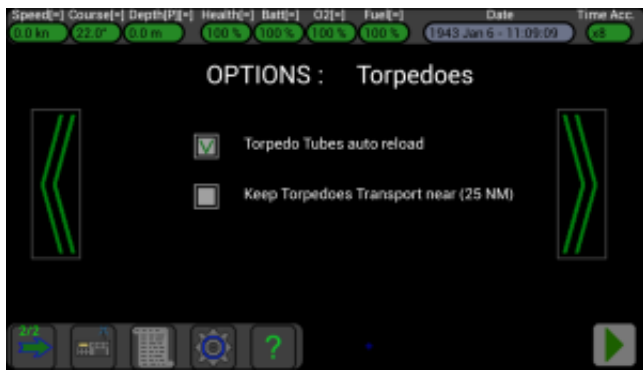
Disabled: the map's background changes color during night, day, sunset and sunrise.

Normally the map's background color changes during day, *enable* this option if you want to preserve the device's battery or to relax your eyes.

Info panel / Log Font Size :

Use the "-" and "+" buttons to reduce or enlarge the Font used in the *Info panel* (the *Info panel* is shown on the left of the screen when a unit is selected) and in the *Log Screen*.

Torpedoes page :



Torpedo Tubes auto reload :

Default = *enabled*.

Enabled : when a torpedo is launched and an other torpedo reserve is available, its tube is reloaded automatically.

Disabled : when a torpedo is launched, its tube remains empty.

This option (*enabled*) is useful in the middle of a battle to not forget to reload the torpedo tubes.

Note: if all tubes are empty and other torpedoes reserve are available, the frontal tubes are reloaded in this sequence : **F1-F2-F3-F4**. If you have few torpedoes reserve and want to reload first the **F3** tube, *disable* this option before launching torpedoes and reload the **F3** tube manually (using the button near the tube **F3** in the *Torpedoes Screen*).

Keep Torpedoes Transport near (25 NM) :

Default = *disabled*.

Enabled : the *Torpedoes Transport* will follow your U-Boat at a distance of 25 NM.

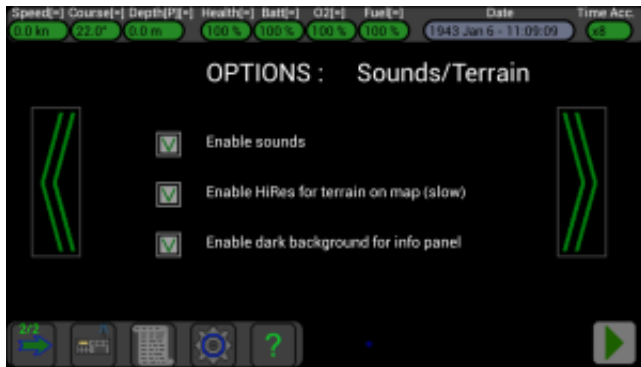
Disabled : the *Torpedoes Transport* will remain in its position.

If you have a lot of enemies around and you want to replenish often your U-boat, you can *enable* this option to save time between each replenishment. Otherwise, if the *Torpedoes Transport* is in an other zone of the map, you could wait a lot for it to come near, when called with the radio.

In other situations, it could be useful to keep this option *disabled*, for example when you want the *Torpedoes Transport* to stay in an other zone of the map for reporting other units with its radio.

Note: this option is available *only* in the **Full** version of the game; in the **Demo** version the *Torpedoes Transport* is not available.

Sound/Terrain page :



Enable sounds :

Default = *enabled*.

Enabled : sounds are played.

Disabled : all sounds are muted.

This option (*disabled*) can be useful to not disturb other persons....

Enable HiRes for terrain on map (slow) :

Default = *enabled*.

Enabled : the terrain is shown with high resolution.

Disabled : the terrain is shown with low resolution.

To avoid using a really large amount of memory in your device, the terrain's points are interpolated in real-time when the map is moved or zoomed and this intensive task could cause a slowdown of the user interface; it is possible to reduce this effect by *disabling* this option and the terrain will be drawn at a lower resolution in the map.

Enable dark background for info panel :

Default = *enabled*.

Enabled : the info panel is shown with a dark background.

Disabled : the info panel is shown with a dark background.

When this option is *enabled*, the info panel for the selected unit is shown inside a panel with a dark background; this can be useful when the terrain is shown in the map and its colors make the text of the *info panel* less readable.

Realism (1) page :



Realistic sensors (sight) ranges (EXPERT) :

Default = *disabled*.

Disabled : all units have standard (short) visual ranges.

Enabled : all units have advanced (long) visual ranges.

Normally, with this option *disabled*, the game is a little more easy and simple, the visual ranges are short and this give you more possibility to remain invisible.

When this option is *enabled* all units have different visual ranges if they look at small, medium or big ships, small or big airplanes, submarines at surface or periscope depth.

A table with all ranges will be added on this web site as soon as possible.

In future there will be different ranges for all instruments, not only for the sight, and they will change depending on weather conditions.

Note: now in the information panel and in the map, it is always shown the **MAX** visual range of the selected unit; in future the table of ranges will be shown inside the game.

Note: this option is available *only* in the **Full** version of the game; in the **Demo** version this option is always *disabled*.

Realistic sensors accuracy (EXPERT) :

Default = *disabled*.

Disabled : all units' instruments (radar, sonar, sight, hydrophones, radio) detect the other units at their exact distance, bearing, heading, speed and depth.

Enabled : all units' instruments are less accurate but realistic.

When this option is *disabled* the sensors detect the exact position, range, bearing, speed, depth and heading of the other units, it makes the game more easy (but not so much realistic).

When this option is *enabled* the sensors are more realistic and the game is more difficult and funny, they

are less accurate if the detected units are far, they don't return a exact value but a range, and the units are shown in the map in a approximate position.

In the information panel now there are shown both these values and the ranges, between "[]".

Note: this option works well but sometimes can cause problems to the *Torpedo Transport*, when approaching your sub; if you encounter problems, please *disable* this experimental option before linking to the refuel sub.

Note: with this option *enabled*, when a sensor of your submarine detects an other unit, it is put on the map in the "middle" of the range, with an average heading, speed and bearing, to reflect the uncertainty of the detection; if a unit is far and your sensor stops to detect it, this unit is printed on the map with a dashed symbol and its position is calculated using the last detected position, heading and speed; when your sensor detects again this unit, it is printed on the map again "in the middle of range" and the unit seems to jump... it is not nice but normal, if you want you can temporary *disable* your instruments in the "My instruments" option page to stop this behavior.

HINT: I suggest at the beginning to keep this realistic option *disabled*, to keep the game easy; when you become expert and want to play a more realistic, funny and difficult game, then *enable* it :-)

Note: this option is available *only* in the **Full** version of the game; in the **Demo** version this option is always *disabled*.

Realistic torpedo reload time (20 min.) :

Default = *disabled*.

Disabled : The torpedo reload time is 5 minutes.

Enabled : The torpedo reload time is 20 minutes.

When this option is *disabled*, the torpedo reload time is short and makes the game more easy.

When this option is *enabled*, the torpedo reload time is more realistic and long, this will force you to not waste your torpedoes and to better design your attacks.

Note: this option is available *only* in the **Full** version of the game; in the **Demo** version this option is always *disabled*.

Realism (2) page :



Realistic speed of turning (EXPERT) :

Default = *disabled*.

Disabled : the speed of turning of all units is fast.

Enabled : the speed of turning of all units is slow and more realistic.

When this option is *disabled* the game is more easy, your speed of turning is fast and it is easy to escape from enemies.

When this option is *enabled* the speed of turning of all units is slow, it makes the game more realistic, difficult and funny.

Note: this option works well but sometimes can cause problems to the Torpedo Transport, when approaching your sub; if you encounter problems, please *disable* this option before linking to the refuel sub.

Note: this option is available *only* in the **Full** version of the game; in the **Demo** version this option is always *disabled*.

Realistic units' speed (EXPERT) :

Default = *disabled*.

Disabled : all units can run at half of their max speed.

Enabled : all units can run at their max speed.

When this option is *disabled* the game is more easy, units are not very fast.

When this option is *enabled* all units can run at their max speed, it makes the game more realistic, difficult and funny.

Note: this option does not affect your submarine, it can run always at its max speed (when it is not damaged...).

Note: this option is available *only* in the **Full** version of the game; in the **Demo** version this option is always *disabled*.

Realistic dive speed (EXPERT) :

Default = *disabled*.

Disabled : your dive speed is fast.

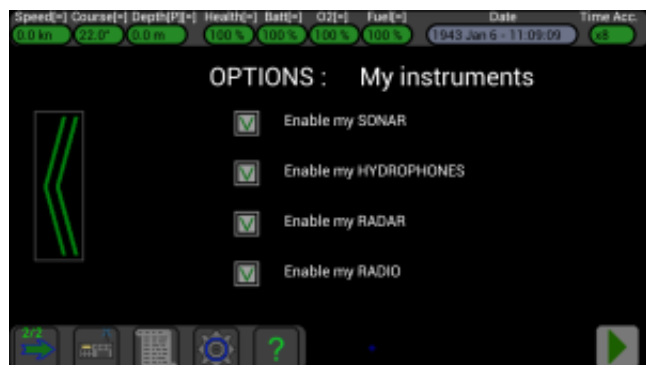
Enabled : your dive speed is slow and more realistic.

When this option is *disabled* the game is more easy, your dive speed is fast and it is easy to escape from enemies.

When this option is *enabled* your dive speed is slow and proportional to your speed, it makes the game more realistic, difficult and funny.

Note: this option is available *only* in the **Full** version of the game; in the **Demo** version this option is always *disabled*.

My instruments page :



Enable my sonar, hydro., radar, radio :

Default = *enabled*.

Enabled : your instruments are enabled and working.

Disabled : your instruments are disabled and can not detect other units.

In the old versions of the game your instruments were always active.

Now, if you use the “Realistic sensors accuracy”, it could be useful to disable some instruments if you want to follow an other unit by using only one or two instruments, or for example if you don’t want to use the hydrophones (they have really a low accuracy for distance and heading).

Note: “radio” is for enabling or disabling the reception of the positions (of the other units) sent by your allies, usually these positions are not accurate.

Note: "sight" is not included here, to disable your sight go below the surface and lower your periscope.

Note: at the moment the other units **DON'T DETECT** your sonar or radar, so you can keep them enabled; in future the other units will detect them...

Note: remember that when you are a periscope depth the other units can detect your periscope with their radar !

Note: this option is available *only* in the **Full** version of the game; in the **Demo** version all your instruments are *always* active.

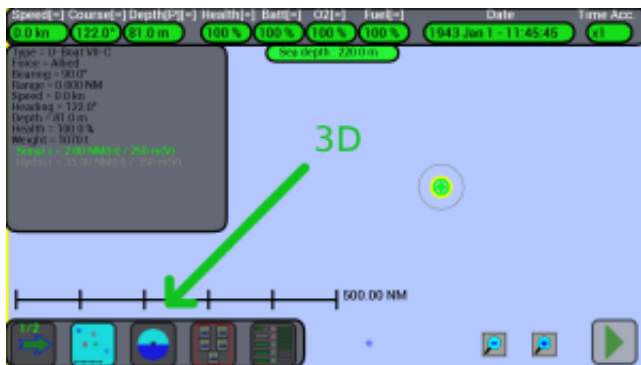
[\(3D\) Next ->](#)

3D

[<- Prev. \(Instructions\)](#)

The "3D" is a set of screens that you can use to see what happens around your submarine; you can see the external world using the periscope, the binoculars and your commander's eyes when he is on the deck. In addition, only in the Full version of the game, there is an additional screen named "Fly view" : using it, you can see the external world from any point of view as you was a flying bird :-)

The button used to open the 3D visual is here, near the "map" button :



This button is used to open one of the four 3D screens (periscope, binoculars, deck, fly), press it more times to pass to the next screen :
the first time it opens the periscope view, if you press it again you see the binoculars, again and you see the deck view, again and you see the fly view, again and you return to the periscope view, and so on...
Every time you click this button, its icon changes, to indicate which is the active view :



[Periscope](#)



[Binoculars](#)



[Deck](#)



[Fly](#)

Periscope view

[<- Prev. \(3D\)](#)

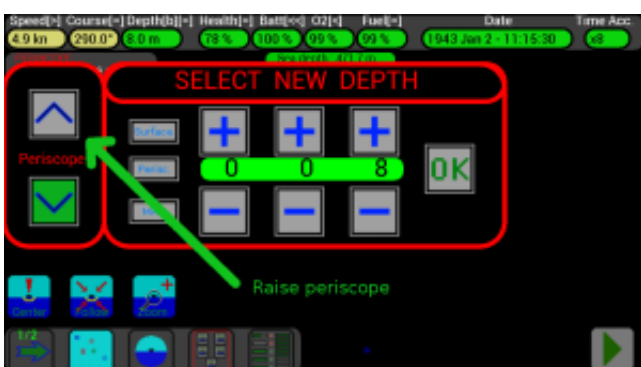
When you are at periscope depth (8m) you can use this view to see around your submarine :



If the periscope is lowered then the screen will be black :



To see around you have to raise the periscope, with the button inside the "change depth" dialog, on the left :



Remember to keep your periscope raised for short time if there are enemies around, or they will be able to detect you using their sight or radar !

To rotate the periscope, put your finger on the screen and move it left or right.

On the top of the screen you can see the indication of its angle:

absolute (0° = nord, 90° = east, 180° = south, 270° = west) or relative to your submarine's course (0° = ahead, 90° = right, 180° = back, 270° = left).



On the bottom of the screen there are 3 other buttons (Center, Follow, Zoom) :



Center :

First select a unit in the map, then press this button to center the periscope view to the selected unit, to see it at the center of the screen.



Follow :

Select a unit on the map and press this button to keep it centered on the periscope screen; when "Follow" is active the button's icon becomes green; press it again to release the "Follow".



Zoom :

The periscope has a 1.5x zoom and (in the Full version of the game) you can switch to 6x zoom by pressing this button; press it again to return to 1.5x zoom :

Zoom 1.5x :

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Zoom 6x :



Binoculars view

[<- Prev. \(Periscope view\)](#)

When you are at surface (0m) you can use this view to see around your submarine :



If your submarine is not at surface, the screen will be black :



Move your finger on the screen to rotate the binoculars left and right; you can also move the binoculars up and down, to see incoming airplanes.

The zoom for binoculars is fixed at 7x.

On the bottom of the screen there are other 2 buttons (Center, Follow) :



Center :

First select a unit in the map, then press this button to center the binoculars view to the selected unit, to see it at the center of the screen.



Follow :

Select a unit on the map and press this button to keep it centered on the binoculars screen; when "Follow" is active the button's icon becomes green; press it again to release the "Follow".

Deck view

[<- Prev. \(Binoculars view\)](#)

When you are at surface (0m) you can use this view to see around your submarine :



If your submarine is not at surface, the screen will be black :



Move your finger on the screen to rotate the eyes left and right; you can also move the eyes up and down, to see incoming airplanes.

The zoom for deck view is fixed at 1x.

On the bottom of the screen there are other 2 buttons (Center, Follow) :



Center :

First select a unit in the map, then press this button to center the deck view to the selected unit, to see it at the center of the screen.



Follow :

Select a unit on the map and press this button to keep it centered on the deck screen; when "Follow" is active the button's icon becomes green; press it again to release the "Follow".

Fly view

[<- Prev. \(Deck view\)](#)

The Fly View is the most interesting 3D view, you can see your submarine, the ships, the airplanes, as you were flying above or below the sea.

You can move the position of your eyes, look in any direction, zoom in or out, follow a ship... this enhances your game experience and permits you to have a better understanding of what is happening around your submarine !

Note: the Fly View is available only in the **Full** version of the game, but can be used always, either if your submarine is not at surface or if you want to see a very far ship.



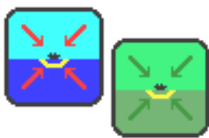


On the bottom of the screen there are other 6 buttons :



Center :

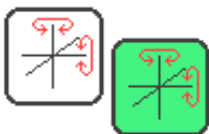
First select a unit in the map, then press this button to center the fly view to the selected unit, to see it at the center of the screen with a default zoom.



Follow :

Select a unit on the map and press this button to keep it centered on the fly view; when "Follow" is active the button's icon becomes green; press it again to release the "Follow".

The next 4 buttons allow to choose how to move the visual, only one button can be active (green when active), press on any of this 4 buttons to change the mode :



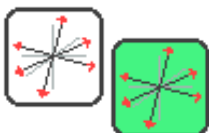
Rotate :

When this button is active, you can rotate your eyes/head around.

Put the finger on the screen and move it left/right or up/down.

You can also zoom in or out, put 2 fingers on the screen and move them away or bring them closer (pinch to zoom).

You can also zoom in or out using the 2 little buttons ("+" and "-") at the bottom of the screen.



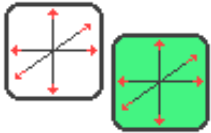
Move :

When this button is active, you can move the view left, right, up and down.

Put the finger on the screen and move it left/right or up/down.

You can also zoom in or out, put 2 fingers on the screen and move them away or bring them closer (pinch to zoom).

You can also zoom in or out using the 2 little buttons ("+" and "-") at the bottom of the screen.



Slide :

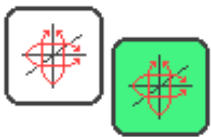
When this button is active you can slide the view using your finger.

Move your finger left/right to move your eyes/head left or right.

Move your finger up/down to move your eyes/head ahead or back.

Put 2 fingers on the screen and move them away or bring them closer to change the height of your eyes/head (to change altitude or depth).

Note: The "slide" button works similarly to the "move" button but there is a small difference : in the "move" mode the axis for the movement are oriented as your head; in the "slide" mode the axis for the movement are oriented as the world... difficult to explain well... use "slide" mode when you want to move your eyes left/right or ahead/back without changing your height...



Orbit :

When this mode is active, you can "orbit" around the selected unit at the same distance from it.

To select a unit, go to the map, press its symbol and return to the 3D view.

If you want to change the distance of your eyes, use 2 fingers and move them away or bring them closer.

Other information :

When a unit is selected, a yellow circle is drawn around it :



When your submarine is at periscope depth or below the surface, a green circle with an arrow is drawn around it :



You can also launch torpedoes in the 3D view :



A blue circle is drawn around the torpedoes :



Ship hit by torpedo, boom !!



Terrain

[<- Prev. \(Fly view\)](#)

The "terrain" permits to play a game with land masses and zone of ocean with different depths inside the map, to make the game more funny and difficult.

It is available **only** in the **Full** version of the game, is generated randomly when a new game is started and you can choose if generate it or not.

When you start a new game, this dialog will let you choose if create it or not :



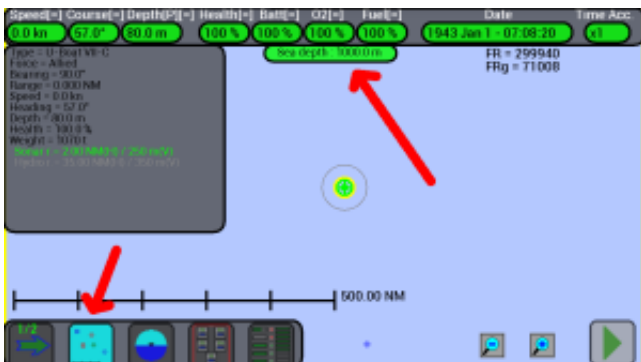
If you choose **NO**, the game will be created without terrain, and all the map will have a fixed depth of 1000m.

Note: the terrain was introduced in the version V1.21 of the game, no problem if you load a game saved with a previous version, all depths will be converted from 350m to 1000m (below 300m the submarine explodes, so nothing changes).

Game with **NO** terrain :

If you choose to **not** generate the terrain, all the map will have a fixed depth of 1000m, at the top of the screen there is the indication of the sea depth (at the position of your submarine).

As shown in this image, the color of the map changes during the day (light during day, dark during night). Note the icon of the map button, it indicates that we are in map mode.



If you want to see the terrain on the map, press again the map button to change to terrain mode, note that its icon changes :



The map now has a dark color, because it has a big depth (1000m).

At the top of the screen the "Date box" will change color if we are during day or night.

Game with terrain :

If you choose to generate the terrain when a new game is created, you will see different zones with different colors inside the map :



BLUE is sea, dark blue indicates zones with big depth (up to 1000m), light blue indicates zones with low depth (up to 100m or less).

Be careful to not touch the ground with your submarine because it will be damaged, look always at the color of the zone where you are and look always at the indicator of the sea depth in your zone (at the top of the screen).

If the indicator shows 100m, your submarine can safely stay at a depth of 94m, don't go below or it will be damaged (a difference of 10m or more is ok).

YELLOW/LIGHT BROWN is sand, beach, indicates the border of a land mass, don't touch it with your submarine.

GREEN is land mass with low height, hills.

BROWN is land mass with medium height, mountains.

WHITE is snow, high mountains (height up to 1000m).

Important: when your submarine is in a zone with low depth (50m, 100m), it could be very difficult to escape and remain undetected from the enemy's sonar or hydrophones !!

Note: the indicator for the sea depth at the top of the screen will change color if you are near the ground. Green is ok, if yellow it is better to check your depth, if RED be careful to not touch the ground !

Examples :

Here your depth is 8m, the sea depth is 118.2m, the indicator is GREEN :



Here your depth is 90.6m, the sea depth is 123m, the indicator is YELLOW :



Here your depth is 108m, the sea depth is 125.1m, the indicator is RED :



Pay attention also at the zoom of the map, because at low zoom some little land masses are not visible, increase the zoom to check well the depths :

Low zoom, few details :



Medium zoom, more details :



High zoom, a lot of details :



You can see the terrain also in the 3D views, during day it has a light color :



During night, it has a dark color :



Avoid this situation : here the submarine is near an island, surfaced, low sea depth (18m) and with a big airplane very near :

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FAQ (en) (pdf)

Frequently asked questions :

General

Q: Where can I download this game ?

A: I distribute this game *only* via the official *Google Play*TM store, it does not contain virus, malware, adware or other bad code and does not collect personal information. The [demo](#) version of the game does not require any permission and does not communicate with internet. The [full](#) version of the game requires only the “Google Play License Verification” permission and communicate only with the Google servers for the license checking (copy protection).

If you download the game elsewhere (not in the *Google Play* Store), it is not my game and could include malware !

Q: When the app is bought and launched, it is not possible to start a game, why ?

A: When the app (*Full version*) is started for the first time, it checks online if it was downloaded from *Google Play*TM (license checking, for copy protection); after, it will check one time every 3 months contacting *Google servers*.

The procedure is well tested and used by a lot of different applications, but in **very rare cases** there may be problems with *Google servers*, or network problems.

Fortunately, only 3 failures have been reported in more than 12 months.

If this happens, here are some solutions :

- 1) Go to Android Settings > Apps > Google Play > select “Force stop”, then “Clear Data” and “Clear Cache”.
- 2) Go to Android Settings > Apps > All > Google Services Framework > select “Clear Data” and “Clear Cache”.
- 3) Go to Android Settings > Apps > All > Google Play Services > select “Clear Data” and “Clear Cache”.
- 4) Make sure that the primary account on your device is the same account you used to purchase the game, check this via Android Settings > Accounts > Google.
- 5) Make sure that your system date and time are correct : Android Settings > Date & time > enable “Automatic Date & Time” and “Automatic time zone”.
- 6) Try signing into <https://wallet.google.com/manage> to verify that the app is not “refunded” nor “cancelled”.
- 7) Check if you have other apps installed which can interfere with the standard Google Play Store, try to remove them to prevent conflicts.

If you have installed root utilities for removing licenses from apps, they will cause problems because they emulate the standard Google Play License verification process.

8) Uninstall the game, reboot the device, download and install it from Google Play.

9) Check if Google Play Services is updated, in the Google Play Store.

Q: Long time passes between game updates, this web site is incomplete or not often updated, why ?

A: I develop this game in my little free time... I have a normal job and often I return at home tired, it is not always easy to sit in front of the Pc and work on the game for other hours :-(
When possible I try to keep this web site update but always, after each game update, I report immediately the new modifications in the [ChangeLog](#).

Q: I asked for a new feature, but you did not implement it, why ?

A: It could be due to different reasons:

- 1) Other players asked for new features times ago, I try to give precedence to them.
- 2) This new feature needs a lot of weeks/months of development/debug.
- 3) This new feature depends of other feature still under development.
- 4) This new feature could have a large impact on all players, I must think well if develop it or not; a new feature could be useful for one player, but many other players could be disappointed... not easy !

Q: When this game will be available for iPhone/iPad ?

A: Often programmers develop their apps using *game-engines*, this permits them to create code for multiple platform with little effort.

From the beginning I decided to write standard *Java* code for *Android* and use only the standard *OpenGL*ES library (yes, I like to reinvent the wheel...).

Now the game sources are so big (more than 40000 lines of code) that probably I will never find the time to insert them into a *game-engine* or translate them for *iPhone/iPad*. :-(

Q: Why should I register to this site ?

A: You can visit this site and see **all** its content without been registered, registration is needed only for writing in the forum (to prevent spam).

Q: I would like to register to this site, but why is the procedure so complicated (button > email > link > wait for approvation) ?

A: Every day there are lots of bots (fake users, robots) trying to register and post spam, I had to enable this long registration procedure for safety reasons.