

Naval Battles

Nolan Hunt

Michael Mazzuca

Steven Coverdale

Dave Lundrigan

Brian Icely

Game

Real time tactical naval combat game set in the second world war era. Each team is provided with a limited number of ships at the start of each match.

Game modes

Commander:

Each team has one command ship. The goal is to eliminate all enemy commanders while protecting your own. A team is eliminated when its commander is sunk. The last team remaining wins.

King of the Hill:

There are one or more control points on the map. Teams fight for control of these points earning points when they hold points. The match ends when all teams have lost all their ships or one team reaches a point limit. At the end of the match the team with the most control time wins.

Movement

Units movement is controlled indirectly by giving orders to move to points on the map. They can be given orders to go directly to a specific point, to follow a list of way-points, or to follow another unit.

Combat

Units have several weapon systems.

Ship Weapons

Primary Weapons: cannons

Primary weapons will automatically aim and fire at the designated target. They have unlimited ammo.

Secondary Weapons: torpedoes, aircraft

Secondary weapons are manually aimed and fired. They have limited ammo.

Torpedoes: Torpedoes are fired by specifying a vector from the ship. The torpedo is launched and turns towards the given vector.

Aircraft: Aircraft are launched in flights by specifying a point to go to and a type of flight (fighter, bomber, reconnaissance).

Tertiary Weapons: depth charges

Tertiary weapons are special use weapons.

Depth Charges: In the case of depth charges they are dropped from a ship as it moves. They have a limited number of charge loaded at once but unlimited reloads.

Defensive Weapons: anti-aircraft

Defensive weapons automatically target and fire at enemy aircraft in range.

Maps

Terrain Types

Deep water

All ships can enter deep water. Submarines can submerge in deep water.

Shallow water

Only smaller ships can enter shallow water. Submarines cannot submerge in shallow water.

Land

No ships can enter land.

Storms

Storms are areas of the map where visibility is reduced for units and aircraft cannot enter.

Controls

Unit Selection

Units can be selected individually or as a group:

- left click (A) – single unit
- left click and drag (A) – multiple units
- esc (B) – deselect all units

Navigation

Orders

Navigation:

- follow way-points
- go to point
- follow another unit
- evasive manoeuvres – active/inactive

Speed:

- full speed
- 2/3 speed
- 1/3 speed
- dead slow

Controls

With unit(s) selected:

- right click water (X) – go to point
- shift-right click water (hold X) – add way-point
 - [] while holding right click (LB, RB while holding X) – move new way-point's position in the list

With way-point selected:

- left click and drag – move way-point
- shift-right click water – insert way-point before current one
 - [] while holding right click – move new way-point's position in the list
- delete (B) – remove way-point (with confirmation box)

Attack

Orders

Targeting and attack:

- target and attack unit with primary weapons (cannons)
- attack with secondary weapons (torpedoes, aircraft)
- deploy special weapons (depth charges)

Stances:

- attack enemy on sight
- evade and return attacks
- evade and flee enemy on sight

Controls

With unit(s) selected:

- left click enemy unit (X) – attack with primary weapons (cannons)
- ctrl-left click (Y) – attack with secondary weapons (brings up aiming controls for secondary weapon)
- tertiary weapon activation buttons in advanced controls interface
- T – cycle through stances
- stance buttons in advanced controls interface

Sensors

Orders

- Sonar – passive/active (destroyers only)

Controls

With unit(s) selected:

- S – toggle sonar (turns all active if at least one selected unit is passive)
- sonar button in advanced controls interface

Advanced controls and information:

Shown for single target to offer graphical interface for additional information and controls. Either in a HUD item attached to the unit or fixed on the edge of the screen.

Ships:

- Navigation
 - current navigation state (following way-point, following target, going to point)

- set go to point
 - set return to follow way-points
 - set follow target
- current speed (full, 2/3, 1/3, dead slow)
 - set full speed
 - set 2/3 speed
 - set 1/3 speed
 - set dead slow
- toggle evasive manoeuvres on/off
- Current Stance
 - set attack on sight
 - set evade and return attacks
 - set evade and flee on sight
- Attack
 - current primary weapon state (idle, target out of range, firing on target)
 - set target
 - secondary weapon state (ready, reloading, firing, out of ammo)
 - fire secondary weapon
 - tertiary weapon state (ready, reloading, firing)
 - fire tertiary weapon
- Sensors
 - current visual range
 - show range overlay
 - current radar range
 - show range overlay
 - current sonar state (active, passive)
 - toggle sonar state
 - current sonar range
 - show range overlay
- Ballast Systems [submarines only]
 - current depth (surfaces, periscope depth, max depth)
 - surface

- periscope depth
- max depth
- Control Tower [aircraft carriers only]
 - Flight 1: state (idle, on mission of type (reconnaissance, fighter, bomber))
 - click to select aircraft
 - Flight 2: state

Aircraft Flights:

- Navigation
 - current navigation state (following way-point, attacking target, escorting flight, returning to base)
 - set return to follow way-points
 - set intercept and attack target
 - set escort aircraft flight
 - set return to base
- Weapons
 - current remaining bombs, torpedoes, rockets.

Ships

Ships are the primary units of the game. Ships have a primary weapon system (cannons) which fires at will on the ship's target. Secondary weapons (torpedoes and aircraft) are aimed and fired manually. Tertiary weapons (destroyers' depth charges) are activated through the advanced controls interface. Defensive weapons (anti-aircraft guns) are targeted and fired automatically without player input.

Shallow Draft Vessels (can enter shallow water areas on the map)

Light Cruisers

Light Cruisers provide light combat ship capability. They have moderate anti-surface and anti-air capability. Their armour and armament aren't as heavy as full size cruisers, but they have significantly more manoeuvrability.

- Armament
 - primary: cannons: moderate
 - defensive: anti-aircraft: moderate
- Armour
 - medium
- Sensors
 - visual: good
 - radar: moderate
- Movement
 - speed: high
 - acceleration: medium
 - manoeuvrability: high

Destroyers

Destroyers provide scouting and anti-submarine capability. They have light anti-surface and anti-air capability, but good anti-sub capabilities. Their speed lets them scout out enemy forces and their torpedoes mean they can deal some significant damage to larger ships.

Sonar:

Destroyers have active and passive sonar. In passive mode the sonar will give bearings towards noise sources but won't pinpoint the target. In active mode submerged targets will become visible, but there will be false positives (ghost submarines will appear that are not actually there). In active mode the destroyer also becomes highly visible to other sonar equipped vessels well beyond the effective range of the sonar.

- Armament
 - primary: cannons: light
 - defensive: anti-aircraft: light
 - secondary: torpedoes
 - tertiary: depth charges
- Armour
 - light

- Sensors
 - visual: good
 - radar: moderate
 - sonar: very-good
- Movement
 - speed: very-high
 - acceleration: high
 - manoeuvrability: high

Submarines

Submarines fill the stealth reconnaissance and ambush roll. They have very-light cannons and anti-aircraft weapons but can deal significant damage to larger ships with torpedoes without being detected.

Submerging:

When in deep water submarines can submerge. Submerging makes the submarine invisible to radar and slowly reduces its ability to be spotted visually until it can no longer be seen visually at max depth. The submarine also becomes invulnerable to all weapons except depth charges when at max depth. When submerged submarines drain their battery power, with the power draining faster if they move.

Submarines can attack while submerged, but doing so automatically raises them from max depth to periscope depth, where they can be spotted visually and damaged by weapons. After their torpedoes hit or run out of fuel the submarine will dive back to max depth.

- Armament
 - primary: cannons: very-light
 - defensive: anti-aircraft: very-light
 - secondary: torpedoes
- Armour
 - light
- Sensors
 - visual (on surface): poor
 - visual (periscope depth): very-poor
 - radar (on surface only): poor
 - sonar (passive): good
- Movement
 - speed (surfaced): medium
 - speed (submerged): low
 - acceleration: medium
 - manoeuvrability: medium

Deep Draft Vessels (cannot enter shallow water areas on the map)

Cruisers

Cruisers are well rounded combat ships. They have very good anti-surface and anti-aircraft capability.

- Armament
 - primary: cannons: heavy
 - defensive: anti-aircraft: heavy
- Sensors
 - visual: moderate
 - radar: good
- Movement
 - speed: medium
 - acceleration: medium
 - manoeuvrability: medium

Battleships

Battleships are the primary anti-surface ships. They have excellent anti-surface capability and moderate anti-aircraft defences.

- Armament
 - primary: cannons: very-heavy
 - defensive: anti-aircraft: moderate
- Sensors
 - visual: moderate
 - radar: good
- Movement
 - speed: medium
 - acceleration: very-low
 - manoeuvrability: low

Aircraft Carriers

Aircraft Carriers provide long range scouting and attack capabilities. They have very limited weapons but can launch aircraft to fill a variety of rolls.

- Armament
 - defensive: anti-aircraft: moderate
 - secondary: aircraft: heavy
- Sensors
 - visual: moderate
 - radar: very-good
 - scout aircraft: very-good
- Movement
 - speed: low

- acceleration: low
- manoeuvrability: very-low

Weapons

Cannons

Cannons are the primary anti-ship weapon. Cannons have unlimited ammo and are fired automatically once an order to attack has been issued.

Auto-fire: yes
 Auto-aim: no
 Range: medium
 Velocity: high
 Accuracy: medium
 Rate of Fire: medium

Anti-Aircraft

Anti-aircraft defences are the primary anti-aircraft weapon. They have unlimited ammo and lock onto and fire at any enemy aircraft in range automatically.

Auto-fire: yes
 Auto-aim: yes
 Range: short
 Velocity: high
 Accuracy: low
 Rate of Fire: very-high

Torpedoes

Torpedoes are heavy anti-ship weapons. Ships carry a limited number of torpedoes and they must be manually aimed and fired. They are very slow but have good accuracy.

To fire torpedoes the player gives the direction to fire from the ship. The HUD should have marks to show the maximum range as well as the travel time along the firing arc. Ideally, enemy ships' paths will also be plotted based on their current velocity with equal marks indicated travel time. Torpedoes are fired in a fixed direction from the ship and then turn towards the desired direction. Destroyers launch torpedoes to port and starboard, and submarines launch torpedoes fore and aft.

Auto-fire: no
 Auto-aim: no
 Range: medium
 Velocity: very-low
 Accuracy: high
 Rate of Fire: very-low

Depth Charges

Depth charges are the only weapon capable of damaging submarines at max depth. Ships have an

unlimited number of depth charges available. They drop beneath the launching vessel and travel down until they reach the dept of the submarine and explode. They are not very accurate and will spread out as they sink as well as exploding at incorrect depths. Depth charged are fired in clips and ships need to pause dropping depth charges to reload.

Depth charges

Auto-fire: no
Auto-aim: no
Range: very-low
Velocity: low
Accuracy: low
Rate of Fire: medium

Aircraft

Aircraft are deployable vessels. They are deployed in flights of 4-8 aircraft from carriers. Carriers have a limited number of flights they can have active at once. Flights can be reconnaissance, fighters, or bombers.

Flights are launched by selecting the type of flight (reconnaissance, fighter, bomber) and setting up a circular way-point path that starts and ends with the carrier. The path must be short enough for the aircraft to have enough fuel. Once launched flights behave like ships and can be given additional orders. However, they have limited fuel and if they run out they will crash.

The way-points for flights should show travel time remaining and the flight should show its remaining fuel time.

Reconnaissance flights have extra fuel and small bomb loads to hit any targets of opportunity, such as submarines.

Fighters can attack other aircraft. They can protect the fleet from enemy fighter or escort bombers to their targets.

Bombers can attack ships but they only get one attack each.

Auto-fire: no
Auto-aim: no
Range: very-long
Velocity: high
Accuracy: high
Rate of Fire: low