

# Contents

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# 1.0 The Main Program

The [Main Program](#) is normally invoked through the front-end menu program. Normally a new scenario or previous battle will be loaded automatically at startup. Alternatively, the [File Menu](#) can be used for this purpose.

The main program will begin moving ships automatically at startup. The [Speed Menu](#) can be used to control the speed of the ships and to pause the game.

An individual ship can be Selected by clicking on it with the left mouse button. Once Selected, the ship can be turned and controlled through the orders in the [Ship Menu](#). To fire at the hull of another ship, first Select the ship to fire by clicking on it with the left mouse button, then choose a target by clicking on an enemy ship with the *right* mouse button. You can fire at the sails of the other ship by pressing the [Control](#) (Ctrl) key and clicking on an enemy ship with the right mouse button. Ships can be boarded and captured by grappling with them. To do this, the [Toggle Grapple Command](#) of the [Ship Menu](#) must be invoked for the attacking ship.

The map display can be zoomed in and out and rotated using commands in the [Display Menu](#).

Note that most all commands, and some extra ones not included in the menus, can be easily invoked through the use of the [Toolbar](#). Also, turning, loading and sail orders can be issued either for individual ships or as [Squadron Orders](#).

## 2.0 The Menus

These menus are associated with the main program:

[2.1 The File Menu](#)

[2.2 The Speed Menu](#)

[2.3 The Ship Menu](#)

[2.4 The Reload Menu](#)

[2.5 The Display Menu](#)

[2.6 The A/I Menu](#)

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## 2.1 The File Menu

The **File Menu** is used to start new battles and to load previously created battles and save battles in progress.

To start a new battle, Select the **New** menu item. You will be prompted for the file name of a scenario to load.

To continue playing a previously saved battle, Select the **Open** menu item. This will prompt you for the file name of the battle.

To save a battle that you are playing, Select the **Save** menu item. If this is the first time this battle has been saved, you will be prompted for a file name to use to save the battle in. By default, a battle should be saved in a file with the file extension **.btl**.

If you want to save the current battle without overwriting the existing file, you can use the **Save As** menu item. You will be prompted for the file name to use to save the battle in.

To exit the main program, Select the **Exit** menu item.

## 2.2 The Speed Menu

The [Speed Menu](#) is used to establish the play speed of the main program, not to control the sailing speed of the ships.

Selecting the [Pause](#) menu item will toggle the action of the main program. With the main program paused, the ships on the map will not move or fire. When the pause function is released, the ships will move normally.

Selecting the [Normal Speed](#) menu item will cause the main program to run at normal speed.

Selecting the [Fast](#), [Faster](#), or [Fastest Speed](#) menu items will cause the main program to run at a much higher speed than normal. Note: in modem play, the speed is determined by the slower of the two players' settings.

## 2.3 The Ship Menu

The [Ship Menu](#) is used to issue orders to ships on the map.

The [Turn to Port \(Left\)](#) menu item is used to turn the currently Selected ship on the map in the port direction.

The [Turn to Starboard \(Right\)](#) menu item is used to turn the currently Selected ship on the map in the starboard direction.

If you order a Squadron Turn for a particular squadron and fail to allow all the ships to finish turning, you may find that you cannot turn individual ships. This is because the Squadron Turn is still in effect for that squadron. To clear this situation, Select the [Clear Squadron Turns](#) menu item.

The [Full Sail](#), [Battle Sail](#) and [Furled Sail](#) menu items are used to set the sails of the currently Selected ship to full, battle, or furled sails respectively.

The [Load Round Shot](#), [Load Chain Shot](#), [Load Grape Shot](#) and [Load Double Shot](#) menu items are used to order the next cannon loads for the currently Selected ship. After the ship fires, the specified type will be loaded. An immediate reload can be ordered by using the [Reload Menu](#) immediately after Selecting the ammunition type.

You can specify that the next cannon load should be changed only for a particular side of the ship. If you hold down the 'L', 'P' or 'Z' key while specifying the next cannon load, it will apply only to the Port (Left) side. If you hold down the 'R', 'S' or 'X' key while specifying the next cannon load, it will apply only to the Starboard (Right) side.

The [Toggle Grapple Command](#) is used to toggle the order to grapple enemy ships. Once this order has been given, the ship will attempt to grapple with any enemy ship it collides with.

To have the computer fire any of your ships for you, use the [Toggle Fire-At-Will Command](#) menu item. This order can be issued to any of your individual ships, or to an entire squadron by holding down the [Control](#) (Ctrl) key when the order is issued. When a ship has been ordered to Fire-at-Will, the computer will decide when and where to fire it. You are still responsible for setting the load of the ships. Issuing the order a second time cancels it.

The [Surrender](#) menu item is used to surrender individual ships or an entire side. This can be used to terminate a battle early. By default, this order will cause the currently Selected ship to surrender. If the [Control](#) (Ctrl) key is held down while this order is issued, the Selected ship's entire side will surrender.



## 2.4 The Reload Menu

The [Reload Menu](#) can be used to force an immediate reload for the Selected ship or squadron. By default, when the next load is specified for a ship or squadron, it will apply after the next shot. You use the Reload Menu when you do not want to wait for that and want to cause the previously specified load to be immediately loaded into the guns.

The [Port \(Left\) Side](#) menu item causes an immediate reload of the Port side. The [Starboard \(Right\) Side](#) menu item causes an immediate reload of the Starboard side. The [Both Sides](#) menu item causes an immediate reload of both sides.

If the [Control](#) (Ctrl) key is held down when this order is issued, it will apply to all ships in the squadron of the Selected ship.



## 2.5 The Display Menu

The [Display Menu](#) is used to control certain display features of the Main Program.

The [Turning Ships](#) menu item toggles the display of turning arrows on the map when ships are in the process of changing direction. By default, this option is on.

The [Gun Range](#) menu item is used to toggle the [range indicator](#) of the currently Selected ship on the map. This display shows the range of possible targets for the ship, based on its current position and ammunition load.

The [Full Screen](#) menu item is used to toggle the full screen display mode of the main program. In full screen mode, the [Unit List](#) at the bottom of the screen is not displayed.

The [Range Grid](#) menu item is used to toggle the display of a range grid on the map. The range grid consists of a pattern of dots on the map. The dots are spaced 200 yards apart in the 3D views, and 1000 yards apart in the 2D views.

The [Ship Bases](#) menu item is used to toggle the display of ship bases on the map.

The [Can Fire](#) menu item toggles the display of icons on the map that show whether a ship is loaded and ready to fire. There are two icons displayed for each ship, one on the port side and one on the starboard side.

The [Auto Scroll](#) menu item can be used to set a display mode in which the map will automatically be scrolled to keep the currently Selected ship on-screen.

The [Ship List](#) menu item displays a dialog box containing the name of every ship in the battle, which can be clicked on to scroll the map to that ship and Select it.

The [Jump Window](#) menu item is used to display a small view of all the ships in the battle. Clicking on any portion of it will scroll the map to that area.

There are 6 possible display scales. They range from [Extreme Zoom-In](#) (closest) to [Ultimate Zoom-Out](#) (farthest). Except for Extreme and Ultimate Zoom-Out, each display scale gives an isometric 3D view of the map. Extreme and Ultimate Zoom-Out are top-down 2D views of the map. Note: when the [Low Memory Setting](#) of the [Options Menu](#) is set, the Extreme Zoom-In graphics mode is disabled to save memory.

The map can be oriented in four different ways. By Selecting the corresponding menu item, the map can be displayed with [North](#), [East](#), [South](#) or [West](#) at the top of the screen.

## 2.6 The A/I Menu

The [A/I Menu](#) is used to set the various A/I modes for the two sides in the current battle.

If the [Manual](#) menu item is Selected for a side, that side will operate without any A/I intervention and will be completely under the control of the player.

If the [Automatic](#) menu item is Selected for a side, that side will be operated by the computer with no player intervention required.

If the [Automatic with Fog-of-War](#) menu item is Selected for a side, then in addition to being controlled by the computer, certain information about that side is withheld from the player to keep them from knowing everything about that side.

## 2.7 The Options Menu

The [Options Menu](#) is used to establish certain program options that are saved and restored the next time the editor or main program is invoked. The values for these options are saved in the file [aos.ini](#) in the Windows subdirectory.

The [Introduction](#) menu item determines if the introductory sound and video will be played at the beginning of the main program.

The [Prompt for New Scenario](#) menu item determines if the main program will prompt for a new scenario when it is invoked directly.

The [Beep on Error](#) menu item determines if the main program will beep when a user error occurs.

The [Sound Effects](#) menu item determines if sound effects are played during the battle.

The [Background Music](#) menu item determines if background music is played during the battle.

The [Draw Filled Range Indicators](#) menu item is used to toggle whether the [range indicator](#) is drawn filled or only as an outline.

The [Long Fire Sounds](#) menu item is used to toggle long or short cannon-fire sound effects.

If the [Use Eight Bit Sound Files](#) option is checked, the program will play the eight-bit version of the sound effect files instead of the default sixteen-bit files. Use this option only if you are having trouble with the sound effects in the program.

The [Low Memory Setting](#) menu item is used when there is not enough memory in your computer to efficiently run the game with all graphics. When this option is set, the game will disable the Extreme Zoom-In graphics mode to save memory.

## 2.8 The Help Menu

The [Help Menu](#) is used to get help and information about the main program.

The [General Help](#) menu item is used to display these help notes for the main program.

The [Scenario Notes](#) menu item is used to display the scenario notes help file for Age of Sail.

The [About Age of Sail](#) menu item is used to display information about the main program, such as the version and copyright date.

## 3.0 The Dialogs

These dialogs are associated with the main program:

[3.1 The A/I Selection Dialog](#)

[3.2 The Modem Dial Dialog](#)

[3.3 The Modem Settings Dialog](#)

[3.4 The New Modem Dialog](#)

[3.5 The Ship List Dialog](#)

## 3.1 The A/I Selection Dialog

The [A/I Selection Dialog](#) appears at the beginning of a battle after the scenario has been chosen. This dialog allows you to establish the A/I settings for each side, the Difficulty level of the A/I, and the battle's basic ammunition Reload Rate.

The [Difficulty](#) setting you choose applies by default to Side A, unless Side A is set to Automatic A/I (with or without Fog of War), in which case it applies to Side B. For regular (i.e., non-campaign) scenarios, Sides A and B are indicated on the Scenario Selection screen. In a campaign game, your character is always assumed to be on Side A.

The [Reload Rate](#) you choose determines the speed at which all cannons on all ships on both sides will be reloaded in that scenario.

For more information about the A/I settings, see the [A/I Menu](#).

## 3.2 The Modem Dial Dialog

The **Modem Dial Dialog** is used by the caller system in modem play to dial the host system and to specify the **encryption key** to be used when reading and writing modem battle files on the host system. The encryption key chosen by the user on the caller system should be kept secret to prevent other users from reading the modem battle file on the host system.



### 3.3 The Modem Settings Dialog

The **Modem Settings Dialog** is used to configure the modem before starting modem play. The values set in this dialog are saved in the initialization file **aos.ini** and restored in subsequent executions of the main program.

The **Initialization** string is sent to the modem before any other commands. This command resets the modem back to its initial state. The default value of this string is **ATZ**.

The **Dial Prefix** string is sent to the modem just prior to dialing the remote phone number. The default value of this string is **ATDT**.

The **Dial Suffix** string is sent to the modem just after dialing the remote phone number. The default value of this string is empty.

The **Escape** string is sent to the modem to cause it to go off-hook just prior to hanging up. The default value of this string is **+++**.

The **Hang-up** string is sent to the modem to cause it to hang up the phone and to put it in a state where it will not auto-answer. The default value of this string is **ATHS0=0**.

The **Auto Answer** string is sent to the modem to put it in a state where it will auto-answer any incoming call. The default value of this string is **ATS0=1**.

The **Baud Rate** setting in this dialog establishes the baud rate of the communication between the computer and the modem. This setting should correspond to the highest speed supported by the modem. For modems that support 28.8Kb, the baud rate should be set at 38400.

The **Port** setting in this dialog should correspond to the port the modem is connected to.

The **Time-out** setting determines how long the communication code will wait for a reply from the modem after issuing a modem command. The default time-out value is **30** seconds.

## 3.4 The New Modem Dialog

The [New Modem Dialog](#) is used at the beginning of a scenario that is going to be played using the modem to define which sides each user will be playing and whether Fog-of-War will be in effect for the battle. If Fog-of-War is assigned at the beginning of the battle, it cannot be disabled during the battle.

## 3.5 The Ship List Dialog

The [Ship List Dialog](#) contains the name of every ship in the battle. Left-click once on a name in the dialog to scroll the map to that ship and Select it. Double-click on the name to scroll to the ship, Select it *and* close the [Jump Window](#). To display the [Ship List](#), Select it from the [Display menu](#).

## 4.0 The Unit List

The [Unit List](#) is displayed at the bottom of the screen, and is used to display a short list of ships on the map and various information such as wind force and direction.

The current wind direction and force in knots are displayed in the upper left-hand corner of the Unit List. The Beaufort description of the wind force is also displayed in this area.

Below the wind display is the [Damage Report](#), which lists the damage inflicted on the target's hull, sails, crew and guns by the most recent cannon attack. When a melee begins, a [Melee Report](#) will appear where the Damage Report normally does. The Damage Report will reappear when cannon fire occurs again, but the Melee Report will be revisited periodically until the melee ends. In [Full Screen mode](#), Damage Report info is displayed in the Status Bar at the bottom of the screen.

A [Data Display](#) of recently Selected ships comprises the rest of the Unit List. Each data area shows a representative picture of the ship along with its national naval flag. At the top right of each data area is displayed the total number of guns on the port and starboard sides of the ship. Below this the current load of the guns is displayed if the guns on that side are ready to fire; or, if the guns are still being reloaded, a progress bar is displayed over a ghosted display of the next load. The current remaining percentage of sail and hull are displayed next to a profile of the ship showing the most recently ordered sail setting (full, battle or furled). Below this the number of crewmen on the ship and their quality are displayed (A = Superior, B = Experienced, C = Average, D = Ordinary, E = Untrained). Two icons are used to display the current heading of the ship and its ordered heading. The black ship icon shows the current heading. If a new direction has been ordered but has not yet occurred, a white ship icon shows the ordered direction. At the far right of the ship's data area is the [Incremental Speed Setting](#) - a vertical red bar which indicates the degree to which the ship's speed has been incremented by the Speed Up or Slow Down toolbar button.

Clicking on a ship's data area with the *right* mouse button will display the [Extended Info Box](#), which lists detailed and continually updated information on the ship. In order from top to bottom and left to right, this info consists of:

- The ship's rate (see 3.0 in the on-line Scenario Notes).

- Current mizzen, main and fore mast integrity (percent undamaged); 0% means no mast is present.

- The year the ship entered service in that navy (if the year is unknown, we have assigned it the year 1775).

- Current number and type(s) of port and starboard guns, with each set of numbers in the format "number of guns x type of gun" (e.g., "5x12" would mean "five 12-pounders"); a

"c" equals "carronades".

The ship's current crew size.

The ship's turning ratio; the higher the number, the sooner it can turn 45 degrees.

The ship's freeboard - the distance (in feet) between its normal waterline and lowest gunports.

The ship's hull point rating, a value used for victory determination.

The ship's top speed in knots.

The ship's current number of guns.

The ship's current number of marines/soldiers.

## 5.0 Other Features

Other features associated with the main program:

[5.1 The Toolbar](#)

[5.2 Drag and Drop Turns](#)

[5.3 Squadron Orders](#)

[5.4 The Jump Window](#)

## 5.1 The Toolbar

The **Toolbar** displayed at the top of the screen under the menu bar can be used as a shortcut to many of the main program commands. Note: depending on your screen resolution, there may or may not be enough room on your screen for all of the buttons listed here. The buttons on the bar and the actions they perform are:



**New** - Start a new battle



**Open** - Open an existing battle



**Save** - Save current battle



**Pause** - Pause current battle



**Speed Up** - Increase speed of Selected ship, squadron or fleet incrementally



**Slow Down** - Decrease speed of Selected ship, squadron or fleet incrementally



**Ship Sync** - Synchronize speed of squadron or fleet



**Port** - Turn Selected ship to port



**Starboard** - Turn Selected ship to starboard



**Clear Squadron Turns** - Cancel current Squadron Turn order



**Full Sail** - Change Selected ship to full sails



**Battle Sail** - Change Selected ship to battle sails



**Furled Sail** - Change Selected ship to furled sails



**Fire at Will** - Toggle command to let computer conduct cannon fire for Selected ship



**Round Shot** - Set round shot as next load for Selected ship



**Chain Shot** - Set chain shot as next load for Selected ship



**Grape Shot** - Set grape shot as next load for Selected ship



**Double Shot** - Set double shot as next load for Selected ship



**Reload Port (Left) Side** - Reload port side with preselected ammunition type



**Reload Both Sides** - Reload both sides with preselected ammunition type



**Reload Starboard (Right) Side** - Reload starboard side with preselected ammunition type



**Grapple** - Toggle grapple order for Selected ship



**Next Ship** - Select next ship or squadron in current battle



**Range Grid** - Display range grid on map



**Can Fire** - Display indicators of which ships can fire and their current ammunition



**Full Screen** - Toggle full screen mode



**Magnify** - Magnify map view



**Shrink** - Shrink map view



**Turning Arrows** - Toggle display of on-map turning arrows



**Gun Range** - Show range indicator for Selected ship



**Help** - Display main program help file

Note that turning, loading, sail, speed, and Next Ship orders can be issued either for individual ships or as [Squadron Orders](#).

**NOTE ON RELOADING:** Normally, if you change the ammunition type on one side of a ship, the other side will also reload that type when it eventually fires. To reload one side with no long-term effect on the ammunition type on the other side of the ship, you must hold down one of the following keys when you Select the new ammunition type:

L, P or Z if you are reloading the port side;

R, S or X if you are reloading the starboard side.



## 5.2 Drag and Drop Turns

In addition to the standard method of turning ships by specifying turns to port and starboard, there is an additional way of turning ships called **Drag and Drop Turns** that may be easier, especially when a ship is moving downward on the screen. To perform a Drag and Drop Turn, click the ship to be turned with the left mouse button, and while holding the mouse button down, drag the mouse in the direction of the desired turn. Then release the left mouse button. This will initiate a turn of the Selected ship in that direction. If the **Control** (Ctrl) key is held down while the Drag and Drop Turn is performed, the turn will be applied in the same manner as a normal Squadron Turn.

## 5.3 Squadron Orders

The orders for turning, loading, speed changes and setting sails can be applied to an entire squadron simultaneously. To do this, first Select any ship from the squadron. Then issue the order while holding down the **Control** (Ctrl) key. The order will apply to the Selected ship's entire squadron. For turning, you should Select either the leading or end ship in the squadron formation. If you order a Squadron Turn for the leading ship, each ship will turn at the proper location to maintain the squadron formation. If you order a Squadron Turn for the end ship, the ships will all turn in parallel at the same time.

If you order a Squadron Turn for a particular squadron and fail to allow all its ships to finish turning, you may find that you cannot turn individual ships. This is because the Squadron Turn is still in effect for that squadron. To clear this situation, Select the **Clear Squadron Turns** menu item with one of the squadron's ships Selected.

Changing the speed of a ship can be incremented/synchronized throughout the Selected ship's squadron by using the **Control** (Ctrl) key, or throughout its entire fleet (i.e., all the ships on its side) by using the **Alternate** (Alt) key.

The **Next Ship toolbar** command can be used to advance to the next squadron by issuing this command with the **Control** (Ctrl) key held down.

## 5. 4 The Jump Window

The **Jump Window** displays a smaller version of the map, with all ships in the scenario displayed on it. The white rectangle indicates the area currently on-screen. Left-click once on the Jump Window to scroll the map to that spot. Double-click on it to both scroll to that spot and close the Jump Window.

