

# Fleet Battle School User Manual

08 Mar 2016

## 1. Introduction

This help file covers how to run the desktop and mobile versions of the FBS main program including how to run network games. When you first run the main program, it will prompt you for a new scenario to load. On the desktop version, if you want to load an existing battle file, then cancel this dialog and open the battle file using the **Open** option of the **File** menu. At any time, you can start a new scenario in the main program by using the **New** option.

## 2. The Main Program Interface

The interface of the Main Program consists of various parts:

- **Main Chart** – In the middle of the main program window, the Main Chart is displayed. It consists of a number of hexes, each one a size determined by the specific scenario. In each hex, you have a number of counters. Each counter represents a group of units of a given type such as seacraft, aircraft, etc.
- **Unit List** – On the left-hand side of the main program window, the Unit List is displayed. When you click on a hex (or tap) in the Main Chart, the hex becomes the **Hot Spot** and the Unit List will display the units in that hex. You can click on units (or tap) in the Unit List to select or unselect them for various functions you perform in the Main Program.
- **Status Bar** – At the bottom of the main program window you will see the Status Bar. It displays various information such as the turn, the current hex coordinates, and the characteristics of that hex such as water depth, etc.

You can scroll around the Main Chart by two methods:

- **Edge Scrolling** – Moving the mouse to the edge of the screen causes the Main Chart to scroll in that direction. (Desktop Only)
- **Drag Scrolling** – Holding down the left mouse button in the Main Chart and dragging the mouse will scroll the chart. (On Mobile versions, hold your finger down in the Main Chart and drag.)

Both of these are enabled by default, but you can turn either of them off by using the **Scrolling Method** option of the Options Menu. In any case you can use the arrow keys to scroll the Main Chart in Desktop versions.

You can zoom in and out in the Main Chart in two ways in the Desktop versions:

- You can use the scroll wheel on your mouse to zoom in and out.
- You can press the predefined zoom scales 1, 2, 3, and 4 on the keyboard (across the top, not the numeric keypad).

You can also zoom in and out in the Unit List by holding down the **Ctrl** (Control) key while using the scroll wheel on your mouse or pressing the keys 1, 2, 3, and 4 on the keyboard.

On Mobile versions, you can zoom in and out by pressing with two fingers and pinching or spreading.

The Main Chart displays the Sea and Land hexes associated with the current scenario. Sea hexes can have up to 5 depth values:

- **Very Shallow** - Red
- **Shallow** – Pale Blue
- **Medium** – Light Blue
- **Deep** - Blue
- **Very Deep** – Dark Blue

A Sea hex can also have 3 clutter values:

- **Low**
- **Moderate** – Gray rectangle
- **Heavy** – Black rectangle

The boundary between Sea and Land hexes is shown with a green line.



The Unit List displays various information associated with each unit depending on its type. For seacraft, the values displayed are:

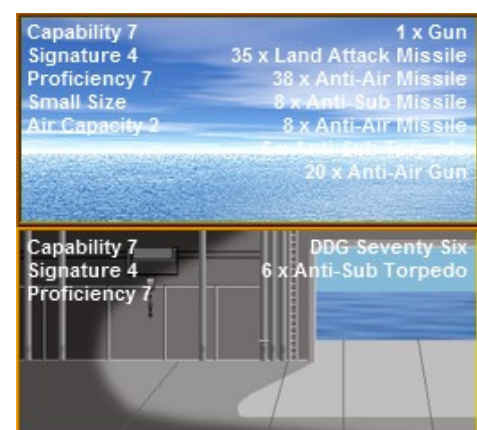
- **Damage** – Damage and Staying Power.
- **Fuel Used** – Fuel Used and Total Fuel (Unlimited for nuclear power).
- **Friction** – Accumulated Friction in the battle.
- **Max Speed** – Maximum speed possible for this ship.

In addition, if a seacraft is the Flagship for its group, then the Mission is shown in the unit picture.



For aircraft, the values displayed are:

- **Number** – Number of aircraft in this group.
- **Altitude** – Current Altitude of this group.
- **Friction** – Accumulated Friction in the battle.
- **Range** – The range of this aircraft.



If you **right click and hold** in the Unit List (**long press** on Mobile devices), then alternate information is shown:

- **Capability** – The Capability level of the craft.
- **Signature** – The Signature level of the craft.
- **Proficiency** – The Proficiency level of the unit.
- **Size** – The physical size of the seacraft.
- **Air Capacity** – For seacraft, how many aircraft they can carry.
- **Home Base** – For aircraft, the home air base or ship of the group.

In addition, for aircraft, one of two listings is shown in the alt display:

- For flights, a list of the loads on the aircraft by type and number of each.
- For squadrons, a list of the different capabilities of the aircraft in that squadron.

Alternatively on Desktop versions, you can right-click while holding down the Ctrl (Control) key to toggle the display of alternative information.

## 2.1 Counters

Various counters are displayed on the main chart for the entities that are there.



Standard counters are displayed using a color representing the force associated with the counter. A designation on the counter indicates the type of naval group or number and type of aircraft in a flight.



Because of Fog-of-War, you may know what force an entity is associated with but not its make up.



At the lowest levels of detection, you may not know much more about a detected counter other than whether it is a submarine, surface group, or aircraft.

The details as to the exact meaning of these detection levels is described in the Rules Documentation.

Other counters and displays on the main chart include:



A SAM site is shown on the main chart using the color of the force which owns the SAM.



A Minefield is shown on the main chart using the color of the force which has laid the minefield plus a number indicating the density of the mines in that field.



An Air Base is shown using the color of the force that owns it and a runway symbol plus a number indicating the number of aircraft currently at the base.



A Port is shown using the color of the force that owns the port with an anchor symbol.

When a seacraft is sunk or a flight of aircraft shot down, then a marker is placed at the location where that happened:



Sunken surface ship.



Sunken submarine.



Crashed flight of aircraft.

Enemy markers are shown highlighted in yellow:



## 2.2 Ranges

Various colored rings are displayed to show ranges in the game. For loads that an entity might carry or have, the following color scheme is used:

- **Yellow** – Radar range.
- **Light Blue** – Range of anti-air weaponry.
- **Light Green** – Range of anti-ship weaponry.
- **Dark Blue** – Range of anti-sub weaponry.
- **Magenta** – Range of land-attack weaponry.
- **Orange** – Range of anti-radiation weaponry.
- **Black** – The flight range of airborne aircraft. In addition, for planning purposes, in the Hot

Spot hex, both the total range and half that range are drawn for the first aircraft selected.

### 3. Issuing Orders

The core of the Fleet Battle School is based on two key steps:

- **Issuing Orders** – Each player issues orders to the forces under their control.
- **Advancing the Turn** – Once all players have issued their orders, the turn is advanced. Note: in Network Mode (see below), only the Host player can advance the turn.

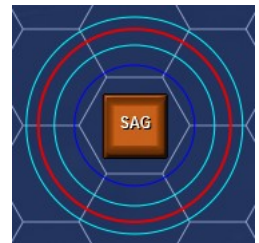
The basic process of issuing orders for sea units is based on a three-step process:

- **Press and Hold** – A player clicks (or taps) on the Main Chart at the location of the units they wish to issue orders for. Then hold the mouse button down (or long press in the Mobile version) until order mode is invoked as shown below.
- **Drag While Holding** - While holding down the mouse button (or finger), the player then drags the mouse (or finger) to indicate the path or direction of the intended movement. For sea units, this path is hex-by-hex.
- **Release and Specify** – Once the path is determined, releasing the mouse button (or finger) will display a dialog so that specific information about the order can be entered.

These steps are described in more detail in the following sections. A higher level method using **Mission Macros** follows that description.

#### 3.1 Press and Hold

If there are both sea and air units in the same hex (as when aircraft are being carried by seacraft), then clicking in a hex will select the sea units. After holding down the mouse button for a short time, the game will enter **Order Mode** and a large red circle will be shown.



#### 3.2 Drag While Holding

With the mouse button held down, the path of the order is specified by dragging the mouse along the intended path. This path is hex-by-hex as shown below.

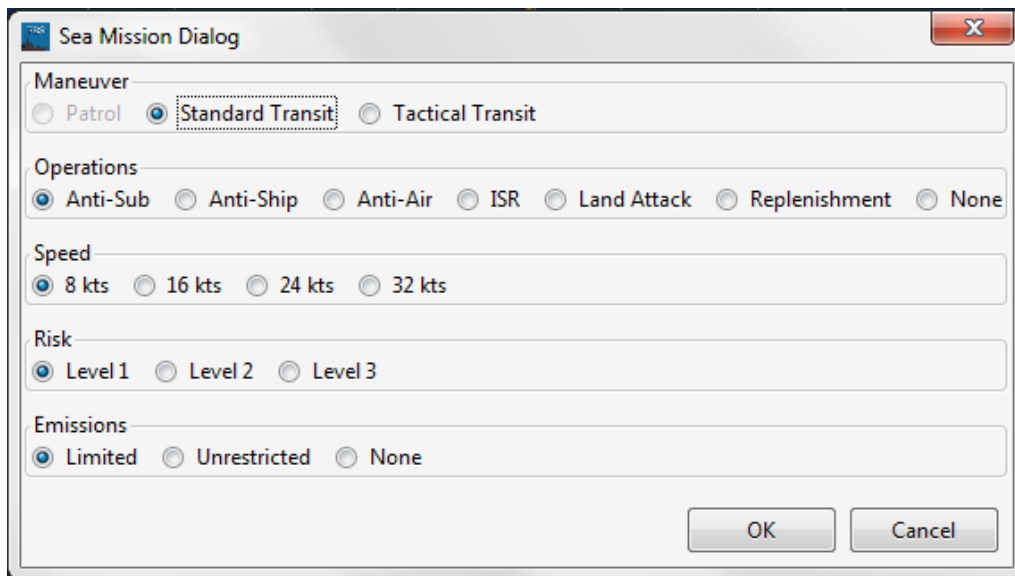


Optionally, you can release the mouse button in the same hex you started in to specify a **Patrol** order (see below).

### 3.3 Release and Specify

Once the path for the order has been determined, then release the mouse button. You will be prompted for additional information about the order as described below.

The Sea Mission Dialog will be shown. **IMPORTANT:** The various elements associated with orders in the Fleet Battle School game can be modified on a scenario-by-scenario basis. This means that the specific items you see in the Sea Mission Dialog may vary from the examples shown here.



The Sea Mission Dialog consists of several elements:

- **Maneuver** – A Patrol is issued when you release the mouse button in the same hex you start in. Otherwise, you will have the option to specify a Transit.
- **Operations** – The Operations options give you the ability to specify the operations or posture the units should have during the execution of this order.
- **Speed/Duration** – In the case of a Transit, you specify the speed you wish the seacraft to move using. In the case of a Patrol, you specify the duration you wish the seacraft to perform that Patrol.
- **Risk** – You specify a Risk level associated with the order. The meaning of this level is described below.
- **Emissions** – You specify an Emission level for the seacraft. The meaning of this is also specified in the Rules Documentation.

When you click OK, the order is annotated on the Main Chart as shown below.



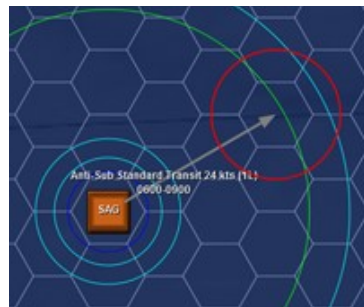
The codes following the Maneuver and Operations of the order reflect the Risk and Emissions specified. Below that is the time span during which the order will be executed.

The **Risk** value is by default three values:

- **Cautious** indicates that the group should avoid enemy ships based on the distance to the nearest enemy ship. The exact distances used depend on the type of group and values specified in the Rules Documentation.
- **Moderate** indicates that the group should not make any changes to its specified orders as a result of the presence of enemy ships.
- **Aggressive** indicates that the group should pursue enemy ships based on the distance to the nearest enemy ship. The exact distances used depend on the type of group and values specified in the Rules Documentation.

### 3.4 Adding Additional Orders

In general, you will form a sequence of orders for any unit with each order in turn picking up where the previous order left off. To add another order to the ones you have already issued for a unit, click on the destination of the last order, and then follow the same three-step sequence: Hold, Drag, and Release, to create the next order, as shown below.



If you click on the same hex the seacraft is in and issue a new order, then any previous orders issued for that seacraft are deleted. Likewise, if you click on any intermediate destination in the sequence of existing orders for a unit and create a new order from there, then any orders beyond that intermediate destination are deleted.

### 3.5 Editing Orders

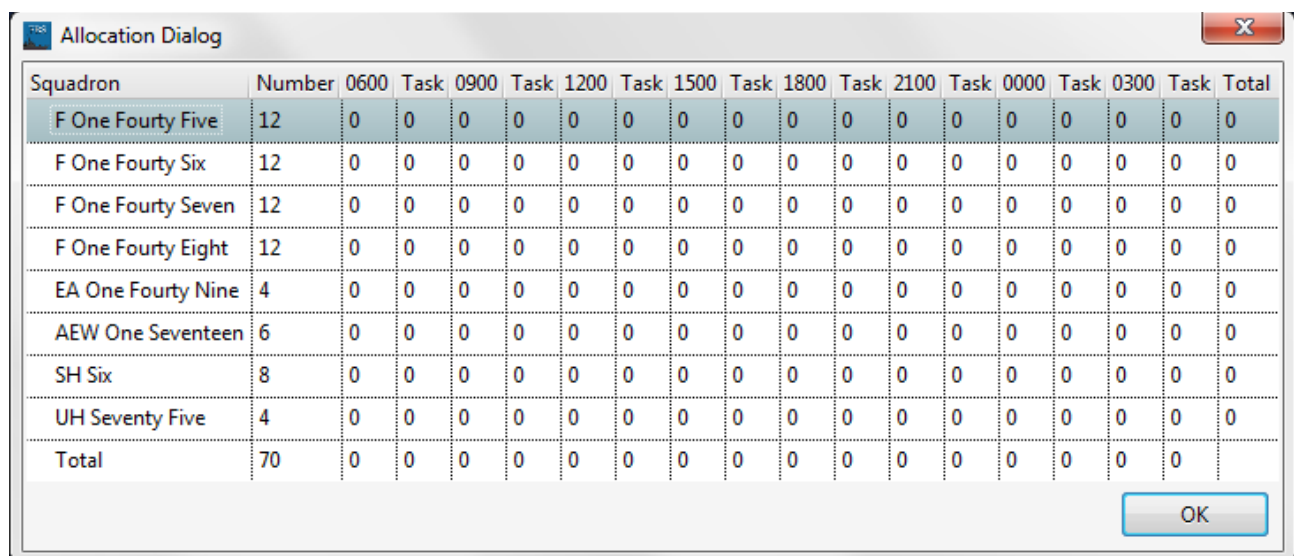
You can change orders you have previously issued by **double-clicking** in the hex containing the selected units. You will be prompted with the same Sea Mission Dialog as before to make changes to that particular order. In the case of the last order issued, you will also have the option to delete



that order. In addition, as mentioned before in the section on Adding Additional Orders, you can delete existing orders by issuing a new order either from an intermediate destination or by issuing a new order from the starting point of the seacraft.

### 3.6 Air Allocation

As mentioned previously, in general you want to space out your air missions over a 24 hour period during the operation so that you have sufficient coverage for defensive and offensive air missions. To build a plan for air allocation and see how you are matching up to that plan, you use the Air Allocation feature. If you select the **Air Allocation** option from the Scenario Menu, it will display the Air Allocation Dialog relative to the air squadrons in the currently selected hot spot as shown in the screenshot below.



Squadron	Number	0600	Task	0900	Task	1200	Task	1500	Task	1800	Task	2100	Task	0000	Task	0300	Task	Total
F One Forty Five	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F One Forty Six	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F One Forty Seven	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F One Forty Eight	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EA One Forty Nine	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AEW One Seventeen	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SH Six	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UH Seventy Five	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The Air Allocation Dialog divides up the 24 hour period into game turns. Associated with each turn there are two values: The number of aircraft you have allocated during that turn and the number of aircraft you have tasked for a mission in that turn. The Total at the end of the rows is the total number of aircraft allocation while the Totals at the bottom of each column are the number of aircraft allocated for that turn and the number of aircraft tasked for that turn.

You use the Allocation Dialog as a planning tool. Start by allocating your aircraft over the 24 hour turn according to your plan on how you want to use them taking into account expected attribution and required aircraft turn around. Next build your air mission plan based on orders and takeoff times. As you do so, compare your tasking with the plan you build using allocation to see if your air orders are following the plan you established for the next 24 hour period.

### 3.7 Underway Replenishment

It is possible to replenish your ships during a scenario provided you have an AO or AOE oiler available. The requirements for replenishment are then as follows:



- The ships you want to replenish should be in the same has as the oiler.
- If the ships have any order assigned to them, it must be the Replenishment mission.
- If the ships are transiting, they must not exceed the speed given by the **Rules File** (typically 16 knots).

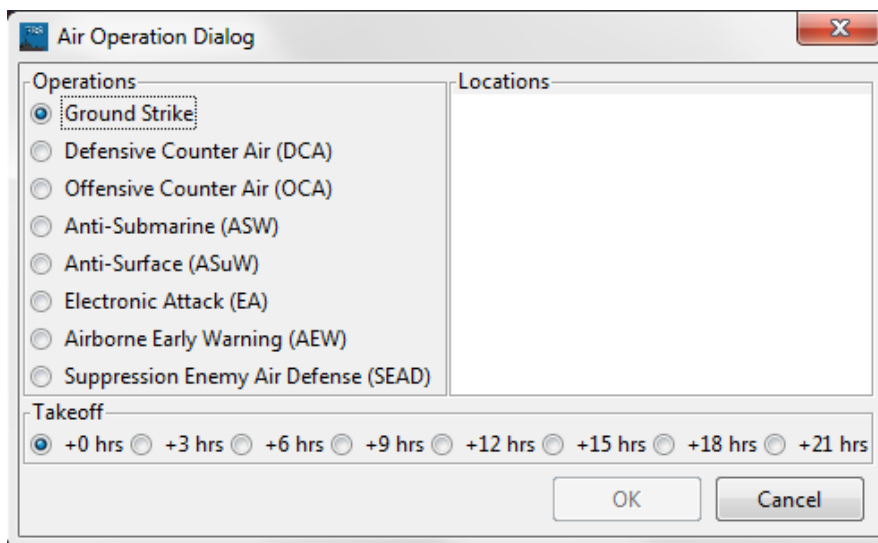
Provided these conditions are met, then your ships will automatically be replenished as the scenario progresses.

### 3.8 Air Operations

The process for issuing orders for air units is different and consists of three steps:

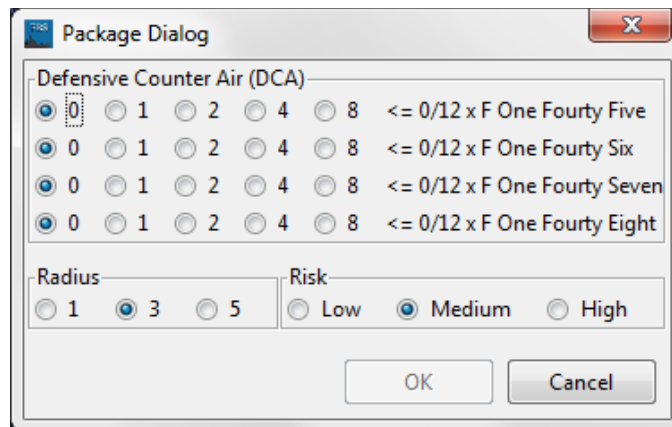
- Selecting a hex that applies to an Air Operation. This may represent the target of a strike or the center of a patrol area.
- Invoking the Air Operation option either from the menu or toolbar option.
- Specifying the details of the Air Operation and the details of the package associated with the operation.

The Air Operation Dialog shows you the available operations you can specify.



As you select an Operation, the list of airbases and carriers that can support that Operation are listed on the right panel. You can also specify at the bottom if the Operation is to start in this turn or some future turn.

Once you click OK, the Package Dialog appears.



The Package Dialog lists the air squadrons that can support the Operation. You select from this list the number of aircraft from each squadron you want to involve in the Operation. Note the two numbers before each squadron:

- The first number is the number of aircraft you have allocated using the Air Allocation Dialog from this squadron for the specified turn.
- The second number is the number of aircraft physically present in the squadron at the current time.

In general your assignment of aircraft should be compatible with your allocation. You can over-allocate aircraft however and this may be suitable for shorter scenarios where a 24 hour air allocation is not necessary. At the time the Operation is launched, the number of aircraft you request may not be physically available due to turn around or to combat losses. If so, then you will only get the number that are physically available.

Following specifying the number of aircraft, you can associate a radius in hexes to a patrol mission. You use this radius to control how large of an area the patrol will cover. Using a smaller radius increases the probability to encountering enemy ships or aircraft in that patrol while using a larger radius increases the size of the patrol when you are not sure exactly where the enemy might be located. In particular, a radius of greater than 3 will increase the effective signature of the target while a radius less than 3 will increase the effective capability of the aircraft.

You also specify the Risk associated with the operation. If you specify Low Risk, then the operation will be terminated if it is attacked by the enemy. If you specify Medium Risk, then it will be terminated if the air superiority aircraft associated with the flight expend their BVR (Beyond Visual Range) weapons or if they suffer 50% or greater casualties. If you specify High Risk, then the operation will be terminated only if the air superiority aircraft associated with the flight expend all of their BVR and WVR (Within Visual Range) weapons or lose 75% or more casualties.

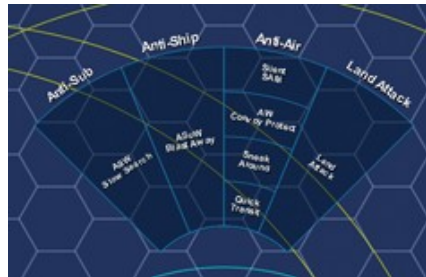
### 3.9 Electronic Attack

Certain aircraft are designated as Electronic Attack aircraft with the notation EA. Such aircraft provide some defense against enemy missiles when they are flying in the same hex as the target aircraft. The Effectiveness of the EA aircraft capability versus the missile capability is used to determine a probability. This then determines a defense value of 1 minus that probability. This

defense value is multiplied times the Effectiveness of the missile attack against the target aircraft resulting in the final probability that is used to resolve the attack.

### 3.10 Mission Macros

Depending on the scenario, there may be several Mission Macros defined which can be used to facilitate the creation of sea orders. To use Mission Macros, you first select the unit that the orders will apply to and then **right-click** in a destination hex (**long press** on mobile devices). If there are Mission Macros that apply to this situation, then a display of those will appear on the screen.



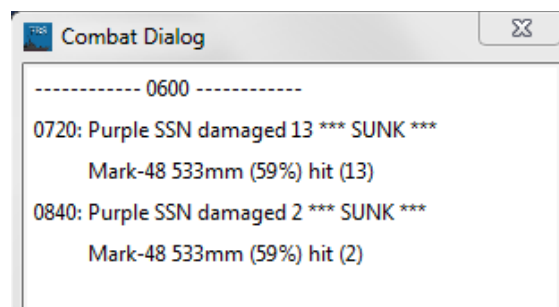
If you select one of these, then a series of orders will be created for the selected unit. You then have the option of modifying those orders or adding to them.

## 4. Running the Game

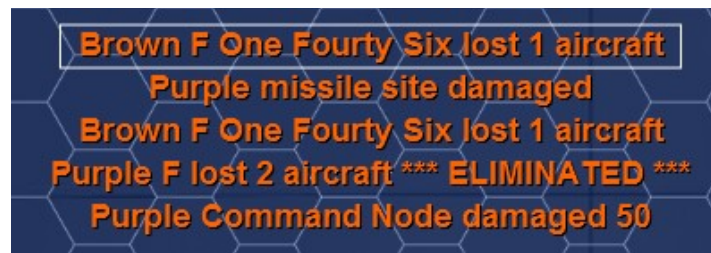
You advance the turn in a game by selecting the **Advance Turn** option of the **Scenario** menu.

### 4.1 Hit Detail

Hits against ships, aircraft, and other targets is shown using a Combat Dialog.



On mobile devices, hits are shown at the top of the screen.



You can click on any of the descriptions and the main chart will scroll to the location that hit occurred.

## 4.2 Damage Control

Damage against ships can result in various changes to the state of the ship. As a result of a hit, a ship may suffer a **Firepower Kill**.

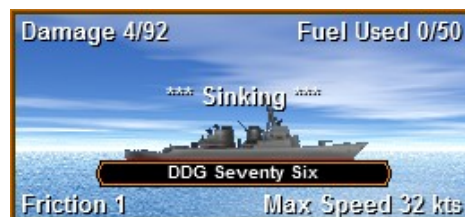


In this state, the ship cannot fire or use detection against enemy ships. A ship may suffer a **Mobility Kill**.



In this state, the ship may fire but cannot move. In addition, a ship may suffer both a Firepower Kill and a Mobility Kill.

A further state is that of **Sinking**.



This state combines the effects of a Firepower Kill and a Mobility Kill. In addition, at the

beginning of a subsequent turn, a ship in the Sinking state may transition to being Sunk or may transition from Sinking to both the Firepower and Mobility Kill states. These transitions are under the control of internal table data and not under the influence of the user.

## 5. Network Games

You can establish a Fleet Battle School network game in multiple ways:

- You can connect both mobile and desktop systems to a desktop system which is designated as the Host.
- You can connect both mobile and desktop systems to a stand-alone system on the Internet which acts as the Server for the game.

Note that the port that Fleet Battle School uses for network games is **9253** and this must be available to the software to open without blocking from firewalls or other protective software such as anti-virus.

In the desktop version of Fleet Battle School, you do this in one of two ways:

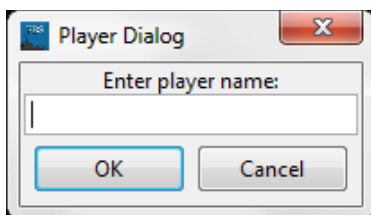
- One of the desktop systems should select **Server** option from the **Mode** menu. This will establish that system as the Host and all other systems, desktop and mobile, should then connect to that system.
- All other desktop systems connect to the Host using the **Caller** option from the **Mode** menu. This will allow that system to connect to the Host system for network play.

There is a slight difference between being a Host or being a Server. A given network game needs both a Host and a Server with a desktop system being able to act as both of these using the Server option. When using a stand-alone system on the Internet which acts as the Server, then one of the systems that connects to it as Callers will still be a Host but not a Server.

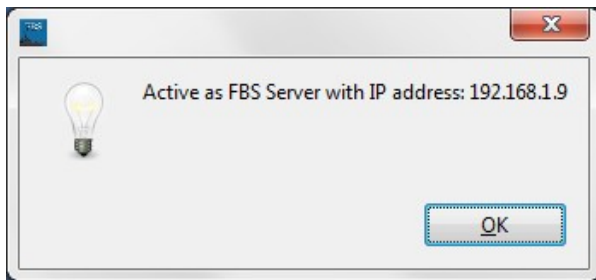
The **Host** in a network game is responsible for loading and saving the scenario being played. All other connections, both desktop and mobile, will be sent a copy of the scenario. Likewise, the Host computer (or Server if stand-alone) is responsible for managing the network traffic and ensuring synchronization of all Callers.

### Host Mode

When you establish your computer as the Server, you will also be the Host. The program will prompt you to enter your Player name for the game.

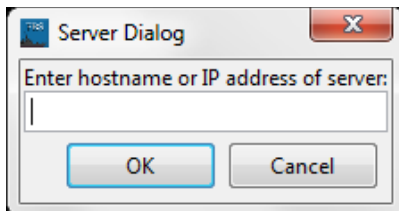


Your IP address is then displayed so you can convey that information to other players wishing to connect to you.



## Caller Mode

When you invoke the Caller option of the Mode menu, you will be prompted to enter the IP address or hostname of the Server.



Likewise, you will be prompted to enter your player name for the game.

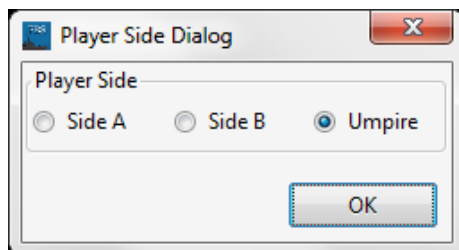
## 5.1 Summary of Network Play Terminology

The following terms are used when talking about a network game configuration.

- **Server** – A Server can either be an instance of FBS invoked in Server mode or the stand-alone server program. All Callers in a network game are connected to a Server.
- **Caller** – A Caller is any instance of FBS which is invoked in Caller mode and thus connected to a Server.
- **Host** – An instance of FBS which has initiated a network game. The Host is responsible for loading and saving games in network play. A Host will be a Server or Caller and will be an Umpire or Commander.
- **Umpire** – An instance of FBS which is a Host but which is not playing a specific side. An Umpire is responsible for resolving the adjudication of the network game for all other players.
- **Commander** – The first instance of FBS to join a network game on a given side will be the Commander for that side. A Commander is responsible for assigning organizations to all Callers on that side.

## 6. Umpire Mode

This section describes the various features associated with Umpire Mode in network play. You select Umpire Mode when prompted by the Player Side Dialog which is displayed when you start Server Mode.



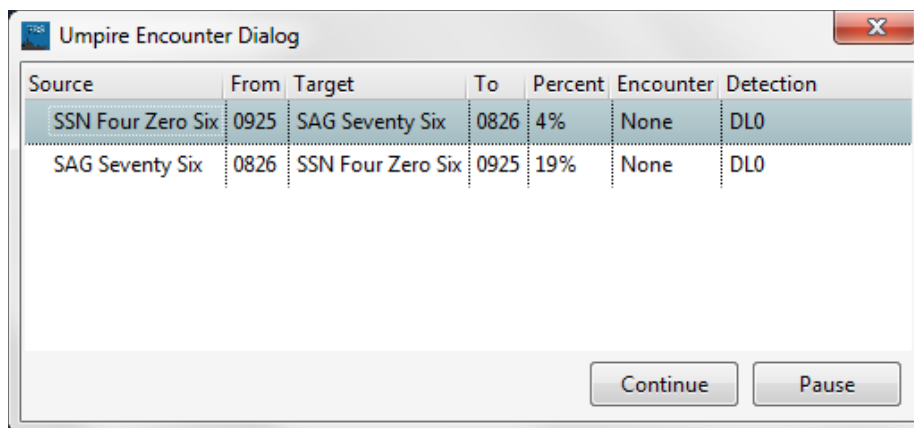
There are several features associated with Umpire Mode:

- There is no Fog-of-War in Umpire Mode. The Umpire can see the units and orders of both sides.
- The Umpire is prompted for Encounters and Engagements and given the option of modifying those before they are applied in the game as described below.
- If all the players in the network game have joined on the same side, then the Umpire has the option of playing the opposing side. Otherwise, the Umpire's interaction is limited to the Encounter and Engagement feature.

### 6.1 Encounter Prompts

When a possible Encounter occurs in the game, execution is stopped and the Umpire is prompted with the Encounter Dialog. The Encounter Dialog has several elements:

- **Source/From** – The unit or group that can generate the Encounter and its location.
- **Target/To** – The unit or group that can be the target of the Encounter and its location.
- **Percentage** – Based on internal tables and modifiers, the probability that the Encounter will occur.
- **Encounter/Detection** – The type of Encounter that has occurred (Visual, Radar, Sonar, ...) and the Detection level as determined by the game engine using a random number generation against the percentage.



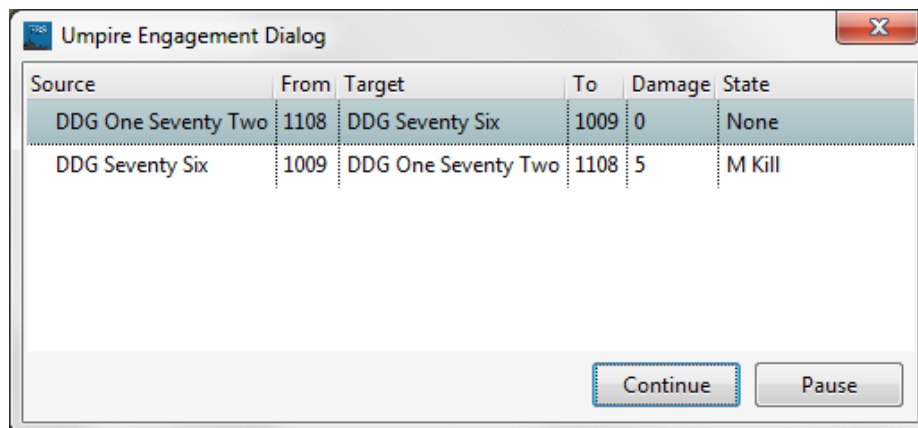


The Encounter and Detection fields for each entry are editable by the Umpire. Doing this involves:

- Clicking in the field to be changed.
- Selecting one of the drop-down options shown.
- IMPORTANT: Click again, or hit return, to enter the selected value into the field.

## 6.2 Engagement Prompts

Once the possible Encounters have been determined, then Engagements are resolved. The Umpire is prompted with a list of these for review in the Umpire Engagement Dialog.



The screenshot shows a window titled "Umpire Engagement Dialog" with a close button (X) in the top right corner. The window contains a table with the following data:

Source	From	Target	To	Damage	State
DDG One Seventy Two	1108	DDG Seventy Six	1009	0	None
DDG Seventy Six	1009	DDG One Seventy Two	1108	5	M Kill

At the bottom right of the dialog, there are two buttons: "Continue" and "Pause".

In addition to the fields before the **Damage** field shows how much damage has occurred to the Target as determined by the internal tables and modifiers of the game engine and **State** which indicates any changes to the damage state of the ship. These values can be edited by the Umpire as before:

- Clicking in the field to be changed.
- Entering a new damage value or selected a new damage state.
- IMPORTANT: Click again, or hit return, to enter the selected value into the field.