

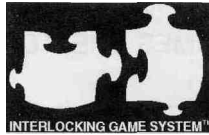


Presents

an



Production of



An Interlocking Game System Module

RULES OF ENGAGEMENT

programmed by
THOMAS R. CARBONE

art direction & graphics
MAURICE MOLYNEAUX

music by
DAVE GOVETT

music produced by
GEORGE ALISTAIR SANGER, THE FAT MAN

technical advisor
MARK R. BRADSHAW

best boy
JAMES SHELTON

missions by
HAYWOOD NICHOLS
THOMAS R. CARBONE
MAURICE MOLYNEAUX
JAMES SHELTON

manual written by
MAURICE MOLYNEAUX
THOMAS R. CARBONE

designed by
THOMAS R. CARBONE
MAURICE MOLYNEAUX

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INTRODUCTION

Designer's Notes

Back in 1989, when work on our previous game, *Breach 2*, had just commenced, we began thinking about writing a real-time spaceship combat game. Those of you familiar with our previous games know of our Universe series and that spaceship combat is not new to us.

What is new, however, is the initial approach. The Universe games were created as massive contests that covered many different aspects of spacecraft operation (mining, piracy, trading, planetary assault, and transport). We wondered about taking an opposite approach. Supposing some of these aspects of the Universe games were developed into full-fledged games in their own right, playable on their own, and then suppose that these games could also be linked together to form one huge game.

This is the concept behind the *Interlocking Game System* (IGS). A standard specification was created and incorporated into what was then the current project, **Breach 2**. Of course, once **Breach 2** was released, IGS remained more or less a concept, since there was no other game to link with.

Rules of Engagement is that missing link. Boarding enemy vessels and assaulting alien outposts are the main ties to **Breach 2**. The games work seamlessly, one leading the other, to create a single, integrated playing experience. Of course, **Breach 2** is not required to play **Rules of Engagement**, as the latter has automatic squad combat routines built in. However, these two games when combined represent our first step in creating the ultimate space game.

Naturally, everyone asks about future IGS modules. We do plan more in the future. Imagine having three, four, or more complete games working as one! That is our dream, and you can help to make it happen. If you have any suggestions, drop us a line. Let us know what adventures you would like us to plot a course for.

Engage Hyperdrive!



Thomas R. Carbone, President
Omnitrend Software, Inc.

INTRODUCTION

Design Philosophy

Like most computer simulators, **Rules of Engagement** is a highly detailed and fairly complex program. An ordinary aircraft flight simulator can easily confuse the average gamer with its multitude of controls and options, and a real-time starship simulation could easily become even more complex because of the very nature of space and the laws of physics which apply. With fleets of starships travelling at greater than half the speed of light, combat zones with a diameter greater than 50 Earths, and an overall arena billions of kilometers on a side, a game like **Rules of Engagement** could become hopelessly unwieldy.

However, although we attempted to be as realistic as possible wherever we could, our primary goal was to make an interesting and entertaining game. Real starship commanders, when and if they actually appear on the scene, will no doubt have to be highly trained: understanding doppler shifts and time-dilation at speeds approaching that of light, and have a keen knowledge of Newtonian mechanics. Obviously, this is a bit much to ask of the average gamer. After all, who wants to calculate acceleration rates for orbital injection around a planet or compensate for time slowing down as our ships approached lightspeed?

Thus, certain "liberties" were taken with the game. There's no time dilation as ships approach lightspeed, and your ships' sensors use a "HyperScanner" field system in order to give you real-time updates on the positions of targets in your vicinity. All this was done to keep the game playable.

In keeping with this simplification, it's logical to expect that, as computers become more and more advanced, on such hypothetical starships a commander would only have to tell the computer what he wanted and it would do it. After all, at velocities approaching 300,000 kilometers per second (lightspeed), human reflexes are thousands of times too slow to react to changes and threats. In reflection of this, in **Rules of Engagement** the player operates all aspects of the mission via a simple yet powerful computer interface. You have a great deal of control, but all the mundane details — like taking care that the antiproton to deuterium ratio in the engines is correct, and that the ship stays at the right distance relative to a target while you're busy firing the weapons—are handled automatically.

Even with this simplification, there's a lot to learn and understand. We've tried to make many of the ship's functions fairly automatic, allowing you to adjust various devices and settings when you become more familiar with them. Our design goal was to produce a full-featured, realistic, entertaining and easy to play game. We think we've succeeded. We hope you agree.

About This Manual

In Omnitrend's "Universe" a potential Fleet Commander must first complete four or more years at a military academy and then spend more years rising through the ranks. The training received during this period is intensive, covering everything from diplomacy, discipline, and tactics to technology and astrophysics. The size of this manual should make it clear that we're *not* about to try to give you this background training. While realistic in many ways, **Rules of Engagement** is nowhere near as complex to play as a real starship would be to command and control.

This is not to say that you could just dive into the program and play the game successfully without first reading at least portions of this manual. However, we also understand that most of you will not want to have to read all of the relevant sections of the manual prior to playing the game the first time. So, to give you a general idea of how **Rules of Engagement** is played, **Part I** (the tutorial) takes you through a very simple beginner mission with step-by-step instructions. In this way you'll get to play **Rules of Engagement** right away and also get some familiarity with the program that will assist you in understanding the rest of the manual.

For those of you unfamiliar with other games in Omnitrend's "Universe," **Part II** updates "The Story So Far...", which fills you in on the background of the game, lists your overall operational orders and also contains intelligence reports on enemies, etc.

Part III describes your goals, objectives and resources, what missions are and how they are played. **Part IV** documents the **Rules of Engagement** interface system (CCSI), describing the design features and general theory of operation. **Part V** continues in this vein, describing the controls and panels in the game itself, documenting each and every button, readout and display.

Part VI describes tactics, techniques and strategies that may be useful in successfully completing your missions.

One of the most important features of **Rules of Engagement** is that it allows you to design and build missions yourself. **Part VII** documents the "builder" sections of the game and how the various editors are used to create new missions or edit existing ones. **Part VIII** documents the Interlocking Game System and how **Breach 2** can be linked with **Rules of Engagement** to make a larger game.

Finally, there are the **Appendixes**, which document technical details, describe the supplied missions, etc.

GETTING STARTED

Getting Started

FOR ALL SYSTEMS

Making Backup Disks

We suggest that you make back-up copies of all the game disks prior to installation. In the event of an accident, you will be able to restore the original disk(s) from your back-up copy.

Readme Files

If there is a README.TXT file on your game disk 1, it will contain important information and instructions that were not available at the time this manual was printed.

IBM/TANDY

System Requirements

IBM-PC, Tandy, or Compatible computer with at least 640K of memory, 2 floppy drives or a hard disk, MS-DOS (or PC-DOS) 3.0 or higher, and CGA, EGA, VGA, or Tandy compatible graphics. A Microsoft, Tandy, or compatible mouse is optional. AdLib, SoundBlaster, and Roland MT-32/LAPC-1 sound boards are supported. Extended memory (XMS) is supported.

Installing the Game Onto a Hard Disk

Your game is shipped on either four 360K 5.25" disks or two 720K 3.5" disks. Place disk 1 into either drive A or B. Type the letter of the drive containing disk followed by a colon (Example: **A:**) and press **Enter**. Type **ROESETUP** and press **Enter**.

Installing the 5.25" Version Onto Floppy Disks

Your game is shipped on four 360K 5.25" disks. If your two floppy drives are of different sizes (one 3.5" and the other 5.25"), it will be necessary to copy some of the game disks onto disks of another size. When playing the game, disks 1, 2, and 3 will be used in drive A. Disk 4 will always be used in drive B. If drive A is 3.5", you will need to copy disks 1, 2 and 3 onto 3 3.5" disks. If drive B is 3.5", you will need to copy only disk 4 onto a 3.5" disk.

Once you have resolved any differences in the disk sizes, place game disk 1 in drive A, Type **A:** and press **Enter**. Type **ROESETUP** and press **Enter**.

Installing the 3.5" Version Onto Floppy Disks

Your game is shipped on two 720K 3.5" disks. If your two floppy drives are of different sizes (one 3.5" and the other 5.25"), it will be necessary to copy some of the game disks onto disks of another size. When playing the game, disk 1 will be used in drive A and disk 2 will be used in drive B. If your drive A is a 1.2mb 5.25" drive, you will need to copy disk 1 onto a 1.2mb 5.25" disk. If drive B is a 1,2mb 5,25" drive, you will need to copy disk 2 onto a 1.2mb 5.25" disk. If either of your drives are 360K 5.25", you will need to obtain the 5.25" version of the game. Contact Mindcraft at the number in the back of this manual for instructions.

Once you have resolved any differences in disk sizes, place disk 1 in drive A. Type **A:** and press **Enter**. Type **ROESETUP** and press **Enter**.

Running the Game

To play the game, type **RULES** and press **Enter**.

Memory Requirements

Rules of Engagement requires almost all of the memory on a 640K computer. If you receive an error message indicating you do not have enough memory, here is what you can do:

- 1) Be sure you are running the game from the DOS prompt. Running the game from within a file manager (such as Windows or Deskmate) may not leave enough memory for the program.
- 2) Check the device drivers loaded in your CONFIG.SYS file. This includes RAM disks, disk caches, and sound drivers. You may need to remove some or all of your drivers. You will need to leave the mouse driver installed in order to use a mouse with the game.
- 3) Remove all TSR (terminate and stay resident) programs such as Sidekick.
- 4) If you still receive the memory error, you may need to remove your mouse driver as well. Also, selecting the internal speaker as opposed to one of the sound boards will use less memory. Using the CGA graphics mode will also save on required memory.

GETTING STARTED

Using Extended Memory (XMS)

This game supports extended memory. In order for the game to use this memory, you must have an extended memory driver present. HIMEM.SYS from Microsoft and QEMM from Quarterdeck are examples of such drivers. Upon running the game, a message will appear to indicate the game is using extended memory. The game will load data into this memory, reducing the amount of disk access and thus speeding up the game.

AMIGA

System Requirements

Any Amiga computer with at least 1 mb of memory.

Installing the Game

Place game disk 1 into drive DFO: and open up its window. Double-click on the ROESETUP icon.

Running the Game

Double-click on the icon labeled RULES.

ATARI ST/TT

System Requirements

Any Atari ST or TT computer with at least 1 mb of memory and one double-sided drive. Supports improved colors on the STe computers.

Installing the Game

Since your game is shipped on double-sided disks, be sure that your drive A is a double-sided drive. Place game disk 1 into drive A and open up its window. Double-click on the ROESETUP icon.

Running the Game

Double-click on the icon labeled RULES.

PART I: A SHAKEDOWN CRUISE

About the Tutorials

For your first mission, we recommend that you follow this tutorial in order to familiarize yourself with the game screens and controls. The tutorial is divided into two separate sections for mouse and keyboard use. If you are working with a system with a mouse compatible with this program, follow the mouse tutorial. If not, follow the keyboard tutorial. Also please refer to page 47 for a table of special symbols used on some game buttons.

NOTE: If you can use a mouse, the keyboard commands are still useful, as you can mix and match, using a combination of mouse and keyboard action to play the game.

The mission "A Shakedown Cruise" is included for use with this tutorial only. It has a very simple objective, extremely weak opposition, and is not intended to provide any real challenge. Rather, it is designed to provide you with an introduction to **Rules of Engagement** and how it is played. We recommend that you follow these instructions *very* carefully. It may be difficult (or impossible) to successfully complete the mission if you don't.

Mouse Tutorial

Start **Rules of Engagement** according to the instructions for your computer (see *Getting Started* section).

When the credit roll has ended (or you have bypassed it by pressing a key during the "chronology"), you will arrive in the game itself and be faced with a computer interface panel labeled "GAME/MISSION 1 0 1", over which is a green bar labeled "MAIN MENU 100". An animated Federated Worlds Armed Forces logo appears at screen center. Along the top and left side of the screen are a series of control buttons, all colored magenta/purple. The first thing you need to learn about controlling **Rules of Engagement** is that the only "buttons" you can click on are magenta or blue (blue=cyan in IBM CGA). "Highlighted" buttons are the active items. A highlighted magenta button turns white, and a blue button/item turns cyan (in CGA the cyan items highlight to white).

NOTE: In this mouse tutorial all on-screen buttons are listed in boldface, capital letters, as in: "Click on the **FIRE** button..." Panel labels are listed in capitalized non-bold text.

PART I: A SHAKEDOWN CRUISE

Ignore the buttons across the top of the screen and under the BUILDER bracket. In this tutorial we are concerned only with the buttons **under** the GAME and NEW GAME brackets.

Mouse button note: Whenever the instructions tell you to "click" the mouse it refers to the *left* mouse button. If use of the right mouse button is required you will be told to "click the right mouse button".

As you portray the Fleet Commander in the game, your first step must be to create your alter-ego. Click on the button labeled **FLEET CMDR** under NEW GAME to create a new Fleet Commander. The animated logo is replaced by a large item selector listing all existing Fleet Commanders (this box is probably empty). At the bottom-right of the selector are four purple buttons, one of which is labeled **CREATE**. Click on it. A small yellow and green (white and cyan in CGA) "usurper" box will appear, asking "Are you sure you want to create a new Fleet Commander?" Click on **YES** to continue.

Following a brief "Please stand by..." message/a larger box appears, this one featuring a picture of a Fleet Commander and a field for his/her name. Click on the NAME button and a text editing frame with a thin cursor appears in the FLEET CMDR NAME field. Type in the name of your choice (up to 18 characters—you can use the Backspace key to edit) and then click your mouse anywhere on the screen (or press the Enter/Return key on your keyboard). Your character is now named. Before actually creating the character, you will probably want to decide what he/she looks like. Clicking on the **NEXT** button cycles through the various options for your character's appearance. Men and women of several ethnicities are available.

When you've selected an appearance, click on the box's **CREATE** button. The CREATE COMMANDER box disappears and you will now see your new character listed in the item selector, with the word "available" appearing to the right of his/her name.

Now it's time to create a game. Click on the **CREATE** button under the NEW GAME bracket at screen *left* (*not* the "CREATE" button at the bottom of the screen). The contents of the selector will change to list available missions and Fleet Commanders. You must select a mission and a character in order to start a new game. Click on the name of the mission **A SHAKEDOWN CRUISE** so that it is highlighted, and then click on the name of your Fleet Commander to highlight him/her. At the bottom-right of the selector is a **MAKE GAME** button. Click on it.

PART I: A SHAKEDOWN CRUISE

A usurper box will appear. Click on **EDIT NAME** and a text editing frame and cursor will appear in the GAME NAME field. Using the keyboard, type the name "Tutorial", then click the mouse anywhere on the screen (or press the Enter/Return key on your keyboard). Finally, you will want to select a mission difficulty. Make sure that the blue **BEGINNER** button is highlighted. If it is not, click on it. (You *must* be on beginner level to follow this tutorial as written!) Now click on the **DONE** button. You are returned to the main screen.

Click on the EXISTING button under the GAMES bracket. The selector will now list all existing game files. Make certain that the game **TUTORIAL** is highlighted (click on its name if not), and then click on the **PLAY** button at the bottom-right of the selector. A "Please stand by..." message will appear. After a few moments, the screen will go black and then return with an image of space. The mission title and author's name appear over a picture of a Federated World's Dreadnought. A moment later, the game screen will appear.

Across the top of the screen is a bar with a number 300 at the far left. This "300 bar" is the main menu of your ship's computer interface and is present at all times during the game. It contains the buttons for switching between various panels, controls for setting the game's time-passage speed, damage readouts and the elapsed mission time clock (CHRONO).

Below the 300 bar is the DATA RETRIEVAL panel (numbered 304). This is your ship's computer, where you can check on the condition of your fleet, and get background information on your mission, status, and data about the Captains on the ships under your command and the enemy you face.

The current data display before you is the FLEET STAT readout. It lists all of the ships under your command and their last reported status. The first ship listed, identified as F01, is your own flagship (the FWS Yury Gagarin), a Destroyer. The other ships are: F02, a Scout (the FWS Explorer), and F03, a Destroyer (the FWS Tau Ceti).

Along the right side of the screen are buttons which will change the data displayed on this panel. Click on the **BRIEFING** button under MISSION. A written briefing appears, describing exactly what you must do to successfully complete your mission.

PART I: A SHAKEDOWN CRUISE


When you've finished reading the briefing, click on the first icon (a sextant) in the 300 bar at the top of the screen. This will move from the DATA RETRIEVAL panel to the NAVIGATION controls. Your mission requires you to capture enemy vessel E01 (a scout) and destroy enemy ship E02 (a transport). Both the enemy ships and your own ships appear in the map which dominates most of the panel. Each ship is indicated by a small arrow and an associated number. When you first view the map, you will see only the ship symbols. At the top of the map area are a series of buttons, only two of which, FWS and ENS, will be highlighted. If you click on the others (STR=stars, AFD=asteroid fields, WAY=waypoints, OUT=outposts, and PLN=planets), the map will then display those items as well (if any). The only items you are concerned with in this mission are ships and waypoints. All ships are already selected for display, so click on the **WAY** button *above the map* to see the system's one waypoint.

When you first see the map you are in "mix" mode, which shows the entire system. To center on your own ship, click on the **LOCK-ON** button at the right end of the TELEMETRY controls. The map will change and center on your ship, showing an area 47 million kilometers in radius.

In order to capture the enemy Scout ship, you must first intercept it. At screen left is a selector which allows you to probe, chase or intercept anything in the solar system. The highlighted (white bar) item in the list below the buttons for these functions indicates the current item. Below this selector are buttons for selecting what type of item you are interested in probing, chasing, etc. The default is **ENS**, for "ENemy Ships", and your target vessel should be highlighted, as it is the first of the two enemy ships in the sector. Click on the **PROBE** button, and the list of enemy ships is replaced by a scanner readout of the enemy ship in question. You now have your prey identified, and it's time to move in.



Click on the CHASE button. The I.D. number of the enemy ship (E01) will appear in the small readout to the right of the **INTRCPT** button, and the small sextant icon alongside the HELM controls (lower-left corner of the screen) will flash, indicating that your ship is in autopilot mode. Your ship is now moving in on the target at full speed, and will automatically match course and speed when it has caught up with it.

PART I: A SHAKEDOWN CRUISE




It will take approximately 2 to 3 minutes of real-time to intercept the target. In the meantime, you'll want to send your other ships after the enemy Transport. Click on the dish-antenna icon (second button from the left) on the 300 bar. This will switch to the COMMUNICATIONS panel (302). On this panel, you need to specify the order to send and the ship to receive it. At the left-center of the screen is a selector labeled ORDER. Click repeatedly on the  button until the order "DESTROY ENEMY SHIP" appears as the highlighted (white bar) item in the list. Now, click on the blue **ACKNOWLEDGE** button, highlighting it. This will tell the Captain(s) to whom you are sending the order to send an acknowledgement when the order has been obeyed.

Note that the FWS Explorer (F02) is the highlighted item in the SHIP selector just below the ORDER box. You will notice that both of these selectors are now linked to the larger selector to the right, which now lists every ENEMY SHIP, and that a bar now connects this selector to a send order box in the lower left-hand corner of the screen. Click on **TRANSPORT** (E02) in the large selector to highlight it and specify it as the ship you want destroyed. To send the order to the FWS Explorer, click on the **SEND ORD** button. If you wait a few moments, you should receive a response from the Explorer, complete with a visual of the Captain of the ship.

Now you need to send the same order to the FWS Tau Ceti. The only thing you need to do is click on the + button at the left end of the SHIP selector, so that the Tau Ceti becomes the highlighted item there, and then click on **SEND ORD** again. In a few seconds, the Captain of the Tau Ceti will also respond.

While you're waiting to catch up with your target, you might as well take some time to acquaint yourself with your opponents. Click on the Computer Panel icon in the 300 bar (fourth from the left) to return to DATA RETRIEVAL. When the panel pops up, click on the ENEMY button under DOCKET. The readout will now display an image of a member of the race/group you are opposing, and text describing them. Clicking on the   buttons to the left of the dossier and text allows you to jump backwards and forwards through the screens of information about the enemy (if any).

PART I: A SHAKEDOWN CRUISE

When you're finished researching your opponents, you might want to find out about the Captains of the Explorer and Tau Ceti. Click on the **FW Captain** button under DOCKET. The screen will now display information about the Captain of the ship currently highlighted in FLEET STAT mode, which probably means the stats for your own character will appear. If this is the case, click on the + button under the displayed Commander/Captain's name. After a moment you will see a picture of Captain Telifero Lawson, and his dossier to the right. The dossier scrolls like the background information on the enemy, with the  and  buttons. When you are done reading Lawson's dossier, you can view that of the Captain of the Tau Ceti by clicking again on the  button.

By now your ship should have closed in on the target vessel. Go back to NAVIGATION (sextant icon) and on the map you should see that your vessel is now much closer to the enemy ship than when you started. In fact, the symbols representing your ship (F01) and the enemy (E01) may even be overlapping. In any case, you'll probably want to zoom in for a tighter view of the scene. Move the mouse pointer over the map area and, as you do, you'll notice that a set of brackets follow your movements. Using these brackets frame an area which closely fits around your ship and the target, and then click the mouse. The area you framed will now jump up to fill the entire map. You can keep zooming in like this until you can clearly see the distance separating your ship from the target.

NOTE: If you rescale the map so much that the enemy ship pops entirely out of view, you can back the zoom off by right-clicking the mouse. Doing this will shrink the current map area to fit within the brackets. Left-clicking zooms in; right-clicking zooms out.

By now you should be or almost be within range to combat the enemy vessel. Click on the Crosshair icon (3rd from the left) in the 300 bar to switch to the TACTICAL panel. Here is where you'll combat the enemy.

In a beginner level mission your ship's defensive energy shields are automatically raised the moment another ship fires on you. However, since the enemy ships in this mission have no operational weapons systems, this will not happen. You can tell the status of the shields by looking at the defense subpanel to the lower right. If the **SHIELDS** button is highlighted and a green circle appears around the small picture of your ship there, then the shields are on. Clicking on the **SHIELDS** button toggles them on and off. Just to get into the habit, raise the shields now.

PART I: A SHAKEDOWN CRUISE

Before going into combat you'll want to power up your Enhanced Beam Weapons (EBWs). At the top-center of the TACTICAL panel, directly under the WEAP label, is a power meter. A small arrowhead is at the left end of the scale, and the power readout below it reads 000%, indicating that the EBW power is off. Click on the arrowhead and, while holding the mouse button down, drag the arrowhead as far to the right of the scale as it will go. When you release the mouse button the EBW power should be set to 100%.

The enemy Scout in this mission has most of its systems severely crippled, but its shields are still partially intact. In order to capture the ship you must board it, and in order to board it you need knock its shields and engines out entirely. To knock out the shields you'll want some very precise weapons control. Click on the **GET** button just above the EBW power meter. The combat map will disappear, replaced by expanded weaponry controls. Note that the EBW FOCUS is currently set at **NORM** (normal). What you want to do is click on **PIN**, for pinpoint firing, allowing you to target specific systems. Now move down to the PINPOINT EBW SET box. The default system to target is the communications system (COMM), Click on the **SHLD** button; you now have the shields targeted.

Click on the highlighted **GET** button to deselect it and restore the map display, then click on **COMBAT ZONE** to display a view with a radius of 500,000 kilometers. This is the maximum effective combat range of your ship's weapons, and the approximate range of your target.

At the center-left of the screen are a set of TARGET controls. Your target, Scout E01 appears in the selector bar. Click on **ACQUIRE**. The I.D. number of the target is fed into target slot A, and, as long as the A button is highlighted, your computer will attempt to keep the weapons pointing in the direction of that target. As you can see, the targeting scope (the "viewer" towards the upper-left of the panel) immediately turns to find and lock onto the target. When a lock is achieved a flashing ACQUISITION indicator appears at the bottom of the targeting scope along with an image of the target starship.

Before you start firing, check the range to the target, listed as the number to the right of the R: at the top of the targeting scope. If the number there is greater than 550,000 you are out of effective firing range. Wait until the range is approximately 550,000 kilometers, and the enemy ship symbol appears in the map display, before firing.

PART I: A SHAKEDOWN CRUISE

At this point, you'll want to attack. To fire the EBWs, click on the upper of the two **FIRE** buttons to the right of the targeting scope, making certain that the ACQUISITION indicator is present (if you fire while there is no acquisition, you'll hit nothing). Each time you fire the EBW power level drops, and you have to wait for the EBW power meter to build up before you can fire again, otherwise you'll be hitting the target with very little energy. (The second **FIRE** button is for firing missiles. However since your ship is carrying no missiles in this mission, clicking on it will have no result.)

Directly to the left of the tactical icon are a set of six readouts, which represent your computer's estimation of the damage the enemy ship's systems have sustained (do not confuse these with the similar damage readouts for your own ship, which appear in the 300 bar). Each time you fire, glance at the tiny red bar to the right of the S (shields) meter there. When the bar alongside the S readout vanishes completely, then the enemy ship's shields have been completely disabled (this could require as few as 3 or as many as 9 full-power EBW hits to accomplish).

When the enemy's shields have been destroyed, click on **GET** and then move the highlighter on PINPOINT EBW SET to **DRIVE**. Click on GET again to restore the map, then continue firing on the enemy ship until red bar next to the D vanishes completely, indicating that the enemy drive systems are completely destroyed (this should require between 5 and 10 full-power EBW hits).

You are now ready to board the enemy vessel. The ATTITUDE controls in the lower left-hand corner of the screen now come into play. These controls are normally used to set your range to the target, your position relative to it, and which shield you want to keep towards it. In boarding situations you use it to bring your starship within boarding range, which is from 0 to 5000 kilometers. Using the mouse, drag the yellow arrowhead next to the RANGE meter all the way to the *bottom* of the scale, and then click on the **POSIT** button just to the right of the ATTITUDE control box. Your ship will now take up a position alongside the enemy vessel. Wait until the R: readout in the targeting scope is under 5000 and then click on the **BOARD** to initiate the boarding sequence.

As soon as the SQUAD DEPLOYMENT (401) panel appears, you'll want to pause the game. Click on the pause button (||) towards the right end of the 300 bar. When the button is lit up, all action on the screen should freeze, including the numbers under the BOARDING CHRONO readout, but the screen should remain intact (if the screen clears to black, you did not set the game for beginner level). Clicking on this button again unpauses — but you'll want to read the following section before allowing the game to continue.

Boarding an Enemy Vessel

Your Fleet Commander character now becomes a Squad Leader and leads a group of marines (members of the Federated Worlds Special Forces — or FWSF) in boarding the enemy vessel. The squad is transported to the enemy vessel and must attempt to wrest control of a specified percentage of systems away from the opposing crew.

NOTE: If you have **Breach 2** and use the IGS system, it is in boarding situations where **Breach 2** will be loaded. In some missions, such as this one, no **Breach 2** scenarios have been linked to a ship or outpost, so in this particular mission **Breach 2** will not be loaded.

The SQUAD DEPLOYMENT panel shows an image of a FWSF marine in full combat gear to the left, and an image of the opposing force type to the right. The name of your commander, and his/her squad-level statistics appear, as does the name of the enemy race/force and the rank of their Captain. At the center of the display is a SYSTEMS CONTROL meter, which shows how much of the enemy ship's systems you control and how much is controlled by the enemy. A horizontal marker indicates the level of control you must reach in order to be victorious. When the meter for FWSF reaches that marker, you have won control of the alien ship. As your meter increases the meter for your opponents decreases, and vice-versa.


You have no actual control over the boarding sequence, other than choosing to abort it by clicking on the **WITHDRAW/UNDOCK** button. As this mission is very easy you'll have little trouble wresting control of the enemy ship from your opponents. In fact, the BOARDING CHRONO will probably never even reach 5 minutes before you are victorious.

To see all this happen unpause the game and let the fighting continue.


When you have seized control of the ship a usurper box appears telling you that "The boarding action was successful." Click on **OK** on this box to return to your own flagship.

PART I: A SHAKEDOWN CRUISE

Completing the Mission

In the time it took you to complete this task, the other ships under your command should have intercepted and attacked Enemy Transport E02. Chances are they've sent reports to you while you were busy fighting the Scout. Look at the Communications icon in the 300 bar. To the right of the antenna symbol is a two-digit number, which lists the number of messages "waiting" for you. There should be at least two, maybe as many as six, waiting. Click on the icon to go to COMMUNICATIONS. The last message received is the one displayed at the top of the list and sender's picture is the one shown. Pressing the  button allows you to scroll back through the messages. Chances are by now that the other ships have destroyed their target.

With two of your three mission objectives met, all that's left for you to do is get your ships to Waypoint 1, as specified in your mission briefing. To see which mission objectives have been met, click on the Computer Panel icon (fourth from left) to return to DATA RETRIEVAL and click on the **OBJECTIVES** button. All mission objectives will be displayed, with a checkmark preceding all of those that have been met.

Switch back to COMMUNICATIONS. On the ORDER selector, click on  until the order "Proceed to Waypoint" appears as the highlighted item in the list. Note that the large selector to the right now lists all waypoints (in this case, one: X01). Since you want to send the order to both the Explorer and Tau Ceti, just click on the **ALL** button to give the order to both ships rather than sending them individual orders. If you wait a few moments you should receive acknowledgements from both ships.

Finally, switch back to the NAVIGATION panel (sextant icon) and click on the WAY button at the bottom of the AUTOPILOT box. A list of waypoints appears, again with only one item listed/highlighted. Click on the **INTRCPT** button to make for it. Your ship will now proceed at full power towards Waypoint 1. It will take a few minutes of game-time (under 3) to reach the Waypoint. Since game-time is equal to real time, this may take longer than you want. To make time pass more quickly, click with the *right-most* mouse button on the »time-accelerator button above the CHRONO readout in the 300 bar. Right-clicking on this button causes the acceleration to jump from 1 x REALTIME (no acceleration) to 32 x REALTIME, which means 32 seconds of game time will pass for each second of real-time which passes. If you watch the CHRONO readout you'll notice that just over a minute of game-time passes every two seconds. In a matter of moments, your ship and its companions will reach the Waypoint and the mission will end. A box will appear notifying you, "Your mission has been completed."

PART I: A SHAKEDOWN CRUISE

When you click on this box's OK button, the screen clears and a computer evaluation of your performance is displayed. Pressing any key returns you to the navigation screen.

At this point, the mission clock is frozen, and all activity is ceased. It is at this point you could switch from panel to panel, examining the final mission status before leaving the mission. When you are finished, click on the disk icon button in the 300 bar. This will exit the mission and save your Fleet Commander's stats.

Congratulations! You have just completed your first mission as commander of a Federated Worlds force!

Keyboard Tutorial

Start **Rules of Engagement** according to the instructions for your computer (see *Getting Started* section).

When the credit roll has ended (or you have bypassed it by pressing a key during the "chronology"), you will arrive in the game itself and be faced with a computer interface panel labeled "GAME/MISSION 1 0 1", over which is a green bar labeled "MAIN MENU 100". An animated Federated Worlds Armed Forces logo appears at screen center. Along the top and left side of the screen are a series of control buttons, all colored magenta/purple. The first thing you need to learn about controlling **Rules of Engagement** is that the only "buttons" you can use are magenta or blue (blue=cyan in IBM CGA). "Highlighted" buttons are the active items. A highlighted magenta button turns white, and a blue button/item turns cyan (in CGA the cyan items highlight to white).

NOTE: In this keyboard tutorial all on-screen buttons are listed in italicized, capital letters, as in: *FIRE*. Keyboard keys are listed in boldface, as in: "Press X to..." Panel labels are listed in capitalized non-bold text.

NOTE ON THE NUMERIC KEYPAD: The Num-Lock function on PC keyboards is disabled by **Rules of Engagement** so that users with smaller keyboards can use the cursor functions on the keypad. When a number key is indicated by the instructions, press the key on the *main* keyboard, not the numeric pad.

PART I: A SHAKEDOWN CRUISE

Each and every game button has a keyboard equivalent. But with only a few exceptions (see page 47), the keyboard equivalents are listed right on the screen. Look at the *INFO* button at the top of the screen. There is a small line, or overscore, above the letter "I" on the button. This overscore indicates what key to press on your computer keyboard to activate the on-screen button. Look at the other magenta buttons on the screen and you'll see similar overscored letters (or function key numbers). When you press the equivalent key for a button the button will either highlight or flash (depending on its function). Ignore the buttons across the top of the screen and under the *BUILDER* bracket. In this tutorial we are concerned only with the buttons under the *GAME* and *NEW GAME* brackets.

As you portray the Fleet Commander in the game, your first step must be to create your alter-ego. Press F to activate the button labeled *FLEET CMDR* under *NEW GAME* to create a new Fleet Commander. The animated logo is replaced by a large item selector listing all existing Fleet Commanders (this box is probably empty). At the bottom-right side of the selector are four purple buttons, one of which is labeled *CREATE*. Press C to activate it. A small yellow and green (white and cyan in CGA) "usurper" box will appear, asking "Are you sure you want to create a new Fleet Commander?" Press Y to continue.

Following a brief "Please stand by..." message, a larger box appears, this one featuring a picture of a Fleet Commander and a field for his/her name. Press N and a text editing frame with a thin cursor appears in the *FLEET CMDR NAME* field. Type in the name of your choice (up to 18 characters—you can use the **Backspace** key to edit) and then press **Enter/Return** on your keyboard. Your character is now named. Before actually creating the character, you will probably want to decide what he/she looks like. Pressing the X button cycles through the various options for your character's appearance. Men and women of several ethnicities are available.

When you've selected an appearance, press C. The *CREATE COMMANDER* box disappears and you will now see your new character listed in the item selector, with the word "available" appearing to the right of his/her name.

Now it's time to create a game. Press T to activate the *CREATE* button under the *NEW GAME* bracket at screen *left*. The contents of the selector will change to list available missions and Fleet Commanders. You must select a mission and a character in order to start a new game. Use the **↑** and **↓** keys to move the highlighter for *MISSION* to *A SHAKEDOWN CRUISE*, and use the **←** and **→** keys to move the highlighter for *FLEET CMDR* to the name of your Fleet Commander. Press G to make a new game.

PART I: A SHAKEDOWN CRUISE

A usurper box will appear. Press N to activate *EDIT NAME* and a text editing frame and cursor will appear in the GAME NAME field. Using the keyboard, type the name "**Tutorial**", then press **Enter/Return**. Finally, you will want to select a mission difficulty. Make sure that the blue *BEGINNER* button is highlighted. If it is not, press B. (You *must* be on beginner level to follow this tutorial as written!) Now press D for *DONE*. You are returned to the main screen.

Press X to activate the *EXISTING* button under the GAMES bracket. The selector will now list all existing game files. Make certain that the game TUTORIAL is highlighted (press **↓** to get the highlighter on its name if not), and then press P to *PLAY* the game. A Please stand by... message will appear. After a few moments, the screen will go black and then return with an image of space. The mission title and author's name appear over a picture of a Federated World's Dreadnought. A moment later, the game screen will appear.

Across the top of the screen is a bar with a number 300 at the far left. This "300 bar" is the main menu of your ship's computer interface and is present at all times during the game. It contains the buttons for switching between various panels, controls for setting the game's time-passage speed, damage readouts and the elapsed mission time clock (CHRONO).

Below the 300 bar is the DATA RETRIEVAL panel (numbered 304). This is your ship's computer, where you can check on the condition of your fleet, and get background information on your mission, status, and data about the Captains on the ships under your command and the enemy you face.

NOTE: You may notice that there are no keyboard equivalents listed on these icons. Each button on the 300 bar is assigned a function key, and they are numbered sequentially, left to right. The first icon is **F1**, the second **F2**, and so on.

The current data display before you is the FLEET STAT readout. It lists all of the ships under your command and their last reported status. The first ship listed, identified as F01, is your own flagship (the FWSYury Gagarin), a Destroyer. The other ships are: F02, a Scout (the FWS Explorer), and F03, a Destroyer (the FWS Tau Ceti).

Along the right side of the screen are buttons which will change the data displayed on this panel. Press B to access the *BRIEFING* button under MISSION. A written briefing appears, describing exactly what you must do to successfully complete your mission.

PART I: A SHAKEDOWN CRUISE

When you've finished reading the briefing, press **F1** to activate the first icon (a sextant) in the 300 bar at the top of the screen. This will move from the DATA RETRIEVAL panel to the NAVIGATION controls. Your mission requires you to capture enemy vessel E01 (a scout) and destroy enemy ship E02 (a transport). Both the enemy ships and your own ships appear in the map which dominates most of the panel. Each ship is indicated by a small arrow and an associated number. When you first view the map, you will see only the ship symbols. At the top of the map area are a series of buttons, only two of which, FWS and ENS, will be highlighted. If you press the associated letter for the others (S=STR/stars, D=AFD/asteroid fields, Y=WAY/waypoints, O=OUT/outposts, and L=PLN/planets), the map will then display those items as well (if any). The only items you are concerned with in this mission are ships and waypoints. All ships are already selected for display, so press Y to view the system's one waypoint.

When you first see the map you are in "mix" mode, which shows the entire system. To center on your own ship, press K to LOCK-ON with the TELEMETRY controls. The map will change and center on your ship, showing an area 47 million kilometers in radius.

In order to capture the enemy Scout ship, you must first intercept it. At screen left is a selector which allows you to probe, chase or intercept anything in the solar system. The highlighted (white bar) item in the list below the buttons for these functions indicates the current item. Below this selector are buttons for selecting what type of item you are interested in probing, chasing, etc. The default is ENS, for "ENemy Ships", and your target vessel should be highlighted, as it is the first of the two enemy ships in the sector. Press B to activate the PROBE button, and the list of enemy ships is replaced by a scanner readout of the enemy ship in question. You now have your prey identified, and it's time to move in.

Press C to initiate a CHASE. The I.D. number of the enemy ship (E01) will appear in the small readout to the right of the INTRCPT button, and the small sextant icon alongside the HELM controls (lower-left corner of the screen) will flash, indicating that your ship is in autopilot mode. Your ship is now moving in on the target at full speed, and will automatically match course and speed when it has caught up with it.

PART I: A SHAKEDOWN CRUISE



It will take approximately 2 to 3 minutes of real-time to intercept the target. In the meantime, you'll want to send your other ships after the enemy Transport. Press **F2** to activate the dish-antenna icon on the 300 bar. This will switch to the COMMUNICATIONS panel (302). On this panel, you need to specify the order to send and the ship to receive it. At the left-center of the screen is a selector labeled ORDER. Press the **→** key repeatedly until the order "DESTROY ENEMY SHIP" appears as the highlighted (white bar) item in the list. Now press **K** to highlight the *ACKNOWLEDGE* button. This will tell the Captain(s) to whom you are sending the order to send an acknowledgement when the order has been obeyed.

Note that the FWS Explorer (F02) is the highlighted item in the SHIP selector just below the ORDER box. You will notice that both of these selectors are now linked to the larger selector to the right, which now lists every ENEMY SHIP, and that a bar now connects this selector to a send order box in the lower left-hand corner of the screen. Use the **Home** and **End** keys to move the highlighter up and down until it rests on *TRANSPORT(E02)* in the large selector, specifying it as the ship you want destroyed. To send the order to the FWS Explorer, press **S** to activate the *SEND ORD* button. If you wait a few moments, you should receive a response from the Explorer, complete with a visual of the Captain of the ship.

Now you need to send the same order to the FWSTau Ceti. The only thing you need to do is press the **+** key so that the Tau Ceti becomes the highlighted item in the SHIP selector, and then press **S** again to send the order. In a few seconds, the Captain of the Tau Ceti will also respond.

While you're waiting to catch up with your target, you might as well take some time to acquaint yourself with your opponents. Press **F4** to activate the Computer Panel icon in the 300 bar (fourth from the left) and return to *DATA RETRIEVAL*. When the panel pops up, press **E** to access *ENEMYdata* under *DOCKET*. The readout will now display an image of a member of the race/group you are opposing, and text describing them. Pressing the **PageUp** and **PageDown** keys allows you to jump backwards and forwards through the screens of information about the enemy (if any).


PART I: A SHAKEDOWN CRUISE

When you're finished researching your opponents, you might want to find out about the Captains of the Explorer and Tau Ceti. Press **C** to access the *FW Captain* data under DOCKET. The screen will now display information about the Captain of the ship currently highlighted in FLEET STAT mode, which probably means the stats for your own character will appear. If this is the case, just press the  key. After a moment you will see a picture of Captain Telifero Lawson, and his dossier to the right. The dossier scrolls just like the background information on the enemy, using the **PageUp** and **PageDown** keys. When you are done reading Lawson's dossier, you can view that of the Captain of the Tau Ceti by pressing  again.

By now your ship should have closed in on the target vessel. Go back to NAVIGATION (press **F1** for the sextant icon) and on the map you should see that your vessel is now much closer to the enemy ship than when you started. In fact, the symbols representing your ship (**F01**) and the enemy (**E01**) may even be overlapping.

By now you should be or almost be within range to combat the enemy vessel. Press **F3** to activate the Crosshair icon in the 300 bar, thus switching to the TACTICAL panel. Here is where you'll combat the enemy.

In a beginner level mission your ship's defensive energy shields are automatically raised the moment another ship fires on you. However, since the enemy ships in this mission have no operational weapons systems, this will not happen. You can tell the status of the shields by looking at the defense subpanel to the lower right. If the *SHIELDS* button is highlighted and a green circle appears around the small picture of your ship there, then the shields are on. Pressing **S** toggles the shields on and off. Just to get into the habit, raise the shields now.

Before going into combat you'll want to power up your Enhanced Beam Weapons (EBWs). At the top-center of the TACTICAL panel, directly under the WEAP label, is a power meter. A small arrowhead is at the left end of the scale, and the power readout below it reads 000%, indicating that the EBW power is off. Press the **End** key on your keyboard, and you'll notice that the  button below the meter will become highlighted and the arrowhead will move towards the right end of the scale. When the EBW power reading is at 100%, press the **End** key again.

PART I: A SHAKEDOWN CRUISE

The enemy Scout in this mission has most of its systems severely crippled, but its shields are still partially intact. In order to capture the ship you must board it, and in order to board it you need to knock its shields and engines out entirely. To knock out the shields you'll want some very precise weapons control. Press G to toggle on the GET button above the EBW power meter. The combat map will disappear, replaced by expanded weaponry controls. Note that the EBW FOCUS is currently set at *NORM* (normal). What you want to do is press N, for *PIN*, or 'pinpoint' firing. This allows you to target specific systems. Now look at the PINPOINT EBW SET box. The default system to target is the communications system (*COMM*). Press the **plus** (+) four times until the blue *SHLD* label is highlighted; you now have the shields targeted.

Press G again to deactivate GET mode and restore the map display, then press Z to switch the map to *COMBATZONE*, which displays a view with a radius of 500,000 kilometers. This is the maximum effective combat range of your ship's weapons, and the approximate range of your target.

At the center-left of the screen are a set of TARGET controls. Your target, Scout E01 appears in the selector bar. Press Q to *ACQUIRE* the ship. The I.D. number of the target is fed into target slot A, and, as long as the A button is highlighted, your computer will attempt to keep the weapons pointing in the direction of that target. As you can see, the targeting scope (the "viewer" towards the upper-left of the panel) immediately turns to find and lock onto the target. When a lock is achieved a flashing ACQUISITION indicator appears at the bottom of the targeting scope along with an image of the target starship.

Before you start firing, check the range to the target, listed as the number to the right of the R: at the top of the targeting scope. If the number there is greater than 550,000 you are out of effective firing range. Wait until the range is approximately 550,000 kilometers, and the enemy ship symbol appears in the map display, before firing.

At this point, you'll want to attack. To fire the EBWs, press the **F9** key, which triggers the upper of the two **FIRE** buttons to the right of the targeting scope — making certain that the ACQUISITION indicator is present (if you fire while there is no acquisition, you'll hit nothing). Each time you fire the EBW power level drops, and you have to wait for the EBW power meter to build up before you can fire again, otherwise you'll be hitting the target with very little energy.

(The second *FIRE* button, **F10**, is for firing missiles. However since your ship is carrying no missiles in this mission, pressing it will have no result.)

PART I: A SHAKEDOWN CRUISE

Directly to the left of the tactical icon are a set of six readouts, which represent your computer's estimation of the damage the enemy ship's systems have sustained (do not confuse these with the similar damage readouts for your own ship, which appear in the 300 bar). Each time you fire, glance at the tiny red bar to the right of the S (shields) meter there. When the bar alongside the S readout vanishes completely, then the enemy ship's shields have been completely disabled (this could require as few as 3 or as many as 9 full-power EBW hits to accomplish).

When the enemy's shields have been destroyed, press G to *GET* the extended weapons controls. Use the **plus** key to move the highlighter on PINPOINT EBW SET to *DRIVE*. Press G again to restore the map, then continue firing on the enemy ship until the red bar next to the D vanishes completely, indicating that the enemy drive systems are completely destroyed (this should require between 5 and 10 full-power EBW hits).

You are now ready to board the enemy vessel. The ATTITUDE controls in the lower left-hand corner of the screen now come into play. These controls are normally used to set your range to the target, your position relative to it, and which shield you want to keep towards it. In boarding situations you use it to bring your starship within boarding range, which is from 0 to 5000 kilometers. Press the 0 (zero) key, which will make the yellow arrowhead next the RANGE move down. When it has reached the *bottom* of the scale, press 0 again. Now press I to activate *POSIT* button just to the right of the ATTITUDE control box. Your ship will now take up a position alongside the enemy vessel. Wait until the R: readout in the targeting scope is under 5000 and then press R (for *BOARD*) to initiate the boarding sequence. As soon as the SQUAD DEPLOYMENT (401) panel appears, you'll want to pause the game. Pressing F7 activates the pause button (||) towards the right end of the 300 bar. When the button is lit up, all action on the screen should freeze, including the numbers under the BOARDING CHRONO readout, but the screen should remain intact (if the screen clears to black, you did not set the game for beginner level). Pressing F7 again unpauses — but you'll want to read the following section before allowing the game to continue.

Boarding an Enemy Vessel

Your Fleet Commander character now becomes a Squad Leader and leads a group of marines in boarding the enemy vessel. The squad is transported to the enemy vessel and must attempt to wrest control of a specified percentage of systems away from the opposing crew.

NOTE: If you have **Breach 2** and use the IGS system, it is in boarding situations where **Breach 2** will be loaded. In some missions, such as this one, no **Breach 2** scenarios have been linked to a ship or outpost, so in this particular mission **Breach 2** will not be loaded.


The SQUAD DEPLOYMENT panel shows an image of a FWSF marine in full combat gear to the left, and an image of the opposing force type to the right. The name of your commander, and his/her squad-level statistics appear, as does the name of the enemy race/force and the rank of their Captain. At the center of the display is a SYSTEMS CONTROL meter, which shows how much of the enemy ship's systems you control and how much is controlled by the enemy. A horizontal marker indicates the level of control you must reach in order to be victorious. When the meter for FWSF reaches that marker, you have won control of the alien ship. As your meter increases the meter for your opponents decreases, and vice-versa.

You have no actual control over the boarding sequence, other than choosing to abort it by pressing *W* to activate the *WITHDRAW/UNDOCK* button. As this mission is **very** easy you'll have little trouble wresting control of the enemy ship from your opponents. In fact, the BOARDING CHRONO will probably never even reach 5 minutes before you are victorious.

To see all this happen unpause the game and let the fighting continue.

When you have seized control of the ship a usurper box appears telling you that "The boarding action was successful." Press *0* for *OK* on this box to return to your own flagship.

Completing the Mission

In the time it took you to complete this task, the other ships under your command should have intercepted and attacked Enemy Transport E02. Chances are they've sent reports while you were busy fighting the Scout. Look at the Communications icon in the 300 bar. To the right of the antenna symbol is a two-digit number, which lists the number of messages "waiting" for you. There should be at least two, maybe as many as six, waiting. Press **F2** to go to COMMUNICATIONS. The last message received is the one displayed at the top of the list and sender's picture is the one shown. Pressing the  key allows you to scroll back through the messages. It's quite likely that the other ships have destroyed their target by now.

PART I: A SHAKEDOWN CRUISE

With two of your three mission objectives met, all that's left for you to do is get your ships to Waypoint 1, as specified in your mission briefing. To see which mission objectives have been met, press **F4** to return to DATA RETRIEVAL and then press 0 to activate the *OBJECTIVES* button. All mission objectives will be displayed, with a checkmark preceding all of those that have been met.

Use **F2** to switch back to COMMUNICATIONS. Press **→** until the order "Proceed to Waypoint" appears as the highlighted item in the ORDERS list. Note that the large selector to the right now lists all waypoints (in this case, one: X01). Since you want to send the order to both the Explorer and Tau Ceti, just press **L** (for *ALL*) to give the order to both ships rather than sending them individual orders. If you wait a few moments you should receive acknowledgements from both ships.

Finally, use **F1** to switch back to the NAVIGATION panel, and press **W** to highlight the *WAY* button at the bottom of the AUTOPILOT box. A list of waypoints appears, again with only one item listed/highlighted. Press **I** to *INTRCPT* (intercept) it. -Your ship will now proceed at full power towards Waypoint 1. It will take a few minutes of game-time (under 3) to reach the Waypoint. Since game-time is equal to real time, this may take longer than you want. To make time pass more quickly, hold down a **Shift** key while pressing the **F8** key, calling the time-accelerator button (») above the CHRONO readout in the 300 bar. Pressing **Shift-F8** causes the acceleration to jump from 1 x REALTIME (no acceleration) to 32 x REALTIME, which means 32 seconds of game time will pass for each second of real-time which passes. If you watch the CHRONO readout you'll notice that just over a minute of game-time passes every two seconds. In a matter of moments, your ship and its companions will reach the Waypoint and the mission will end. A box will appear notifying you, "Your mission has been completed." Press 0 to *OK* this. The screen clears and a computer evaluation of your performance is displayed. Pressing any key returns you to the navigation screen.

At this point, the mission clock is frozen, and all activity is ceased. It is at this point you could switch from panel to panel, examining the final mission status before leaving the mission. When you are finished, press **F5** to activate the disk icon button in the 300 bar. This will exit the mission and save your Fleet Commander's stats.

Congratulations! You have just completed your first mission as commander of a Federated Worlds force!

PART II: THE STORY SO FAR

Historical Briefing

The First Stellar Expansion began on May 10th, 2029, with the first practical demonstration of the hyperdrive field effect. The test was carried out in Building Number 4 of Area 1 1 7 of the Franklin Laboratories test range (a converted Army Ammunition Plant) at Hawthorne, Nevada, in what was then the United States of America. Five years later, that country's National Aeronautics and Space Administration deployed the unmanned vehicles *Odysseus I & II* to test the practicality of hyperdrive as a method of interplanetary and interstellar travel. *Odysseus I* successfully engaged hyperdrive, but its field effect was greater than anticipated, and resulted in the destruction of both the probe and the Space Tug which had launched it. *Odysseus II* was launched two months later, and its hyperdrive activated only when it had left the vicinity of Earth and Luna. *Odysseus II* returned to Earth orbit three weeks later, having successfully "hyperjumped" to the Oort Cloud at the perimeter of the Sol system, taken readings and photos, and then returned.

In 2040, only 11 years after the hyperdrive field was first tested and seven years after the *Odysseus* probes, the first practical starship, the USSC *Gerardus Mercator*, with its crew of seven, made a successful jump of over two lightyears through hyperspace. Less than 100 years after that first manned jump, the colonies of Earth consisted of 8 planets and over 18 billion inhabitants, scattered across several solar systems in the "neighborhood" of Sol/Earth, and were known as the Home Cluster.

Hyperspace proved to be rather curious. It was totally devoid of energy or matter, yet spacecraft could operate normally within its bounds. A trip through it (a hyperjump) would take, regardless of the actual distance in "normal" space, 6.8433 Earth days. There were, however, two limitations to its use. One was the enormous amount of energy required to enter hyperspace. The other was the so-called "Mass Limit", which, stated simply, placed a severe limit on the size of spacecraft that could enter hyperspace.

By the early 2100's the starships, powered by mass-conversion, were strained severely just to travel from one end of the Home Cluster to the opposite end, and three ships were lost when the strain overloaded their systems. The energy/fuel requirements for jumps beyond the Home Cluster demanded starships larger than the Mass Limit permitted. Because of this fact, and that all of the Home Cluster colonies remained dependant on Earth for support, the experts were predicting an end to the Expansion. As usual, the experts were wrong.

PART II: THE STORY SO FAR

In 2105, a team of scientists, travelling through the far reaches of the Tau Ceti solar system, were shocked when they discovered a huge alien artifact drifting through space. Entire scientific communities came to study the artifact and, several years later, the purpose of the great object was discovered. It was a hyperspace booster, a device with the capability to "push" spacecraft (and other objects) not tens but *thousands* of lightyears through hyperspace. Since the booster itself did not enter hyperspace (it was calculated to exceed the Mass Limit by a factor of over 7,453), a ship right up to the Mass Limit could travel enormous distances using virtually no power.

Years of research continued. Why had the Charon, the "gatekeepers" as the scientists dubbed them, abandoned a working booster? Where had they gone? The scientists were unable to say. The booster contained a mapping system depicting millions of the galaxy's stars, but few of them had been specifically marked by the Charon.

Eventually, elements of the Charon's control system were deciphered and trial boosts began. They proved the booster to be fully functional and the technicians' knowledge of the control system was deemed adequate to allow regular use. The Second Expansion was underway.

Your home is in a cluster of stars known as the Local Group. For years the Local Group had been receiving Development Assistance packages from the Home Cluster, to assist them in constructing new colonies and providing updates to their technology. Fifty years ago, the shipments stopped coming. Officially, the word was there hadn't been any indication that they would stop. The next ten years were known as The Great Panic, a period of interstellar war and piracy that nearly destroyed human civilization in the Local Group. Fortunately, at the peak of hostilities, a hyperspace booster was discovered inside the Local Group. The knowledge that two-way communication with the Home Cluster might be established acted to calm the Local Group. A monumental plan was put into action to move the booster, entirely at sublight speeds, into orbit around Cetus Amicus. But, during the twenty-plus years the move required, the Local Group again fell into turmoil, this time to emerge divided into two mutually hostile governments: the Federated Worlds (FW) and the United Democratic Planets (UDP).

Following years of instability and chaos, the FW and UDP ceased hostilities and formed an overarching governmental agency known as the Local Group Unification Organization, which was to oversee the slow reunification of the two nations.

PART II: THE STORY SO FAR

Several years after the reunification process began, the hyperspace booster at Cetus Amicus was certified as operational. The Federated Worlds, eager to reestablish contact with the Home Cluster, dispatched the FWS Union, under the command of Captain Alex G. Seward, to use the booster and travel to Tau Ceti III — the location of the Home Cluster's hyperspace booster. Captain Seward completed his mission, overcoming a saboteur and xenophobic locals, and uncovered the truth about the discontinuance of Development Assistance packages to the Local Group. Seward's report of his findings, sent back to the Local Group via the Tau Ceti booster, led to an investigation by the Federated Worlds Special Forces' Intelligence Division (FWSF- ID). It was discovered that a conspiracy had been going on for those fifty years of non-contact, involving high-level officials in not only the Home Cluster, but also in both the FW and UDP, many of whom were currently serving on the Local Group Unification Organization's high council (NOTE: specific details are CLASSIFIED at this time). Some of the investigation's findings were leaked, and this caused the Unification Organization to collapse. With both UDP and FW governments implicated in the conspiracy, both sides grew mistrustful and hostile. Following several military incidents, the UDP declared war on the Federated Worlds.

This is the situation which exists today.

Coded Situation Orders

NAVCOM ENCODED TRANSMISSION
CODED LEVEL: ARCHER ABLE ONE

TO: FWAF Task Force Commander — Code Number Te56 Ra8790u

FM: Admiral V. Bresheliah, Marine Operations, HQ Axia •

RE: OPERATION BLINDING LIGHT

MG: You have been selected to command the FWAF Third Fleet. In this capacity your responsibility will be to lead missions as part of Operation Blinding Light ("Operation Blinder" to the FWSF Marine squads your fleet may deploy), a large-scale Fleet operation composed of a series of missions in numerous solar systems. In each mission you will take command of the flagship of a selected task force and lead the vessels of that force in accomplishing the goals of the mission.

PART II: THE STORY SO FAR

Your missions will be varied, ranging from escorting supply transports to seek-and-destroy strikes in hostile systems. Although many missions may be straightforward ship to ship combat in deep space, in others your task force may be required to capture enemy ships and/or outposts. In such circumstances, you will deploy squads of FWSF Marines for boarding, rescue and control operations against the selected targets.

It is important for you to remember that often you will be commanding not just one ship, but entire groups of ships. Each of those ships has a captain who, just like you, has his own responsibilities, strengths and weaknesses. You must try to gain an understanding of those captains and their abilities in order to make the most effective use of them.

Good luck,
Adm. Viktor Bresheliah, FLEETOPS, FtA.

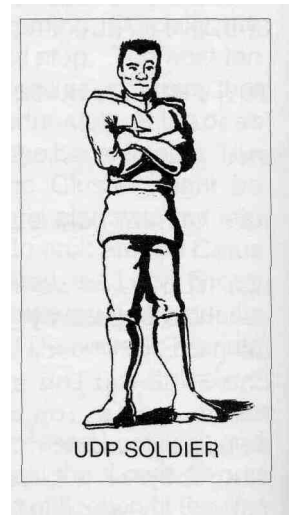
END TRANSMISSION

Intelligence Reports

The UDP

In 2348 the United Democratic Planets (UDP) was formed, chiefly to avoid coming under the regulations of the Federated Worlds (established three years earlier), which the UDP founders felt provided for far too much individual liberty. UDP allied governments, as a whole, exert a great deal more influence on the day-to-day lives of the citizenry than Federated Worlds governments. The UDP has developed into a steadily increasing threat to the stability of the Local Group and declared war on the Federated Worlds (FW) in early 2374. In that time the UDP has undertaken both overt and covert operations aimed at the destruction of the FW.

The UDP military has no special name or designation. They're simply UDP Forces. In terms of technology, the UDP tends to be roughly on-par with the FW, although some of their equipment is slightly less sophisticated.



Their soldiers are, on the whole, excellent, although in recent years a few "cracks" have appeared in the loyalty of the rank and file. Beware of letting this type of information lessen your opinion of them, as an experienced UDP starship commander is not to be taken lightly. They are formidable.

Member and allied worlds of the UDP consist of: Arbest, Aurei Ise, Bahnir, Baliolsol, Benison, Fevvel, Grotto, Miga Kambut, Milokarr, Myl, Rouvchorra, Schrelos, Sirrial, and Stowe. The UDP has outposts in many systems, and several important allies, including the "Aliens" and several species of "Mutie".

Aliens

A generic term for creatures of unknown origin. The "Aliens" we refer to today are strange beings, apparently sapient, which have developed as an increasing threat to the Federated Worlds in recent years. They are tall, bipedal creatures with no arms and squat bodies. Their single-eyed and beaked head is held high above the body by a powerful snakelike neck. Their exact origin is unknown, but their ability to withstand, unprotected, environments ranging from hellish to vacuum, has led many scientists to speculate that they originated either from a planet humans would categorize as uninhabitable or were genetic engineering experiments. Little is known about the Aliens except that they communicate using electromagnetic energy and infrared light, that they almost all seem to possess the ability to attack with a psionic stun, and that their nervous systems have the peculiar capability of building up an odd energetic charge which can then be released through the creatures' "eye", resulting in a deadly beam.



Interestingly, although the Aliens are hostile to FW forces, they seem to have struck up some kind of relationship with the UDP and some other factions and races hostile to the FW, including the recently discovered and highly dangerous Cybers, whose ships they have been detected on. Aliens are sometimes found controlling ships of their own, attacking any FW forces they encounter. All FW attempts at communication with the Aliens have been failures.

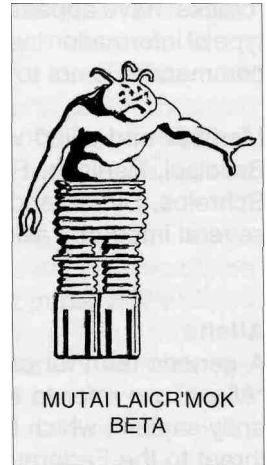
PART II: THE STORY SO FAR

Muties

"Mutie" is a common Local Group colloquialism for "mutant", and is most commonly used in reference to proto-sapient beings originating on Tuoles Laicr'mok—a planet in the LG-MD8 system, at the very perimeter of the Local Group. There are numerous varieties of muties, although the most common are the "Beta Muties" (*Mutai Laicr'mok Beta*), disgusting, legless beings that move around on motorized treads.

Several varieties of muties have been trained by the UDP to act as everything from servants to combat forces. They range in threat potential from the pathetic to the formidable, so caution is advised.

"Mutie" is also a popular insult amongst adolescents.



The Entymions

The first known contact between FW and Entymion forces was when a fleet of Entymion ships was detected in 2346 by the 'Demon's Lair' outpost in the Deimos starsystem. The Entymions have been tentatively identified as originating outside of the Local Group. However, while this would seem to imply that they possess an advanced form of hyperspace travel or a hyperspace booster, neither appears to be the case. In fact, all evidence seems to point to the Entymions lacking even conventional hyperspace engines! The Entymions apparently travel entirely at sublight velocities. They appear to be long-lived and very patient creatures, who don't seem to mind spending thirty or more years on each leg of a journey. That is not to say, however, that the Entymions have no interest in hyperspace technology. Intelligence reports indicate that they have been known to ask numerous questions about the Cetus Amicus hyperspace booster.



Creatures of vast, cool intellect, they are surprisingly good fighters and have never been seen to back-down in combat. Strangely enough, they treat each encounter between their kind and the Federated Worlds as if it were the first, leading some xenosociologists to speculate that the Entymions have no concept of war, hostilities, or even "grudges" as we know them. As a result, no state of war exists between the Federated Worlds and the Entymions, although a number of conflicts have taken place.

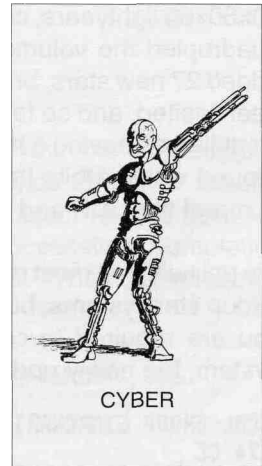
Priority One Report: Cybers

In recent months a new hostile force has been encountered in the Local Group. They are humanoid beings who have been extensively modified with biotechnical implants to become biomechanical beings commonly referred to as "Cybers". Although encounters have been few, the Cybers have, in every reported instance, been hostile to any and all governments and life forms, usually destroying the unfortunate few whom they have come face to face with. The single exception to this hostility are Aliens, which have reportedly been detected on Cyber vessels. The nature of this relationship is unknown.

Cybers are extremely dangerous opponents, and it is better strategy to run than fight when confronted by them. All of their ships we have encountered thus far are equivalent to dreadnought class vessels, and very powerful. The Cybers themselves are cunning opponents, quick to respond, aggressive in the extreme, and uncompromising.

No one knows where the Cybers come from or what they want. However, intelligence reports indicate that they apparently have an extremely small presence in the Local Group: perhaps only a few dozen ships, and no known bases (except those of other races which they raid). No Cyber body has yet been captured so it has been thus far impossible to determine if they are modified humans of common descent to those on the Local Group and Home Cluster, which some biologists speculate must be the case. The two prevailing theories about the Cybers origin are:

1. They were a splinter colony in the Local Group who for some reason chose to modify themselves biomechanically and have only recently made themselves known.



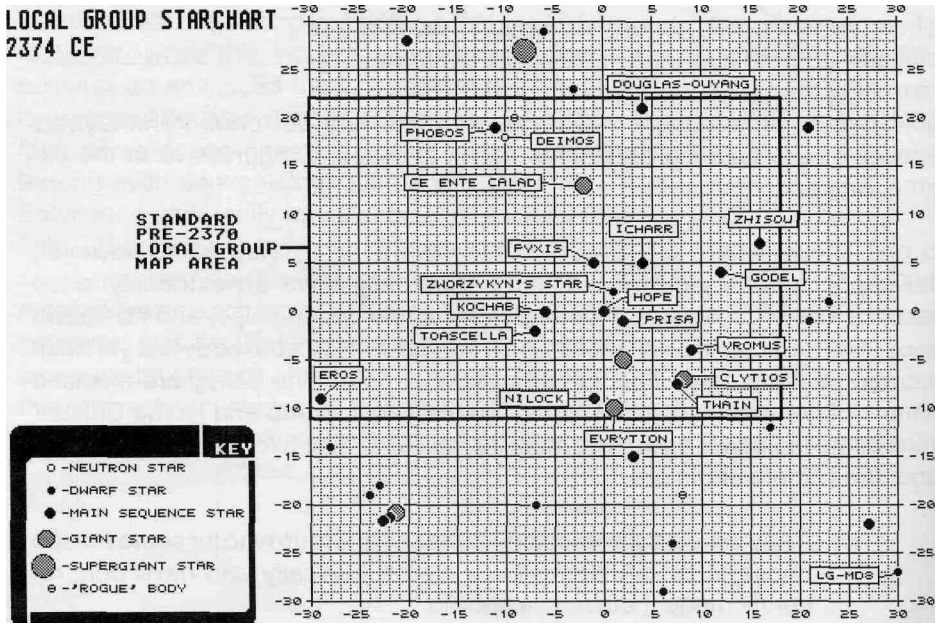
PART II: THE STORY SO FAR

- They are from "outside" the Local Group and arrived here either by accident (unlikely) or through some kind of hyperspace booster.

Local Group Starchart — Updated

For the past century and a half the Local Group's boundaries were established as a rectangular volume of space 48 lightyears "wide" (X axis), 33 lightyears "deep" (Y axis) and 34 lightyears "high" (Z axis), for a total volume of 50,490 cubic lightyears. In 2369, Tim Markarian, Dean of Astrophysics at Axia Polytech, proposed extending the Local Group's boundaries to encompass a cube 60x60x60 lightyears, centered on the star Hope. This new definition more than quadrupled the volume of the Local Group to 216,000 cubic lightyears, and added 27 new stars, bringing the total to 47. Not all of the 27 new stars have yet been visited, and so far only one of those few that have been visited has been identified as having a habitable planet (specifically, the red dwarf star LG-MD8, around which orbits the unsavory planet called Tuoles Laicr'mok — garbage dump of the UDP and the home of the "Muties").

It is unlikely that most missions will stray beyond the established pre-2369 Local Group star systems, but for your future reference, and in the unlikely event that you are required to command a task force to some previously unexplored system, the newly updated map is provided here.



PART III: MISSION OVERVIEW

What the Game Is

Having gotten your first sample of **Rules of Engagement** through the tutorial, you now have some idea of what the game is about and how it is played. This section provides brief descriptions about key aspects of the game, allowing you to form a better mental picture of the nature of your objectives in the game, the opposition you face, and what resources are available to you and your opponents.

You as the Fleet Commander

Rules of Engagement is a role-playing game in which you take on the role of a Fleet Commander deployed to lead Federated Worlds forces in specific missions against enemy or rebel forces. Your overall objective is to advance your Fleet Commander. This is accomplished by successfully completing missions, which raises the total score for the Commander. When certain scores are reached, the Commander is promoted.

NOTE: For detailed information about Fleet Commanders, see Appendix I.

The Concept of the Mission

A mission is a single, specific military operation. Each time you play a game you are engaged in a particular mission. In **Rules of Engagement** there are no broad "campaigns" of linked operations. Each mission stands on its own.

In the mission you take the helm of the flagship of a group of Federated Worlds starships. The force under your command can consist of as few as one ship, and up into entire armadas of vessels.

PART III: MISSION OVERVIEW

Mission Locales

Each mission takes place in a particular solar system (also: starsystem), containing between one and two stars, and various numbers or planets, asteroid fields, outposts and waypoints. The system map is 4 x 4 billion kilometers, with an overall map area of 16 quintillion square kilometers. All game action takes place on a two-dimensional plane through the center of the system. You cannot collide with objects in the system, as they are treated as if just **below** the plane your ships, and the enemy, are on. Thus, when your ship appears to be flying *through* the sun or a planet, it is actually passing over it.

You cannot leave the system. Your ship's navigational subsystem has an inhibitor which will prevent your vessel from leaving the system map and venturing into the void of interstellar space.

A few things to know about the systems:

- The size and class of the star(s) in the system can effect your communications systems. The hotter the star, the more interference it creates. Furthermore, the closer you are to the star, the higher the interference.
- Asteroid fields are no menace to navigation, however, the more dense an asteroid field is, the more difficult it is to scan outside it. A ship caught in a dense asteroid field is at a disadvantage because it may be effectively sensor-blind while opposing ships outside of the field are probably still be able to see it.
- Planets have no affect on your ship (although they may harbor outposts).

Time-Limits & Real-Time Missions

Some missions have time limits built in, forcing you to complete the mission within a certain time-frame. If you do not meet all of the objectives within a particular mission's time limit, you will have failed to successfully complete the mission, and the game will end.

The CHRONO readout in the 300 bar at the top of all of the game screens displays a continually updated mission clock, registering how many hours, minutes and seconds have passed since the mission began. The total mission time remaining can be seen under the Objectives display on the DATA RETRIEVAL panel.

Unlike Omnitrend's **Breach 2**, in which time passes in 30 second "rounds", almost everything that happens in **Rules of Engagement** occurs in real-time. One second of time in the "real" world equals one second of game-time, which means, if you don't pay attention, you could suddenly find yourself having less than five minutes in which to get your ships to a point in space that would take ten minutes to reach at maximum velocity, and thus lose the mission.

E=MC² ... It's the Law

According to Einstein's Special Theory of Relativity, no object in normal space can accelerate beyond the speed of light — roughly 300,000 kilometers per second. In the **Universe** games this limitation is circumvented by use of "hyperspace" engines, which allow ships to pop out of normal space in one location and, 6.8 days later, emerge at a location many lightyears away. However, hyperspace travel is impractical within a solar system (who wants to take 6.8 days to cross a distance you could travel in hours?), and thus all ships are trapped by the "lightspeed barrier".

At maximum, the fastest ships in the game can reach 99% of lightspeed. All missiles travel at 99.9999% lightspeed. Enhanced Beam Weapons and communications signals, being energy, can travel at lightspeed, but no faster.

Now, 300,000 kilometers per second might sound fast (and it is), but it's still not infinitely fast, something you'll pick up on soon enough when you realize that it can take 3.7 *hours* for a message at that velocity to cross a 4 billion kilometer axis of the solar system map!

The lightspeed limitation returns the "fog of war" aspect to space combat that most computer games and simulations seem to ignore. Simply put, you can't flash all over the map instantaneously, nor yell for help and expect the cavalry to come running right away.

Captains

You have direct control of only the mission's flagship. All other ships under your command have their own Captains, whom you must manage and deploy. Using your ship's communications system, you can send orders to these Captains, instructing them to undertake various actions.

PART III: MISSION OVERVIEW

One thing that is very important to understand is that each Captain has a distinct personality which will affect how he or she acts and responds to your orders. Some will attempt to meet mission objectives without awaiting orders from you, others won't budge without a direct order. Some will follow your orders to the letter, others won't listen to you at all. Some are clever tacticians, others have the IQ of a black hole. Some are so loyal that they will blow themselves to bits on your order, while others just don't give a damn about you, orders, or the Federated Worlds, and will surrender to hostile forces at the drop of a hat.

As a result, one of the most important aspects of a mission is to decide which Captain is right for what job. This is done by reviewing each Captain's docket, which can be accessed via your flagship's Data Retrieval system.

Communications

The Communications system is one of the six primary systems of your ship. Through it you deploy your forces and keep tabs on them. This system keeps track of messages received, and contains a list of orders which you can send to the Captains under your command. You can direct Captains to particular targets or patrols, or even contact the enemy and order them to surrender.

Battle Groups

Deploying Captains individually can be time-consuming, particularly when you want several of them to do the same thing - like defend an outpost or attack a specific ship. This problem is alleviated by the formation of Battle Groups, in which two or more ships undertake actions as a unit. Battle Groups are formed by ordering one Captain to form a group, and then instructing other ships to join the group. Once the Group is formed, all of the ships in the group will act on whatever the Group Captain does, with the net result being that you can control many ships by sending orders to only one.

Naturally, this is not a perfect system, as, again, the personalities of given Captains come into play. Some Captains rebel against authority, and still others won't take orders from Captains who have less experience than they do. As a result, forming Battle Groups often requires even more attention to the personalities of the Captains than normal.

Enemies

In each mission you will find yourself facing a specific enemy force composed of a particular faction or race. Like a Captain under your command, these enemies have "group traits" which affect their actions and reactions. A particular enemy might be very aggressive, and would be more likely to attack your forces or outposts than less aggressive creatures. They might be exceptionally clever tacticians, but also possess poor diplomatic skills, thus making it unlikely they could convince neutral outposts to help them.

As with your Captains, a docket of information about your opponents is available from your DATA RETRIEVAL system.

Federated Worlds Ships (FWS)

All of the vessels under your command are ships of the Federated Worlds. There are six classes of ships, each potentially more powerful than the last (depending on how they are equipped and armed). The starship classes are: Transport, Scout, Destroyer, Cruiser, Heavy Cruiser, and Dreadnought. In optimal configuration, Dreadnoughts are the most powerful ships in the fleet, and Transports the weakest. However, since some large warships are equipped with less than the best parts, sometimes a Dreadnought can end up being less capable than a Cruiser.

For detailed information on Federated Worlds ships, see Appendix III.

Enemy Ships

Enemy forces have access to ships comparable to those in your forces' inventory. They conform to the same six categories: Transport, Scout, Destroyer, Cruiser, Heavy Cruiser, and Dreadnought.

Navigation

Another of your ship's six key systems. Most navigation is a fully automatic process, although manual control is possible. Through your ship's navigational system you can keep track of objects and ships in the system, and with the touch of a button probe, intercept, or chase any one of them.

PART III: MISSION OVERVIEW

Combat

This involves two or more opposed ships moving within one million kilometers and firing on each other. All ships are armed with a form of EBW (Enhanced Beam Weapon), and some may also carry varying numbers, and types of missiles.

Ships are protected by defensive energy shields, which minimize damage from hostile fire. However, the shield system can itself be damaged and destroyed, and even the best shields are not 100% effective at preventing damage. Failure to raise the shields in combat is a sure way to invite destruction.

Ships are "destroyed" when all six of their primary systems have been rendered totally inoperative and irreparable.

Damage

Every ship has six primary systems, each of which can sustain damage. Undamaged systems work with 100% effectiveness. As a system is damaged, the functions related to that system begin to fail, until eventually the related functions become inoperable. A system that is at 0% operational capacity is considered destroyed and cannot be repaired. Damage is sustained in combat with hostile forces, the one exception being when communications equipment sustains damage when you push the system to its limits.

If a system is at least partially operational, it can be repaired. However, the more damaged a system is, the longer it takes for your ship's damage control teams to deal with the problems. Using the Damage Control settings on your ship's DATA RETRIEVAL panel, you can distribute your repair personnel to priority systems. Furthermore, docking with an outpost may be helpful, as many outposts are capable of fixing your systems more quickly and completely than your own crew.

Partially damaged systems lose functionality as follows:

Communications	Reduced comm range and interference tolerance Reduced sensor range Possible loss of sensor probe operation
Computer	Loss of information on Data Retrieval displays
Life Support	If below 50%, crew will begin to suffocate
Shields	Reduced shield recharging rate
Weapons	Reduced EBW power
Drives	Reduced maximum speed and acceleration

Boarding

Some missions may require you to capture an enemy vessel. To capture a vessel you must board it and seize control of a certain percentage of critical systems. To board an enemy ship you must first destroy its shield and drive systems, and then move your ship within 5,000 kilometers range.

Boarding is normally a fully automatic process, however, if you have **Breach 2**, the Interlocking Game System allows **Rules of Engagement** to lock into that game and utilize it for such ship boarding sequences (see "Part VIII: The Interlocking Game System").

Outposts

Outposts are bases. They can be planet-bound facilities or free-floating space stations. Each outpost has two levels of sophistication of interest to starship commanders, related to the outpost's ability to repair starships and resupply their missile stocks. The higher the sophistication, the more help the outpost can provide.

Outposts can have one of three alliances: to you, the enemy, or neutral. Friendly (FW) outposts will come to your aid if you dock with them, enemy outposts will aid enemy ships, and neutral outposts may or may not help either side (depending on the diplomatic skill of the ship commander wishing to dock).

If an outpost is hostile, the only option you have is to capture it. If a neutral outpost denies you docking permission, you may also attempt to capture it. Capturing an outpost involves a procedure similar to that used in capturing an enemy ship, except that only the outpost's shields must be disabled before boarding, and your ship must move within 1,000 kilometers. Naturally, enemy forces can attempt to capture neutral or Federated Worlds outposts as well, and will probably attempt to retake their own facilities that you have occupied.

Capturing a particular enemy outpost may actually be set as an objective for a particular mission.

As with boarding an enemy ship, if you have **Breach 2**, the Interlocking Game System allows **Rules of Engagement** to lock into that game and utilize it for such outpost boarding sequences (see Part VIII of this manual).

PART III: MISSION OVERVIEW

Mission Briefing

Each mission contains a briefing that you can review at any time by accessing your ship's DATA RETRIEVAL panel. The briefing will detail the background of the mission, and may also contain hints on how to deal with the enemies and avoid potential pitfalls.

Objectives

One or more objectives will have to be met in order to complete a given mission. The objectives for a given mission are available for review at any time on your ship's DATA RETRIEVAL panel. Those objectives that are checked off have been met. A complete list of possible objectives follows:

All Ships to Waypoint 1—All surviving FW ships must reach Waypoint 1 (X01). If more than one objective is required, this is always the last one that must be met, as it represents the final destination of all your forces.

Ship *n* to Waypoint *n*—You must safely guide the specified ship to the specified waypoint.

One Ship to Each Waypoint — Your Fleet must "control" strategic points in space. One FW ship must be located at each waypoint in the system in order for the mission to end successfully.

NOTE: Any one of the preceding three waypoint-related objectives may be in a given mission, but *only one*. You can't very well have one ship at each waypoint and also get all ships to the first waypoint, can you?

Capture Outpost *n*—At the end of the mission the specified outpost (*n*=outpost ID) must be under the control of your forces.

Capture Enemy Ship *n*—Your forces must disable and then board/capture the specified enemy ship (*n*=enemy ship ID). Since ships cannot be recaptured by the enemy (they are rendered dead when boarded), this can be done at any time during the mission.

Neutralize *n*% of Enemy Fleet — Your forces must successfully neutralize (either capture or destroy) the specified percentage (*n*=percentage) of enemy ships in the system.

PART III: MISSION OVERVIEW

Control n% of Outposts — At the end of the mission your forces must simultaneously control the specified percentage (n=percentage) of outposts in the system in which the mission takes place.

It sometimes gets tricky trying to figure out in which order to carry out these objectives, but the simplest approach is to deal with those that cannot be changed by enemy actions first (like destroying ships) and then deal with "final position" objectives last (like moving ships to particular waypoints).

As stated earlier, some missions also have a time limit. If a time limit is set, when the limit is reached, the mission will end. Therefore, it is important to fulfill the mission objectives before this limit is reached,

Skill Levels

There are three skill levels you can play, Beginner, Intermediate, and Advanced. The differences are as follows:

Beginner

- Missiles and EBW's from FW ships never miss (unless fired outside of correct range or jammed).
- Enemy missiles and EBW's do only 50% normal damage.
- FW ships have unlimited visibility of enemy ships.
- When pausing game, screen does not blank.
- Shields raise automatically when hit.

Intermediate

- Missiles and EBW's from FW ships are subject to the normal weapons' accuracy.
- Enemy missiles and EBW's do only 75% normal damage.
- Enemy ships are only detectable when within sensor range of an FW ship.
- When pausing game, the screen blacks out.
- Shields must be raised manually.

Advanced

- Same as Intermediate, except:
 - Enemy missiles and EBW's do normal damage.

PART III: MISSION OVERVIEW

If you successfully played the same mission at both Beginner and Advanced levels, and took identical action with identical results in both games, you would notice that you received a lower score for the Beginner game. This is done to balance for the many advantages gained in playing the Beginner level, which is easier than an Intermediate game and *much* easier than playing a game at Advanced level.

Saving a Game in Progress

You have the ability to save a game at any time simply by activating the disk icon in the game's 300 bar. This means that you can stop playing at any point and resume the game later.

In fact, when using the IGS you can save the game from within **Breach 2**, and when you tell **Rules of Engagement** to resume the game it automatically returns you to your position within **Breach 2!** (See Part VIII of this manual for more details on the IGS.)

Ending a Game

A game will end when:

- all of the mission objectives are met (win)
- an objective you were meant to capture is destroyed (lose)
- your flagship is destroyed (lose)
- your Fleet Commander is killed in a boarding action (lose)
- you end a game by quitting and deleting it (lose)
- your flagship surrenders to enemy forces (lose)

If you win a game, your Fleet Commander's statistics will be updated. If you lose the game, the game file is erased and the Fleet Commander stats will be updated to reflect the loss.

Note that after winning or losing a mission, a mission summary will appear. After reading this summary, pressing any key will return you to the last game panel you were operating. The mission clock will be frozen, and all activity will have ceased. This allows you to examine the final positions and status of your ships, read any unread communications, and examine any other data in any of the game panels. Once you have finished, activate the disk icon button to exit the mission and save your Fleet Commander's stats.

Playing With Other IGS Products

The Interlocking Game System is a unique method of allowing separate games to combine with one another to form one huge game. **Rules of Engagement** is able to load Omnitrend's previous IGS game, **Breach 2**, as if the two were one large game. It is possible that in future **Rules of Engagement** may be able to load or be loaded by other IGS modules, meaning that your role playing character (the Fleet Commander in the case of **Rules of Engagement**) can adventure through many games.

Currently, **Rules of Engagement** is an IGS controlling module, which loads non-controlling modules (like **Breach 2**). Check with your dealer or contact Mindcraft for information on other IGS games.

NOTE: A detailed description of the IGS system can be found in part VIII of this manual.

Creating Your Own Missions

You can create new missions or modify existing ones by using the various 'builder' panels accessible from the **Rules of Engagement** GAME/MISSION menu. Part VII of this manual documents the builder panels and their use.

Where to Go from Here

By now you are probably wondering when you will be able to play a game other than the tutorial mission, well, now that you have an overview of various aspects of **Rules of Engagement**, it's time to go on to the specifics of playing and controlling the game. The next section of this manual ("Part IV: The CCSI Interface") documents the game's interface, describing not only how to operate it, but the most efficient way in which to use it. Following that, "Part V: The Main Panels" documents each of the actual game panels, giving you button-by-button and function-by-function information. Finally, "Part VI: Tactics" documents tactics, strategies, and playing tips which will help you learn the game and successfully complete missions.

PART IV: THE CCSI INTERFACE

Command and Control — Overview

During the brief peace that existed during the period of the Local Group Unification Organization (2368-2374 CE [Common Era]), the Federated Worlds Armed Forces (FWAF) suffered from a number of critical budget cutbacks which seriously affected the operational readiness of Federated Worlds defenses. Many starships were decommissioned, and a large percentage of FWAF combat personnel were discharged or retired. During this period, the only major new military expenditures were related to refitting key starships with new systems. One major program undertaken by the FWAF during this period was the complete overhaul of the computer and control systems of all combat-ready starships. This was done to keep up with the latest innovations in related technology. Several years earlier, (2364CE) a contract was awarded to the Intelligence Corporation to develop a new Command & Control Systems Interface (CCSI) which would become the standard on all Federated Worlds starships. The final specification produced by Intelligence was then incorporated into all CCSI related computer system produced for the FWAF— including those produced by manufacturers other than Intelligence.

Tast experience had taught the FWAF that simplification of CCSI systems was of vital importance. The old CCSI standard had worked very well, but over many years its deficiencies had become increasingly apparent. What the FWAF sought was a fully integrated system in which the data displays and controls were one and the same. Furthermore, it specified that the overall number of controls be reduced. Intelligence's design reflects these concerns.

Interface Basics

When you sit down in front of a CCSI panel for the first time you are struck by the simplicity of it. Gone are the rows of data displays, buttons and keyboard banks. In their place is a single glassy panel, on which is displayed a digital representation of a control board. This is a touch-screen which is operated by pressing on the display's simulated "buttons" and touching or "dragging" other controls. Since the controls are part of the display rather than separate equipment, the system can mix information displays with the controls themselves, allowing the user to keep his/her/its eyes focused on the data at all times. This cuts down on response time, and, since related controls can be displayed with mode-specific information, there is less chance of confusion over which controls relate to what function.

Furthermore, in the interest of preventing confusion over distinct and unrelated functions, the CCSI displays only related controls at any one time. If you are accessing communications functions, the navigational controls are not displayed. Likewise, if you are reading the docket of one of the Captains under your command, the weaponry systems are not shown.

Controlling the CCSI

The FWF computer systems work with multifunction touch-sensitive displays. Chances are your actual personal computer isn't this sophisticated, so you must operate the interface using a mouse and/or keyboard. Control of the CCSI panels is covered in this section, with operational details for both mouse and keyboard users. "Pressing" a button in the lingo of these instructions means to click on it with the mouse or press the keyboard equivalent.

Button Symbol Table

Key equivalents are listed on most buttons as the overscored letter or symbol. In some cases the button symbols themselves represent keys. The following is a list of button symbols and their keyboard equivalents:

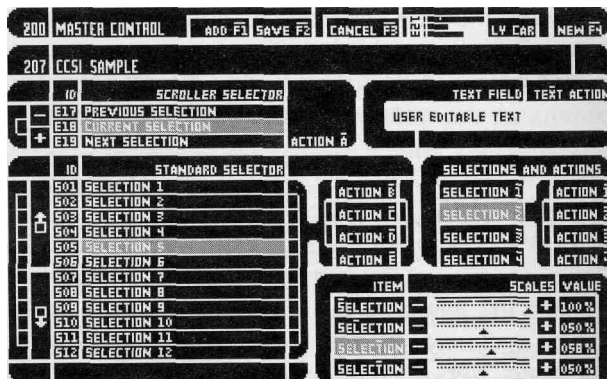
<i>symbol</i>	<i>keyboard equivalent</i>
0 to 9	number keys (on the <i>main</i> keyboard)
F1 to F10	function keys
+	+ (plus) key
-	- (minus) key
←	left-arrow key (cursor pad)
→	right-arrow key (cursor pad)
↑	up-arrow key (cursor pad)
↓	down-arrow key (cursor pad)
⌂	Home key
→ 	End key
↑ □	PageUp key
↓ □	PageDown key

NOTE: When the manual refers to the **PageUp**, **PageDown**, **Home**, and **End** "buttons" or "controls", the on-screen representation of the button will contain the symbols displayed in the table above.

PART IV: THE CCSI INTERFACE

A Sample Panel

Each CCSI panel is made up of several distinct "parts", some or all of which may change as you access different systems. For reference, we here present a "sample" of a CCSI panel with "typical" elements.



PANELS & PANEL NUMBERS

A "panel" in CCSI terms is a large group of related controls, such as controls associated with Data Retrieval or equipping starships. Groups of related subfunctions within a panel are known as "subpanels".

Each and every panel display has an identifying number. These numbers are always three-digit values. The first digit in the number tells you something about the panel you are working with. For instance, all shipboard CCSI panels are of the 300 series, meaning that the number of any such panel will begin with a 3, as with Navigation being panel 301 and Tactical being panel 303.

Panel series are as follows:

000 series	Usurper boxes
100 series	Game/Mission
200 series	Mission Builder
300 series	Ship CCSI
400 series	FWSF Marine deployment

MASTER CONTROL BAR

This bar contains those controls and displays common to all related panels. For example, the Master Control Bar on a starship panel contains the mission clock and all of the controls necessary to access various systems. This bar is always present, while separate control panels displayed below it can and do change. Master Control Bars are *always* green (cyan in CGA), although control buttons and displays within it can be other colors.

ACTION BUTTONS

Action buttons are controls which *do* something. Activating one has an immediate result, such as changing a mode or firing a missile. They represent "buttons" of the type you "press/touch". Using an action button as simple as clicking on it with the mouse or pressing the equivalent key on your computer keyboard.

Action buttons are easily identified because they are *always* rectangular and magenta in color. The bright color indicates that these are controls rather than a inactive part of the display.

There are two types of action buttons. The first is the "trigger" type, which activates a particular function and then deactivates it. Trigger buttons will "flash" white a few times when pressed and then return to their normal color. The second type of action button is the "switch" type, which, when pressed, remains active until another function deactivates it or it is selected again to toggle it "off". When such a switch is "on" it remains white to indicate its status.

A few examples are in order. A FIRE button is a "trigger" type, firing a weapon and then stopping. On the other hand, an ACQUIRE button which locks the weapons system onto a target or a GET button that calls up another display is a "switch".

In some cases, such as when two or more action buttons call up wholly different displays, only one button may be active/highlighted at any one time. In other cases, such as when choosing what to display on a map, many related action buttons can be active at the same time.

PART IV: THE CCS1 INTERFACE





SELECTION BUTTONS

Selection buttons differ from action buttons in that selection buttons don't actually do anything in of themselves. They are used to make a choice from a selection of two or more items which will be acted on by associated action buttons. For example, on a starship's Tactical panel there is a Beam Width control with three selection buttons (wide beam, normal beam, and pinpoint fire). The act of selecting any one of these buttons does nothing by itself, as you are simply telling the CCS1 which option you wish to use when you next press the action button (FIRE).

Selection Buttons are *a/ways* blue in color and a highlighted item is displayed as a lighter blue (cyan and white in CGA). In all cases selection buttons can be clicked on using the mouse. When using the keyboard in a few modes it is necessary to use the arrow keys or related "scroll" action buttons to highlight the selection (notably on standard item selectors [see below] and on two submenus in the Tactical panel).

Generally, when in clusters of two or more related selections, only one selection button may be active/highlighted at any one time.

STANDARD SELECTOR

When you are offered a list of items to choose from, the usual way of presenting the list is through a standard selector. The selector features numerous selector buttons, each of which can contain an item (all items are listed alphabetically). The current selection is whichever item is highlighted. To select an item with the mouse, you merely click on it. To select an item with the keyboard, simply press the  and  keys to move the highlighter bar to the item you want. In the case of side-by-side selector lists, you must use the  and  keys to move through the right-hand list.

(Furthermore, on your ship's communications panel, scrolling the highlighted item on the standard selector is accomplished by use of the **Home** and **End** keys.)

If a list contains more items than can be displayed at one time, you can press on the "page-forward" and "page-back" buttons alongside the list. Keyboard users will have to press the keyboard equivalent listed on these buttons (it varies from panel to panel).

As with all selection buttons, simply highlighting an item out of the list will not do anything until you press a related action button.

SCROLLER SELECTOR

In some places, the standard selector becomes impractical because of limited display space. In such cases, a "scroller" selector is employed, which works somewhat differently from the standard selector. A scroller selector usually lists only three items at any one time, with the second item being automatically highlighted. By pressing on the scroll-up and scroll-down action buttons (or pressing their key equivalents), the list of items will scroll, allowing you to place any item in the list on the highlighted bar. The highlighted item is the choice to be acted on by associated action buttons.

You cannot "click" on any item in a scroller selector, as there are no "buttons" to pick. The scroller list is gray with a white highlight instead of the usual selection button colors of blue with a light-blue highlighter (cyan and white in CGA).

Scroller sectors sometimes have related action buttons in a bar just above and/or below the selector itself.

(On the Tactical panel there is a miniature version of the scroller selector which lists only *one* item at a time.)

THERMOMETER SCALE

These are used to set values that require a wide possible range or fine-adjustments of a value. The scale bar represents the potential range of the value, and the small arrowhead parallel to the scale indicates the current value's position along the scale. These scales are used throughout the program, for everything from setting map view radii to adjusting the power level of your weapons.

To operate such meters, simply move the arrowhead pointer along the scale until the desired value appears (either parallel to the scale or in a value readout nearby). To adjust the setting with the mouse, click and hold the mouse button on the arrowhead and drag the arrowhead along the scale. To adjust the value with the keyboard, press the indicated 'move' key once to start the arrowhead moving, and press the key again to stop it.

PART IV: THE CCSI INTERFACE

These keys start moving the arrowhead slowly, but the longer the arrowhead moves the faster it goes. This acceleration makes it possible to move across large ranges quickly, but can make fine-positioning problematic. To avoid this when making small adjustments, quickly tap the arrowhead move keys on and off, which will not give the arrowhead time to accelerate.

NOTE: In many cases, these scales are rather 'coarse', and fine positioning using the mouse is impossible. Mouse users can use the keyboard commands to fine-tune their settings on such scales.

VALUE READOUT

Several types of these readouts are seen on CCSI panels. Their purpose is to list information about settings or related controls.

For example, a value readout alongside a thermometer scale for setting EBW power would display the percentage of hitting power selected (000% to 100%), or, one alongside CHASE an INTERCEPT controls would identify the item you are pursuing.

The most common value readouts are small boxes, pinkish-orange in color (cyan in CGA), which are usually just large enough to hold the values to be displayed. The second type of value readout simply displays white numbers on black backgrounds.

STATUS METERS

A status meter is a bar that, when at maximum length, indicates that the item in question is at 100%. As the bar shrinks, it indicates the current percentage. Such bars are used in the Master Control Bar to indicate the approximate operational capability of each of your ship's six primary systems. Similar readouts appear on the Tactical panel to show you the operational capability of the systems of targeted ships and outposts, and one is used to show the power-up status of the EBWs.

USURPER BOXES

Occasionally, when you access a particular mode or function a yellow and green bordered (cyan and white in CGA) subpanel will pop up. This is known as a "usurper" box because it usurps control from whatever panel you are working with. When a usurper box is present you cannot work with any controls outside of the usurper's own. You must send the usurper box away (usually by operating a **CANCEL**, **ABORT**, **DONE**, or **OK** button) before you can again work with other controls.

Usurper boxes are most commonly used for alert messages and warnings. Other time then act as submenus, providing extra options to those displayed on the main panel you are working with.

If a usurper box features *no* action buttons (magenta), such as when the "One moment please..." messages appear, then the box is under system control and will automatically disappear when the computer is ready to proceed.

Usurper boxes are easy to identify because they tend to pop up in the middle of the screen, and are bordered primarily in yellow with a green bar across the top. The green bar will contain a three-digit panel number, always starting with 0 (zero), as with 001 or 015.

TEXT EDITING FIELDS

There isn't much need for *typing in* **Rules of Engagement**, but occasionally you are required to enter a name for a game, mission, character, etc. In these situations, you will be confronted with a text editing field. To type in the field you must activate the associated action button (like **NAME**, **EDIT NAME** or such), which will result in the appearance of a thin rectangular frame in the text field, inside which is a slim vertical cursor. Each text editing field can hold up to 18 characters of text. You can use the Backspace key on your computer keyboard to delete existing text. The cursor and delete keys have no effect. Most common alpha-numeric keys can be used in such fields. All text will appear in uppercase (capital) letters.

To exit a text editing field, simply click your mouse anywhere on the screen, or press the **Enter/Return** key on your keyboard.

NOTE: The large "dossier" type text fields in the builder panels work differently, and are documented in Part VII of this manual.

PART V: THE MAIN PANELS

PART V: THE MAIN PANELS

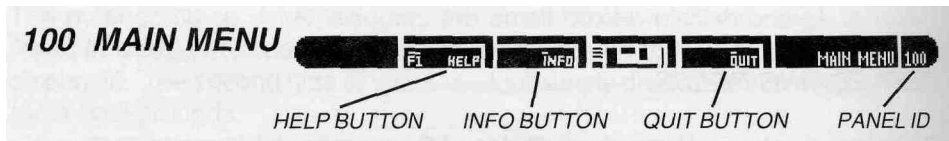
How to...

This section explains each and every panel in the game, with the exception of the builder panels (see Part VII). Each panel's purpose and functioning is detailed.

Screen buttons are listed in uppercase bold text, with the key equivalent listed, in parenthesis, immediately following the button text, as in: "...use **BUTTON** (B) to..."

Please note that many options will bring up alert messages, such as "are you sure you want to delete...", and the usurper boxes bearing these messages are no? always noted in the text because, as a rule, what to do when one appears is fairly self-evident.

Each panel is listed by number and name. Operation of the controls on these panels are as described in "Part IV: The CCSI Interface", unless otherwise noted.



This is a Master Control Bar which appears only on the starting menu screen of the game (Panel 101). It contains only three controls, all action buttons (magenta); they are as follows:

HELP (F1)

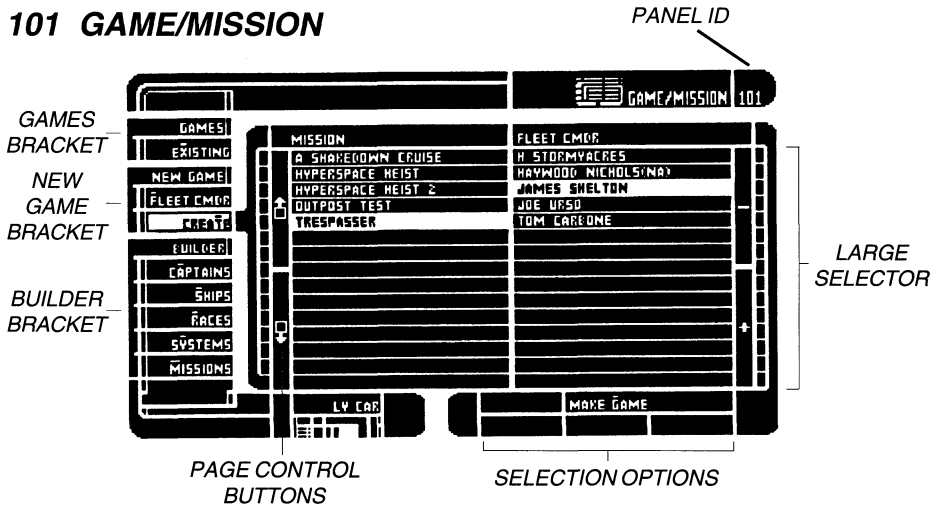
This button brings up an enlarged version of the standard usurper message box (001) which briefly explains how to create and start a game. The only button on this box is an **OK** (O) control to exit.

INFO (I)

This calls up usurper box 000, which lists the game's copyright information and credits. There are two buttons in this box, the first, **MORE** (M), cycles to the next page of credits, and the second, **DONE** (D), exits the box. The last page of credits features only the **DONE** button.

QUIT (Q)

This quits the program. When you select it, you are asked if you really want to leave the game, and your options are **YES (Y)** and **NO (N)**.

101 GAME/MISSION

This menu dominates the majority of the game's opening screen, and provides access to all aspects of **Rules of Engagement**. From here you can create and edit Fleet Commanders, start games, and access the mission builders/editors. Along the left side of the panel are eight action buttons divided into three categories. The categories are:

GAMES

Options related to existing (saved) game files.

NEW GAME

Options related to the making of new games files and the creation and handling of Fleet Commander characters.

BUILDER

Options under this are related to mission elements and accessing the mission builder panels.

Initially, none of the action buttons in these categories are activated, and a large FWA logo dominates the screen. When any of the 101 panel action buttons are used, this logo disappears (and will not reappear unless you play and exit a game or restart the program.)

PART V: THE MAIN PANELS

Only one of these eight buttons can be active at one time.

When any of these action buttons are selected, a large selector, listing all items related to that mode, becomes "linked" to that button. Operation of this selector is like all standard selectors; click the mouse on, or use **↑** and **↓** to highlight, the item you want to act upon. Use the **PageUp** and **PageDown** buttons to page through long listings.

At the bottom-right of the selector are action buttons representing the options related to the current items listed. Most of these selector buttons will act on the item highlighted, although a few (notably "create" and "make" buttons) will add new items to the listing rather than acting on the selected one.

Following is a description of each of the buttons and the category they fall into:

EXISTING (X)

This button is the only item under the GAMES bracket. When highlighted, this button brings up a listing of all existing game files. These include games newly created and not yet started, as well as games saved in progress. Each game is listed by the name you gave it, and the mission being played is displayed to the right of the game name.

You have two options in this mode. The first option, **DELETE (D)**, removes whatever existing game file is highlighted in the list. When a game is deleted, the Fleet Commander used in that game is removed from the game file, placed back on the "available" list, and the game itself is erased.

The second option, **PLAY (P)**, loads the highlighted game file and begins game play (jumping directly to panel 304 if the game has not been previously played and saved in another mode).

FLEET CMDR (F)

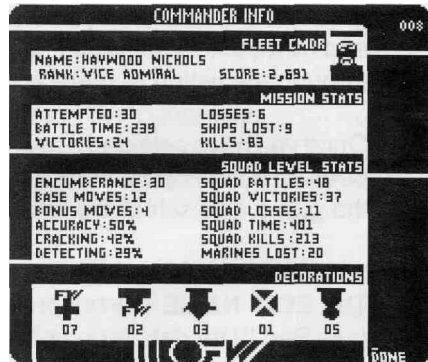
When highlighted, this button brings up a listing of all existing Fleet Commanders, listing their names and status. A commander whose name is followed by "AVAILABLE" is ready to use in a new game. If the name is followed by a "N/A" (Not Available) flag, the Commander is involved in an existing game and cannot be used in a new game or deleted until the game he/she is involved in is completed or deleted.

There are four possible actions you can take with regard to the Fleet Commander listing, the controls for which are all clustered at the bottom-right of the selector.

CONVERT (V) will read all **Breach 2** Squad Leaders in the user-selectable directory and convert them to **Rules of Engagement** Fleet Commander characters (see Appendix VI for details on operating this feature).

DELETE (D) will remove the selected Commander from the list permanently. You will be prompted "Are you sure...?" before the deletion is carried out. If you attempt to delete a Commander that is currently involved in an existing game, you will be notified: "That Fleet Commander is currently commanding a game. You must delete the game first."

EXAMINE (E) calls up a box which lists information about the selected commander, including, name, rank, vital statistics, and commendations.

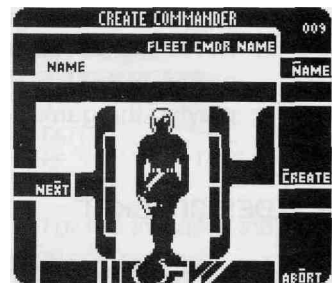


CREATE (C) does not act on the highlighted item; it *creates* a new Fleet Commander. When you answer **YES (Y)** to the "Are you sure...?" prompt, usurper box 009 appears, in which you name your character and select his/her appearance.

009 OPERATION

Selecting **NAME (N)** on this box causes a text editing frame and cursor to appear in the FLEET CMDR NAME field, where you can type in a name up to 18 characters in length (see "Part IV: The CCSI Interface" for details on text editing fields).

When you have completed the name, click the mouse anywhere on the screen or press **Enter/Return** on your keyboard.





PART V: THE MAIN PANELS

Selecting **NEXT** (X) cycles through the six different options for Fleet Commander appearance. When both the name and appearance are to your liking, selecting **CREATE** (C) on the box will exit to 101 and add your new character to the Commander listing. If you decide you don't want a new Commander, **ABORT** (0) will exit without creating a character.

CREATE (T)

This splits the large selector horizontally and lists all existing missions and Fleet Commanders so that you can create a new game file. To create a game, highlight the name of the mission you want to play in the first column and the name of the Commander you wish to use in the second column.

KEYBOARD NOTE: In the second column of the selector in this mode, use the  and  keys on your keyboard to move the highlighter up and down the Commander list, and the indicated + and - keys to page through the listing (if there are more than 15 selections).

Once you have selected a mission and a Commander, activating **MAKE GAME** (G) will open a small dialog box (010) in which you must name the game and select a difficulty level.

010 OPERATION

The **EDIT NAME** (N) button allows you to enter/edit the game name (see Part IV for details on text editing fields). When you have completed the name, click the mouse anywhere on the screen or press **Enter/Return** on your keyboard. Three blue selector buttons provide choices for game difficulty. The difficulty button highlighted when you use **DONE** (D) to make the game file sets the difficulty level. **BEGINNER** (B), **INTERMEDIATE** (I), and **ADVANCED** (V). (See *Skill Levels* in Part III of this manual for details on mission difficulties and how they affect playing the game and the Fleet Commander character's score).

BUILDER BRACKET

The remainder of the buttons on panel 101 are related to the BUILDER section of the program, which allows you to edit existing missions and mission elements or create new ones. The actual functioning of the panels called by each of these buttons is documented in Part VII of this manual. However, in brief, here is what each button will list and allow you to access:

CAPTAINS (A)

FW Captains - the commanders of ships in missions.

SHIPS (S)

FW starships, commanded by either the Fleet Commander or a FW Captain.

RACES (R)

Enemy forces/alien races, who are your opponents in missions.

SYSTEMS (S)

The solar systems in which missions take place.

MISSIONS (M)

The missions you undertake when playing the game.

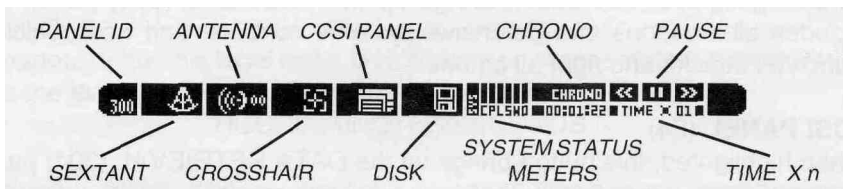
When any builder button is active, the selector lists all items of that type. The selector options for all builder items are identical:

DELETE (D) Delete the highlighted item in the current list.

EDIT (E) Enter the selected builder panel and edit the highlighted item in the current list.

CREATE (C) Enter the selected builder panel and create a new item to be placed in the current list.

300 MASTER SHIP CONTROL



This is a Master Control Bar which appears above *all* of the in-game starship control panels (301-304). It contains several important readouts and the controls which provide access to all other panel modes.

PART V: THE MAIN PANELS

The 300 bar contains five large action buttons and three smaller ones, each of which contains an icon. Of the five large buttons, only one of the first four can be highlighted at any one time. The fifth large button (containing the disk icon) and the three small ones to the far right are of the trigger switch type, activating and immediately deactivating themselves.

KEYBOARD NOTE: The action buttons in the 300 bar do not have key equivalents listed on-button, however, they do all have keyboard equivalents. Each button is triggered by a function key, starting with F1 and ending with F8. The leftmost button is F1, the second is F2, and so on.

Starting at the left end of the bar and moving to the right, the five large icons are:

SEXTANT (F1)

When highlighted, this button brings up your ship's NAVIGATION panel (301), from which you can steer your ship, probe items in the vicinity, and consider your strategy.

ANTENNA (F2)

When highlighted, this button brings up your ship's COMMUNICATIONS panel. Immediately to the right of the icon, but still in the button, is a two-digit number which will usually read "00". This readout displays the total number of messages, up to a maximum of 99, received by the Comm system since you last accessed it (if at all). When you access the COMMUNICATION panel, this number resets to 00.

CROSSHAIR (F3)

When highlighted, this button brings up the TACTICAL (303) panel, which includes all weapons and defensive systems controls, and from which you launch all attacks and fight all battles.

CCSI PANEL (F4)

When highlighted, this button brings up the DATA RETRIEVAL (304) panel in whatever mode it was last in (there are eight sub-modes). See the description of panel 304 for details.

DISK (F5)

This icon is a trigger button which allows you to save the game and exit the mission.

When activated during a mission, it brings up a usurper box which asks, "Do you want to save your current game position?", with the options being: **YES** (Y) saves the game as it stands and exits to panel 1 0 1 , so you can resume later where you left off; **NO** (N) exits to 1 0 1 without saving the current position, so that when you restart the game it will resume at the beginning of the mission or at the last place you *did* save the position; **CANCEL** (C) aborts the exit routine and returns immediately to the game.

When activated after the successful or unsuccessful completion of a mission, it will exit the mission and update your Fleet Commander's stats accordingly.

SYSTEM STATUS METERS

Immediately to the right of the **DISK** button is a small readout featuring six letters, above each of which is a thin bar/meter. These represent the status of each of your ship's six primary systems. If the status meter for a system reaches the top of the 300 bar, that system is 100% operational. Each time a system sustains an additional 10% of damage, the meter's height slips a notch. Once a meter is completely depleted, the system in question is 0% operational, and technically "destroyed". (See "Part VI: Tactics" for details on system damage and damage control.) Below each meter is a letter identifying the system represented by that particular meter. The list of letters read "CPLSWD" and stands for:

C	Communications
P	computer
L	Life support
S	Shields
W	Weapons
D	Drive/propulsion

CHRONO

The readout under this label is the ship's "mission chronometer", a clock which shows the elapsed mission time in the following format:

HOURS:MINUTES:SECONDS.

This clock is always running unless the game is paused or you have accessed a panel with its own clock (such as 401 MARINE DEPLOYMENT when boarding an outpost or ship). The default is for the clock to run at realtime speed, with one second of gametime equaling one second of realtime. This can be changed by using the slowtime and speedtime controls (« and ») described below. (The CHRONO readout may freeze momentarily when you switch panels or modes. This is done so that you are not out of control of the mission during the time your personal computer is busy loading graphics or other data.)

TIMEX_n

This readout shows the current rate of gametime versus realtime passage, with n representing the multiplication factor of gametime. Gametime defaults to realtime (x1), where one second of gametime equals one second of realtime. At almost any time this can be changed, up or down, doubled to two (x2), four (x4), eight (x8), sixteen (x16), and finally thirty-two times realtime (x32) (where each second of realtime equals 32 seconds of game time).

The TIME X n factor is controlled by the three small action buttons immediately above the TIME X readout. They are described next.

« (F6)

This button is a trigger which, when activated, immediately divides the current gametime multiplication factor in half. For example, if the gametime setting is at x8 before you activate the « button, it will read x4 after you have activated it. The minimum gametime rate is x1.

Right-clicking on « (Shift-F6) immediately jumps the speed back to realtime (x1) regardless of the current rate.

|| (F7)

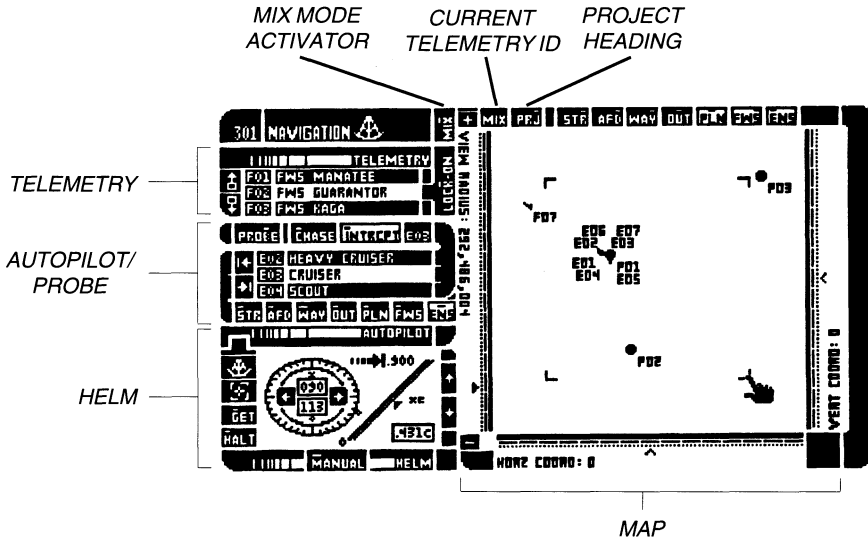
This button toggles the PAUSE mode on and off. When highlighted, 1 1 freezes the game and chronometer, as well as disables all other buttons and controls.

NOTE: In actual combat, you would not be able to stop time in the heat of battle and leisurely weigh your options. Thus, at Intermediate and Advanced difficulty, pausing the game results in the the screen being cleared of everything but the 300 bar. At Beginner difficulty the screen is not cleared when the game is paused.

>> (F8)

This button is a trigger which, when activated, immediately doubles the current gametime multiplication factor. For example, if the gametime setting is at x8 before you activate the » button, it will read x16 after you have activated it. The maximum gametime rate is x32, where 32 seconds of gametime pass for every second of realtime. Right-clicking on »(Shift-F8) immediately jumps the speed to maximum (x32) regardless of the current rate.

307 NAVIGATION



This panel relates specifically to maneuvering your ship and studying the "field of battle". The panel is dominated by a map display, which fills the center and right end of the panel. To the far left are three banks of controls, related to: what telemetry is being displayed on the map; computer controlled autopilot navigation; and manual helm control.

TELEMETRY

This selects from which FW ship, if any, the sensor data displayed by the map comes. As each ship has a limited scanning range, the ability to display sensor information from any of your ships is of great strategic value as it allows you to "see" more than your ship's own sensors can. Furthermore, use of it allows you to see what any ship in your fleet is up to at any given moment.

The ship whose telemetry information is displayed is selected by using a scroller selector and an associated **LOCK-OK** (K) action button. Use the **PageUp** and **PageDown** buttons to scroll until the ship you want information from appears highlighted, and then activate **LOCK-ON** to have the map display that ship's sensor information.

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Just above the TELEMETRY controls is a small action button labeled **MIX** (X). The purpose of this button is to "mix" all received telemetry with the overall solar system map to produce a single "overview". Activating **MIX** causes any Lock-Ons to be disengaged and an entire solar system map to be displayed, allowing you to see where all of your forces are relative to the system's sun(s), planets, outposts, asteroid fields and waypoints. The mix mode map defaults to full-system view with a radius of 2 billion kilometers. The scale of the zoom can be changed using the map-scale controls (see the MAP description for details).

Mix mode is useful for overall strategic planning, but it has some limits; particularly, it displays the locations of all *known* items in the system, but unknown items, such as enemy ships that are not in sensor range of any of your FW forces, are not displayed.

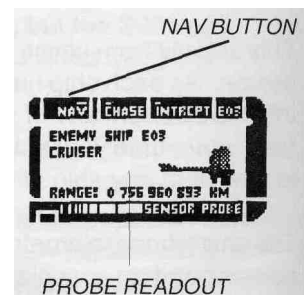
NOTE: If you are playing a game at beginner level, the map can always display the current position of enemy ships, in sensor range or not. *This only works on beginner missions!*

AUTOPILOT

The controls in this bank comprise your ship's autopilot and strategic scanners. The purpose of this bank is to allow you to pick targets, get information about them via scanning/probing, and move towards them. Above this bank's scroller selector is a value display and buttons which will act on the highlighted item in the selector. Below this bank's selector are a set of seven buttons which change what type of item is listed in the selector. All AUTOPILOT buttons and readouts are listed as follows.

PROBE (B)

Scans the item highlighted in the AUTOPILOT scroller selector and provides information about it. When you probe each of the following subjects (selected using the buttons at the bottom of the AUTOPILOT controls), the indicated information is displayed:



STAR	Name, I.D. number, type and radius.
ASTEROID	I.D. number and density.
WAYPOINT	I.D. number and range at time of probe.
OUTPOST	Name, I.D. number, alliance, status and sophistication.
PLANET	Name, I.D. number, type and radius.
FW SHIP	Name, I.D. number, class, range and status (if destroyed)
ENEMY	I.D. Number, class, range and status.

When **PROBE** has been activated the scroller selector is replaced by the probe data, and the **PROBE** button itself changes to a **NAV (V)** button, which will restore the scroller selector to its normal status.

CHASE (C) and INTRCPT (I)

These buttons activate the autopilot system, which immediately sets course to pursue the currently highlighted item in the AUTOPILOT selector or the item currently being probed.

Only one of these two buttons can be activated at one time.

In **CHASE** mode, your ship will proceed at full-power until it approaches the target, and will then match velocity with it at a specified range (500,000 from starships, etc.). The chase mode is best used when pursuing moving targets, such as FW and enemy ships.

In **INTRCPT** mode, your ship will proceed at full-power until it approaches the target, and will then slow to a complete stop within a specified range of it (500 kilometers from outposts, etc.). Once the interception has been completed, your ship remains stopped and will not automatically adjust its position if the target moves. The intercept function is most useful when pursuing (relatively) stationary targets, such as outposts, planets and asteroid fields.

The act of chasing or intercepting a particular target can be overridden or altered by activating any of the controls which affect the ship's heading and velocity, such as using the controls on HELM or the tactical maneuvering controls on the TACTICAL (303) panel.

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Specific AUTOPILOT overrides work as follows:

- In chase mode, selecting **CHASE** again with a different subject selected will change the course and target.
- In chase mode, activating **INTRCPT (I)** will alter the autopilot settings to intercept and stop relative to the current target or a newly selected one.
- In intercept mode, selecting **INTRCPT** again with a different subject selected will change the course and target.
- In intercept mode selecting **CHASE** will alter the autopilot settings to keep up active pursuit of the current target or a newly selected one.
- In either mode, switching to manual helm control by using the **MANUAL (M)**, **GET (G)** or **HALT (H)** buttons on the HELM panel(see the HELM description below).
- Activating one of the tactical maneuvering controls on the TACTICAL panel (303) will override any AUTOPILOT or HELM settings until you restore control to the NAVIGATION panel.

THE CHASE/INTERCEPT TARGET I.D.

This value display appears immediately to the right of the **INTRCPT** button. Its function is to list the I.D. number of the item last/currently being chased or intercepted. If either the **CHASE** or **INTRCPT** buttons are highlighted, the value in this readout indicates the current subject being pursued.

If the crosshair/tactical icon on the HELM is flashing (it will be static white in CGA), the **CHASE** and **INTRCPT** buttons will be off, however the I.D. readout still indicates the last subject being pursued, although the pursuit has been overridden by the tactical maneuvering controls. Disengaging the tactical maneuver in this case is accomplished either by using **CHASE** or **INTRCPT** to go after the same or a new target, activating manual helm control (see **MANUAL**, **GET** or **HALT** below), or by using the TACTICAL panel's small sextant button on the TACTIC control subset (see the section on panel 303 TACTICAL for details).

If the manual helm controls (**MANUAL**, **GET** and **HALT**) are used, the autopilot is disengaged and the TARGET I.D. is cleared.

THE AUTOPILOT SELECTOR & BUTTONS

The autopilot selector works like all scroller selectors. This particular one displays I.D. numbers and names for seven different categories of lists, selected by the action buttons along the bottom of the selector. Only one of these buttons can be active at any one time. The buttons are:

STR (S)	Lists all stars (max of 2) in the system.
AFD (A)	Lists all asteroid fields in the system.
WAY (W)	Lists all waypoints in the system.
OUT (O)	Lists all outposts in the system.
PLN (P)	Lists all planets in the system.
FWS (F)	Lists all FW starships in the system.
ENS (N)	Lists all enemy ships in sensor range of FW ships (in beginner mode <i>all</i> enemy ship are listed).

HELM

This bank of controls allows you to steer your ship, "manually" setting a course and velocity. This subpanel contains six action buttons, two navigational control status indicators, draggable "dial" and velocity meter controls, and several value readouts. The bank's **MANUAL** button must be active before most of these controls will do anything.



This is a sextant indicator light. The actual icon will remain black unless the AUTOPILOT controls are active. If an AUTOPILOT mode is active, the icon will flash on and off to indicate that navigation control is currently under the autopilot (in CGA the icon turns white and does not flash).

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This is a crosshair indicator light. The actual icon will remain black unless the TACTIC controls on the TACTICAL panel (303) are active. If the TACTIC controls are in use, this icon will flash on and off to indicate that navigation control is currently overridden by the tactical system (in CGA the icon turns white and does not flash).

MANUAL (M)

This action button activates manual helm control, making your ship take up the course and speed set using the Heading Dial and the Velocity Meter (see below). If the AUTOPILOT controls are active (noted by the flashing small sextant light), MANUAL shuts them off and takes control. If the TACTIC controls are active (noted by the flashing crosshair light), **MANUAL** takes control from them.

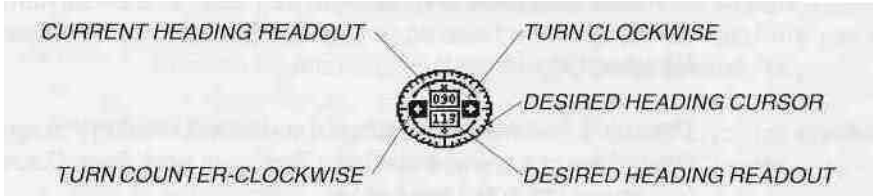
You can manually change course or speed at any time by tweaking the controls in this section and activating **MANUAL**.

OPERATIONAL OVERVIEW: To utilize manual control you must set course and speed using the Heading Dial and Velocity meter and make sure that the **MANUAL (M)** (manual helm control) button has been activated. Using the chase and intercept, or halt and tactical maneuvering controls, turns manual helm control off.

The manual helm control mode is also automatically activated when the **GET** and **HALT** buttons are used (see below).

THE HEADING DIAL

This dial represents a heading in degrees, set relative to the "plane of the ecliptic" of the current solar system. Headings can be from 000 to 359 degrees, allowing your ship to move in any direction on the map. Heading 000 is due "north" on the dial and map, heading 090 is due "east", 180 is due "south", and 270 is due "west".



The following is a breakdown of the elements of the Heading Dial.

Current Heading Readout

This displays the current heading of your ship. The value in this readout changes to reflect your ship's course changes. The *Current Heading Readout* is not specifically linked to the manual helm controls, and reflects the ship's heading whether navigation is under autopilot, manual, or tactical control.

Desired Heading Readout

This displays the desired heading you want your ship to take when under manual helm control. The value displayed here is determined by the position of the *Desired Heading Cursor* (see next item) on the outside of the Dial. When you set a new desired heading this readout will change instantly to reflect it. If **MANUAL** is activated, the *Current Heading Readout* (see above) will begin to change to match the desired heading as your ship takes up the new course.

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Desired Heading Cursor

This operates much like the arrowhead pointer on a standard "thermometer scale" (see "Part IV: The CCSI Interface"), except that rather than going from one end of a straight scale to another, this pointer circles a dial - encountering no start and end points. The position of the cursor on the outside of the dial indicates your desired heading in degrees. The actual numerical value of the heading is displayed in the *Desired Heading Readout* (see above).


There are two ways to change the desired heading: dragging the pointer, or using the *Turn Clockwise* and *Turn Counterclockwise* controls (see below).


To drag the pointer you must have a compatible mouse. Click the left mouse button on the pointer, and, while holding the button down, "drag" the pointer around the dial to the desired position. As you move the pointer, the *Desired Heading Readout* will change to reflect the new setting. When you release the mouse button, the pointer will stay where you left it.

Turn Clockwise

This function is activated by the  button, and its purpose is to move the *Desired Heading Cursor* around the Heading Dial in a clockwise direction. When you activate the  button by clicking on it with the mouse, it stays "on" only as long as you hold the mouse button down. If using the keyboard, the button stays "on" and the pointer moves clockwise until you press another key.

Turn Counter-Clockwise

This function is activated by the  button, and its purpose is to move the *Desired Heading Cursor* around the Heading Dial in a counter-clockwise direction.

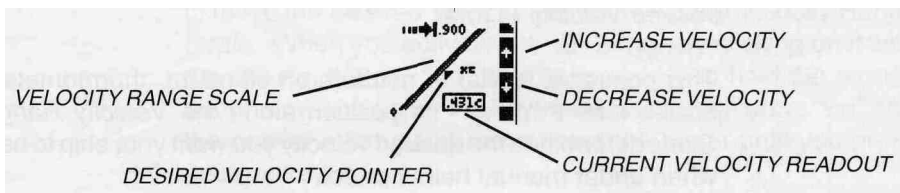
When you activate the  button by clicking on it with the mouse, it stays "on" only as long as you hold the mouse button down. If using the keyboard, the button stays "on" and the pointer moves counter-clockwise until you press another key.

NOTE: If the Velocity Meter (see below) is set to .000c your ship will not be moving and your new Desired Heading setting won't make a heck of a lot of difference.

VELOCITY METER

This portion of the helm is where you can adjust your velocity for manual helm control situations. There are a number of items associated with the Velocity Meter.

MAXIMUM POTENTIAL VELOCITY
READOUT



VELOCITY NOTE: All velocities in **Rules of Engagement** are presented as metric values on scale where the number 1 equals the speed of light (c). Thus, a velocity of .75 equals 75% of lightspeed.

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Maximum Potential Velocity Readout

The symbol here is an arrow pointing at a "stop" line, which indicates **that** the number to the right of the symbol is your ship's *maximum* potential velocity. The maximum velocity is determined by the type of engines your ship carries. Smaller ships are limited in the size and power of engine types they can be equipped with.

This readout always represents the maximum velocity at which your ship could travel if the drive systems were *undamaged*. If the drive has sustained damage, you will not be able to reach this maximum until the drive is repaired.

Velocity Range Scale

This is an "angled" version of the standard "thermometer" scale (see Part IV). It represents the potential velocity range of your vessel, going from "halted" (no velocity) at the bottom left, to your vessel's top velocity at the upper-right (the numeric value is displayed in the *Maximum Potential Velocity Readout* to the left). The position of the *Desired Velocity Pointer* (see next item) on this scale indicates the manual helm control velocity.



Desired Velocity Pointer

This pointer is similar to pointers on standard "thermometer" scales (see Part IV). Its position along the *Velocity Range Scale* determines the desired velocity you want your ship to use when under manual helm control.



There are two ways to change the desired velocity; dragging the pointer up and down the scale using a mouse, or using the *Increase* and *Decrease Velocity* buttons (see below).

To drag the pointer you must have a compatible mouse. Click the left mouse button on the pointer, and, while holding the button down, "drag" the pointer up and down the scale to the desired position. When you release the mouse button, the pointer will stay where you left it and, if the **MANUAL** button is active, your ship will immediately begin making velocity adjustments. If in manual mode, you can see the velocity change happening by watching the *Current Velocity Readout* (see below).

Increase Velocity Button

This function is activated by the  button, and its purpose is to move the *Desired Velocity Pointer* up the *Velocity Range Scale*. When you activate the  button by clicking on it with the mouse, it stays "on" only as long as you hold the mouse button down. If using the keyboard, the button stays "on" and the pointer attempts to move up the meter until you press another key.

Decrease Velocity Button

This function is activated by the  button, and its purpose is to move the *Desired Velocity Pointer* down the *Velocity Range Scale*. When you activate the  button by clicking on it with the mouse, it stays "on" only as long as you hold the mouse button down. If using the keyboard, the button stays "on" and the pointer attempts to move down the meter until you press another key.

Current Velocity Readout

This readout, appearing in a frame below the *Desired Velocity Meter*, shows a continuously updated readout of your ship's current velocity. Under manual control or in intercept mode, the value will level off at a particular number. In chase or tactical maneuvering modes, the value will fluctuate as your ship automatically adjusts its position relative to targets.

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HALT (H)

This button is of the trigger type, and causes your ship to execute a full-power breaking maneuver and come to a complete stop (relative to the current solar system). Activating **HALT** automatically switches on manual helm control (**MANUAL** will be highlighted) and moves the *Desired Velocity Pointer* to 000. **HALT** overrides all chase, intercept, manual helm and tactical maneuvering controls.

GET (G)

This button is of the trigger type, and its function is to copy the current navigation settings into the HELM box and switch to manual helm control. The heading and velocity of your ship at the moment you trigger **GET** is set on the heading dial and velocity scales, regardless of whether navigational control is under autopilot (chase or intercept) or tactical control.

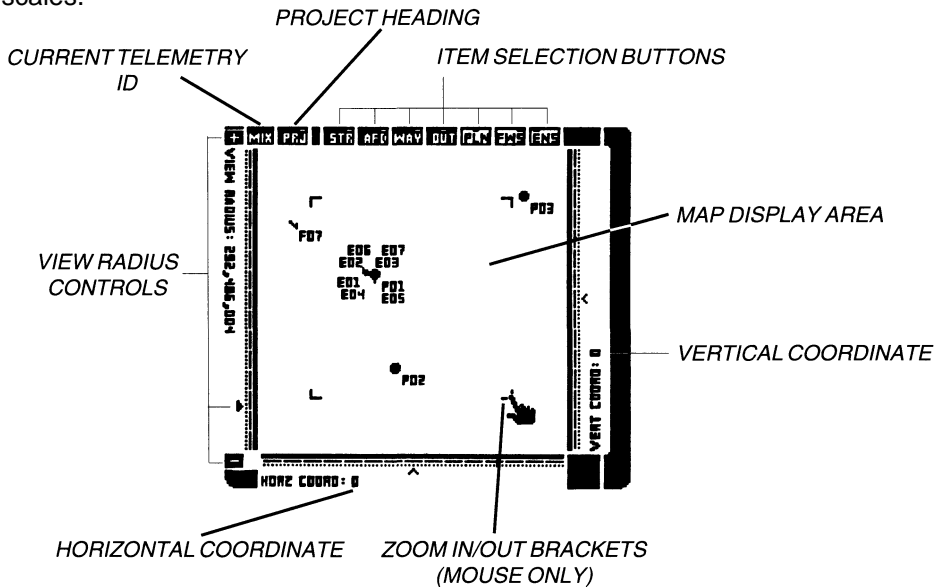
See *Maneuvers* in Part VI of this manual for examples of using this control in a mission.

THE MAP

This large display is used primarily for planning strategy and determining manual helm control settings. It displays either the telemetry data from the last ship selected using the **LOCK-ON** (K) button, or a "system overview" map if **MIX** (X) is active.

The view scale of the map is adjustable, allowing you to see large views for planning strategy or closing in to tighter zooms for viewing action in detail.

The map is made up of four elements: the map view itself; the item selection buttons; the view radius controls; and the horizontal and vertical coordinate scales.



The following is a breakdown of the elements of the map elements.

Map Display Area

This is where the actual map is displayed. The map is a square area the exact center and size of which is variable depending on a ship's position and sensor ability.

The map display can present views ranging from a minimum radius of 75 kilometers to a maximum of 2 billion kilometers (the radius can be adjusted using the *View Radius Controls*, see below), although the 2 billion kilometer radius is available only in "mix" mode (see above).

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View Radius Controls

These are along the map's left side, and their purpose is to allow you to adjust the map's "zoom" level to show varying volumes of space.

There are only three actual controls, all of which mouse users will probably have little use for (see *Mouse Map Radius Control* below).

First and foremost is the *zoom scale*, which is simply a thermometer scale the full height of the map. This scale represents no "set" range, rather, the range it represents varies depending on the source of the telemetry. In mix mode it presents a range from 2 billion (top of the scale) to 75 (bottom) kilometers. When Locked-Onto a ship, it represents a range from that ship's sensor-maximum (top) to 75 kilometers (bottom).

Alongside the *zoom scale* is a *radius indicator*, an arrowhead type pointer which indicates where in the potential "zoom" range your view is currently set. If the arrowhead is halfway down the scale, you are currently viewing an area only half as large as potentially possible from the current telemetry source.

The *radius indicators* actually a control, and mouse users can "drag" it up and down the scale to adjust the view radius.

Keyboard users need to use the *increase radius (+)* and *decrease radius (-)* buttons at the top and bottom of the *zoom scale*. The + button causes the *radius indicator* to move up the scale, widening the view. Likewise, the - button causes the *radius indicator* to move down the scale, shrinking the view radius. As is typical with thermometer type scales, the + and - buttons activate an "accelerating movement" routine; the longer the button is active, the faster the *radius indicator* will move (see Part IV for details on Thermometer Scales and their operation).

Keyboard users must simply activate the buttons and then press any key when they wish to stop the *radius indicator's* motion. Mouse users who want to use these buttons must simply hold down the left mouse button for as long as they want the arrowhead to move.

Mouse Map Radius Control

If you are playing the game with a mouse, it is the easiest way to adjust the map radius. If you move the mouse pointer over the map itself, you'll see that a set of four "brackets" appear, framing an area of the map. As you move the mouse pointer you can adjust the size of the area framed. Clicking the left mouse button causes the map to instantly zoom in to show only the area you "framed". The VIEW RADIUS readout changes to reflect the radius of the area currently displayed. You can use this method of scaling in over and over again. The only time you can't zoom in on the map any more is when the view radius reaches 75 kilometers.

Backing "out" from a zoom involves the same technique, except that you use the *right* mouse button. When you right-click the mouse, the map changes its zoom level so that the area you were viewing when you clicked now fits inside the brackets. In effect, right-clicking does the reverse of left-clicking. Left-clicking blows up the area in the brackets to fill the map display, while right clicking shrinks the image filling the map to fit within the area defined by the brackets.

Horizontal & Vertical Coordinate Scales

These scales represents the entire "width" and "height" of the solar system map, from -2 billion to +2 billion. The mark at the middle of either scale represents coordinate 0, the center of the system on that axis. The arrowhead pointers which appear alongside each of these scales shows you where the current centered object is within the system. The specific coordinate the arrowheads point to are listed as the HORZ COORD: and VERT COORD: readouts.

NOTE: These Coordinate Scales are readouts only, and you cannot manually adjust the map center. Remember, the map center is always either a ship (Lock-On mode) or the system center (mix mode).

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Once you learn how the coordinate system works, such as that a + horizontal coordinate is to the right of system center and a - vertical coordinate is below the system center (on the map), then you can tell where a given ship is simply by Locking-Onto it and checking its coordinates. A ship with a horizontal coordinate of -2,000,000 (-2 million) and a vertical coordinate of 3,000,500,000 (3 billion, 500 million) would be just left of the system's center and 75% of the way towards the "south" end of the map from the system's center.

Item Selection Buttons

Across the top of the map is one value readout, and eight action buttons. All but one of the buttons are used to select what items will appear in the map display.

LOCK-ON I.D. READOUT

Between the **MIX** and **PRJ** buttons is a value readout which displays the identification number of the ship currently Locked-Onto using the TELEMETRY controls. This I.D. number will always be for a Federated Worlds ship (F01-F99).

If the **MIX** button is activated, this readout will display the word "MIX" to let you know that no single ship's telemetry is the source of the current map display.

PRJ (J)

Immediately to the right of **MIX** and the LOCK-ON I.D. READOUT is the **PRJ** button, which toggles the "project course" mode on and off. When **PRJ** is active, an animated "blip" is drawn moving outward from the FW ship currently Locked-Onto as the telemetry source. This "blip" is used to show that vessel's current heading. The vessel whose course is being projected appears at the center of the map, and its I.D. number appears in the LOCK-ON I.D. READOUT (see above).

If **MIX** is active no projected course will be displayed, since no particular ship is the subject of a "mix" display.

VIEW-ITEM SELECTOR BUTTONS

The remaining seven buttons along the top of the map allow you to select which items you want the map to display at any given time. This is done to permit you to selectively display data relevant to your current operations. For instance, when tracking down enemy ships, you may not want solar system items (like planets, etc.) cluttering up the view. These buttons are:

- STR** (R) Displays all stars (max of 2) in the system.
- AFD** (D) Displays all asteroid fields in the system.
- WAY** (Y) Displays all waypoints in the system.
- OUT** (U) Displays all outposts in the system.
- PLN** (L) Displays all planets in the system.
- FWS** (S) Displays all FW starships in the system.
- ENS** (E) Displays all enemy ships in sensor range of FW ships (in beginner mode a//enemy ship are listed).

The view-item buttons are not exclusive, and you can have none, all, or any combination of them active at any one time; such as having **OUT**, **ENS** and **FWS** switched on.

Reading the Map

The map display is fairly easy to "read" and understand. Each type of item is identified by a symbol and always accompanied by an identification number. For instance, Federated Worlds starships are displayed as small green (white in CGA) vector symbols (arrows). The following chart shows the I.D. numbers, symbols and colors used for each type of item displayed on the map.

I.D., SYMBOL & COLOR CHART						
ITEM	I.D.	TYPES	MAP SYMBOL	COLOR		
				EGA	CGA	
STARS	S01-S02		yellow	white	
ASTEROIDS	A01-A99		grey	cyan	
WAYPOINTS	X01-X99	-	yellow	white	
OUTPOSTS	T01-T99	FW Enemy Neutral	-	blue cyan green	white magenta cyan	
PLANETS	P01-P99	Habitable Airless Gaseous		green gray cyan	cyan white magenta	
FW SHIPS	F01-F99	normal destroyed	normal destroyed	green green	white white	
ENEMY SHIPS	E01-E99	normal destroyed	normal destroyed	pink red	magenta magenta	

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A few notes on map symbology:

- The vector/arrows representing ships are rather simple indicators of a ship's actual heading. The vectors can point in one of eight directions, corresponding to headings of 0, 45, 90, 135, 180, 225, 270, and 315 degrees. Actual headings can be any number between 0 and 359, so the vectors represent only "approximate" headings, not actual ones.
- When a ship has been captured or destroyed, the symbol for it changes from a vector to a small circle.
- Planets appear as small filled circles *until the* map display zooms in tightly enough so that the planet's actual size can be accurately reflected by an octagonal outline.
- If several items are very close together on the map, sometimes the symbol or I.D. number for each may become obscured by those of other items. This can be dealt with by changing the map's scale or by choosing not to show certain items through use of the View Selection Buttons (see above).

Furthermore, each system has a definite "border" which is exactly 2 billion kilometers out from the system center. The map displays this "border" as a solid line, and your ship cannot cross it. Built-in inhibitors prevent your ship from leaving the system and racing into empty interstellar space. The entire border can be seen in mix mode.

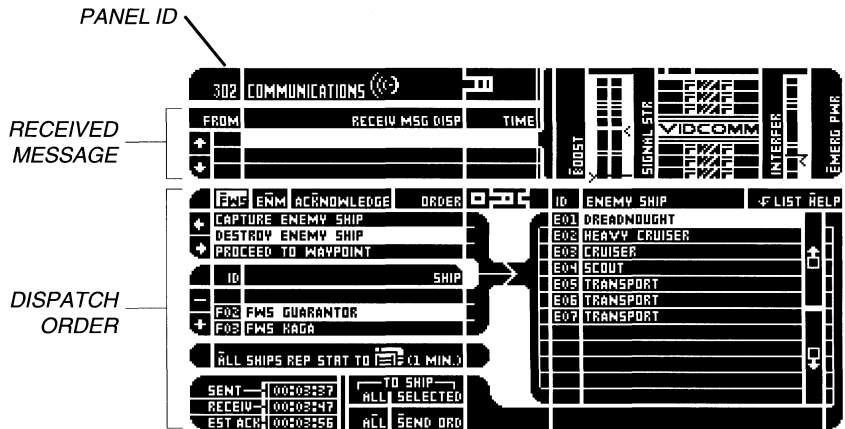
Sensor Range Limitations

Normally, the map displays the telemetry of the ship currently Locked-Onto (see TELEMETRY). Ships do not have infinite scanning range, and as a consequence when Locked-Onto a ship the map will display an area only as large as that ship's sensors can scan. In mix mode the map can display a view up to 2 billion kilometers in radius, but when viewing telemetry from a Destroyer equipped with the best equipment it can carry, the view is limited to 47 million kilometers in radius, about 1/43rd (2.35%) the map's maximum view radius (equivalent to an area representing a mere 5.5% of the map area). In mix mode sensor range limitations do not come into play insofar as the solar system components and your ships go, as you always know where they are. It is enemy forces that are the wildcard, and which are not displayed unless they happen to be within sensor range of one of your ships. Again, in beginner skill level games the location of all enemy ships can be determined at any time, as sensor range limits are disabled in beginner level.

302 COMMUNICATIONS

This is the very heart of your fleet command. It is from where you dispatch orders to and receive reports from the captains under your command.

The COMMUNICATIONS panel is one of the easiest to operate, having very simple controls. As you can see, it consists of three scroller selectors, one standard selector, and a handful of buttons and readouts. The panel is divided into two parts: the upper third is the Received Message section, and the lower two-thirds is the Dispatch Order section.



Quick Operational Overview



The COMMUNICATIONS PANEL has a number of options, but sending orders and reading received messages is fairly simple. Here's a quick reference for operating the panel:

To check to see if you have any waiting messages:



- 1 — From any panel other than COMMUNICATIONS, look at the dish-antenna button on the 300 bar at the top of the screen. If the number to the right of the icon is greater than 00, then you have waiting messages. Use the icon to go to COMMUNICATIONS.

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To review waiting messages:

- 1 — Make sure you are on 302 COMMUNICATIONS.
- 2 — The most recently received message will appear on the highlighted line under the RECEIV MSG DISP label, and a visual of the sender will appear to the right.
- 3 — To see previous messages, use the  to scroll back, highlighting each message and displaying its visual. You can also use  to go forward through the list.

To send an order to a single ship:

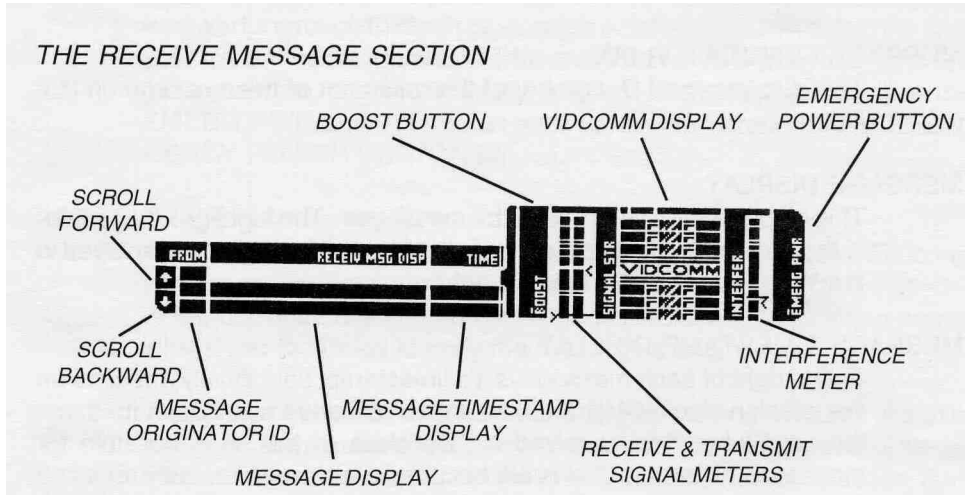
- 1 — If transmitting to an FW ship, make certain that **FWS** (F) is highlighted under ORDER. If transmitting to an enemy ship, highlight **ENM** (N).
- 2 — Use the  and  buttons to highlight an order under ORDER.
- 3 — If the order you have selected requires you to pick an item in the standard selector (bottom-right), highlight the item in question using the mouse or by moving the highlighter with the **Home** and **End** buttons.
- 4 — Use the - and + buttons under SHIP to highlight the name of the ship to which you want to send the order.
- 5 — Activate **SEND ORDER** (S).

To send an order to all ships of a given type:

- 1 — If transmitting to an FW ship, make certain that **FWS** (F) is highlighted under ORDER. If transmitting to an enemy ship, highlight **ENM** (N).
- 2 — Use the  and  buttons to highlight an order under ORDER.
- 3 — If the order you have selected requires you to pick an item in the standard selector (bottom-right), highlight the item in question using the mouse or by moving the highlighter with the **Home** and **End** buttons.
- 4 — Activate **ALL** (L).

Panel Breakdown

The following is a breakdown of all of the sections, readouts and controls of panel 302 COMMUNICATIONS.




This section is used to view the messages you have received. A scroller selector allows you to move through the messages, and a Vidcomm display shows you an image of the Captain, or enemy, who sent it.

The left end of this section consists of the scroller selector with which you can scan all messages (if any) received by your ship. As each message is received, it is placed at the "top" of the list, and pushes all other messages "down". The most recently received message is *always* at the top of the list.


Whenever you move to the COMMUNICATIONS panel from another, or if you receive a message while already in COMMUNICATIONS, the list is automatically set to the top so that you can immediately see the last message received.

SCROLL FORWARD/NEXT MESSAGE BUTTON

Activating this button  will scroll up one item through the list of received messages, going from the message you are currently viewing to the next one received. If you are viewing the last message received, this button will have no effect.

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SCROLL BACKWARD/PREVIOUS MESSAGE BUTTON

Activating this button  will scroll down one item through the list of received messages, going from the message you are currently viewing to the previous one received. If you are viewing the first message received, this button will have no effect.

MESSAGE ORIGINATOR I.D.

This displays the I.D. number of the originator of the message on that line.

MESSAGE DISPLAY

This displays the actual text of the messages. The highlighted line (top) is the currently selected message, the "visual" for which is displayed in the Vidcomm display to the far right.

MESSAGE TIMESTAMP DISPLAY

To the right of each message is its timestamp, specifically, the time on the mission clock (CHRONO) when the message was transmitted, *not* the time when you received it. Because of this, it is possible for messages to seem out of order because a message recently received from a very distant ship would have an earlier time stamp than a previously received message sent from a nearby ship.

BOOST BUTTON

The **BOOST** (B) button is a toggle which, when activated, overrides the power-level safety on your ship's communications circuits, so that the incoming signal strength is increased by from 1 to 15 points (depending on what communications system your ship carries). Using it carries a penalty, however, as it continually strains and damages your communications system. If you need it, it is recommended that you turn it on only when absolutely necessary (see next item).

INCOMING & TRANSMIT SIGNAL STRENGTH METERS

To the immediate right of **BOOST** are the vertical "thermometer" scales, R and T. The left scale (R) shows you the strength of received/incoming signals. The strength of the last message received is indicated by the small green pointer (cyan in CGA) to the left of the scale. If a message is too weak to be received, or is blocked by system interference, a "MESSAGE GARBLED" alert appears in the MESSAGE DISPLAY, in which case you might want to use **BOOST** (see above) to try to enhance incoming signals so that you can read them.

The right scale (T) displays two pieces of related information. The red horizontal line indicates the estimated minimum level the outgoing signals' strength must reach in order to be properly received, and the cyan pointer shows the current actual signal strength of your communications system. If the pointer is above the line, then your transmitter is powerful enough to reach other ships in the system. If below the line, your transmitter is too weak to be received. If your transmissions are too weak to be received normally, as a last-ditch effort, you can use the **EMERG PWR** button to boost your transmitter strength (see EMERGENCY POWER BUTTON below).

VIDCOMM DISPLAY

Your vessel's communications equipment is of the classic Vidcomm variety, and in this portion of the panel a video "snapshot" of the sender of the currently highlighted message is displayed. This video image allows you to quickly identify the message's origin.

The Vidcomm display may sometime display varying amounts of static. The static is a result of the distance between ships and the level of stellar interference encountered by the ship transmitting the message (see next item).

INTERFERENCE METER

Stars are not simply light and heat sources for planets, they are vast thermonuclear reactors, radiating tremendous amounts of energy. Furthermore, stars are not all alike. Their size can vary tremendously, as can their chemical composition. There are six primary classes into which stars can fall, each identified by a letter; they are: B, A, F, G, K, and M. B class is the hottest star type, and M is the coolest. Hotter stars release more energy, and hence generate more energetic interference than cooler ones. (You can check the class of any stars in the current system by using **PROBE** on the 301 NAVIGATION panel.)

Why is it important to know about star types? The more interference a star or stars generate, the more likely it is that your transmissions may be blocked. The INTERFER meter is a "thermometer" type scale representing the current level of interference generated by stellar bodies (stars) in the system. The yellow pointer (white in CGA) indicates the current interference level, and the red line represents the point at which the interference will impede transmissions. As long as the pointer is *below* the line, interference should not be a problem. If it is above the line, you may have problems transmitting orders.

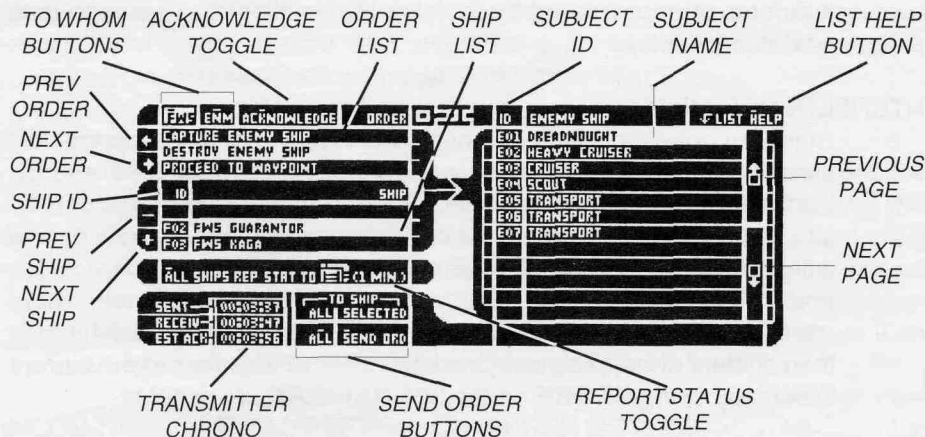
PART V: THE MAIN PANELS

If the arrowhead is below the line, then your transmissions may be blocked by the interference and a "BLOCKED" message will appear in the SENT readout at the bottom-left of the panel (see TRANSMITTER CHRONO below). Stellar interference is greater the closer you are to a star, so you can attempt to minimize its effects by navigating away from any stars. If the interference is still too great, you can attempt to use the EMERGENCY POWER BUTTON (next item).

EMERGENCY POWER BUTTON

The **EMERG PWR** (E) button is a toggle which, when activated, overrides the power-level safety on your ship's transmitter, so that when you send a message, the signal strength is increased by 28 points. Emergency Power is used when the interference levels are so high that they impede transmissions from your ship (see above). When **EMERG PWR** is active, the communications system sustains six percentage points of damage every time you transmit an order.

DISPATCH ORDERS SECTION



The bulk of the COMMUNICATIONS panel is taken up by the controls you use for selecting and sending orders. To the left are two selectors, the first is used to select an order, and the second is for picking which ship to send the order to. For some orders all you have to do is pick the order and ship, and then activate **SEND ORD** or **ALL** to transmit the order. For other orders, such as **ATTACK ENEMY SHIP**, the standard selector to the right becomes active, and you must specify another selection — such as which enemy ship to attack.

TO WHOM BUTTONS


These are toggle action buttons, one of which is always highlighted. If **FWS** (F) is selected, then the orders in the ORDER list below are those you can send to FW ships. If **ENM(N)** is selected, the orders that appear in the ORDER list are those you send to hostile spacecraft.

The SHIP selector is also affected by which of these buttons is highlighted. When **FWS** is highlighted, the SHIP selector lists FW ships, and when **ENM** is highlighted, it lists enemy ships.


ACKNOWLEDGE TOGGLE

ACKNOWLEDGE (K) is a selection button which lets you set whether or not you wish an "acknowledge order" flag to be transmitted with each message. If **ACKNOWLEDGE** is off, Captains may or may not send messages when they carry out orders. If it is on, you are telling them that you want them to acknowledge your orders and report on the status of their action as they carry those orders out. As always, some Captains may not respond to this.



PREVIOUS ORDER

The  button scrolls up through the ORDER list to the order previous to the currently highlighted one (if any).

NEXT ORDER

The  button scrolls down through the ORDER list to the order immediately following the currently highlighted one (if any).

ORDER LIST

This scroller selector allows you to scroll through the orders for the type of ship selected with the To Whom buttons. Three orders can be seen at any one time, and the one on the highlighted (white) line is the currently selected order. The list is scrolled using the  and  buttons (see above).

A listing and description of all orders appears at the end of the section on the COMMUNICATIONS panel.

PREVIOUS SHIP

The - button scrolls up through the SHIP list to the ship previous to the currently highlighted one (if any).

PART V: THE MAIN PANELS

NEXT SHIP

The + button scrolls down through the SHIP list to the ship previous to the currently highlighted one (if any).

SHIP I.D.


These fields list the I.D. numbers for the ships listed in the SHIP list to the right.

SHIP LIST

This scroller selector allows you to scroll through the list of ships of the type selected using the To Whom buttons (above). Three ship names can be seen at any one time, and the one on the highlighted (white) line is the currently selected order. The list is scrolled using the - and + buttons (see above).

If **FWS** is highlighted as the To Whom button, the names of all FW ships in the system can be scrolled through. If **ENM** is highlighted as the To Whom button, all enemy ships currently within sensor range of your forces will be listed (in beginner level missions *all* enemy ships will be listed).

REPORT STATUS TOGGLE

This action button, **ALL SHIPS REP STAT TO**  (A), is a toggle, which, when flipped on, automatically sends an order to all FW ships under your command, instructing their computers to transmit status reports to your ship's computer once every minute. The data transmitted by the ships appears on the FLEET STAT mode of panel 304 (see 304 DATA RETRIEVAL for details).

When you toggle this button off another order is sent, instructing all ships to discontinue sending minutely update reports.

Why would you possibly want this off? If your ships are constantly sending messages to you, the steady stream of transmissions makes it easier for enemy ships to track them down.

TRANSMITTER CHRONO

There are three time readouts displayed here. Any time you send a message to a *single* ship the readouts here are updated and tell you:

PART V: THE MAIN PANELS

SENT	The time when you sent the last order. It reports "BLOCKED" if stellar interference is too strong and blocks your transmissions.
RECEIV	The estimated time when the selected ship will receive the last transmitted order.
EST ACK	The earliest time you could possibly expect an acknowledgement message to the last transmitted order (assuming the ACKNOWLEDGE toggle is on — see above).

SEND ORDER BUTTONS

There are two action buttons here, **SEND ORD (S)** and **ALL (L)**. **SEND ORD** sends the currently highlighted order in the ORDER list to the ship highlighted in the SHIP list. It sends the order **only** to that ship, via a directional, coded transmission. On the other hand, **ALL** sends the currently highlighted order to **every** ship (of the type selected using the To Whom buttons) in the system.

LIST HELP BUTTON

This is for keyboard users. The scroller selectors on this panel utilize the arrow keys that would normally be used to scroll a standard selector, like the one below this button. So, the standard selector on this panel uses the Home and End buttons to scroll the highlighter along the listing in the selector (if any). Because it's easy to forget these keys, **LIST HELP (H)** is provided. If you forget which keys to use, activating **LIST HELP** causes a box to appear, with a message reminding you of which keys move the highlighter.

SUBJECT I.D.

These list the I.D. numbers for all items currently listed in the selector.

SUBJECT NAME

This is a standard selector, which operates as any other standard selector (see Part IV).

KEYBOARD NOTE: Because the arrow keys are used elsewhere on this panel, to scroll the highlighter bar on this selector use the **Home** and **End** keys.

PART V: THE MAIN PANELS

What the selector lists, if anything, is not under direct player control. Depending on the order highlighted, this selector may or may not display related items for you to choose. For example, the order "PATROL PLANETS" tells a ship to fly around the planets in the system, but does not name specific planets, and therefore the selector contains no selections. However, the order "CAPTURE OUTPOST" requires you to specify a target for the ship(s) you are commanding, and thus in this case the selector lists all outposts in the system.

PREVIOUS PAGE

The **PageUp** button jumps to the previous "page" of items in the selector (if any).

NEXT PAGE

The **PageDown** button jumps to the next or following "page" of items in the selector (if any).

Orders

The following is a listing of all orders available on the COMMUNICATIONS panel. The first 16 are for Federated Worlds ships only, and the remaining two are for sending to enemy ships. As always, the personalities of the Captains and enemies will determine whether or not they will follow the orders you send.

MANEUVER AT WILL

Instructs Captain of the FW vessels(s) in question to do whatever they think is appropriate. As this is an essential "blank check" order, you should carefully review the docket(s) of any Captains before sending this order (dockets are available on panel 304 DATA RETRIEVAL).

HOLD POSITION

Instructs the Captain of the vessel(s) in question to come to an immediate stop and take no action without further orders.

FORM WITH FLAGSHIP Instructs the Captain of the vessel(s) in question to follow the flagship (your ship) wherever it goes. This order merely instructs the ships to follow you, and the Captains of those vessels may or may not engage in the actions your ship undertakes.

RESUPPLY AT OUTPOST

Instructs the Captain of the vessel(s) in question to proceed to and resupply at the Outpost highlighted in the standard selector. If the outpost is FW, the ship will have no trouble getting supplies and repairs. If it is a neutral outpost, the Captain's diplomacy is needed to negotiate for supplies, etc. If you order a Captain to resupply at an *enemy* Outpost, he/she will have to capture it first, and therefore it is the same order as CAPTURE OUTPOST when the subject is held by the enemy. (The allegiance of any Outpost can be determined by probing it from 301 NAVIGATION.)

CAPTURE OUTPOST

Instructs the Captain of the vessel(s) in question to proceed to, attack, and then attempt to board and capture the Outpost highlighted in the standard selector. You can capture both enemy and neutral outposts, though it's easier to first try asking (RESUPPLY AT OUTPOST) a neutral Outpost before using hostilities. If the outpost is FW, there is no reason to attempt to capture it. (The allegiance of any Outpost can be determined by probing it from 301 NAVIGATION.)

Enemy ships can capture Outposts as well, so you may find yourself having to order one of your ships to retake an FW Outpost seized by the enemy.

CAPTURE ENEMY SHIP

Instructs the Captain of the vessel(s) in question to intercept, attack, and then attempt to board and capture the enemy ship highlighted in the standard selector.

DESTROY ENEMY SHIP

Instructs the Captain of the vessel(s) in question to intercept, attack, and then attempt to destroy the enemy ship highlighted in the standard selector.

PROCEED TO WAYPOINT

Instructs the Captain of the vessel(s) in question to proceed to the Waypoint highlighted in the standard selector.

PATROL OUTPOSTS


Instructs the Captain of the vessel(s) in question to move from Outpost to Outpost within the system, much like a guard or sentry.

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PATROL PLANETS

Instructs the Captain of the vessel(s) in question move from planet to planet within the system. Used to initiate a "search pattern" or sentry action by the selected ships.

REPORT STATUS

This order is similar to the **ALL SHIPS REP STAT TO**  button (see above), but instructs **only** the selected ship to send a *single* update message. As with **ALL SHIPS REP...**, the report goes not to the Communications panel, but to 304 DATA RETRIEVAL.

FORM BATTLE GROUP

Instructs the Captain of the vessel in question to form a Battle Group and take charge as the Group Leader. All ships instructed to join that Battle Group then come under the immediate command of the Group Leader's Captain. This gives a great deal of authority to the Captain in question, so make sure you've picked the right Captain for the job.

JOIN BATTLE GROUP

Instructs the Captain of the vessel(s) in question to intercept, follow, and otherwise follow the orders of the Captain of the ship designated the Group Leader of the Battle Group currently highlighted in the standard selector. Battle Groups are always identified by an I.D. starting with G, as in G01 or G12.

DISBAND FROM BATTLE GROUP

Instructs the Captain of the vessel(s) in question to disengage from the Battle Group currently highlighted in the standard selector, and to no longer follow the orders of the Captain of that Group.

ACTIVATE SELF-DESTRUCT

Instructs the Captain of the vessel(s) in question to proceed to immediately arm and initiate the DESTRUCT function on their vessel. If the Captain obeys, 15 seconds after receiving the order, the ship(s) in question will explode. Make sure your own, or any other FW ships or enemy targets to be captured, are *not* in the vicinity. Any vessel within 4 million kilometers of a self-destructing starship will be instantly destroyed, and those under 100 million kilometers range risk severe damage or destruction.

SURRENDER TO ENEMY SHIP

Instructs the Captain of the vessel(s) in question to proceed surrender to the enemy ship currently highlighted in the standard selector. Since your score and performance is ranked depending on many factors, including FW casualties, in many cases it's better to instruct a doomed ship to surrender rather than be destroyed, for at least the crew then has a chance for survival. Of course, whether or not the enemy accepts the surrender is an entirely different matter.

The following orders are sent only to enemy ships:

SURRENDER TO FW FORCES

Instructs the captain of the enemy vessel(s) in question to surrender to one of the FW ships in the system.

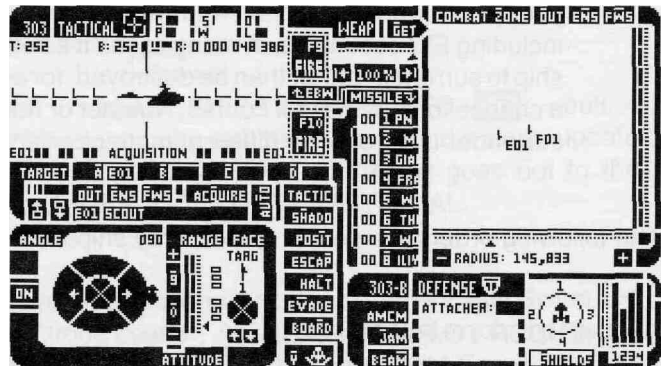
THE FW FLAGSHIP SURRENDERS

If you issue this order you yourself are offering to surrender your ship to the selected enemy ship. This is used only to avoid the complete destruction of your vessel, which would result in a lower score than surrendering. Of course, whether or not the enemy accepts your surrender is an entirely different matter.

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303 TACTICAL

As the name implies, this panel is from where you undertake most tactical action. All combat and defense related activities are carried out from this panel, including ship to ship combat, docking with friendly outposts and boarding hostile ships and outposts.



The TACTICAL panel is, by far, the most complex one you will work with. In some instances you may be faced with as many as 56 buttons at one time, in addition to thermometer and dial type scales, etc. The reason for this complexity is the vast number of actions that must be available from the TACTICAL panel. You can lock onto targets, undertake tactical maneuvers, set your desired position and range from a target, toggle defensive systems on and off, study the combat area, dock, pick weapons settings... and, of course, the most important thing, fire on enemy ships.

Actually, this panel is composed seven interrelated subpanels, not all of which can be seen at the same time. They are:

TARGET SYS	Targeting scope and lock-on controls
WEAP SET	Fire and weaponry setting controls
TACTICAL MAP	A combat map
ATTITUDE SET	Sets your position and range to a target
TACTIC	Tactical maneuvers and actions
DEFENSE SUBSYS	Defensive system controls and readouts
DESTRUCT	Self-destruct control

Operational Overview

Tactical is most commonly used for combat and combat related actions. Before you can combat a ship you must lock it into the TARGET system. Once a target is locked in, you can, if within firing range, attack it using Enhanced Beam Weapons (EBW) or missiles (if your ship is carrying any). The EBW strength and beam-width is selectable, as are which types of missiles you choose to fire (if your ship is stocked with two or more types).

Navigational control of your ship in combat can either be left to the 301 NAVIGATION panel or overridden using one of the TACTIC buttons, which allow you to take up certain positions relative to the current target, evade, escape, board or dock with it. The ATTITUDE controls allow you to set the actual position and range that you want relative to a target when using some of the TACTIC modes.

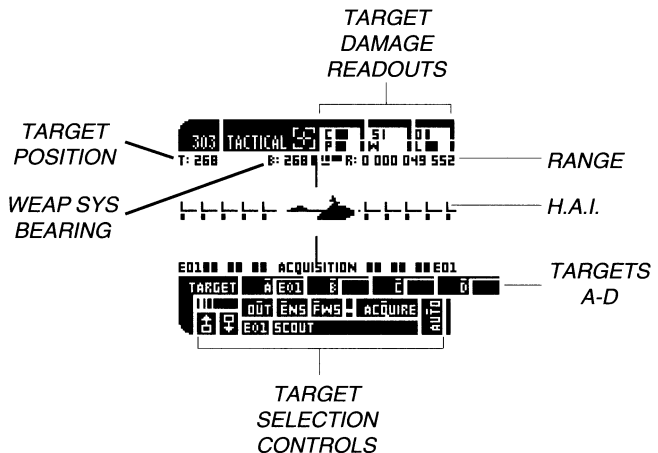
The DEFENSE subsystem allows you to raise and lower your ship's defensive shields as well as toggle on Anti-Missile CounterMeasures (AMCM).

In a situation where your ship is severely crippled and there is no way to avoid destruction at the hands of your enemy, the DESTRUCT option allows you to destroy your own ship before they get the chance, and, in some cases, allows you to take some of the enemy ships out with you.

Damage sustained by your own ship is displayed, as always, in the 300 bar at the top of the screen.

Target Sys

This section of TACTICAL occupies the upper-left quarter of the panel, and consists of a Target Damage Meters, Targeting Scope, Target Readouts, and Target Selection Controls.



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This subpanel is operated by first selecting a target by using the Target Selection Controls, awaiting a target acquisition, and then executing firing/docking/boarding actions (using other subpanels) when within the correct range.

Breakdown of the Target Sys subpanel is as follows:

TARGET DAMAGE READOUTS

Immediately to the right of the TACTICAL panel label are small readouts: six letters, to the right of each of which is a small bar/meter. These represent the status of each of the currently targeted ship's six primary systems. If the status meter for a system is complete/full, that system is 100% operational. Each time a system sustains an additional 10% of damage, the meter's length slips a notch. Once a meter is completely depleted, the system in question is 0% operational, and technically "destroyed".

NOTE: A ship may repair damaged systems, but once a system is 0% operational (destroyed), it cannot be repaired without the help of a sufficiently sophisticated outpost.

Alongside each meter is a letter identifying the system represented by that particular meter. The list of letters read "CPLSWD" and stand for:

C	Communications
P	computer
L	Life support
S	Shields
W	Weapons
D	Drive/propulsion

TARGETING SCOPE

This consists of a "viewer" which displays computer simulations of targets as well as target and targeting related information. Targets are displayed as computer generated images which do not change size as their range alters, although the viewing angle of target vessels will change to reflect that ship's current heading.

In addition to target visuals, there are a number of readouts displayed within the scope. They are as follows:

Target Position

The readout which appears to the right of the T: flag shows the currently selected target's position in degrees (0 to 359), relative to your ship's position in the solar system. The value 0 (zero) is always due "north" on the system map.

Weap Sys Bearing

The readout which appears to the right of the B: flag displays the current bearing of your ship's weapon system in degrees (0 to 359), relative to your ship's position in the solar system.

The EBW projectors and missile launchers are directional, and can be rotated in any direction. And the value alongside the B: flag will change as your weapons system constantly attempts to keep the selected target, if any, centered.

For a lock to be achieved on the currently selected target, the readout here must match that of the Target Position readout (T:, see above).

If no targets have yet been locked into the Targets A-D selectors (see below), then the Weap Sys Bearing will read 0 (zero).

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Range

The readout which appears to the right of the R: flag displays the currently selected target's range from your vessel in kilometers. Range is very important to know, because if you are beyond particular distances, certain actions are futile. For instance, a target ship that is under 550,000 kilometers away is considered within the effective firing range of EBWs, while missile ranges may be considerably less.

The operational range of each range-restricted system or function is explained in the section on its operation. However, for quick reference, the following is the effective maximum range of each of listed items. You should be under the specified range to use that item or system:

<u>Item/System</u>	<u>Maximum Range</u>
EBW	550,000 km*
Missiles	variable**
Board ship/outpost	5,000 km
Dock w/outpost	1,000 km

*-Actual EBW maximum range is 3 *million* kilometers, However, as it takes ten seconds for a beam to cross that distance, and ships rarely stand still for you to shoot at, the *effective* combat range for EBW fire is considered to be just over half a million kilometers.

** - Dependent upon a given missile type's fueled flying time and the course and velocity of the target (see Missile Selection Buttons (Full) under *Weap Set*, below).

H.A.I./Horizontal Attitude Indicator

This is simply a horizontal gauge which displays "tick marks" on a line which are used to visually indicate when your weapon system is turning to maintain a bearing on a target. The space between each "tick" on the scale represents 10 degrees of bearing.

Current Target 1 . D.

The I.D. number of the currently selected target is displayed on both the left and right ends of the bottom of the Targeting Scope. The target can be an enemy ship, and FW ship, or an outpost.

The I.D. displayed here will be identical to that displayed alongside the Current Target Switch (see Target A-D below).

Acquisition Indicator

When the currently selected target (see Target A-D, below) is at the center of the Targeting Scope and the Target Position (T:) and Weap Sys Bearing (B:) readouts match, this flashing indicator bar will appear at the bottom of the Targeting Scope, between the Current Target I.D. Readouts.

The bar contains cycling colored "blips" (no cycling in CGA) and an "ACQUISITION" message. When this bar is present, your targeting system has achieved a lock on the current target, and you may fire your weapons (see *Weap Set* below).

If you fire when the Acquisition Indicator is not present you will probably not hit your target as EBWs will be fired at nothing and missiles have no targets specified.

TARGETS A-D

This section consists of four action buttons, **A**, **B**, **C**, and **D**, (keyboard users simply press the indicated letters) which represent target "slots". Each slot can contain the I.D. of a given ship or outpost, identified by the small readout at the right edge of each button. The current target is selected by and whichever button is highlighted. Therefore, you can have four targets locked-in, one per slot, and switch back and forth between them as you like.

Whenever you highlight one of these buttons, the targeting system immediately swings around to get a lock on the specified item.

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Most tactical actions and maneuvers are taken relative to whichever target is currently locked in. For instance, if you activated the **POSIT** function (see TACTIC section below), your ship would take up a position relative to the currently selected target. If you then changed from target A to target B, your ship would then attempt to take up a similar position relative to target B.

To enter a target into one of the slots, highlight the selected button, make sure the desired target is displayed in the Target Selection Controls (see below), and then use the **ACQUIRE** button (below) to lock it in. The computer will automatically enter the I.D. for the specified target into the specified target slot.

TARGET SELECTION CONTROLS

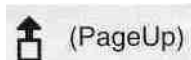
These controls are used to select targets for the Target A-D slots. A single-line scroller selector and related action buttons is used to pick and lock in targets.

OUT (U), ENS (E), and FWS (F)

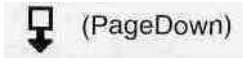
These three action buttons are used to select what types of items will be displayed in the associated scroller selector. **OUT** selects outposts, **ENS** selects enemy ships (it is the default setting when you start the game), and **FWS** selects your own ships (you cannot select your own ship, however). Only one of the three buttons can be highlighted at any one time.

ACQUIRE (Q)

Activating this trigger action button causes the I.D. of the item currently displayed in the scroller selector to be locked into the currently highlighted "slot" (A-D), replacing whatever I.D. was already there, if any.



Scrolls the scroller selector back to the previous item in the current list, if any:



Scrolls the scroller selector to the next item in the current list, if any.

i.D. READOUT AND SCROLLER SELECTOR

This is a standard scroller selector with a standard I.D. readout. The only difference between it and those seen on other panels is that this one displays only a single item at any given time. In essence, it simply displays only the highlighted item in the list, rather than the highlighted item and those immediately preceding and following it.

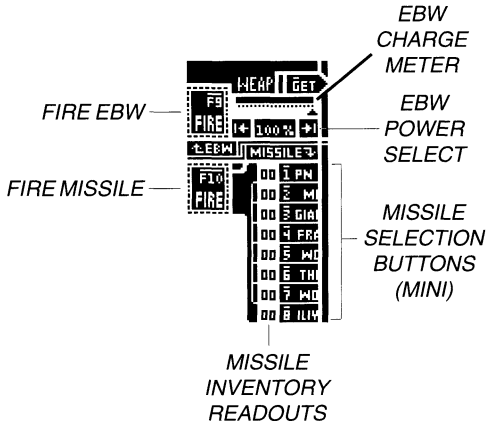
AUTO (T)

This is a toggle action button. When activated, it causes your ship's computer to automatically switch to the closest of the targets currently in the Target A-D slots. For example, if you had targets in all four slots, had target A selected, but target C was the closest to you, when you activated **AUTO** the highlighted target button would automatically be changed from A to C. If, while **AUTO** was activated, another of the selected targets were to become the closest in range, the selected target would again change.

Toggling **AUTO** off (unhighlighted) switches this mode off, and the system will no longer automatically lock onto the closest of the locked in targets.

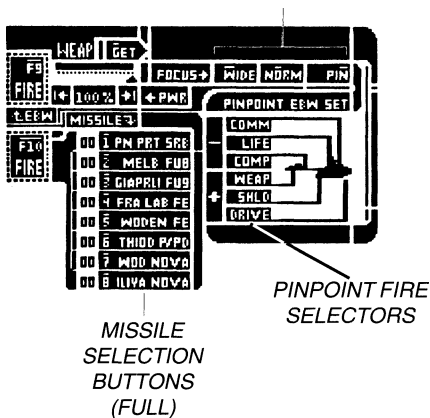
Manually activating one of the Target A-D buttons deactivates the **AUTO** mode.

Weap Set



These controls are related to firing of your ship's weapons and adjusting their settings.

There are two "modes" to this subpanel, set by use of the **GET** (G) button at the top of the controls. When **GET** is not highlighted, the TACTICAL MAP (see below) is displayed to the right, and only the fire buttons, EBW power meter, and missile selector buttons and readouts are accessible. But, when GET is activated, the TACTICAL MAP disappears, revealing the full set of weaponry controls, including EBW beam-width and pinpoint targeting controls; *full* missile selector buttons are displayed, with missile labels fully visible.



FIRE EBW (F9)

This is a trigger type action button which, when activated, fires the Enhanced Beam Weapons at the current target. The beam travels at 1c (lightspeed) and has a maximum strike range of 3 million (3,000,000,000) kilometers (although your chances of hitting a moving target at ranges greater than 550,000 kilometers are slim). The force of the beam is determined by the EBW CHARGE METER and the EBW POWER SELECT controls (see following items).

EBW CHARGE METER

This meter shows the charge status of the EBW batteries. If the meter's bar is full then 100% power is available. If the bar is partially full, then lesser percentages are available. The system recharges at a steady rate (variable depending on a given ship's equipment and damage the system has sustained), so if you wait, the power climbs.

EBW POWER SELECT

The actual percentage of potential EBW "hit" power you wish to use is selected with these controls. The position of the arrowhead pointer along the EBW CHARGE METER sets the percentage of EBW power you wish to apply when firing. The numerical value of this strength is displayed in the small readout immediately below the EBW CHARGE METER.

The arrowhead may be moved in one of two ways. Players with compatible mice can simply drag the arrowhead along the scale; releasing it when it is where they wish it to be. Keyboard users can use the **Home** and **End** keys to move the arrowhead along the scale to the left and right respectively. As with most thermometer type scales, pressing **Home** or **End** switches on a "move pointer" mode which remains "on" until you press another key.

In some circumstances you may find that the arrowhead cannot be moved to the top of the scale, or that during or after battle, that it has slipped down the scale and cannot be moved back up it. This is an indication that the weaponry system has sustained damage, and that the EBW beam projectors are incapable of firing at power levels greater than those the arrowhead can be moved to. In such a case, the only way to restore full EBW power is repair the weaponry system (see DAMAGE CONTROL under 304 DATA RETRIEVAL in this section on the manual and also the sections pertaining to system damage in "Part VI: Tactics"),

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FIRE MISSILE (F10)

This is a trigger action button, and activating it causes your weapons system to attempt to fire one missile of the currently selected type at the current target. If no missiles of the selected type are present, no missile will fire. Each time you press **FIRE** another missile launch is attempted. Thus, if you have lots of missiles in stock, you can launch a veritable salvo at the selected target.

MISSILE INVENTORY READOUTS

These numbers appear to the right of the missile selection buttons/labels, and indicate the current stock of the indicated class of missile. If the readout displays 00, then no missiles of the indicated type are present.

Missiles can be restocked by docking with outposts. The more sophisticated the supply capabilities of an outpost, the greater range of missiles they supply. However, remember that not every ship can carry all types of missiles. The type of weaponry system a given ship carries determines the types and number of missiles the ship can carry.

MISSILE SELECTION BUTTONS (MINI)

There are eight of these selection buttons, one for each type of missile. Only one button can be highlighted at any given time, and whichever one is selected is the type of missile currently chosen for firing. To highlight a missile type, either click the mouse on the desired button or press the associated number (1 through 9) on your keyboard.

In this mode only a small portion of each button is visible. See **MISSILE SELECTION BUTTONS (FULL)** below for descriptions of each missile type.

EBW FOCUS SELECTORS

There are three selection buttons here, only one of which can be active at any one time. The active button determines the beam-width/focus of your ship's EBW fire.

PART V: THE MAIN PANELS

- WIDE (W)** Spreads the beam widely, making it easier to hit evasive targets. However, although your chance of achieving a hit increases on wide beam setting, because the beam is "fanned out" the hit strength is diminished.
- NORM (0)** Sets the beam to normal width.
- PIN (N)** Sets the beam to pinpoint width. In this mode your odds of hitting an evasive target drop, however, this is made up for in that you can pinpoint specific systems of the target, and the power of the EBW will be directed against that system alone (see PINPOINT FIRE SELECTOR below).

PINPOINT FIRE SELECTOR

If the EBW FOCUS is set to pinpoint fire, specific systems of the target can be singled out for EBW attack. This selector box allows you to specify which system to hit when using pinpoint fire. The box displays an image of the current target (if any), linked to selector buttons representing its six primary systems. Whichever of the system buttons is highlighted represents the subject of any pinpoint EBW fire.

Mouse users need only click on the label for the system they wish to target. Keyboard users can use the + and - keys to move the highlighter up and down the list.

NOTE: The highlighted system in this box will not have any effect on EBW fire with normal or wide beam settings.

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MISSILE SELECTION BUTTONS (FULL)

There are eight of these selection buttons, one for each type of missile. Only one button can be highlighted at any given time, and whichever one is selected is the type of missile currently chosen for firing. To highlight a missile type, either click the mouse on the desired button or press the associated number (1 through 8) on your keyboard.

In brief, the missile types are as follows:

<u>Button</u>	<u>Missile</u>	<u>Type</u>	<u>Purpose</u>
1	PN PRT SRB	Pritchard SRB	Damages shields
2	MELB FU8	Melbourne FU8	General damage
3	GIAPRLI FU9	Giaperelli FU9	General damage
4	FRA LAB FE	Franklin Lab FE	Anti-Personnel
5	WODEN FE	Woden FE	Anti-Personnel
6	THIOD P/PD	Thiodyne P/PD	Damages drives
7	WOD NOVA	Woden Nova	General damage
8	ILIYA NOVA	Iliya Nova	General damage

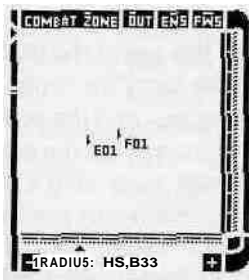
Details on missile types, their uses, range, etc., can be found in Appendix IV.

Tactical Map

This is a simplified and miniaturized version of the map display on 301 NAVIGATION, and works identically to that map. The only differences are as follows:

- Only potential targets (enemy and FW ships, and outposts) can be displayed.
- The map view is limited to your vessel's sensor range, with no telemetry from other ships or "mix" modes available.
- No course project mode.
- EBW and missile fire and "hits" are displayed on the map.

There are six buttons and one thermometer scale related to the map. They are as follows:



COMBAT ZONE (Z) When activated this recalibrates the map radius controls so that the maximum map radius is 500,000 kilometers instead of your ships' maximum sensor range, allowing for easier zoom adjustments in combat.

Any or all of the following three can be highlighted at any time.

- OUT (O)** When highlighted, the map displays outposts.
ENS (N) When highlighted, the map displays enemy ships.
FWS (W) When highlighted, the map displays FW ships.

Mouse users can, as on 301, move the mouse over the map, frame and area, and click the left button to zoom in and the right button to zoom out. They can also drag the arrowhead below the scale at the bottom of the map to adjust the view radius.

Keyboard users must adjust the zoom radius by using the + and - keys, which are equivalent to the increase and decrease map radius buttons bracketing the RADIUS: readout.

See the section on 301 NAVIGATION for more details of working with map displays.

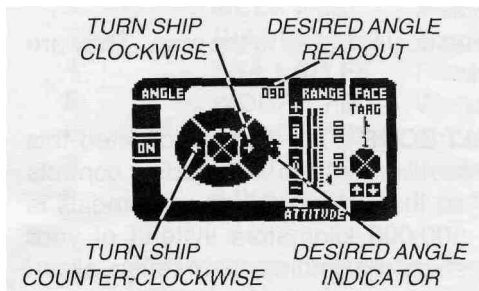
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Attitude Set

This subpanel consists of controls which allows you to set your desired attitude relative to a target when using one of the tactical maneuvering controls (see below).

THE ANGLE DIAL

The position of the flagship icon at the perimeter of the dial represents a position, in degrees, set relative to a target vessel or outpost (the dial's center). The angle can be from 000 to 359 degrees.



The dial can represent two different things. If you select the "shado" maneuver (see *Tactic* below), the top of the dial represents the "bow" or "front" of the target vessel, and the position of the ship icon at the rim of the dial represents your ship's desired position relative to the direction

the target is facing. On the other hand, if you select the "posit" (POSIT) maneuver, the top of the dial represents the top of the map, and the position of the ship icon at the rim of the dial represents your ship's desired position relative to the target's position in space, not relative to the target's heading.

The following is a breakdown of the elements of the Angle Dial.

Desired Angle Readout

This displays the desired angle you want your ship to take in a shado or positioning maneuver. The value displayed here is determined by the position of the *Desired Heading Cursor* (see next item) on the outside of the Dial. When you set a new desired heading this readout will change instantly to reflect it. If **MANUAL** is activated, the *Current Heading Readout* (see above) will begin to change to match the desired heading as your ship takes up the new course.



Desired Angle Indicator (Flagship Icon)

This operates identically to the Desired Heading Indicator on the HELM portion of 301 NAVIGATION. The icon represents your current flagship, and its position around the dial is important, however, the way the icon itself is pointing (always up) is not of any concern.

The position of the icon on the outside of the dial indicates your desired angle in degrees. The actual numerical value of the heading is displayed in the *Desired Angle Readout*(see above).

There are two ways to change the desired angle: dragging the pointer with the mouse, or using the *Turn Clockwise* and *Turn Counter-Clockwise* controls (see below).

To drag the pointer, you must have a compatible mouse. Click the left mouse button on the pointer, and, while holding the button down, "drag" the pointer around the dial to the desired position. As you move the pointer, the *Desired Angle Readout* will change to reflect the new setting. When you release the mouse button, the pointer will stay where you left it.

This function is activated by the  button, and its purpose is to move the *Desired Angle Indicator* around the Heading Dial in a clockwise direction. When you activate the  button by clicking on it with the mouse, it stays on only as long as you hold the mouse button down. If using the keyboard, the button stays "on" and the icon moves clockwise until you press another key.

PART V: THE MAIN PANELS

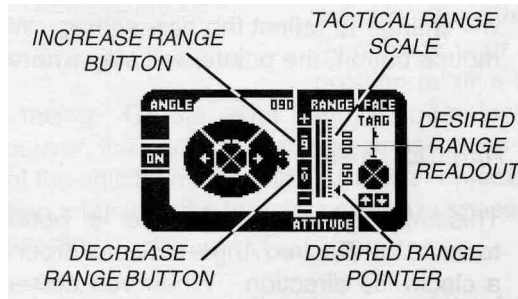
Turn Counter-Clockwise

This function is activated by the 4- button, and its purpose is to move the *Desired Angle Indicator* around the Heading Dial in a counter-clockwise direction. When you activate the 4- button by clicking on it with the mouse, it stays "on" only as long as you hold the mouse button down. If using the keyboard, the button stays "on" and the icon moves counter-clockwise until you press another key.

NOTE: If neither the **SHADO** OR **POSIT** buttons are activated (see Tactic below), the settings in the ATTITUDE box won't have any effect.

RANGE CONTROLS

This portion of the ATTITUDE box is where you can adjust your range for shado or positioning maneuvers. There are a number of items associated with setting the range.



Tactical Range Scale

This is a standard "thermometer" scale (see Part IV). It represents the potential tactical range of your vessel relative to a target. The scale represents ranges of between 0 (bottom of scale) and 500,000 (top of scale) kilometers. The position of the *Desired Range Pointer* alongside the scale determines range setting.

Desired Range Pointer

This pointer is similar to pointers on standard "thermometer" scales (see Part IV). Its position along the *Velocity Range Scale* determines the desired velocity you want your ship to use when under manual helm control.

There are two ways to change the desired velocity; dragging the pointer up and down the scale using a mouse, or using the *Increase* and *Decrease Velocity* buttons (see below).

To drag the pointer you must have a compatible mouse. Click the left mouse button on the pointer, and, while holding the button down, "drag" the pointer up and down the scale to the desired position. When you release the mouse button, the pointer will stay where you left it and, if the **MANUAL** button is active, your ship will immediately begin making velocity adjustments. If in manual mode, you can see the velocity change happening by watching the *Current Velocity Readout* (see below).

Increase Range Button

This function is activated by the 9 button, and its purpose is to move the *Desired Range Pointer* up the *Tactical Range Scale*. When you activate the 9 button by clicking on it with the mouse, it stays "on" only as long as you hold the mouse button down. If using the keyboard, the button stays "on" and the pointer attempts to move up the meter until you press another key.

Decrease Range Button

This function is activated by the 0 button, and its purpose is to move the *Desired Range Pointer* down the *Tactical Range Scale*. When you activate the 0 button by clicking on it with the mouse, it stays "on" only as long as you hold the mouse button down. If using the keyboard, the button stays "on" and the pointer attempts to move down the meter until you press another key.

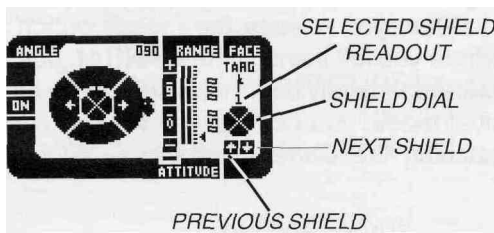
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Desired Range Readout



This readout displays the numeric value of your ship's desired range.

FACE SHIELDS

This final section of ATTITUDE allows you to specify which of your ship's four shields you wish to try to keep towards the current target. This is very useful, particularly when some of your ship's shields have been seriously depleted or destroyed (see DEFENSE SUBSYSTEM below), and you wish to keep your strongest defenses towards the enemy.



The arrow pointing towards the word TARG indicates the direction of the target, and the number below the arrow indicates which shield you wish to keep towards that target. The default is shield 1, the bow shield, but you may, by using

the next shield and previous shield buttons, the  and  keys, turn any shield towards the target.

As with all of the setting under ATTITUDE this is only a "desired" shield facing. As your ship manuevers to maintain position, course, etc., it is not always possible to keep a particular shield oriented towards the target.

Tactic



At any given time there are seven action buttons in this bank. Six are consistently present, and the seventh varies depending on the current target and its status. Each of the following, when activated, will remain active until another button in the bank is activated, or when navigational control is usurped via the 301 NAVIGATION panel. Only one of the buttons can be active at any one time.

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- SHADO (H)** Initiates a "shadowing" maneuver, where your ship will attempt to take up the range and position set in the Attitude Set subpanel relative to the current target. The angle will be set *relative to the target's bow*, which always represents 0 (zero) to the shado mode. Therefore, if the ANGLE is set at 180, your ship will constantly attempt to remain behind the target no matter which way it faces on the map. Because your ship must try to maintain an angle relative to potentially turning and moving targets, it is much more difficult to achieve and maintain target acquisition in SHADO mode than it is in POSIT mode (see below).
- POSIT (I)** Initiates a "positioning" maneuver, where your ship will attempt to take up the range and position set in the Attitude Set subpanel relative to the current target. The angle will be set *relative to the map*, where "up" always represents 0 (zero) to the position mode. Therefore, if the ANGLE is set at 180, your ship will constantly attempt to remain "due south" of the target on the map.
- ESCAP (P)** Initiates an "emergency escape maneuver" in which your ship determines the heading of the current target and immediately thrusts at full power in the opposite direction (180 degrees different from the target) in an attempt to reach and maintain a "safe" distance from the target: 900,000 kilometers or greater.
- HALT (L)** Causes your ship to immediately perform a full power breaking maneuver, coming to a complete halt relative to the current solar system.
- EVADE (V)** Initiates an evasive action sequence. In 3uch a mode, your ship proceeds at high thrust and randomly changes course every few seconds. This maneuver is used to shake missile fire or try to avoid having enemy ships get and keep you in their gunsights.
- BOARD (R)** This button appears if the target is an eipemy ship, enemy outpost or a Neutral outpost that has refused you permission to dock.

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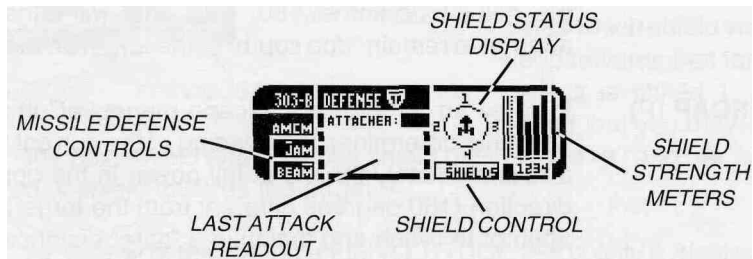
DOCK (K) This button appears in the place of **BOARD** if the current target is a friendly or neutral outpost, or an outpost that has been seized by FW forces. Activating it when your ship is under 1,000 kilometers range from the outpost causes your ship to halt and a docking sequence to be initiated (see *Docking Control* below).



(Y) This button, when highlighted, hands navigational controls back to the 301 NAVIGATION panel, in whichever mode it was last set prior to being overridden by the TACTIC maneuvers.

Defense Subsys/303-B DEFENSE

This subpanel provides control over both your ship's primary defensive systems, and information on hits taken and the status of your shields.



MISSILE DEFENSE CONTROLS/AMCM

There are two Anti-Missile CounterMeasure (AMCM) options available, **JAM** (J) and **BEAM** (M). Both can be active at the same time, if you wish.

JAM uses special transmitters to confuse the guidance systems of incoming missiles. When a missile falls within the "sphere of influence" of the jammer, it should lose track of the target (you), and will most likely pass by without exploding. When the missile clears the jamming range, it may very well double-back and try again and again until it either gets lucky and hits you or runs out of fuel.

The one drawback to having jamming on is that the energy used for it is tapped from the shield generators, and thus the regeneration/recharge rate of the shields is lowered, meaning it takes hit shields longer than normal to build back up.

BEAM, on the other hand, bleeds power from your EBW charging system for use by automated defensive EBW batteries which attempt to shoot-down incoming missiles. The BEAM mode's primary disadvantage in combat is that it prevents your main EBW system from recharging as quickly as normal, hindering your combat firepower.

LAST ATTACK READOUT

This readout displays information about the last attack on your ship. At the top, a value readout displays the 1 .D. of the last ship that fired on you and got a "hit". Below that a text display explains what happened, such as informing you that your ship was:

HIT BY EBW
NORMAL
ON SHIELD 1

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The example tells you that the enemy hit shield number 1 with a normal width EBW beam. Likewise, if you are hit by a missile, the enemy missile type number (see Appendix IV) is displayed along with the number of the shield hit. If you are hit with the shields down, or hit on an inoperative shield, the message will be similar, but instead of saying "ON SHIELD n" it will say "THRU SHIELD n", indicating which shield location the fire passed through.

SHIELD STATUS DISPLAY

This display contains a symbol of your flagship. If the shields are on (raised), a green "bubble" will encircle the ship. There are actually four shields, each composing one quarter of the defensive sphere. The number of each shield is displayed next to its quarter of the bubble.

When your ship takes a hit with the shields up, the impact is shown on the affected shield and that shield flashes (a corresponding power loss is reflected on the shield strength meters; see below).

If any of the four shields are completely depleted of energy, the section of the bubble representing it will disappear until such time as it can regenerate/rebuild power (see the SHIELD STRENGTH METERS below).

SHIELD CONTROL

This action button toggles the shields on and off. When the button is highlighted, the shields will be raised (if the shield system is functional). If the button is magenta/unhighlighted, the shields are off.

Always make certain that your ship's shields are raised prior to engaging an enemy vessel. The same "hit" on identical shielded and unshielded ships will have drastically different results, with the unshielded ship sustaining far more damage than the shielded one.

In beginner level games, the shields are raised automatically when you are fired upon.

SHIELD STRENGTH METERS

There are four numbered meters here, each linked to a specific shield. The meters represent the strength of a given shield. Whenever a shield takes a "hit", the height of that shields' meter drops, and there is a corresponding loss of power, which takes time to build back up. Weak shields are less effective at preventing damage than strong shields, so it's a wise idea to keep your eyes on these indicators and try to keep the strongest shields towards the enemy (see FACE SHIELDS above).

Destruct

If your ship sustains so much damage that it cannot move or complete its mission, or if it is about to be destroyed by hostile ships, you can "take yourself out" of the game by self-destructing your flagship.

To use the self-destruct you must be on the 303 TACTICAL panel and the **GET** (G) button at the top of the panel must be highlighted, thus providing access to the full weaponry settings and, of course, the DESTRUCT subpanel.

There is but one button on this subpanel, an action button labeled **EXECUTE** (X). If you activate it, a usurper box asking "Are you sure you want to activate the self-destruct system?" appears. If you answer affirmatively, the usurper disappears and the surface of the CCSI panel will slowly slide open, revealing the self-destruct controls.

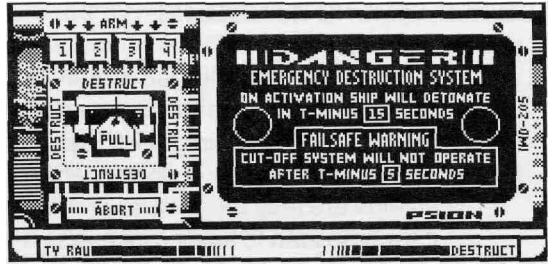


Operation is extremely simple, but not one-step. To activate the destruct sequence you must press/highlight all four numbered buttons at the top-left of the destruct controls (1, 2, 3, and 4). The striped panel will then pop open, and if you click on the **PULL** (P) tag hanging from the arming level, the lever will be thrown and a 15 second countdown will start.

To halt the destruct sequence, use the **ABORT** (A) button at any time prior to the destruct sequence countdown reaching 5 seconds.

PART V: THE MAIN PANELS

5 seconds is critical, because the destruct system works by creating a feedback loop in the drive and power systems of your ship. It takes ten seconds for this power feedback to reach critical level, and, once this level has been achieved, the imminent explosion cannot be aborted.

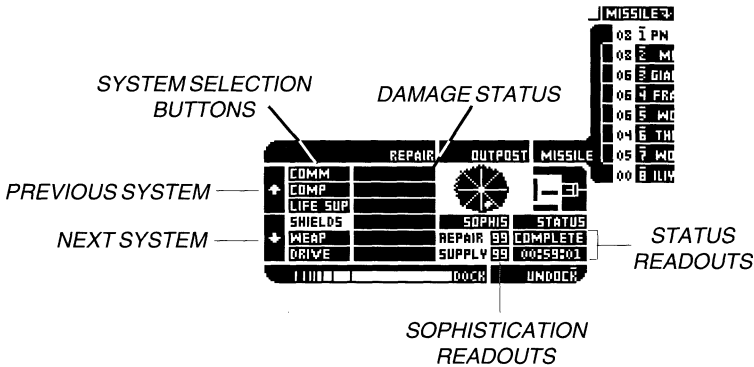


When a starship self-destructs, the energy released will destroy any ships within 4 million kilometers range, and those between 4 and 100 million kilometers risk damage ranging from minor to critical. If you time your destruction just right, you might take some of the enemy ships out with you. Just watch out for your own ships'.

Docking Control

When you successfully dock with an outpost (see **DOCK** under *Tactic* above), the ATTITUDE subpanel is replaced by a docking status display: DOCK. When docked with an outpost, the outpost's technicians will attempt to repair whatever system you have highlighted under REPAIR and restock any missiles that your ship is capable of carrying that the outpost carries.

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There are only a handful of controls on this subpanel. To the left are six selection buttons, each representing one of your ship's primary systems. The highlighted item is the one the outpost's technicians will attempt to help you repair. To change systems, click on the appropriate button or use the **↑** and **↓** buttons to move the highlighter from system to system.

When you are ready to disengage from the docking maneuver, use the **UNDOCK (K)** button.

The repair and resupply sophistication of the outpost are displayed below the OUTPOST visual. The higher the numbers, the more sophisticated the outpost is.

To the lower right end of the DOCK box are two STATUS readouts. The readouts to the right of the repair sophistication value tells you the status of repair on the currently highlighted system and the status of missile resupply. The readout for repair will be one of the following.

- UNDERWAY Repairs are in progress
- COMPLETE The system was undamaged or repairs completed
- TOO SOPH The system is too sophisticated for the outpost to work on

When one system is completely repaired, move the highlighter to another damaged system to have it repaired.

The STATUS readout for supply tells you when loading of missiles will be complete. The time readout there tells you the mission time when resupply will be finished. When the outpost has fully restocked your missiles to the best of its ability, a COMPLETE message appears.

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While you are docked the tactical maneuvering controls and both fire buttons are disabled (because firing your weapons within docking range of an outpost is very dangerous). While the DOCK panel is present, you can switch targets, relock all target slots, adjust weapons settings, etc., but you cannot maneuver or fire.

If you switch to 301 NAVIGATION and set a course while docked with an outpost the docking is automatically aborted.

If you break off a docking maneuver before repairs and resupply are completed, you may end up with unfinished repairs and only a percentage of the total number of missiles the outpost could have provided (if any).

Boarding/401 SQUAD DEPLOYMENT

When you have knocked out an enemy ship's shields and drive systems and moved within 5000 kilometers range, you can board the ship. When you have knocked out an enemy or neutral outpost's shields and moved within 1000 kilometers range, you can board the outpost.

If you have **Breach 2**, the IGS system *may* load and run that game, if an appropriate scenario has been linked. If **Breach 2** is not installed, or no linked scenario is located, then panel 401 SQUAD DEPLOYMENT appears.

The SQUAD DEPLOYMENT panel reports on the boarding action status. It displays an image of a FWSF marine in full combat gear to the left, and an image of a member of the opposing forces to the right. The name of your Fleet Commander (now acting as a Squad Leader), and his/her squad-level statistics appear, as does the name of the enemy race/force and the rank of their Captain. The higher the rank of the enemy Captain, the better leadership the enemy will have, and the tougher they will be to beat.

At the center of the display is a Systems Control meter, which shows how much of the enemy ship's systems you control and how much is controlled by the enemy. A horizontal marker indicates the level of control you must reach in order to be victorious. When the meter for FWSF reaches that marker, you have won control of the alien ship. As your meter increases the meter for your opponents decreases, and vice-versa.

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Under the image of the FWSF Marine and the enemy are a set of icons representing the forces in combat. The health of each is indicated by their color. The more red that shows, the more seriously injured the combatant. When a combatant's status meter is entirely red, he/she is dead and the icon is removed. On each side, one icon is separated from the rest. The separate figure on the FWSF side is the health of your Fleet Commander/Squad Leader. The separate figure on the enemy side is the enemy Captain. If the enemy Captain dies, his forces will be less organized and easier to beat. If your Fleet Commander dies the game ends.

You have no actual control over the boarding sequence. What you must do is keep your eyes on the percentage of systems you control, and weigh the health of your squad against that of the enemy forces. If your squad is badly injured and the enemy is not, or if your Fleet Commander is in danger of dying, or if you cannot seem to make any progress in gaining control of the enemy ship's systems, it would probably be a good idea to abort the boarding. You can abort by using the **WITHDRAW/UNDOCK (W)** action button.

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304 DATA RETRIEVAL

Although every control panel on your flagship is a technically part of the computer access system, it is on DATA RETRIEVAL that you actually consult the computers directly for various types of information. This panel has *eight* different modes, each called up by one of the action buttons at screen right. When you first begin a mission you arrive initially on DATA RETRIEVAL in FLEET STAT mode (see below). Whenever you return to 304 from another panel, it reappears in the mode you last left it in.

The eight data modes are as follows, and are accessible by activating the indicated action buttons. The highlighted button indicates the current mode.

FLEET STAT (F)

Lists all FW ships (your ship, the flagship, is usually at the top of the list). You can see the stats for up to 16 ships at any one time. And, while it's rare that you'll play missions with more than this number of ships, if more than that number are present, using the **PageUp** and **PageDown** buttons allow you to see all of them.



SHIP	TIME	HEADING	VELOC	GROUP	COMM	COMP	ENL	ENLS	WEAR	DRTVE	SHIP STATUS
F01	00:06:45	112	4610		100	100	100	100	100	100	FLAGSHIP
F02	00:00:00	000	0000		100	100	100	100	100	100	HOLDING FOR ORDERS
F03	00:00:00	000	0000		100	100	100	100	100	100	HOLDING FOR ORDERS
F04	00:00:00	000	0000		100	100	100	100	100	100	HOLDING FOR ORDERS
F05	00:00:00	000	0000		100	100	100	100	100	100	HOLDING FOR ORDERS
F06	00:00:00	000	0000		100	100	100	100	100	100	HOLDING FOR ORDERS
F07	00:00:00	000	0000		100	100	100	100	100	100	HOLDING FOR ORDERS

This mode is designed to allow you to get a quick overview of your fleet. However, this information here is based upon status reports sent to your computer by each ship under your command, and those ships do not automatically report. Once the mission begins, if you want status reports you'll either have to periodically issue "REPORT STATUS" orders to certain or all ships, or activate the ALL SHIPS REP STAT... function, which orders each ship to send a status report once every minute (both accomplished via 302 COMMUNICATIONS).

There are seven readout categories for each ship in FLEET STAT mode. They

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SHIP

Lists, on small action buttons, the mission I.D. number of each vessel. One ship's I.D. will always be highlighted. This indicates which ship or Captain will be the default if you switch to SHIP STAT or FW CAPTAIN (see below). To move the highlighter, either click the mouse on another ship's I.D. number or activate the  and  keys to move the highlighter from button to button. If you return to FLEET STAT from SHIP STAT the highlighter will be on the ship last viewed in that mode. Likewise, returning to FLEET STAT from FW CAPTAIN causes the highlighter to be on the ship commander by the last Captain viewed in that mode.

TIME

Lists the time when the indicated ship last transmitted a status report to you.

HEADING

Lists the heading/course of the indicated ship as of its last transmitted status report.

VELOCITY

Lists the velocity of the indicated ship as of its last transmitted status report.

GROUP

'r-.'

If the indicated ship is a member of a Battle Group, the number of the Group (01 to 99) is displayed under this heading. Group Leaders are indicated by highlighted (white) Group numbers.

SYS DMG STAT

Lists the operational capacity for each ship's systems, from communications to weapons.

SHIP STATUS

Lists the action being undertaken by the indicated ship as of its last transmitted status report (i.e.- "HOLDING FOR ORDERS"). Your own ship's status will always read "FLAGSHIP".

PART V: THE MAIN PANELS

SHIP STAT (S)

Allows you to review detailed information about each ship in your fleet, one at a time, and allows you to see their status. The **↑** and **↓** buttons alongside the the ship name (SHIP) allows you cycle through all ships.

The screenshot displays the 'SHIP STAT (S)' interface. At the top, it shows '304 DATA RETRIEVAL'. The main display is divided into several sections:

- ID:** F02 FMS GUARANTOR
- SHIP:** MISHAI SINGH
- CAPTAIN:** (blank)
- % OPERATIONAL:** 100
- PRT SYSTEM:** 03 COMM
- SHIP STATUS:** HOLDING FOR ORDERS
- SINCE UPDATE:** 00:07:16
- HEADING:** 000
- WEAP:** 100 05 SHLD
- DRIVE:** 100 05 WEAP
- VELOC:** 00000
- GROUP:** (blank)
- ACTIVE:** 100%
- INJURED:** 000%
- DEAD:** 000%
- CREW:** (blank)
- MISSILE INVENTORY:**
 - 12 FM PRT SR8 09 WIDDEN FE
 - 12 MEL & PUB 09 TINDO PPD
 - 14 GIRELLI PUB 05 MOD NOVA
 - 08 FRA LAB FE 02 ILVA NOVA

On the right side, there is a vertical menu with options: FM FORCES, FLEET STAT, SHIP STAT, DAMG CONT, DOCKET, FM CAPTAIN, ENEMY, MISSION, BRIEFING, OBJECTIVES, and EVALUATE. The 'SHIP STAT' option is currently selected.

When you enter this mode the default ship to be displayed is the ship whose I.D. is currently highlighted on FLEET STAT.

While much of the information displayed in this mode is identical to that displayed in FLEET STAT mode, there is additional data provided in SHIP STAT mode that is not displayed elsewhere. Remember, the information displayed in this mode is only as recent as the last update report. If the ship has not reported its status in a while (see SINCE UPDATE below), the information may not be accurate!

ID

Lists the mission I.D. number of the currently displayed vessel.

SHIP

Displays the full name of the currently displayed vessel.

SHIP STATUS

There are five readouts under this heading. The first is the actual SHIP STATUS readout for the selected vessel, and lists the action being undertaken by the indicated ship as of its last transmitted status report (i.e.- "HOLDING FOR ORDERS"). If you are displaying information about your own ship, this readout displays "FLAGSHIP".

There are four additional readouts under this heading:

SINCE UPDATE

Lists the time, via a running "clock", that has passed since the indicated ship last transmitted a status report to you. If you are displaying information about your own ship, this readout displays a time of "00:00:00", since your ship doesn't bother sending status reports to itself.

HEADING

Lists the heading/course of the indicated ship as of its last transmitted status report.

VELOCITY

Lists the velocity of the indicated ship as of its last transmitted status report.

GROUP

If the indicated ship is a member of a Battle Group, the number of the Group (G01 to G99) is displayed under this heading. Group Leaders are indicated by highlighted (white) Group numbers.

CREW

Displays the percentages of the currently selected ship's crew that are active, injured, or dead. The greater the number of injured and dead, the less likely a given ship will be able to deal with repairing damage.

MISSILE INVENTORY

Lists how many of each type of missile the listed ship was carrying at the time of the last update. The numbers are listed to the left of the missile labels. Missiles in stock are displayed with green labels, and those exhausted/not carried have red labels (cyan and magenta in CGA).

To the left side of the display is the indicated ship's technical data display, which lists parts, system damage, and ship type.

%OPERATIONAL

Lists the operational capacity for each of the selected ship's systems (labels are to the right), from communications to weapons.

PRT

This readout displays the part number for the indicated system of the currently selected ship. This information is provided so that you can size up the capabilities of your ships against enemy ships by comparing their system statistics. (The stats for ships and parts are listed in Appendix III.)

SYSTEM

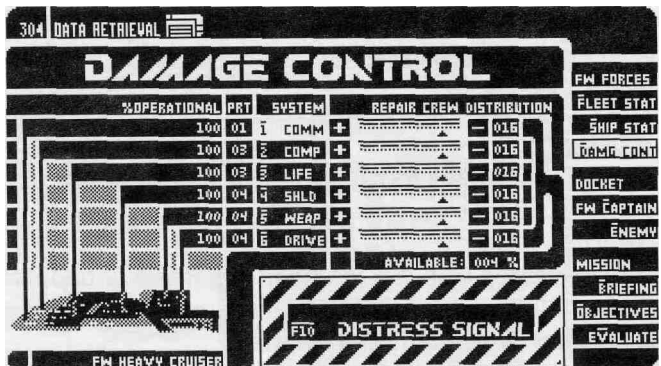
Labels the six primary systems of the selected ship.

At the bottom of this display is a diagram of the selected ship, displaying its physical form and identifying its class (Transport, Scout, Destroyer, Cruiser, Heavy Cruiser or Dreadnought).

PART V: THE MAIN PANELS

DAMG CONT (D)

Brings up the DAMAGE CONTROL panel for your flagship (and *only* your flagship). This lists the operational capacity of each system and allows you to distribute percentages of your total repair capacity to each system, allowing you to prioritize your repair efforts.



As with SHIP STAT mode, the operational percentage and part number for each system is displayed.

Under REPAIR CREW DISTRIBUTION are a series of six "thermometer" type scales, each of which can potentially be set from 000% (extreme right) to 100% (extreme left). However, the only way to set any given meter to 100% is to set all others to 000%, this is because the sum total of the values of all six meters cannot exceed 100%. For example, if all six systems are set at 016%, there will be 4% left over (AVAILABLE), because $16\% \times 6 = 96\%$ and $100\% - 96\% = 4\%$.

The AVAILABLE readout displays the total percentage of damage control personnel currently unassigned. If this value read 000% you'll have to lower one or more of the meters before you can add any personnel to a given system.

The default settings for this mode are for each system of your ship to have 16% of the repair crews assigned to them, with 4% left available.



Operation of this panel is simple. Mouse users need only to "drag" the arrowheads under each scale to set their values. Keyboard users use the + and - buttons/keys to move the arrowhead of the currently selected system left and right. The currently selected system is indicated by its label, a selection button, being highlighted. To change it, press the number (1 to 6) of the system you wish to adjust the percentage of.

Finally, at the bottom of the screen is an extremely large action button, the **DISTRESS SIGNAL** (F10). This is a switch type action button which, when activated, sends out a message requesting immediate assistance from other ships in your fleet. This is to be used only in the most dire of circumstances, or when you need help and your communications system is so severely damaged that you can't send orders.

FW CAPTAIN (C)

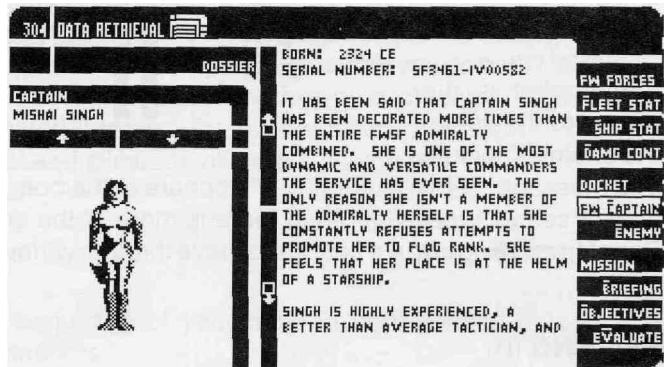
This gives you the docket for each Captain, allowing you to read his/her docket and see what he/she looks like.

When you enter this mode, the ship Captain of the ship I.D.

currently highlighted on FLEET STAT, or the ship currently displayed in SHIP STAT, is the default Captain to be displayed. The  and  buttons above the image of the Captain can be used to cycle to different Captains.

NOTE: Whichever Captain is currently displayed when you switch to another mode is the one whose ship will be selected when you next go to FLEET STAT or SHIP STAT mode.

The docket is displayed immediately to the right of the Captain's picture. The message"—END OF FILE—" appears at the bottom of the docket. If you cannot see this message, then there is more of the docket to read. Use the **PageUp** and **PageDown** buttons to move through various "pages" of the docket.



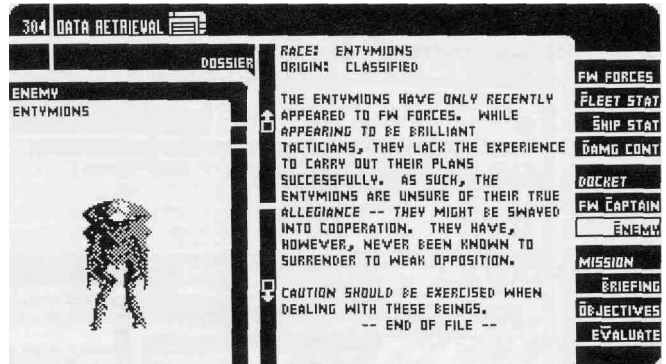
PART V: THE MAIN PANELS

ENEMY (E)

This provides you with the docket for the forces opposing you in the current mission, allowing you to read the docket on them and see an example of what they look like.

The docket is displayed to the right of the enemies' picture.

The message "—END OF FILE—" appears at the bottom of the docket. If you cannot see this message, then there is more of the docket to read. Use the **PageUp** and **PageDown** buttons to move through various "pages" of the docket.



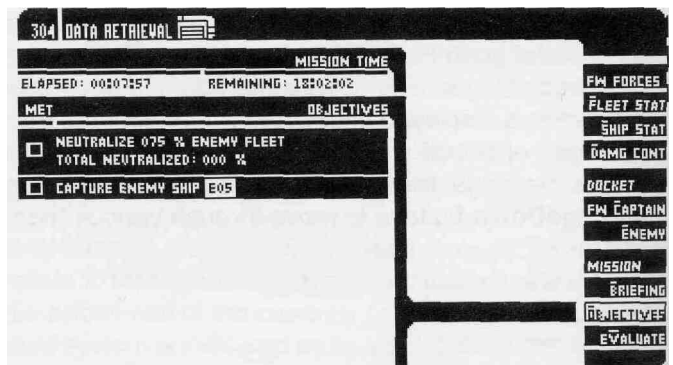
BRIEFING (B)

This simply displays the mission briefing, which summarizes your mission objectives and often provides useful strategic and tactical information.

OBJECTIVES (O)

Lists objectives which must be satisfied to successfully complete the mission. Those preceded by a checkmark have been met.

At the top of the panel is a MISSION TIME display which shows the ELAPSED mission time and the REMAINING time you have in which to meet all of the mission objectives. All objectives must be met before the remaining time elapses else the mission will fail.



PART V: THE MAIN PANELS

NOTE: If you are in a mission without a time limit, the readout following REMAINING will read "NO LIMIT".

Refer to *Objectives* in Part III of this manual for a complete description of each mission objective.

NOTE: In some cases you may see what appear to be two mutually exclusive and conflicting orders in the same list of objectives. For example, you might be instructed to capture a particular enemy ship and neutralize 100% of the enemy fleet. How can you do both? Well, "neutralizing" a ship can be accomplished by capturing it. In such a case, you should interpret the orders as saying "capture this particular vessel and eliminate all others as you see fit."

EVALUATE (V)

Produces a computer evaluation of your mission performance thus far. It includes the following statistics:

- If your ship successfully completed the mission objectives
- Total elapsed mission time
- Number of FW ships which survived the operation
- Number of FW ships destroyed during the mission
- Number of surviving FW ships damaged at the mission end
- Number of FW ships that surrendered
- Number of Enemy ships destroyed
- Number of Enemy ships captured
- Number of Enemy ships operational at the mission end
- Number of Enemy outposts captured by FWSF marines
- Percentages of FW personnel surviving, killed and injured during the mission
- Performance index/mission score

When a mission ends, successfully completed or not, a final mission evaluation is displayed.

PART VI: TACTICS

PART VI: TACTICS

Knowing how to control your ship's systems is one thing, but understanding how to use those systems in tactical situations is something completely different. This section discusses various tactics and how they can be used in a mission.

Maneuvers

Maneuvering your flagship is relatively easy, since all computations are performed by the on-board computers. Maneuvering controls are located on the NAVIGATION (301) and TACTICAL (303) panels. The operation of these controls is described in "Part V: The Main Panels".

NOTE: The on-board computer is limited in its ability to alter your ship's heading and velocity dependent on the type of (and damage level) of your drive system. There will be situations where a target has a more powerful drive system, effectively preventing you from being able to position your ship where you want.

The following is a description of each maneuver and its tactical and strategic value.

INTERCEPT (Panel 301, Button **INTRCPT**)

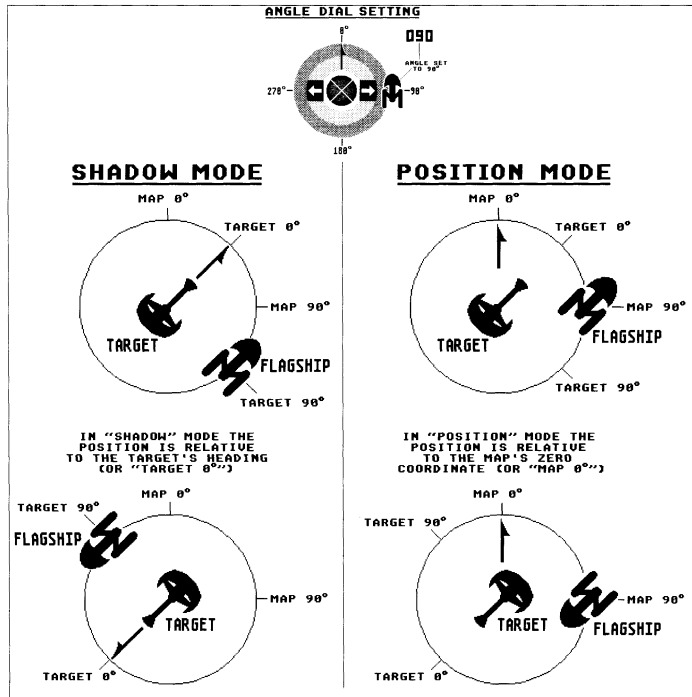
This maneuver will set the ship's autopilot to intercept an object or waypoint. The autopilot will adjust course and velocity so that the ship's velocity will be 0 upon interception. This is useful for approaching stationary targets such as planets and outposts. When targeting moving objects (such as enemy ships), the object will usually appear to move away upon being intercepted. This is due to the fact that your ship will be stopped upon intercept while the target object is still moving.

CHASE (Panel 301, Button **CHASE**)

This maneuver is similar to intercept, but will approach the target object and hold at a range of 500,000 kilometers. If the target is moving, the autopilot will attempt to hold this distance directly behind the object. This, in effect, is chasing the object. This is useful for following an enemy ship just at the edge of weapons range.

SHADOW (Panel 303, Button **SHADO**)

This maneuver is similar to chase, but allows you to select the distance and bearing you want to be from the target. Using the angle and range attitude controls on the TACTICAL panel (303), you can adjust these parameters. For instance, if you want to position your ship directly off the starboard (right) side of the target, set the angle to 90. To position directly in front of the target, set the angle to 0.

**POSITION** (Panel 303, Button **POSIT**)

The position maneuver is identical to shadow with the exception of how the angle setting is interpreted. Assuming that the angle is set to 180, shadow would try and keep your ship directly behind the target. Position would, however, try and keep your ship to the "south" of the target, regardless of the target's heading. Refer to the adjacent figure for an example of shadowing and positioning.

ESCAPE (Panel 303, Button **ESCAP**)

The escape maneuver is used to put some distance between your flagship and the current target. Escape will attempt to move your ship to, and maintain, a safe distance (900,000 kilometers) from the target. The computer will adjust your heading so that, at the beginning of the maneuver, you are travelling in the opposite direction as the target. This will make the escape as quick as possible. Remember that the ability to escape depends on your ship's drive being more powerful than that of the target.

PART VI: TACTICS

HALT (Panel 303, Button **HALT**)

Halt, the simplest maneuver, will simply stop your ship dead in space. It automatically switches manual helm control on.

EVADE (Panel 303, Button **EVADE**)

This maneuver will cause your ship to zig-zag at maximum acceleration in order to evade incoming EBW and missile fire. The usefulness of this maneuver depends on the strength of your drive system. A weak or damaged drive will not be able to out-maneuver the incoming fire.

DOCK (Panel 303, Button **DOCK**)

The dock button will appear when you have selected an FW outpost, neutral outpost, or enemy outpost that has been captured. You must be within 1,000 kilometers of the target. Docking with an outpost will allow you to repair and resupply your ship.

BOARD (Panel 303, Button **BOARD**)

The board button will appear when you have selected an enemy outpost or enemy ship. You must be within 5,000 kilometers in order to board the target. You will need to board ships and outposts in order to capture them.

Fire Control Techniques

Key to the successful completion of most missions is your ability to combat enemy ships and Outposts. The following are hints and suggestions you can use when engaging the enemy.

- 1) Try to knock out critical enemy systems first. The drives and weapons system should be the primary targets. Knocking these out first will make the destruction of the other systems easier. Use the appropriate missiles in addition to pinpoint EBW fire to target these systems.
- 2) To make missile hits more damaging, lower your EBW power to around 50% so that you can fire rapidly. Pinpoint the shields and hit repeatedly. This will have the effect of weakening the shields, making them less resistant to missile attacks.
- 3) Pinpoint fire works well only with ships that cannot outmaneuver you. If you find maintaining a target lock is difficult, use the normal beam width. If you still don't get enough hits, switch to wide beam.

PART VI: TACTICS

- 4) Choose your maneuvers based on the strength of your drive system relative to that of the enemy. Some maneuvers, such as escape, work only when you have the superior drive capability. To determine the strength of the enemy drive, use your probe (from panel 301) to determine the class of ship you are fighting. Then refer to Appendix III and look up the maximum velocity and acceleration for the drive system that is used on that class of enemy ship. Compare these values to the values for the drive on your ship (values for the parts can also be found in Appendix III). If you do not know which drive system you have on board yourship, you can look up the part number by using SHIP STAT on the Data Retrieval (304) Panel.
- 5) Make frequent use of the facing control. Try to keep orienting the strongest shield towards the enemy. Remember, though, that the autopilot may not always be able to orient that shield to your liking. Maneuvering the ship requires that the ship rotate in various directions. The autopilot will, however, do its best. When in the Halt maneuver, the ship will not be under power so the autopilot will always be able to orient the selected shield.
- 6) When the enemy has the superior drive capability, you may be better off to select the Halt maneuver. Otherwise, your ship may simply spin around trying to keep up with the enemy ship. This may prevent you from being able to achieve a target acquisition to fire your weapons.

Tactical Use of Asteroid Fields

Asteroid fields can be both a hindrance and a help. When a ship is within one, it risks being partially sensor-blinded by the numerous rocky objects surrounding it, which generate confusing "echoes" and distort hyperscanner field readings. The denser the asteroid field, the less sensor visibility a ship within it is likely to have. Because of this, it's not a good idea to chase an enemy ship into a dense asteroid field, as it could evade you while in the field, or even emerge in clear space before you do, and have the advantage of being able to see - and target - you before you can see it.

On the other hand, there are several ways in which you can use asteroid fields to your advantage.

PART VI: TACTICS

- 1) Lure an enemy ship into approaching you by passing through an asteroid field. If you see an enemy ship approaching you, and you are near an asteroid field, set a course (using the manual helm control) that will allow you to "skim" the outside of the field on the side opposite of the approaching enemy. Once the field is full between you and the enemy, move towards the field until you are almost at its edge, and then halt. If the enemy makes a beeline for you, he will pass right through the asteroids and, if the field is sufficiently dense, will be unable to get a fix on you until he clears the field. Meanwhile, since you're not in the midst of the rubble, you'll be able to see him approaching and fire EBWs several times long before he can see you. Your EBWs have a maximum "hit" range of 3 million kilometers, and, while in normal combat firing at targets over 550,000 kilometers away is wasteful, in this circumstance it's worth trying. Since the enemy will probably be flying straight through the field, you have a greater chance of getting a hit at extreme range.
- 2) Lead a pursuing enemy through a dense asteroid field. As with the previous technique, if your drive is powerful enough, you'll clear the other side of the field before your opponent does, and you can halt your ship and nail the enemy a few times before he emerges and can lock onto you.

To do this, go to Panel 301 and set the autopilot to intercept the desired asteroid field. Your ship will make directly for the center. Once you are on course and at full speed, use the **GET** (G) function (see *301 Navigation* in Part V) to copy the current course and velocity into the manual controls. Your ship will now fly into the asteroid field, through its heart, and out the other side. Once you emerge on the far side, you may, if the enemy has followed, be able to get a few shots in on him before he can lock onto you.

- 3) Hide and seek. Large, dense asteroid fields are good places to "hide" if you're in desperate need of a breather. If the center of the field is so far "in" that an enemy's sensors cannot detect you from outside the field, you can sit tight and lick your wounds, somewhat safer than normal from enemy attack. To do this, locate a very large, dense field and intercept it. Your ship will stop at its center.

To check an asteroid field's density, probe it from the NAVIGATION panel (301). The higher the density, the more sensor problems it will cause.

Doubling Back Through an Asteroid Field

Another trick you can pull with a ship pursuing you through an asteroid field is to wait until you think the enemy is in the field with you and then suddenly change course. If the field is dense enough, the enemy ships(s) might miss your course change and lose track of you. Turning at a 90 degree angle to your current heading is one course change you might try.

Damage Control and Outpost Repair/Resupply

Your ship's crew includes repair personnel capable of repairing any of the six systems on yourship. The crew cannot, however, repair a system that has been completely destroyed. A system is considered completely destroyed once its damage status reaches zero. At this point, the only place to repair the destroyed part is at an outpost.

You distribute your repair crew to the six systems using the damage control panel (304). A specific percentage of the crew is allocated to each system using the slider controls. You may change the distribution at any time. You should distribute a higher percentage to the systems you deem most critical. Repair crews assigned to undamaged systems will sit idle until the part needs repair. Each part on your ship has a sophistication level. The higher this number, the more sophisticated the part. Sophistication levels for your parts can be found in Appendix III. Your crew can repair a part of any level of sophistication, however the lower level parts will be repaired much more quickly than higher level ones. In addition, the more damage a part sustains, the longer it will take to repair.

Outposts can repair your parts even more quickly, but they are limited by their sophistication level, in which parts they can work with. By using a probe on the outpost, you can ascertain its repair level. This level is the maximum sophistication part that they can repair. Outposts can also repair destroyed parts. Outposts are also your only source for resupply of missiles. Missiles, like system parts, have sophistication levels. Each outpost has a supply sophistication level. This level means the outpost has missiles up to, but not beyond, that sophistication. The sophistication level of each missile type is listed in Appendix IV.

After docking with an outpost, a resupply procedure will automatically be initiated. The outpost will reload your ship with its maximum compliment of missile up to the supply sophistication. Resupply of missiles takes 5 minutes for free-floating, and 15 minutes for planetary based outposts. Resupply at the planetary based outposts take longer since it is necessary for them to launch a supply shuttle into orbit that will rendezvous with your ship.

PART VI: TACTICS

Tactical Use of Self-Destruction

Your flagship is armed with a detonation system that will destroy the ship on your command. This is useful should you encounter a no-win situation. Detonating your ship will initiate a blast that will instantly destroy any ships within 4 million kilometers range, and those between 4 and 100 million kilometers risk damage ranging from minor to critical.

Although your Fleet Commander character will be killed, you may be able to complete the mission by using this tactic. For instance, if the only remaining victory condition is to destroy an enemy ship with which you are engaged in battle, the resulting explosion may destroy him for you.

Keep in mind that you can also order your other ships to self-destruct. Self-destruction is, however, the ultimate sacrifice a ship captain can make, so play close attention to whom you are making this request. Check the docket (available on 304) of the Captain first to see if he/she is likely to obey this order.

CAUTION! Make certain that vital mission objectives are not within dangerous proximity of a ship about to self-destruct. For instance, if you intend to blow your own ship to atoms, try to get some distance between your ship and those you want spared. Likewise, you can order ships that are near a ship you wish to destruct to go somewhere "safe".

Surrender Tactics

Both enemy ships and Federated World ships may surrender to the opposing forces. Using the communications system, you can order any or all of your ships to surrender. You can also send a message to any enemy ship, surrendering your own flagship. Once the flagship has surrendered, the mission is lost. A surrender will in many cases be your only alternative to self-destruction or destruction at the hands of the enemy.

The enemy may or may not accept your surrender. That depends a large part on whom you are fighting. In addition, the enemy will be more susceptible to your surrendering if a large percentage of your fleet has already surrendered. The enemy dossier may contain information you can use to determine how likely it is they will accept your surrender.

The enemy may also surrender to you or one of your fleet ships. You can also send messages to enemy ships requesting their surrender. Again, the personality of the enemy plays a large part in their likelihood of surrendering to you.


Forming Battle Groups

In many missions you will have several objectives to meet. In some cases you may be required to tend to all of them quickly, and will find that there isn't time to lead your forces in all required actions. Naturally, you can order various ships to take care of certain tasks, but in situations where two or more ships may be required to meet a particular objective, it is sometimes best to form a Battle Group.

A Battle Group is a grouping of ships, the Captain of one of which you have assigned to act as the Group Leader. The Group Leader then has authority to give orders to other ships in the Group and instruct them in what to do. This is particularly handy in situations where there will be a significant communications delay between your flagship and other ships in your fleet.

The best choice for a Group Leader is a ship whose Captain is loyal, experienced, stable and ingenious (amongst other things). The reasons? First, disloyal Captains are more likely to surrender to hostile forces, Secondly, some Captains do not take orders well from captains with less experience than they themselves have, so the more experienced the Captain you selected as Group Leader is, the less likely he is to have problems with "renegade" or disobedient Captains under his command. Third, a stable, non-temperamental Captain is less likely to take rash action that could risk lives unnecessarily. In light of this, choosing Captains to act as Group Leaders is not a decision to take lightly, and choosing which ships to assign under that Group Leader is important as well, so read their dockets carefully (panel 304).

NOTE: The right Captains may not have the right ships for the job. You also have to take into account the relative strengths of the vessels commanded by those Captains you wish to assign to Battle Groups.

To form a Battle Group, go to COMMUNICATIONS (302) and send the order "FORM BATTLE GROUP" to the ship you have selected as a Group Leader (you cannot send it to ALL ships). If ACKNOWLEDGE is on, the Captain of that ship will acknowledge the order when (and if) he/she forms the group. If not, the next time the ship sends you a status report (send the order "REPORT STATUS" or activate the **ALL SHIPS REP STAT TO**  button), its group status will be reported. The Group Leader *must* notify you that it has formed a group in one of these fashions *before* you can assign other ships to join that group.

NOTE: A ship selected as a Group Leader will, on some readouts, have its normal Ship I.D. replaced by a Group I.D. Thus, if you assigned ship F07 to form the first Battle Group, its I.D. would be changed to G01.

PART VI: TACTICS

Once the Group Leader has acknowledged the Group formation (you will receive the message "FORMING BATTLE GROUP Gn" (where n is the Group number; 00-99). You can then send the order "JOIN BATTLE GROUP" to the ships you wish (if you send the order to ALL ships, all ships but your own and the selected Group Leader will join the Group). Ships obeying the order will, if the ACKNOWLEDGE flag is on (see 302 *Communications* in Part V), respond "JOINING WITH GROUP Gn".

Deploying Battle Groups

Once a Battle Group has been formed, all you need to do to deploy it is to send an order to the Group Leader. If you order the Group Leader to destroy a particular enemy vessel, the entire Group will follow the order (as always, this depends on the Captain leading the Group and those under his/her command).

It is important to issue orders *only* to the Group Leader, because sending a specific order to a ship or ships within a Group will cause them to automatically disband from the Group ("REPORT STATUS" is the only order that you can send to a Battle Group "follower" that will not cause that ship to disband).

As you issue orders to the Group Leader, the ships led by it will, if ACKNOWLEDGE was on when you sent the last order to the Group Leader, "GROUPED WITH Gn" to let you know they are following the actions of the Leader.

Disbanding Battle Groups

When you wish to break up a particular Battle Group, send the order "DISBAND FROM BATTLE GROUP" to the Group Leader.

To have individual ships leave a Battle Group without disbanding the entire Group, send the "DISBAND..." order to the specific ships you want to break free from the group, or send those ships specific orders to do other things (such as "MANEUVER AT WILL", "DESTROY ENEMY SHIP", etc.).

You can break up all existing Battle Groups by issuing the "DISBAND..." order to ALL ships. This order will affect all Groups, but will not affect ships ordered to form with your flagship (see following section),

Forming with the Flagship

In addition to ordering a Captain to form a Battle Group and instructing ships to join that Group, you can order the ships under your command to form the equivalent of a Battle Group with your own ship acting as the Group Leader. Send the order "FORM WITH FLAGSHIP" to those ships you want to lead. If the Captains of those ships obey the order (as always, whether they do or not depends on their personalities), their ships will follow yours and do what you do. If you set a specific course, they will follow it.

NOTE: This order does not form an "official" Battle Group, and your flagship will not be assigned a G (Group) designator on the map displays.

The "FORM WITH FLAGSHIP" order is really just an instruction for ships to follow you. If you attack an enemy ship while other ships are grouped with you, the Captains of those ships may not join the attack until you issue an attack order.

Hints On Keeping Your Battle Group Together

When a Battle Group is formed, the ships in it follow the lead of the Group Leader. The danger in such formations is that not all ships have the same maximum velocity. It is possible for the ship leading the Group to outdistance one or more of the Group members when moving towards a target. This is potentially dangerous, because it can lead to your forces being widely scattered, resulting in some ships of the Group encountering the enemy prior to others. If you intend to work from a strength-in-numbers posture, you do *not want* to spread your Battle Group out. The problem here is that the autopilot modes, such as chase and intercept (panel 301), set your ship on a full-power course for the selected target. Velocity in such modes is controlled by the ship's computer. Ideally, you want to set course for the target and then maintain a velocity which will allow even the slowest ships in your Battle Group to keep pace.

This need can be met through use of the manual helm control on the NAVIGATION (301) panel. Using the autopilot controls, you would set out to chase or intercept a given target. Once the desired heading has been set, activate the GET (G) button on the HELM subpanel, which switches to manual control while maintaining the heading and velocity set by the autopilot mode. After **GET** has copied these values into the manual helm control, you can make appropriate adjustments to your velocity to ensure that all of the ships formed with you can keep up. In this way you don't end up scattering your forces.

PART VI: TACTICS

The drawback to this approach is that it doesn't work well on nearby fast-moving or distant moving targets, since, in manual mode, your ship does not automatically correct course to compensate for moving targets. To solve this logistical problem you will either need to manually adjust your heading, or switch back to an autopilot mode for a moment and then use **GET** again to pick up the new heading. In either case, you will want to do this periodically in order to avoid wasting a great deal of time.

Disbanding a Flagship Formation

As with any other Battle Group, ships that are formed with your flagship can be disbanded from your "group" by issuing other orders to those ships. Sending the order "DISBAND FROM BATTLE GROUP" to ships formed with your flagship is equivalent to a "MANEUVER AT WILL" order.

Capturing Outposts

In some missions you may be required to capture one or more enemy outposts. Even if you are not compelled to take over such outposts, in some circumstances you may find it to your advantage to seize strategically placed enemy or neutral outposts. Enemy ships cannot get resupplied or repaired at outposts controlled by your forces, so it makes strategic sense to capture outposts your enemies could seek assistance from. Naturally, the enemy won't just sit still for this. They may very well try to capture such outposts themselves, or even go after established FW outposts to try to cut off your supply and repair lifeline.

If you have two or more outposts as potential "capture" targets, the one you pick to go after first should be determined by balancing which is of greatest value to the enemy (sophistication) against their positions relative to enemy ships.

HINT: If you have to choose between two nearby and similarly sophisticated outposts, one free-floating and the other planet-locked, capture the free-floating one first. It takes longer for ships to resupply at planet-locked outposts, so enemy ships who attempt to resupply their missiles while you're occupied won't get the jump on your forces as quickly.

Capturing an outpost is accomplished from the TACTICAL panel (304). You must knock out the outpost's shields and then board it. If the boarding action is successful, the outpost is yours. Following a successful outpost capture, your marines will repair the outpost's shields to hold off enemy ships. Likewise, if you abandon a capture attempt, the outpost personnel will themselves repair their shield systems.

Dealing With Non-Objective Enemy Ships

In some missions your orders may require you to capture or destroy specific enemy ships, etc., that leave other enemy ships essentially "non-objective" items. In such circumstances, destroying such ships is a complete waste of time. Your only concern with such ships is the threat they pose to your ships and outposts. Therefore, the best way to eliminate such threats, if you get the chance, is to disable them. For example, if confronted by a non-objective ship that threatens your forces, concentrate your attack on knocking out the ship's drive system. If you completely destroy the ship's drive, it will be forever unable to maneuver and effectively "neutralized". You can therefore leave it for later.

Crippling Enemy Ships

In some cases, you may need to deal with some pressing problem (like assisting a ship or outpost in danger) while in the act of fighting an objective enemy vessel (one you must capture or destroy). In such cases a useful tactic is to attempt to cripple the ship in question in such a way that it is temporarily rendered "lame". For example, if you severely damage the target's drive, chances are you might be able to go and take care of other business and return to finish the target before it can repair the damage or reach an outpost. Likewise, a ship threatening an outpost could be dealt with by damaging its weapons system. If it can't fire, it can't penetrate the outpost's defenses, and thus, the outpost is spared...for the time being. Also, if your attention is required elsewhere, you could cripple the current target, then order another ship to "finish" it while you go off about more urgent business.

PART VI: TACTICS

Keeping an Enemy from Calling for Help

If you are in a system with at least one hot star (such as a class F, A, or B) and can ambush an enemy ship nearby such a star, the interference generated by the star will keep him (and, alas, you) from being able to call for help from his fellows. To determine the type of a system's star(s), probe it from the NAVIGATION panel (301). A small temperature scale appears alongside the star graphic, and the taller this scale is, the hotter the star. The hotter the star, the more communications interference it will cause. Also, the closer a ship is to a star, the greater the interference, so catching an enemy nearby a cooler star may have the same effect as being farther from a hotter star.

STANDARD TEMPERATURE RANGES FOR EACH STAR CLASS

<u>Type</u>	<u>Color</u>	<u>Temperature (celsius)</u>
B	White/bluish	25,000°C
A	White	11,000°C
F	Yellowish	7500°C.
G	Yellow	5300°C to 5800°C
K	Orange	4000°C to 4900°C
M	Red	3000°C to 3400°C

PART VII: THE BUILDER

Overview

This section explains each and every panel in the builder sections of the game. Each panel's purpose and functioning is detailed. Screen buttons are listed in uppercase bold text, with the key equivalent listed, in parenthesis, immediately following the button text, as in: "...use **BUTTON** (B) to..."

Please note that many options will bring up alert messages, such as "are you sure you want to delete...", and the usurper boxes bearing these messages are not always noted in the text because, as a rule, what to do when one appears is fairly self-evident.

Each panel is listed by number and name. Operation of the controls on these panels are as described in Part IV, unless otherwise noted.

Operational Overview

There are five builder panels. The first four are used to create individual elements that can be used in many missions. The fifth builder panel is where elements created with the other four are assembled to create missions. To wit: you create FW Captains, then you create ships for the Captains, next you create an opponent/enemy, and then you create a solar system in which they will clash. Finally, you assemble all the parts, set objectives, and you have a mission. Access to each of the builder panels is via the 101 GAME/MISSION panel (see Part V of this manual for details).

The Upper Bar

Each of the 5 builder panels all share a common bar at the top of the screen. In addition to the current builder panel number and label, this bar always contains the following controls:

ADD(F1)

Activating this button will cause the current item being edited (be it a ship Captain, solar system, mission, etc.) to be saved as a new item. For instance, you would activate this button prior to using **SAVE** (below) if you have edited an existing item and want to save the changes (but retain the original).

PART VII: THE BUILDER

SAVE (F2)

This button will save the current item and exit the panel, returning you to the main panel (101).

CANCEL (F3)

This button will cancel any changes you have made and exit the panel without saving, returning you to the main panel (101).

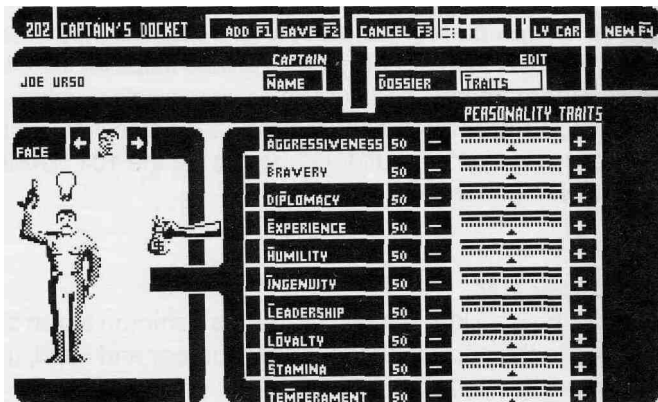
NEW(F4)

This button will cause the settings of the selected builder panel to be reset to their default "create" settings. This allows you to create a new item and begin editing it without having to exit to 101 and use the create function for that panel.

Since the item currently in the builder panel will be cleared when **NEW** is used, you will be allowed to first save any unsaved changes to the current item.

202 CAPTAINS

This section of the builder allows you to create, edit, and delete Federated Worlds ship Captains. This panel operates in two modes, one allowing you to edit the personality traits, the other allowing you to edit the dossier. Initially, this panel will be in the "traits" mode.



Just below the upper bar is a bar containing a text field for the Captain's name, a button for editing the name, and controls for switching between traits and dossier mode. These controls are as follows:

NAME (N)

This is a toggle action button. When activated, a text editing frame and cursor appears, allowing you to enter/edit the Captain's name. (See Part IV for details on working with text editing fields.)

DOSSIER (D) and TRAITS (T)

Only one of these two buttons can be active at one time. In dossier mode, the lower portion of the screen is occupied by the Captain's dossier editor. In traits mode (the default), the lower portion of the screen is filled with the Captain's personality traits editor. Switching modes has no effect on anything entered or edited in either mode, so you can feel free to go back and forth between them without fear of losing your work.

TRAITS MODE

When the **TRAITS** button is highlighted, the lower portion of the screen is occupied by the PERSONALITY TRAITS editor. This consists of ten thermometer type scales, each used to set a particular trait (see Part IV for details on the operation of thermometer scales).

Each trait can range from 00 to 99, and the current setting is always displayed in the related value readouts to the left of the scales. To adjust a trait, simply move the arrowhead pointer below the selected scale. Moving the arrowhead to the right increases the value; moving it to the left decreases the value. The value changes while the arrowhead.

Keyboard users will note that the same buttons (- and +) are used for all ten scales, and might be confused as to how you pick which trait you wish to edit. The label for each trait is a selection button. The scale next to the currently highlighted label is the one the - and + buttons will affect. To change traits, simply press the indicated key to highlight the trait that you wish to edit. Mouse users will note that each time they click/drag an arrowhead, that arrowhead lights up, and the highlighted label changes to reflect the current trait being edited.

It is the combination of the values of each of these traits which determine the personality of a Captain. The ten traits are as follows and affect the indicated aspects of the Captain:

PART VII: THE BUILDER

AGGRESSIVENESS (A)

The higher this factor, the less likely the Captain will accept a surrender or negotiation. A high factor also means the Captain may seek to destroy the enemy more than the mission objective requires.

BRAVERY (B)

The higher this factor, the more likely it is the Captain will engage in risky situations.

DIPLOMACY (P)

The higher the factor, the better the Captain is at negotiating with neutral outposts for repair and resupply.

EXPERIENCE (E)

The higher this factor, the more experience the Captain has had in combat. More experience means the Captain is better at whatever tactics are known by him/her. Tactics known are determined by ingenuity.

HUMILITY (H)

The higher this factor, the better able the Captain is at taking orders from lesser experienced Captains.

INGENUITY (I)

The higher this factor, the more sophisticated battle tactics the Captain knows.

LEADERSHIP (L)

The higher the factor, the better the Captain is at controlling his group.

LOYALTY (Y)

Low loyalty means the Captain is liable to surrender easily. A low factor will also mean that he is less likely to take risks to complete the mission.



STAMINA (S)

Low stamina means the Captain is likely to make errors during a prolonged battle.

TEMPERAMENT (M)

The lower the factor, the less stable the Captain. This would cause the Captain to make errors under pressure.

SELECTING AN APPEARANCE

To the left of the trait editing scales is an image of a "generic" Captain which alters somewhat as you change certain traits. Directly above that is a small set of controls labeled FACE, which consists of two action buttons and a small display. These controls allow you to select a "look" for each Captain. There are 24 different faces available: 16 men and 8 women. Use the  to go to the next face, and the  to go back to the previous one.

Whichever face is shown in this display when you save the Captain determines the face and sex of that character during game play only. The full-figure image of the captain on the screen will not change.

DOSSIER MODE

The text in the CAPTAIN'S DOSSIER is what will appear in a mission when a player reads the docket for the Captain.

When the **DOSSIER** button is highlighted, the lower portion of the screen is occupied by the CAPTAIN'S DOSSIER editor. This consists of nothing more than an extremely large text field into which the text for the Captain's dossier is entered/edited.

Since the dossier editors for the CAPTAINS and ENEMY RACES and the mission briefing editor of the MISSION BUILDER (206) are all virtually identical, documentation on the operation of the editor is covered at the end of this part, under the heading *Supplement: Dossier/Briefing Editors*. Refer to that section for details on using the dossier editor.

WRITING A CAPTAIN'S DOSSIER

Admittedly, you can write just about anything you like, but, ideally, the function of the dossier is to give the player a "personality sketch" of the character, useful for determining that Captain's strengths, weaknesses, and potential uses and dangers. Therefore, the best way to write a dossier is to, through the text, give some clues as to the Captain's personality *without* spelling out each trait numerically (ie - "his LOYALTY is low at 34").

PART VII: THE BUILDER

As an example, the following is the dossier for Captain Deneal Mabuso (included with the game), followed by her actual traits. Notice how the text manages to give string hints as to what these traits are without actually listing them off.

BORN: 2346 CE
SERIALNUMBER: SF3641-BR11697

Captain Mabuso is the daughter of Renita Mabuso, Defense Minister of Imperial Beurn. As the child of a high-ranking government official, she is well aware of the "pomp before progress" stance of the Mellus Administration ruling Beurn. As a result, she has developed an intense disdain for bureaucracy, and thus is something of a "maverick", rejecting authority she considers incompetent.

This hotheaded, rebellious nature is tolerated primarily because Mabuso is one of the most brilliant tacticians ever to serve the FW. She is the only academy graduate to ace the "Leslie Maru" endurance test, and has been known to achieve minor miracles under the most extreme pressure.

Now her actual stats/traits:

AGGRESSIVENESS	64
BRAVERY	70
DIPLOMACY	34
EXPERIENCE	52
HUMILITY	25
INGENUITY	99
LEADERSHIP	44
LOYALTY	67
STAMINA	88
TEMPERAMENT	26

A few final notes on writing a dossier that is "correct" for the Omnitrend "Universe". If you're creating your own worlds, the following is not so important.

- Our "convention" for Captains is to begin with the BORN: and SERIAL NUMBER: fields on the first two lines, leave the next line blank, and then write the rest of the dossier in paragraph form (see above example).

PART VII: THE BUILDER

The BORN: value can be easily determined. The "war" that is declared in the game's opening sequence begins/began in 2374 CE (Common Era). You can assume your mission will take place sometime after that. Figure out your Captain's age at the time war was declared, subtract it from 2374, and you have your BORN: date.

FWAF serial numbers *always* begin with SF, and always contain letters and numbers in the precise configurations as in this example serial number: SF3641-BR11697. In other words, the 'SF', four digits, a hyphen, two letters, and a final six digits.

203 SPACECRAFT DESIGN

This section of the builder allows you to create, edit, and delete Federated Worlds and allied starships. Construction is simplicity itself: you select the ship class, pick the parts, name the vessel, and save it. Spacedocks should have it so easy!

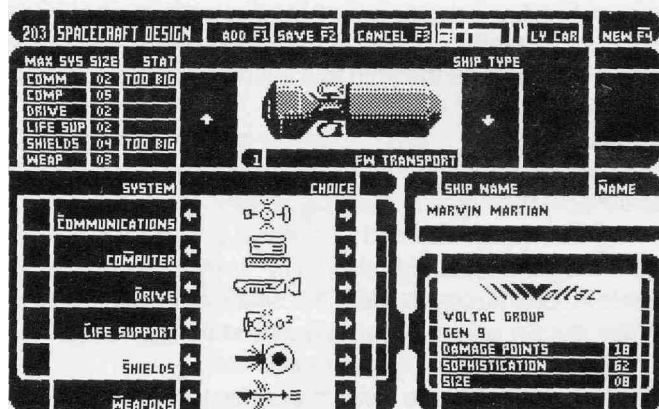




image of a ship flanked by  and  buttons, which allow you to cycle through the ship classes. There are six ships classes. From weakest (militarily) to strongest, they are:

TRANSPORT
SCOUT
DESTROYER
CRUISER
HEAVY CRUISER
DREADNOUGHT

PART VII: THE BUILDER

When you first enter the panel or use **NEW** (F4), the default ship type is a SCOUT.

To the left of the ship display are MAX SYS SIZE and STAT readouts. Under MAX SYS SIZE are labels for each of the ship's six primary systems, and the number displayed in the value readout to the right of each label is the maximum "size" of each system the currently selected ship class can carry. If any selected part for a system has a size that is larger than the number indicated, a TOO BIG warning will appear under STAT.

NOTE: You will not be allowed to save the current ship if any TOO BIG warnings appear.

If any TOO BIG warnings appear, you'll either have to change the ship class to a larger ship to accommodate the systems you have specified, or select smaller parts for the indicated systems. If, after selecting parts that fit the current ship class, you change the ship to a lower/smaller class, one or more of the selected parts may not fit.

SHIP NAME

To the right is a field labeled SHIP NAME. It consists of a standard text editing field and one button, **NAME** (N), which activates the text editing mode. See Part IV for details on the operation of text editing fields.

You will not be able to save the current ship if no name has been entered for it.

PARTS SELECTORS

The majority of the panel is dominated by the parts selectors, which allow you to equip each ship from an inventory of numerous part. To the left are six parts selectors. Using the arrow buttons there you select the combination of parts you want. To the bottom-right of the screen is a CURRENT PART STAT DISPLAY, which displays the stats of the last part you selected.

THE SELECTORS

These are used to select which parts you wish to use for each of the ship's six primary systems. Each part selector consists of a label (selection button), and a part display, bracketed on either side by previous part and next part action buttons (← and →). To change a part, all you need to do is use the arrow buttons to move forward or backward through the selections.

Keyboard users will note that the same buttons are used for all six selectors, and might be confused as to how you pick which system you wish to edit. The label for each system is a selection button. The scale next to the currently highlighted label is the one the ← and → buttons will affect. To switch parts to edit, simply press the indicated key to highlight the part that you wish to edit. Mouse users will note that each time they click one of the arrow buttons, the highlighted label changes to reflect the part being edited.

The six system types and selectors are as follows:

- | | |
|---------------------------|---|
| COMMUNICATIONS (C) | Picks the communications system you want to equip your ship with. There are 3 models to choose from. |
| COMPUTER (M) | Picks the computer system you want to equip your ship with. There are 4 models to choose from. |
| DRIVE (D) | Picks the drive system you want to equip your ship with. There are 5 models to choose from. |
| LIFE SUPPORT (L) | Picks the communications system you want to equip your ship with. There are 3 models to choose from. |
| SHIELDS (S) | Picks the defensive shield system you want to equip your ship with. There are 5 models to choose from. |
| WEAPONS (W) | Picks the offensive weapons system you want to equip your ship with. There are 5 models to choose from. |

PART VII: THE BUILDER

CURRENT PART STAT DISPLAY

This box is directly below the SHIP NAME box and right of the PARTS SELECTORS, to which it is linked by a bracket featuring a moving tab which links the STAT DISPLAY to whatever part has been selected last. Its job is to provide you with the statistical information for the last selected part.

For example, when you first create a new ship (from 1 0 1), when you arrive on 203 the highlighted system is communications, and the parts displayed there is the first part in the list. The CURRENT PART STAT DISPLAY identifies it as a THUKE XX, which is capable of sustaining 4 points of damage before it fails, has a sophistication level of 33, and a size of 2. If you then advanced to the next part for the communications system the stats would change to reflect it (a Giaperelli Marconi II). If you were to switch to editing parts for another system, the stats for the current part listed under whatever system you moved to would appear in this box.

In brief, the more sophisticated a part, the more effective it is, but the harder it is to repair, and the less chance you'll have of finding an outpost than can repair or replace it. The larger the size of a part the fewer ship classes it will fit into.

At the top of the CURRENT PART STAT DISPLAY is the logo of the company that manufactures the currently selected part. Below that is the company name, and below that is the part name. Finally, the bottom three lines list damage points, sophistication and size of the part.

NOTE: Technical details about all FW ship classes, parts, and enemy ship classes and parts are covered in Appendix III. You can consult it to determine how various ship and part combination stack up against those of opposing forces.

SHIP BUILDING HINTS

Although there are a limited number of possible combinations of ships and parts, there are enough so that you can create a group of ships with widely varying capabilities.

It's important to remember that the Heavy Cruiser class vessels can only be commanded by Fleet Commanders with a rank of at least 1st Lieutenant, and the Dreadnoughts by those with a rank of at least Commander. Thus, if you're making missions to be played by less "experienced" player characters, you shouldn't make tons of top-end ships (although you can always assign a Captain to command such ships in a mission).

When naming ships that operate within the established Omnirend "universe", always precede all Federated Worlds Armed Forces ship names with an FWS, as in FWS YURY GAGARIN or FW STERESHKOVA. Privately or corporately owned transports and scouts can also be added, and such ships should not have an FWS prefix.

SAVING SHIPS

When you save a ship it is added to the current ship list. If, when you try to save a ship, any part is too big for the current ship class, and/or the ship has no name, you will be warned and returned to the ship builder.

If you create (having used CREATE from 101 or NEW from this panel) a new ship with a name identical to an existing one, the existing one is not overwritten.

204 ENEMY RACES

This section of the builder allows you to create, edit, and delete enemy races. This panel operates in three modes, one allowing you to edit the personality traits, a second allowing you to design the "look" of the creatures, and a third allowing you to edit the dossier. Initially, this panel will be in the "traits" mode.



PART VII: THE BUILDER

The actual operation of this panel is identical to that for FW Captains with the exception of the addition of the PHYS FORM mode.

Just below the upper bar is a bar containing a text field for the race's name, a button for editing the name, and controls for switching between traits and dossier mode. These controls are as follows:

NAME (N)

This is a toggle action button. When activated, a text editing frame and cursor appears, allowing you to enter/edit the race's name. (See Part IV for details on working with text editing fields.)

PHYS FORM (Y), DOSSIER (D) and TRAITS (T)

Only one of these buttons can be active at one time. In phys form mode, the lower portion of the screen is occupied by a "body construction" panel. In dossier mode, the lower portion of the screen is occupied by the races's dossier editor. In traits mode (the default), the lower portion of the screen is filled with the race's personality traits editor. Switching modes has no effect on anything entered or edited in either mode, so you can feel free to go back and forth between them without fear of losing your work.

TRAITS MODE

The default mode. When the **TRAITS** button is highlighted, the lower portion of the screen is occupied by the PERSONALITY TRAITS editor. This consists of ten thermometer type scales, each used to set a particular trait (see Part IV for details on the operation of thermometer scales).

Each trait can range from 00 to 99, and the current setting is always displayed in the related value readouts to the left of the scales. To adjust a trait, simply move the arrowhead pointer below the selected scale. Moving the arrowhead to the right increases the value; moving it to the left decreases the value. The value changes while the arrowhead.

Keyboard users will note that the same buttons (- and +) are used for all ten scales, and might be confused as to how you pick which trait you wish to edit. The label for each trait is a selection button. The scale next to the currently highlighted label is the one the - and + buttons will affect. To change traits, simply press the desired key to highlight the trait that you wish to edit.

PART VII: THE BUILDER

Mouse users will note that each time they click/drag an arrowhead, that arrowhead lights up, and the highlighted label changes to reflect the current trait being edited.

It is the combination of the values of each of these traits which determine the personality of a race. The ten traits are as follows and affect the indicated aspects of the race:

AGGRESSIVENESS (A)

The higher this factor, the less likely the race will accept a surrender. A high factor also means that they will be more violent.

BRAVERY (B)

The higher this factor, the more likely it is the race will engage in risky situations.

DIPLOMACY (P)

The higher the factor, the better the race is at negotiating with neutral outposts for repair and resupply.

EXPERIENCE (E)

The higher this factor, the more experience the race has in combat. More experience means the race is better at whatever tactics are known by them. Tactics known are determined by ingenuity.

HUMILITY (H)

The higher this factor, the better able the race is at taking orders from those of lesser experience.

INGENUITY (I)

The higher this factor, the more sophisticated battle tactics the race knows.

LEADERSHIP (L)

The higher the factor, the better the race is at controlling groups of ships.

LOYALTY (Y)

Low loyalty means the race is liable to surrender easily.

STAMINA (S)

Low stamina means the race is likely to make errors during a prolonged battle.

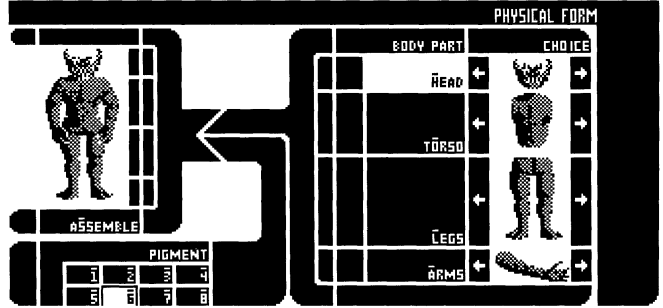
PART VII: THE BUILDER

TEMPERAMENT (M)

The lower the factor, the less stable the race. This would cause them to make errors under pressure.

PHYSFORM MODE

When the **PHYS FORM** (Y) button is highlighted, the lower portion of the screen is occupied by a special "construction panel" which allows you to assemble physical forms for aliens out of a series



of parts. To the right are four parts selectors. Using the arrow buttons there you select the combination of parts you want. To the bottom-left of the screen is a pigment selector (disabled in CGA), with a bright border around the color you select. When you have picked the parts you like and the color you want, using the **ASSEMBLE** (S) button puts together your choices and produces a full alien.

THE PARTS SELECTOR

This is used to select which parts you wish to use for the race. There are four body part categories, and almost any combination of parts are possible (there are a few restrictions). Each part selector consists of a label (selection button), and a part display, bracketed on either side by previous part and next part action buttons (◀ and ▶). To change a part, all you need to do is use the arrow buttons to move forward or backward through the selections.

Keyboard users will note that the same buttons are used for all four selectors, and might be confused as to how you pick which part you wish to edit. The label for each body part is a selection button. The scale next to the currently highlighted label is the one the ◀ and ▶ buttons will affect. To switch parts to edit, simply press the indicated key to highlight the part that you wish to edit. Mouse users will note that each time they click one of the arrow buttons, the highlighted label changes to reflect the part being edited.

PART VII: THE BUILDER

The four part types and selectors are as follows:

- HEAD (H)** Picks the type of head you want the race to have. There are 41 different heads to choose from, or you can decide these aliens have no head at all. (The last head looks like that of the creature on the **Breach 2** box.)
- TORSO (0)** Picks the type of main body you want the race to have. There are 13 torsos to choose from. You cannot choose not to have a torso, as the race has to have at least *one part*. Body number 1 1 is snakelike and used to construct the Aliens seen in **Breach 2**; if you select it, any arms you selected will not appear when the race is assembled because the body has no "shoulders" to which to attach arms.
- LEGS (L)** Picks the type of legs you want the race to have. There are 13 sets of legs to choose from, or you can decide these aliens have no legs at all.
- Of the 11th set of legs (11 presses of the <^ or 3 presses of the + from the "blank" or "no legs" option), only one leg is fully visible, and the other leg is only partly there. These legs are used to construct the Aliens seen in **Breach 2** and designed specifically to work with body 1 1 (see above). If you select these legs, when you assemble the race, body 1 1 will be used regardless of which body you selected, and, since body 1 1 does not permit arms, any arms you selected will also not appear because body 1 1 has no "shoulders" to which to attach them.
- ARMS (A)** Picks the type of arm you want the race to have. There are 11 arm types to choose from, or you can decide that these aliens have no upper limbs.

PART VII: THE BUILDER

THE PIGMENT SELECTOR

This occupies the lower-left corner of the PHYS FORM display. (It is disabled in CGA). This portion of the panel simply consists of eight selection buttons, although you wouldn't necessarily realize that's what they are by looking at them. Unlike regular selection buttons which are blue (cyan in CGA), each of the eight selection buttons here are different colors. The currently selected color is indicated by a white frame around the button. When you select another color button (either by clicking on it or pressing the number for a color), the white frame moves to it.

Whatever color you have selected when you use **ASSEMBLE (S)** is the "skin pigment" you have chosen for the race. The sections of the body parts which appear pink/light-red in the parts selector will be recolored to match your choice, but other colors will not (like those featuring silvery mechanical parts, etc.).

THE ASSEMBLY BOX

This appears above the pigment selector and to the left of the part selector. It consists of a display and a single button: **ASSEMBLE (S)**. When you use **ASSEMBLE** the parts and pigment currently selected are put together to generate complete physical form for the race you are working on. If, following assembly, you are not happy with the results, simply edit your part and/or color selections and then use **ASSEMBLE** again, you can do this as many times as you like.

700,000+ POSSIBILITIES

Given all of the part and color options available, the PHYS FORM editor can potentially generate up to 733,744 possible variations of enemy forms!

PRE-MADE ENEMY FORMS

Included with the game are a set of special graphics which feature pre-made enemy images which are not affected by the PHYS FORM mode. For example, while a UDP Officer is clearly human, creating a naked man with the PHYS FORM editor hardly results in an "official" looking UDP Officer. Thus, a picture of a uniformed UDP Officer, as well as other potential enemies, have been included with the program.

PART VII: THE BUILDER

To access these graphics, all you have to do is type a very specific name into the NAME field. The graphic will not appear on panel 204 (you'll see whatever form was last assembled from PHYS FORM mode), but the appropriate image *will* appear when playing a mission (on the communications and enemy docket displays). Remember, you must type the name *exactly* as indicated.

<u>name</u>	<u>description</u>
UDP OFFICER	A UDP Officer
FWSF MARINES	A (renegade) FWSF Marine
FWRP	FW Reserve (outpost crew) Personnel

DOSSIER MODE

The text in the ENEMY DOSSIER is what will appear in a mission when a player reads the docket for the race.

When the **DOSSIER** button is highlighted, the lower portion of the screen is occupied by the ENEMY DOSSIER editor. This consists of nothing more than an extremely large text field into which the text for the race's dossier is entered/edited.

Since the dossier editors for the CAPTAINS and ENEMY RACES and the mission briefing editor of the MISSION BUILDER (206) are all virtually identical, documentation on the operation of the editor is covered at the end of this part, under the heading *Supplement: Dossier/Briefing Editors*. Refer to that section for details on using the dossier editor.

KEYBOARD NOTE: Since keypresses in dossier mode are interpreted as text entry into the dossier, to use any of the normal screen buttons in dossier mode, hold down the Alternate key on your keyboard while pressing the indicated letter, such as pressing Alt+T to switch back to traits mode. The Alternate key is not necessary when using the function keys for buttons on the Upper Bar.

PART VII: THE BUILDER

WRITING A RACE'S DOSSIER

Admittedly, you can write just about anything you like, but, ideally, the function of the dossier is to give the player some background information on the opposing forces, useful for determining their strengths and weaknesses. Therefore, the best way to write a dossier is to, through the text, give some clues as to the race's traits *without* spelling out each aspect numerically (ie - "their stamina is very high at 92").

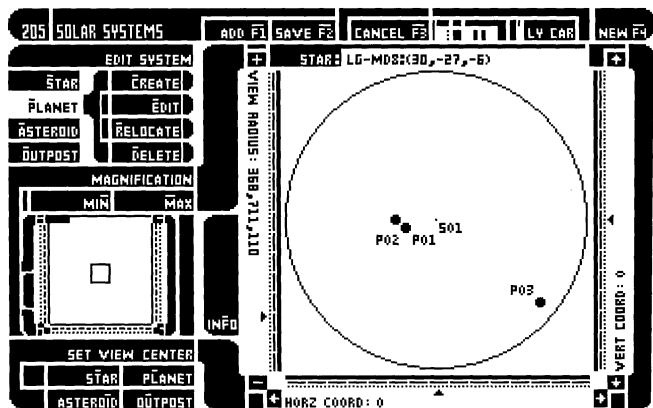
A few final notes on writing an enemy dossier that is "correct" for the Omnitrend "Universe". If you're creating your own worlds, the following is not so important. Our "convention" for races is to begin with the RACE: and ORIGIN: fields on the first two lines, leave the next line blank, and then write the rest of the dossier in paragraph form.

RACE: MUTAI LAICR'MOK BETA
ORIGIN-.TUOLES LAICR'MOK, SYSTEM LG-MD8:(30,-27,-6)

205 SOLAR SYSTEMS

Every battle requires a battleground, and in **Rules of Engagement** battlegrounds are solar systems. Sorry, we don't allow fighting in the vast emptiness between stars.





The solar system builder is fairly simple, and has few requirements. Each system has a map area 4 x 4 billion kilometers square, and all items for that system must fit within that space. Secondly, all solar systems must have at least one star/sun.



Beyond that, you can place 1 additional sun, and anywhere from 0 to 99 of the following: planets (3 classes), asteroid fields, and outposts (3 types). It's entirely your choice.

THE MAP

The map display on this panel works virtually identically to the map on the navigation panel in the game proper (see 307 *Navigation* in Part V for operational details), with a few minor additions. First of all, the view radius is not limited by any sort of sensor range restrictions as in a mission, so you can alter the view from 2 billion to 75 kilometers in radius.

The horizontal and vertical coordinate pointers along the bottom and right edges of the map can be moved manually, allowing you to change the view center. The arrowheads there can either be dragged using the mouse, or moved by activating the  ,  ,  and  buttons on-screen or their equivalent keys.

Zooming in and out using the mouse is identical to on other maps. keyboard users must use the + and - buttons to change the view radius.

Furthermore, additional off-map controls can be used to alter the view center and radius (see MAGNIFICATION and SET VIEW CENTER below).

EDIT SYSTEM

To the right of the map are three banks of controls. The uppermost is the most important, for the controls in it are used for creating and editing system components. Under EDIT SYSTEM are selection buttons used to pick the type of item to act on, and action buttons used to act on the selected item type.

Of the selection buttons, only one can be highlighted at one time. A small movable "tab" links the highlighted button to a bracket which connects it to the action buttons immediately to the right. The selection buttons are:

STAR (S) When highlighted, the action buttons allow you to create, edit, relocate or delete stars in the system.

PLANET (P) When highlighted, the action buttons allow you to create, edit, relocate or delete planets in the system.

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ASTEROID (A) When highlighted, the action buttons allow you to create, edit, relocate or delete asteroid fields in the system.

OUTPOST (O) When highlighted, the action buttons allow you to create, edit, relocate or delete outposts in the system.

The action buttons are to the right of the selection buttons. They are:

CREATE (C) Brings up a usurper box which is used to create a new star, planet, asteroid field or outpost.

EDIT (E) Produces a selector with which you pick which specific item of the type selected you wish to edit. Once the item has been picked, a usurper box appears, which is used to edit the selected item.

RELOCATE (R) Produces a selector with which you pick which specific item of the type selected you wish to relocate. Once the item has been picked, the map display switches into "locate" mode (see below), allowing you to alter the system location of the item.

DELETE (D) Produces a selector with which you pick which specific item of the type selected you wish to delete.

VIEW FIELD

This subpanel consists of three items: two action buttons and a miniature representation of the map. The first action button is **MIN (N)**, and activating it causes the map radius to be set to minimum radius (75 kilometers). The second button is **MAX (M)**, which sets the map radius to maximum radius (2 billion kilometers).

The miniature map is used to show the size and location of the current map view relative to the full system map. A square frame within the mini map indicates the current map area. If you reduce the view area of the large map, the framed area will shrink. And, if you alter the view center, the frame will move off-center as well.

SET VIEW CENTER

The four action buttons here are used to quickly center the map view on specific items within the system. Activating any of the buttons causes a selector to appear, with which you identify the specific item of the indicated type to center on. Highlight the item on the selector and then use its **CENTER (N)** button. This causes the map's horizontal and vertical centering coordinates to be altered to center on the selected item. The name of the item will appear at the top of the main map.

The centering options are:

STAR (T)	Center on a star
PLANET (L)	Center on a planet
ASTEROID (I)	Center on an asteroid field
OUTPOST (U)	Center on an outpost

THE INFO BUTTON

Between the VIEW FIELD subpanel and the main map is a single action button: **INFO (F)**. Activating INFO results in an information usurper box appearing, listing data about the item the map display is currently centered on (if any). The name currently centered item will appear at the top of the main map.

If you manually move the view center off of an item, the last centered item remains listed at the top of the map and the subject of **INFO** until you re-center on another item.

This feature is a quick way to check on the stats of an item without having to enter an editing mode. Use the SET VIEW CENTER controls to center on the object you want and then use **INFO** to "scan" it.

CREATING/EDITING STARS

When you first create a new solar system, there is always one star already present. This star has the I.D. S01 and defaults to a M type (red) star with a radius of 696,000 kilometers. You can edit the stats of this star (name, type, and radius), but you cannot delete it unless there is another sun in the system.

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To create or edit a star, go to EDIT SYSTEM, highlight **STAR** (S) and then use either the **CREATE** (C) or **EDIT** (E) button. A usurper panel appears, on which you can enter the name of the star (a standard text editing field), select its class (highlight one of the six class labels under STAR TYPE), and even adjust its radius (using a thermometer scale at the bottom of the box). Once the star's stats are to your liking, use the **LOCATE** (L) button to exit the box and go into the map's locate mode to place the star (see LOCATE MODE below).

Star Limit

There is a limit of two stars per system. This is realistic because, while many stars come in clusters, it is rare (outside of the center of a galaxy) to find more than two within 4 billion kilometers of each other.

Star Names

When you first create a new system, the default star has an I.D. (S01), but no name. The name of the first star will be the name of the system, so choose carefully.

If you create a star, you are always creating the second star (S02) in the system, and its default name will be the name of the first star (S01) followed by a space and the letter B, as in "Alpha Centauri B". If the first star's name is already 17 or 18 characters long (the limit), the last two characters are replaced by the space and B. Naturally, you can edit this name to be anything you want.

Star Sizes

The default size for a star is a 696,000 kilometer radius, the size of Earth's sun. You can actually adjust this radius from a bottom end limit of 5,000 kilometers to a top end limit of 300 million kilometers. The sizes of stars indicate their "class", ranging from Neutron Stars through Supergiants. As you adjust the radius, the readout under STAR CLASSIFICATION in 002 tells you what class the star is.

<u>Class</u>	<u>Radius in Kilometers</u>
SUPERGIANTS	100,000,000 to 300,000,000
GIANTS	10,000,000 to 99,999,999
MAIN SEQUENCE	50,000 to 9,999,999
WHITE DWARF	10,000 to 49,999
NEUTRON STARS	5,000 to 9,999

HINT: Stars with habitable planets would most likely be those of Main Sequence size.

Star Types

There are six star classes in **Rules of Engagement**, ranging in color/chemical composition and temperature. The hotter a star, the more communications related interference it generates. Remember this when creating your systems and missions. (The temperature of a star and a ship's proximity to it determine the interference levels.)

Type	Color	Temperature (Celsius)
B	White/bluish	25,000°C
A	White	11,000°C
F	Yellowish	7500°C.
G	Yellow	5300°C to 5800°C
K	Orange	4000°C to 4900°C
M	Red	3000°C to 3400°C

HINT: Stars capable of supporting habitable planets would most likely be classes F, G, and K.

CREATING/EDITING PLANETS

When you first create a new solar system, there are no planets present. Each planet has an I.D. starting with the letter P, as in P02.

To create a planet, go to EDIT SYSTEM, highlight **PLANET (P)** and then use either the **CREATE (C)** or **EDIT (E)** button. A usurper panel appears, on which you can enter the name of the planet (a standard text editing field), select its class (highlight one of the three labels under PLANET TYPE), and even adjust its radius (using a thermometer scale at the bottom of the box). Once the planet's stats are to your liking, use the **LOCATE (L)** button to exit the box and go into the map's locate mode to place the planet (see LOCATE MODE below).

Planet Limit

You can have anywhere from 0 to 99 planets in a system.

Planet Names

When you first create a new planet, the default name is "MAGRATHEA". You can edit this and change it to whatever you like.

Planet Sizes

The default size for a planet is a 7,000 kilometer radius, roughly the size of the Earth. You can actually adjust this radius from a bottom end limit of 100 kilometers to a top end limit of 200,000 kilometers.

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HINT: Realistically, habitable planets should have a radius no greater than 7,800 and no less than 6,100 kilometers.

Planet Types

There are three planet types in **Rules of Engagement**:

Type	Classes	Realistic Sizes (radius in km)
Gaseous	A-C	20,000 to 200,000
Airless	D-J	100 to 20,000
Habitable	K-N	7,800 to 6,100

Gaseous planets are those which are composed primarily of light gasses, such as hydrogen and helium. They tend to be very large, with no tangible surfaces. Examples of gaseous planets in our own solar system are Jupiter, Saturn, Uranus and Neptune.

Airless planets are rocky worlds with atmospheres that are either nonexistent or unbreathable. Examples of airless planets in our own solar system are Mercury, Venus, the Moon, Mars, and many of the moons of the gaseous outer planets.

Habitable planets are those with a breathable atmosphere. Human-habitable planets require water, and acceptable surface gravity.

CREATING/EDITING ASTEROID FIELDS

When you first create a new solar system, there are no asteroid fields present. Each field has an I.D. starting with the letter A, as in A01. To create or edit an asteroid field, go to EDIT SYSTEM, highlight **Outpost** (P) and then use the **CREATE** (C) or **EDIT** (E) buttons. A usurper panel appears, on which you can adjust the field's density (using the thermometer scale at the bottom of the box). The denser the field, the more sensor blockage it will cause to ships within it.

Once the field's density is to your liking, use the **LOCATE** (L) button to exit the box and go into the map's locate mode to place and set the size of the field (see LOCATE MODE below).

HINT: When calling this box using **EDIT** (E), two arrow buttons flank the field I.D., allowing you to scroll through all of the different fields you've created and adjusted their densities without having to call the edit function many, many times.

CREATING/EDITING OUTPOSTS

When you first create a new solar system, there are no outposts present. Each outpost has an I.D. starting with the letter T, as in T02.

To create or edit an outpost, go to EDIT SYSTEM, highlight **Outpost** (P) and then use either the **CREATE** (C) or **EDIT** (E) buttons. A usurper panel appears, on which you can enter the name of the outpost (a standard text editing field), select its type (highlight one of the three labels under outpost TYPE), and adjust its supply and repair sophistication (using the two thermometer scales at the bottom of the box). Once the outpost's stats are to your liking, use the **LOCATE** (L) button to exit the CREATE Outpost box and go into the map's LOCATE MODE to place the outpost (see LOCATE MODE below).

Outpost Limit

You can have anywhere from 0 to 99 outposts in a system.

Outpost Names

When you first create a new outpost, the default name is "TANTALUS". You can edit this and change it to whatever you like.

Outpost Sophistication

The default sophistication levels for any outpost's supply and repair factors is 50. You can adjust this factor from a bottom end limit of 0 to a top end limit of 99. The more sophisticated the outpost, the better equipped it is to help starships.

Outpost Types

There are three outpost types in **Rules of Engagement**: FW, Enemy/UDP and Neutral.

FW outposts are those which are allied with the FW or under FW control. They will allow your forces to dock without hesitation and do their best to resupply and repair you.

UDP/Enemy outposts are those controlled by hostile forces. They will not allow your forces to dock with them, but will allow your enemies to dock and receive assistance. FW forces can, of course, attempt to board and seize control of such outposts.

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Neutral outposts are those which are not allied with either you or the enemy forces. They may nor may not allow a given ship to dock (dependant on that the diplomatic ability of the ship's captain). In extreme emergencies FW forces can, of course, attempt to board and seize control of such outposts.

Outpost Locations

Outposts can either be free-floating or planet-locked. A Free-floating outpost is a space station, while a planet- locked outpost rests on the surface of or in the atmosphere of a planet. To make an outpost free-floating, locate it outside of the boundaries of any planets. To make it planet-locked, place it within the bounds of a planet.

HINT: It takes ships longer to resupply at planet- locked outposts than from free-floating ones.

RELOCATING STARS, PLANETS, ASTEROID FIELDS, AND OUTPOSTS

When you select **RELOCATE** (R), a selector box appears allowing you to specify which item of the selected type you wish to relocate. Highlight your selection and use **LOCATE** (L). You will jump immediately into locate mode, details of which follow.

LOCATE MODE

In this mode the EDIT SYSTEM buttons vanish and are replaced by **DONE** (D) and **ABORT** (A) buttons. At map center, a small crosshair appears, showing the current location of the object to be located. You can move this crosshair anywhere on the map by either holding down a Shift key while clicking the mouse or by holding down a Shift key while pressing and holding one of the arrow keys on the keyboard.

NOTE: Asteroid fields are placed by locating two opposite corners of a rectangular area defining the field. With the mouse this is accomplished by Shift-clicking to set the first corner of the rectangle, and then Shift-clicking again to set the opposite corner.

With the keyboard this is accomplished by using the Shift and arrow keys to set the first corner, and using the following keys to position to opposite corner:

Home	moves the end corner to the left
End	moves the end corner to the right
PageUp	moves the end corner to the up
PageDown	moves the end corner to the down

Using a Shift-arrow key combination after a field area has been drawn erases the current field area and sets a new starting point.

In locate mode all of the usual map, map centering, and map zoom controls work normally, allowing you to change the view radius, center, etc., which choosing the location for your object.

When the crosshair is placed correctly, use the **DONE** (D) button to exit LOCATE MODE and lock-down the selected item. If you decide you don't want to do this after all, **ABORT** (A) will exit LOCATE mode without making any changes to the map. (If you are relocating an existing object, it will not be moved; if you were placing a newly created item, it's creation will be aborted and it will not appear at all.)

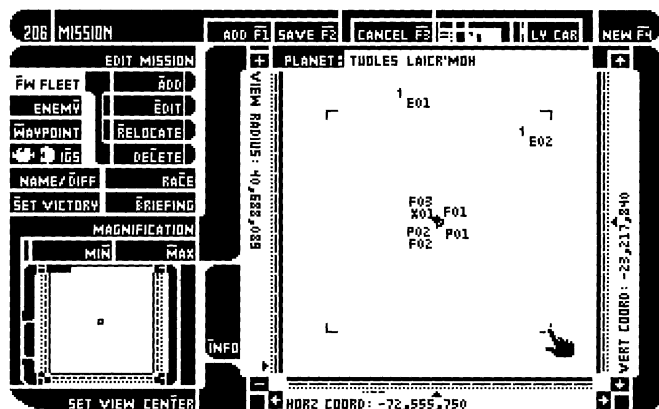
SAVING A SOLAR SYSTEM

There are no special conditions for saving a solar system, as the editor will not allow you to remove the only condition this builder requires: that you have at least one star.

206 MISSION

The mission builder allows you to edit and create missions for the game. It is the same mission builder used to create the missions included with the game.

Missions are made up of the following components:



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- 1) A single solar system in which the battle takes place
- 2) One or more Federated Worlds ships and captains
- 3) An Enemy Race to battle against
- 4) Some (or possibly no) enemy ships
- 5) Some (or possibly no) waypoints

The first three mission components are created and stored separately from the missions (they will be referred to as "external components"). This allows you to maintain a "library" of ships, ship captains, solar systems, and enemy races so that you do not need to create them each time you make a mission. Before creating or editing a mission, you should create and/or edit the external components. The external components are copied and stored in the mission file. This is done so that if you wish to trade missions with someone, you need only send the mission file and not all the external components.

Should you make a change to an external component, the change *will not* be made in any missions that use the component. You will need to edit the mission and re-read the component. Procedures for re-reading these components will be described later.

The mission builder provides for the creation and editing of the remaining mission components; enemy ships and waypoints. These are "internal components" and are unique to the mission.

ENTERING THE PANEL

If you entered the panel by selecting **CREATE** from the main panel, you will first be required to select the solar system in which the mission takes place. You will be able to change this system later, but a solar system is always required to begin a new mission.

THE MAP

You will notice that the mission builder panel is similar to the solar system builder panel (205). The map works almost identically. The difference is in the centering control (see SET VIEW CENTER below).

EDIT MISSION

To the right of the map are three banks of controls. The uppermost is the most important, for the controls in it are used for creating and editing mission components. Under EDIT MISSION are selection buttons used to pick the type of item to act on, and action buttons used to act on the selected item type. Below these are a group of four buttons used to edit other mission information. These four buttons will be described later.

Of the selection buttons, only one can be highlighted at one time. A small movable "tab" links the highlighted button to a bracket which connects it to the action buttons immediately to the right. The selection buttons are:

- | | |
|---------------------|--|
| FW FLEET (F) | When highlighted, the action buttons allow you to load (from a library), edit, relocate or remove Federated Worlds ships in the mission. |
| ENEMY (Y) | When highlighted, the action buttons allow you to create, edit, relocate or delete enemy ships in the mission. |
| WAYPOINT (W) | When highlighted, the action buttons allow you to create, edit, relocate or delete waypoints in the mission. |
| IGS (G) | When highlighted, the action buttons allow you to specify Breach 2 scenarios that are linked to outpost and enemy ships. |

The action buttons are to the right of the selection buttons. There are two sets of action buttons. The first is for **FW FLEET**, **ENEMY**, and **WAYPOINT**. They are:

- | | |
|-----------------|---|
| ADD (A) | Brings up a usurper box which is used to add a new FW ship, enemy ship, or waypoint. |
| EDIT (E) | Produces a selector with which you pick which specific item of the type selected you wish to edit. Once the item has been picked, a usurper box appears, which is used to edit the selected item. |

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RELOCATE (R) Produces a selector with which you pick which specific item of the type selected you wish to relocate. Once the item has been picked, the map display switches into "locate" mode (see below), allowing you to alter the system location of the item.

DELETE (L) Produces a selector with which you pick which specific item of the type selected you wish to delete.

The second set is only for IGS. They are:

OUTPOST -> BREACH 2 (O) Brings up a usurper box which is used to link a Breach 2 scenario to an outpost.

ENEMY -> BREACH 2 (E) Brings up a usurper box which is used to link a Breach 2 scenario to an enemy ship.

VIEW FIELD

This subpanel consists of three items: two action buttons and a miniature representation of the map. The first action button is **MIN (N)**, and activating it causes the map radius to be set to minimum radius (75 kilometers). The second button is **MAX (M)**, which sets the map radius to maximum radius (2 billion kilometers). The miniature map is used to show the size and location of the current map view relative to the full system map. A square frame within the mini map indicates the current map area. If you reduce the view area of the large map, the framed area will shrink. And, if you alter the view center, the frame will move off-center as well.

SET VIEW CENTER

The **SET VIEW CENTER (T)** button here is used to quickly center the map view on specific items within the solar system. Activating this button will bring up subpanel 011. This subpanel contains buttons for all the map elements. Activating any of these buttons causes a selector to appear, with which you identify the specific item of the indicated type to center on. Highlight the item on the selector and then use its **CENTER (N)** button. This causes the map's horizontal and vertical centering coordinates to be altered to center on the selected item. The name of the item will appear at the top of the main map.

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The centering options are:

FW SHIP (F)	Center on a Federated Worlds ship
ENEMY SHIP (E)	Center on an enemy ship
WAYPOINT (W)	Center on a waypoint
STAR (T)	Center on a star
PLANET (L)	Center on a planet
ASTEROID (I)	Center on an asteroid field
OUTPOST (U)	Center on an outpost
ABORT (A)	Abort the centering command

THE INFO BUTTON

Between the VIEW FIELD subpanel and the main map is a single action button: **INFO** (I). Activating INFO results in an information usurper box appearing, listing data about the item the map display is currently centered on (if any). The name currently centered item will appear at the top of the main map.

If you manually move the view center off of an item, the last centered item remains listed at the top of the map and the subject of **INFO** until you re-center on another item.

This feature is a quick way to check on the stats of an item without having to enter an editing mode. Use the SET VIEW CENTER controls to center on the object you want and then use **INFO** to "scan" it.

MISCELLANEOUS CONTROLS

Four other buttons, grouped below the edit mission controls, allow for the editing of the remaining mission information.

NAME/DIFF (D)

Activating this button will bring up subpanel 014, allowing you to set the name and author of the mission, difficulty level, and solar system used in the mission.

The **EDIT** (E) button allows you to edit the mission name. The mission name is the name displayed on the main game panel (101). This name should appear similar to a military operation codename. The **NAME** (A) button allows you to edit the author's name. The author's name will appear when a mission is played.

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The mission difficulty is your estimation of the difficulty in completing the mission. Note that by convention, missions should be rates assuming the game is played on the advanced level.

The **CHANGE SYSTEM** (C) button will bring up a usurper box allowing you to select a new solar system or re-load the existing one. You would want to re-load the same solar system if you were to make changes to the system in the solar system builder.

When you are finished editing, select **DONE** (D) to save the changes.

RACE (C)

Activating this button will bring up a selector box allowing you to select or change the enemy race in the mission. Before saving a mission, you will need to make this selection.

At the top of the selector box, the currently selected enemy race will appear. If no race has yet been selected, "NONE" will appear.

There are three buttons at the bottom of the selector box. **CANCEL** (C) will remove the selector and no change will result. **EXAMINE** (E) will bring up subpanel 006 allowing you to view the personality traits and dossier of the currently highlighted race. **DONE** (D) will remove the selector box, making the currently highlighted race the enemy race used in the mission.

Note that subpanel 006 that appears on selecting **EXAMINE** has a few controls of its own. When it initially appears, the personality traits will be displayed. By activating the **DOSSIER** (O) button, the dossier for the race will be displayed, You can scroll the dossier up and down using the up and down arrow buttons. When displaying the dossier, activating the **TRAITS** (T) button will return you to the traits display. Selecting **DONE** (D) will remove the subpanel and return you to the selector box.



SET VICTORY (S)



Activating this button will bring up subpanel 012, allowing you to edit the victory conditions for the mission. For a description of each of the victory conditions, see Part III of the manual under "Objectives".



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This subpanel lists the eight mission victory conditions. Each of the conditions can be turned on or off by activating the appropriate **ON** (O) or **OFF** (F) button in the toggle column. A check mark will appear to the right of these buttons (in the active column) if the condition is on.



When playing from the keyboard, you will first need to select the victory condition by pressing the appropriate number key (1-8). The edit column will display the currently selected condition. Some victory conditions have additional data that must be entered. These are as follows:



CONDITION 2 For this condition, you must select both a ship and a waypoint. The + and - buttons are used to select the ship, and the  and  buttons are used to select the waypoint. You must first add the ships and waypoints, since these controls will scroll through only the existing items. If you later remove a ship or a waypoint that relates to this victory condition, the condition will automatically be turned off.

If you are using a keyboard, you must select victory condition 2 (by pressing 2) before using the +, -, , and .

CONDITION 4 For this condition, you must first select an outpost using the  and  buttons.

If you are using a keyboard, you must select victory condition 4 (by pressing the number 4) before pressing the  and  keys.

CONDITION 5 For this condition, you must select an enemy ship using the  and  buttons.

If you are using a keyboard, you must select victory condition 5 (by pressing the numbers) before pressing the  and  keys.

CONDITION 6 For this condition, you must select a percentage of the enemy fleet to neutralize. Activate the **SET % (S)** button and an edit field will appear around the current percentage. Backspace over the old percentage and enter a new one. Press the enter key when done.

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CONDITION 7 For this condition, you must select a percentage of the outposts to control. Activate the **SET % (E)** button and an edit field will appear around the current percentage. Backspace over the old percentage and enter a new one. Press the enter key when done.

CONDITION 8 For this condition, you must enter a time limit in hours and minutes. Activate the **HOURS (H)** button and an edit field will appear around the current hour value. Backspace over the old value and enter a new one. Press the enter key when done. Activating the **MINS (M)** button will similarly allow you to edit the minutes value.

When you have finished editing the victory conditions, activate the **DONE (D)** button to save the changes. Activating the **ABORT (A)** button will abort all changes you have made.

BRIEFING (B)

Activating this button will bring up subpanel 015 allowing you to edit the mission briefing. The editing controls work the same as the editing controls in the captain and enemy race dossier panels. Operation of these controls is covered at the end of Part VII, under the heading *Supplement: Dossier/Briefing Editors*. Refer to that section for details on using the mission briefing editor.

KEYBOARD NOTE: Since keypresses in the editor mode are interpreted as text entry into the mission briefing, to use any of the normal screen buttons in the editor mode, hold down the Alternate key on your keyboard while pressing the indicated letter, such as pressing Alt+I to switch back into insert mode.

ADDING FW FLEET SHIPS

When you first create a new mission, there are no FW ships present. Each FW ship has an I.D. starting with the letter F, as in F02.

To add an FW ship, activate the **FW FLEET (F)** button, and then use the **ADD (A)** button. A selector box will appear, allowing you to select both a ship and a captain. The left-hand column will display the list of ships in your library.

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Preceding each ship name is a two letter code indicating the class of the ship. The codes are:

TR	Transport
SC	Scout
DE	Destroyer
CR	Cruiser
HV	Heavy Cruiser
DR	Dreadnought

The right-hand column displays your library of ship captains. These two lists can be scrolled up and down by using the buttons on either side of the names. The **PageUp** and **PageDown** buttons will scroll the ship list, and the + and - buttons will scroll the captains list.

Select both a ship and a captain by pointing to the name and clicking the mouse. From the keyboard you can use the **↑** and **↓** keys to select the ship, and use the **←** and **→** keys to select the captain. Note that by selecting the Fleet Commander as the ship captain, you are in effect selecting the flagship for the mission. This is the ship that the player will be commanding. Since there can only be one flagship in each mission, you can only select the fleet commander for one ship in each mission.

Below each list are buttons for examining the currently selected item. Activating **EXAMINE SHIP** (S) will bring up a box (007) displaying information on the selected ship. The ship name, class, and parts manifest are all shown. Activating **DONE** (D) will remove this box.

EXAMINE CAPTAIN (C) will bring up a box (006) displaying information on the currently selected captain. Initially, the personality traits will be displayed. Activating the **DOSSIER** (0) button will display the dossier. The dossier can be scrolled using the **↑** and **↓** keys. Activating **DONE** (D) will remove this box.

Once you have selected the ship and captain, use the **EDIT/LOCATE** (E) button to continue with the process. Activating the **ABORT** (A) button instead will abort the process of adding a ship. If you have continued the process, a new box (007) will appear allowing you to edit the damage status of the ship. This allows you to have the ship begin the mission with some damage already sustained. Each system will begin at 100% operational. Reducing each value will cause each system to be damaged that amount. Reducing the value to zero means the system is destroyed. The only way the player will be able to repair a destroyed system is at an appropriate outpost.

PART VII: THE BUILDER

If using a mouse, you can operate either the slider controls or the + and - buttons to set the damage level. From the keyboard, first select the system you want to set (using the buttons to the left of the damage level amount), then use the + and - keys to adjust the damage level.

Activating the **ARMAMENTS (A)** button will display the initial missile quantity on board the ship. The ship will begin with no missiles. Missiles can be added by pressing the **▲** and **▼** buttons. When using a keyboard, first select the missile type you wish to change by activating the appropriate button (use keys 1 thru 8). Next, use the **▲** and **▼** keys to change the missile quantity. You will be limited in the quantity of each type of missile that can be loaded according to the weapons system on the ship. Refer to Appendix III under the weapons system parts list for the maximum quantities.

After the damage and armaments are set, use the **LOCATE (O)** button to exit the box and go into the map's locate mode to place the ship within the solar system (see LOCATE MODE below). Activating the **ABORT (B)** button instead will abort the addition of the ship.

EDITING FW FLEET SHIPS

To edit an existing FW ship, activate the **FW FLEET (F)** button, and then use the **EDIT (E)** button. A selector box will appear, allowing you to select the ship you wish to edit. The left-hand column will display the list of ships already in the mission.

The right-hand column displays the captain currently assigned to the ship. The ship list can be scrolled up and down by using the buttons to the left of the ship ID. Select the ship you wish to edit by pointing to the name and clicking the mouse. From the keyboard you can use the **▲** and **▼** keys.

Below the right-hand list is the **CHANGE CAPTAIN (C)** button. Activating this button will cause the selector box to change into a mode allowing you to select a different (or re-load the existing) captain for the selected ship. This works similar to the selector box for adding a ship, except the left-hand column will only display the selected ship.

Note that the ship that is assigned the Fleet Commander will act as the flagship for the mission. This is the ship that the player will be commanding. Only one ship can be assigned the Fleet Commander.

Once you have selected the ship, use the **EDIT** (E) button to edit the damage and armament, or the **RELOCATE** (R) button to relocate the ship. Activating the **ABORT** (A) button instead will abort the editing process.

If you have selected **EDIT**, the damage and armament edit box will appear. This box will operate the same as it does in adding a new ship.

If you selected the **RELOCATE** button, the map will go into the locate mode, allowing you to reposition the ship.

ADDING ENEMY SHIPS

When you first create a new mission, there are no enemy ships present. Each enemy ship has an I.D. starting with the letter E, as in E02.

To add an enemy ship, activate the **ENEMY** (E) button, and then use the **ADD** (A) button. A selector box will appear, allowing you to select both a ship and a captain. The left-hand column will display the list of enemy ship classes.

The righthand column displays a list of ranks for the ship captain. These two lists can be scrolled up and down by using the buttons on either side of the names. The **PageUp** and **PageDown** buttons will scroll the ship list, and the + and - buttons will scroll the captains list.

By making the two selections, you are picking the class of the enemy ship, and the rank of the ship's captain. If you pick a captain with a higher rank, he will be more experienced at commanding the ship and crew.

Select both a ship class and a captain rank by pointing to the name and clicking the mouse. From the keyboard you can use the **↑** and **↓** keys to select the ship class, and the **←** and **→** keys to select the rank.

Once you have made your selections, use the **EDIT/LOCATE** (E) button to continue with the process. Activating the **ABORT** (A) button instead will abort the process of adding a ship.

PART VII: THE BUILDER

If you have continued the process, a new box (007) will appear allowing you to edit the damage status of the ship. This allows you to have the ship begin the mission with some damage already sustained. Each system will begin at 100% operational. Reducing each value will cause each system to be damaged that amount. Reducing the value to zero means the system is destroyed. The only way the enemy will be able to repair a destroyed system is at an appropriate outpost.

If using a mouse, you can operate either the slider controls or the + and - buttons to set the damage level. From the keyboard, first select the system you want to set (using the buttons to the left of the damage level amount), then use the + and - keys to adjust the damage level.

Activating the **ARMAMENTS** (A) button will display the initial missile quantity on board the ship. The ship will begin with no missiles. Missiles can be added by pressing the **▲** and **▼** buttons. When using a keyboard, first select the missile type you wish to change by activating the appropriate button (use keys 1 thru 8). Next, use the **▲** and **▼** keys to change the missile quantity. You will be limited in the quantity of each type of missile that can be loaded according to the weapons system on the ship. Refer to Appendix II under the weapons system parts list for the maximum quantities.

After the damage and armaments are set, use the **LOCATE** (0) button to exit the box and go into the map's locate mode to place the enemy ship within the solar system (see *LOCATE MODE* below). Activating the **ABORT** (B) button instead will abort the addition of the ship.

EDITING ENEMY SHIPS

To edit an existing enemy ship, activate the **ENEMY** (Y) button, and then use the **EDIT** (E) button. A selector box will appear, allowing you to select the ship you wish to edit. The left-hand column will display the list of enemy ships already in the mission.

The right-hand column displays the rank of the captain currently assigned to the ship. The ship list can be scrolled up and down by using the buttons to the left of the ship ID. Select the ship you wish to edit by pointing to the name and clicking the mouse. From the keyboard you can use the **▲** and **▼** keys.

PART VII: THE BUILDER

Below the right-hand list is the **CHANGE CAPTAIN** (C) button. Activating this button will cause the selector box to change into a mode allowing you to select a different rank for the captain of the selected ship. This works similar to the selector box for adding a ship, except the left-hand column will only display the selected ship.

Once you have selected the ship, use the **EDIT** (E) button to edit the damage and armament, or the **RELOCATE** (R) button to relocate the ship. Activating the **ABORT** (A) button instead will abort the editing process.

If you have selected **EDIT**, the damage and armament edit box will appear. This box will operate the same as it does in adding a new ship. If you selected the **RELOCATE** button, the map will go into the locate mode, allowing you to reposition the ship.

ADDING WAYPOINTS

When you first create a new mission, there are no waypoints present. Each waypoint has an I.D. starting with the letter X, as in X02,

To add a waypoint, activate the **WAYPOINT** (W) button, and then use the **ADD** (A) button. The map will go into the locate mode to allow you to position the waypoint within the solar system (see *LOCATE MODE* below).

RELOCATING SHIPS AND WAYPOINTS

When you select **RELOCATE** (R), a selector box appears allowing you to specify which item of the selected type you wish to relocate. Highlight your selection and use **LOCATE** (L). You will jump immediately into locate mode, details of which follow.

LOCATE MODE

In this mode the EDIT MISSION buttons vanish and are replaced by **DONE** (D) and **ABORT** (A) buttons. At map center, a small crosshair appears, showing the current location of the object to be located. You can move this crosshair anywhere on the map by either holding down a **Shift** key while clicking the mouse or by holding down a **Shift** key while pressing and holding one of the arrow keys on the keyboard.

PART VII: THE BUILDER

In locate mode all of the usual map, map centering, and map zoom controls work normally, allowing you to change the view radius, center, etc., which choosing the location for your object.

When the crosshair is placed correctly, use the **DONE** (D) button to exit LOCATE MODE and lock-down the selected item. If you decide you don't want to do this after all, **ABORT** (A) will exit LOCATE mode without making any changes to the map. (If you are relocating an existing object, it will not be moved; if you were placing a newly created item, it's creation will be aborted and it will not appear at all.)

SAVING A MISSION

Before you can save a mission, you must first give it a name, select an enemy race, and add at least one FW ship with the Fleet Commander as the captain (the flagship). If you try to save a mission before specifying one of these elements, you will receive a warning message and be returned to the editor.

SUPPLEMENT: DOSSIER/BRIEFING EDITORS

The dossier editors for the CAPTAINS (Panel 202) and ENEMY RACES (Panel 204) and the mission briefing editor of the MISSION BUILDER (Panel 206) are all virtually identical, documentation on the operation of the editor is covered in this subsection.

THE EDITOR

The editor consists of a field some 15 lines tall and approximately 70 characters wide. We say "approximately" because all of the text in **Rules of Engagement** is proportionally spaced. This means that, unlike standard computer text, each character does not take up exactly the same amount of space as all others. Thus, an I requires only half the space of an A and one third the space of an M.

Like the smaller text editing fields seen in **Rules of Engagement**, a small cursor appears wherever you are currently typing. Unlike those fields, the **Enter/Return** key on your keyboard does not exit the text editing mode, nor does clicking the mouse. As long as the **DOSSIER** button is active, all normal keyboard input is interpreted as text editing.

PART VII; THE BUILDER

KEYBOARD NOTE: Since keypresses in dossier mode are interpreted as text entry into the dossier, to use any of the normal screen buttons in this mode, hold down the Alternate key on your keyboard while pressing the indicated letter, such as pressing Alt+T to switch back to traits mode. The alternate key is not necessary when using the function keys for buttons on the Upper Bar.

MOUSE NOTE: Clicking the mouse on existing dossier/briefing text jumps the text editing cursor to that location. If you click where no text has been typed, the cursor will not jump to that location.

There are two text editing modes, overtyping and insert. The default setting when you first enter panel 202 is for overtyping mode. The current mode is determined by the status of the two buttons to the right of the dossier text field. Only one of them can be active at any one time.

INSERT (Alt+1)

If this is highlighted, when you move the cursor into the midst of existing text and begin typing, text is inserted at the cursor position, pushing existing text to the right. If the end of the existing text being "pushed" hits the physical end/limit of the dossier text field, the last "word" (a group of characters with no spaces within) will be deleted. To prevent the loss of the end of your dossier you will have to delete some existing text first, move the cursor to another location, or switch to overtyping mode (below).

OVER (Alt+0)

If this is highlighted, when you move the cursor into the midst of existing text and begin typing, the text you type replaces existing text, overwriting it.

Finally, in the MISSION BRIEFING editor (015) there is a **DONE** (Alt+D) button below the insert and overtyping mode controls. This button is used to exit to the MISSION panel (206).

PART VII: THE BUILDER

Additional notes on text editor operation:

- The arrow/cursor keys can send the text editing cursor up, down, left or right. The only limitation is that you cannot cursor out into "blank" space where no characters or spaces have been typed.
- Word-wrap is automatic. If the word you are typing reaches the end of the current line and will not fit, it is automatically "wrapped" around to the next line.
- **Enter/Return** puts a "hard-Return" at the end of the current line and forces the cursor to the next line down.
- The **Backspace** key deletes text to the left of the cursor.
- The **Delete** key does nothing.
- The numbers and decimal point/period on the numeric keypad are not usable (although the 2, 4, 6 and 8 keys are used as cursor keys).
- The text which appears in this editor is purely uppercase, thus the status of the **Shift** and **CapsLock** keys have no effect on the case of letters.
- Although most standard characters and punctuation are supported, the following symbols are unavailable:

@ # \$ ^ & = | < > - ' { }

- There is no provision for importing external text files as dossiers.
- While the proportionally spaced text makes the dossier nicer looking, its main drawback is that it forces the program to do lots of recalculations every time a character is inserted or deleted, as it must do a lot of redrawing. Therefore, the dossier editor can get quite sluggish if you're backspacing or inserting text in a fairly "full" dossier.
- Because of the proportional spacing, the maximum number of characters possible in a single dossier is variable.

PART VIII: THE INTERLOCKING GAME SYSTEM

Overview

The Interlocking Game System (herein referred to as IGS) is an innovative new approach to computer games. IGS Games are capable of working with one another, appearing to the player to be a single game.

Rules of Engagement (hereafter referred to as **Rules**) is an IGS controlling module. It is, in effect, the starting point for your characters. **Rules** will automatically load and run other IGS games when the game conditions warrant.

Requirements

The only special requirement to run the IGS system is a hard drive. Unfortunately, running such a complex and intertwined system as IGS just does not work smoothly on a floppy based system.

Breach 2

As of this writing, the game **Breach 2** is the other game in the IGS series. You will need **Breach 2** version 2.0 or higher (the version number is shown on the title screen of the game). When installing **Rules**, you will have the option of installing the IGS links. This procedure requires your original **Breach 2** disks and will actually copy **Breach 2** into the same directory of your hard disk that contains **Rules**.

Some **Rules** missions contain "IGS Links", meaning that there is at least one enemy ship or outpost that is linked to a **Breach 2** scenario (included with the mission). When attempting to board the ship or outpost, the game will bypass the normal boarding screen (panel 401) and instead, load **Breach 2** and the scenario. No additional interaction is required on your part! Your Fleet Commander will act as the Squad Leader for the mission. All experience gained in the mission is transferred back to **Rules** and saved in your Fleet Commander's record.

PART VIII: THE INTERLOCKING GAME SYSTEM

The scenario can be saved in progress if you desire. Once you resume the mission, **Rules** will automatically reload **Breach 2** and resume the scenario. When the scenario is complete, you will return to **Rules** right where you left off.

The Future

More IGS modules are planned in the future. Under consideration are modules to simulate planetary assaults, and a module permitting you to explore and colonize uncharted space.

APPENDIX I: ALL ABOUT FLEET COMMANDERS

Fleet Commander characters are created by you, the user, and act as your alter-ego in the game. You can create as many Fleet Commanders as you like, although playing consistently with one or two will probably increase the rate at which promotions are achieved.

NOTE: If your Fleet Commander is killed in a mission the character is *not* erased from the disk. The mission is simply logged as a "mission loss" in the character's stats.

Your overall objective is to advance your Fleet Commander. This is accomplished by successfully completing missions, which raises the total score for the Commander. When certain scores are reached, the Commander is promoted (see *Scores* below).

Moving up through the ranks is very important. Fleet Commanders who have not reached particular ranks will not be allowed to command missions where the flagship is a large warship. For instance, in order to command a heavy cruiser class flagship, your Fleet Commander must have a rank of at least 1st Lieutenant.

Following is a listing of flagship classes and the minimum rank a Fleet Commander must have in order to assume command.

<u>Flagship Class</u>	<u>Minimum Rank</u>
Transport	Ensign
Scout	Ensign
Destroyer	Ensign
Cruiser	Ensign
Heavy Cruiser	1 st Lieutenant
Dreadnought	Commander

When a game has been started, the Fleet Commander chosen for the game is removed from the "available" list, and his/her name is followed by a N/A (Not-Available) flag. Until the game in question is completed or deleted, that Commander will not be usable. This is to prevent the character from being used in multiple games at the same time, which would cause problems when the character completed the missions. After all, how could anyone command two Flagships in two different locales at the same time?!

APPENDIX I: ALL ABOUT FLEET COMMANDERS

Creating Commanders and Importing Others

From the GAME/MISSION 1 0 1 panel you can create, examine and delete Fleet Commanders characters (this is covered in detail in Part V of this manual), as well as import **Breach 2** Squad Leaders as Commanders (covered in Appendix VI). All Fleet Commanders are stored in a file called RULES.CMD. It is possible to *import* other RULES.CMD files and add the Commanders in that file to your own list. See Appendix VI for details on how to import .CMD files.

WARNING! Deleting or overwriting the RULES.CMD file erases *all* Fleet Commanders you have created.

Character Stats

Each Fleet Commander has his/her own set of statistics. There are two categories of stats for each Commander, 'Mission' and 'Squad Level'. Mission stats are related to the commander's performance in **Rules of Engagement** missions. Mission stats are:

SCORE

Each mission attempted results in a score, which is added to the total score from all missions attempted by the Commander.

ATTEMPTED

The total number of missions the Commander has attempted so far.

BATTLE TIME

The total time the Commander has spent in missions; listed in hours.

VICTORIES

The total number of missions the Commander has successfully completed.

LOSSES

The total number of missions the Commander has failed to complete.

SHIPS LOST

The total number of Federated Worlds starships lost in battle in missions commanded by the Commander.

KILLS

The total number of enemy vessels captured/destroyed in missions led by the Commander.

APPENDIX I: ALL ABOUT FLEET COMMANDERS

The Squad Level stats relate to the boarding of enemy ships and Outposts. The first six stats (encumbrance, base moves, bonus moves, accuracy, cracking, and detecting) come into play only if the Interlocking Game System (IGS) is used to access **Breach 2** when boarding enemy ships and Outposts. These stats relate specifically to **Breach 2** action and have no effect in **Rules of Engagement** itself. (See Part VIII of this manual for more information about IGS and **Breach 2**.) The remaining six Squad Level stats are affected by both **Breach 2** and the built-in marine-combat routines of **Rules of Engagement**. These stats are:

SQUAD BATTLES

The total number of squad battles the Commander has attempted thus far.

SQUAD VICTORIES

The total number of successful squad battles the Commander has led thus far.

SQUAD LOSSES

The total number of unsuccessful squad battles the Commander has led thus far.

SQUAD TIME

The total time (in minutes) the Commander has spent leading squads.

SQUAD LEVEL KILLS

The total number of enemies killed by the Commander (himself) in squad missions thus far.

MARINES LOST

The total number of FWSF marines under the Commander who were killed in squad battles thus far.

Score

At the end of each mission the Commander receives a mission score, which is appended to the character's total score.

The mission score is based upon mission performance. For instance, sustaining crew casualties, damage, and destruction of Federated Worlds ships, and enemy takeovers of FW Outposts all have negative effects on the mission score. On the other hand, if the Commander's forces destroy enemy ships, or capture enemy ships and Outposts, the score is effected positively.

HINT: Capturing enemy vessels yields more points than simply destroying them.

APPENDIX I: ALL ABOUT FLEET COMMANDERS

Promotions

A Fleet Commander is promoted in rank when his/her score reaches certain levels. Promotions are based on score.

<u>Rank</u>	<u>Minimum Score</u>
Ensign	0
2nd Lieutenant	150
1st Lieutenant	300
Lieutenant Commander	500
Commander	800
Captain	1,100
Commodore	1,800
Rear Admiral	2,700
Vice Admiral	3,400
Admiral	4,100
Fleet Admiral	5,000

Commendations

In addition to being promoted through the ranks, your Fleet Commanders can also receive commendations for their actions. There are six medals that can be awarded, and any commander can have multiples of each. The medals are displayed when you examine a Fleet Commander from either the GAME/MISSION panel or when you check the Commander's docket from DATA RETRIEVAL within the game. Medals are as listed below and awarded in the circumstances following.

FW CROSS

Awarded when, in a single mission, at least 3 enemy Outposts or 8 enemy ships are captured or destroyed.

DISTINGUISHED SERVICE

Awarded once every 40 enemy ships losses.

PURPLE HEART

Awarded when, upon returning from a mission, the Fleet Commander's ship suffered more than 50% crew loss.

DISTINGUISHED CAREER CLUSTER

Awarded every 20 victorious missions.

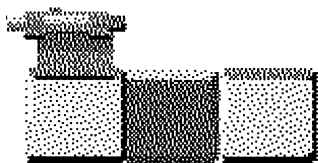
FW MEDAL OF HONOR

Awarded for every 500 points of score.

APPENDIX II: OPPOSING FORCES

APPENDIXII: OPPOSING FORCES

UDP/Enemy Fleet Ship List



Part Numbers	
Communication	1
Computer	1
Drives	1
Life	1
Shields	1
Weapons	1

Class: Transport Crew Compliment: 26
Length: 390 Meters Manufacturer: Dorner-Chapman
Beam: 247 Meters Classification: Goods and Passenger Transport
Draught: 196 Meters



Part Numbers	
Communication	1
Computer	2
Drives	2
Life	1
Shields	1
Weapons	2

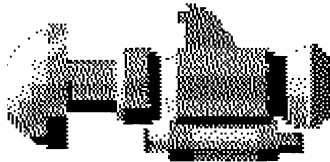
Class: Scout Crew Compliment: 53
Length: 125 Meters Manufacturer: Vaccusys
Beam: 41 Meters Classification: Research and Exploration
Draught: 40 Meters

APPENDIX II: OPPOSING FORCES



Part Numbers	
Communication	2
Computer	1
Drives	2
Life	2
Shields	2
Weapons	3

Class: Destroyer Crew Compliment: 79
 Length: 125 Meters Manufacturer: DuBois Autoengineering Company
 Beam: 50 Meters Classification: Warship
 Draught: 49 Meters



Part Numbers	
Communication	2
Computer	3
Drives	3
Life	2
Shields	3
Weapons	4

Class: Cruiser Crew Compliment: 84
 Length: 143 Meters Manufacturer: GordCon Aero-Astro
 Beam: 54 Meters Classification: Warship
 Draught: 67 Meters



Part Numbers	
Communication	Unknown
Computer	4
Drives	4
Life	2
Shields	4
Weapons	4

Class: Heavy Cruiser Crew Compliment: Unknown
 Length: 206 Meters Manufacturer: Vaccusys/GordCon Aero-Astro
 Beam: 137 Meters Classification: Warship
 Draught: 82 Meters

APPENDIX II: OPPOSING FORCES



Part Numbers	
Communication	3
Computer	Unknown
Drives	5
Life	Unknown
Shields	5
Weapons	5

Class: Dreadnought Crew Compliment: Unknown
Length: 338 Meters Manufacturer: Classified
Beam: 140 Meters Classification: Warship
Draught: 125 Meters

Enemy Parts Lists

The following are lists of parts for the six different system on board the ships.

NOTE: The following information is listed for each part in each system. Most systems have other information that will be described in each section.

DP's Damage points the system can incur. The more DP's, the stronger the part.
Soph Sophistication level of the part.
Size The size factor of each part.

Life Support System Parts List

#	Type	DP's	Soph	Size
1	Enemy Type 1	6	38	1
2	Enemy Type 2	14	56	3
3	Enemy Type 3	25	95	4

APPENDIX II: OPPOSING FORCES

Communications System Parts List

#	Type	DP's	Soph	Size	Max Inf	Base Sig	Scan Radius
1	Enemy Type 1	5	35	1	22	38	39
2	Enemy Type 2	6	56	3	51	62	153
3	Enemy Type 3	18	90	5	95	97	230

Notes:

"Max Inf" is the maximum interference level that the part can experience and still transmit.

"Base Sig" is the base signal strength. The higher number indicates a stronger transmitter.

"Scan Radius" is the maximum range of the scanner in millions of kilometers.

Computer System Parts List

#	Type	DP's	Soph	Size
1	EnemyType 1	5	39	5
2	Enemy Type 2	12	42	6
3	Enemy Type 3	21	76	8
4	Enemy Type 4	34	98	4

Shield System Parts List

#	Type	DP's	Soph	Size	DP Blockage			
					1	2	3	4
1	EnemyType 1	15	63	3	2	2	2	2
2	Enemy Type 2	21	68	6	9	8	8	6
3	Enemy Type 3	26	72	11	15	12	12	8
4	Enemy Type 4	41	85	12	18	15	15	12
5	Enemy Type 5	53	98	14	32	24	24	11

Notes:

"DP Blockage" is the number of damage points that will be blocked by each of the 4 shields.

APPENDIX II: OPPOSING FORCES

Drive System Parts List

Type	DP's	Soph	Size	Max Velocity	Acceleration
EnemyType1	6	73	1	0.42	0.013
Enemy Type 2	9	76	5	0.64	0.047
Enemy Type 3	21	83	4	0.87	0.089
Enemy Type 4	32	86	8	0.92	0.103
Enemy Type 5	43	94	11	0.98	0.093

Notes:

"Max Velocity" is listed as a percentage of light-speed.

"Acceleration" is listed in units of light-speed per second per second

Weapons System Parts List

#	Type	DP's	Soph	Size	Maximum Missiles								EBW	
					1	2	3	4	5	6	7	8		
1	EnemyType1	4	42	2	5	1	1	0	0	0	0	0	0	13
2	Enemy Type 2	12	49	6	4	3	1	2	0	0	0	0	0	15
3	Enemy Type 3	22	63	13	6	6	2	4	2	0	0	0	0	21
4	Enemy Type 4	37	79	8	10	10	8	9	3	2	2	0	0	32
5	Enemy Type 5	43	90	11	14	10	12	12	8	3	3	2	0	41

Notes:

"Maximum Missiles" lists the maximum number of each type of missile that can be carried.

"EBW" lists the damage points inflicted by the EBW at 100% power.

APPENDIX III: FW SHIP STATS & PARTS LISTS

APPENDIX III: FW SHIP STATS & PARTS LISTS

FW Ship List



Class: Transport
Length: 450 Meters
Beam: 173 Meters
Draught: 173 Meters

Crew Compliment: 38
Manufacturer: DuBois Autoengineering Company
Classification: Goods and Passenger Transport

Maximum Sizes for Parts	
Communication	2
Computer	5
Drives	2
Life	2
Shields	4
Weapons	3



Class: Scout
Length: 108 Meters
Beam: 39 Meters
Draught: 39 Meters

Crew Compliment: 61
Manufacturer: YopCo Astronautics Division
Classification: Research and Exploration

Maximum Sizes for Parts	
Communication	3
Computer	6
Drives	4
Life	2
Shields	8
Weapons	8

APPENDIX III: FW SHIP STATS & PARTS LISTS



Maximum Sizes for Parts	
Communication	4
Computer	6
Drives	7
Life	3
Shields	11
Weapons	8

Class: Destroyer
 Length: 170 Meters
 Beam: 55 Meters
 Draught: 49 Meters

Crew Compliment: 67
 Manufacturer: YopCo Astronautics Division
 Classification: Search and Destroy



Maximum Sizes for Parts	
Communication	5 -
Computer	7
Drives	14
Life	3
Shields	16
Weapons	9

Class: Cruiser
 Length: 225 Meters
 Beam: 115 Meters
 Draught: 52 Meters

Crew Compliment: 91
 Manufacturer: Woden
 Classification: Exploration and Defense



Maximum Sizes for Parts	
Communication	5
Computer	12
Drives	14
Life	4
Shields	18
Weapons	10

Class: Heavy Cruiser
 Length: 250 Meters
 Beam: 130 Meters
 Draught: 52 Meters

Crew Compliment: 109
 Manufacturer: Woden
 Classification: Warship

APPENDIX III: FW SHIP STATS & PARTS LISTS



Maximum Sizes for Parts

Communication	8
Computer	13
Drives	16
Life	5
Shields	20
Weapons	11

Class: Dreadnought Crew Compliment: 134
 Length: 303 Meters Manufacturer: Classified
 Beam: 141 Meters Classification: Warship
 Draught: 81 Meters

FW Parts Lists

The following are lists of parts for the six different system on board the ships.

NOTE: The following information is listed for each part in each system. Most systems have other information that will be described in each section.

DP's Damage points the system can incur. The more DP's, the stronger the part.
 Soph Sophistication level of the part.
 Size The size factor of each part.

Life Support System Parts List

Type	DP's	Soph	Size
Yop Company Cli-Mate 3	8	45	2
Gas Technology AF#4	12	78	3
Franklin Lab Zonemaster	21	94	4

APPENDIX III: FW SHIP STATS & PARTS LISTS

Communications System Parts List

#	Type	DP's	Soph	Size	Max Inf	Base Sig	Scan Radius
1	Thuke XX	4	33	2	20	47	47
2	Giaperelli Marconi II	11	60	5	57	73	137
3	PsionWF2164	24	94	7	92	99	203

Notes:

"Max Inf" is the maximum interference level that the part can experience and still transmit.

"Base Sig" is the base signal strength. The higher number indicates a stronger transmitter.

"Scan Radius" is the maximum range of the scanner in millions of kilometers.

Computer System Parts List

#	Type	DP's	Soph	Size
1	Alkis 22/3	13	45	5
2	Gedvex Mica	7	58	5
3	Intellect 500	17	81	7
4	Intelligence Engine Mark 2	29	97	10

Shield System Parts List

#	Type	DP's	Soph	Size	Df'Blockage			
					1	2	3	4
1	Hinto/KotoCoDFI	18	70	4	3	3	3	2
2	Voltac Group Gen 9	18	62	8	9	5	5	4
3	Deflect Technologies M/20	28	67	10	12	10	10	12
4	Franklin Lab Lodi	38	81	15	19	8	8	18
5	Woden Plate++	49	97	16	25	17	17	25

Notes:

"DP Blockage" is the number of damage points that will be blocked by each of the 4 shields.

APPENDIX III: FW SHIP STATS & PARTS LISTS

Drive System Parts List

Type	DP's	Soph	Size	Max Velocity	Acceleration
Rynox BTB	5	71	2	0.47	0.011
Vromus 830/2	14	79	4	0.68	0.050
Hinto/KotoCo2	25	84	5	0.85	0.092
AthikTech 100-32	32	89	12	0.90	0.067
Franklin Lab Oyabe	41	98	12	0.99	0.101

Notes:

"Max Velocity" is listed as a percentage of light-speed.

"Acceleration" is listed in units of light-speed per second per second

Weapons System Parts List

#	Type	DP's	Soph	Size	Maximum Missiles										EBW	
					1	2	3	4	5	6	7	8	9	10		
1	Zeus Penetrator Mk2	9	46	3	3	3	1	0	0	0	0	0	0	0	0	11
2	Sunstorm HF4	15	56	7	3	3	2	2	0	0	0	0	0	0	0	21
3	SunstormHF5	24	67	9	5	5	4	4	3	0	1	0	0	0	0	32
4	Woden EBW++	34	78	9	8	8	6	6	6	4	5	0	0	0	0	36
5	Woden Arma IX	45	92	11	12	12	14	8	9	9	5	2	0	0	0	44

Notes:

"Maximum Missiles" lists the maximum number of each type of missile that can be carried.

"EBW " lists the damage points inflicted by the EBW at 100% power.

APPENDIXIV: MISSILE TYPES

Federated Worlds Armed Forces Missile Types

#	Name	Soph	Damage	Accuracy	Accel	Range	Description
1	PN Pritchard SBR	39	n/a	78	0.040	8.00	Damages shields up to 5dp
2	Melbourne FU8	43	42	92	0.068	27.50	General damage
3	Giaperelli FU9	49	64	84	0.098	13.00	General damage
4	Franklin Lab FE	54	n/a	80	0.058	26.50	Anti-Personnel
5	Woden FE	63	n/a	86	0.190	9.50	Anti-Personnel
6	Thiodyne P/PD	78	96	71	0.164	13.00	Targets drive system
7	Woden Nova	87	122	62	0.184	12.00	General damage
8	Iliya Nova	95	148	46	0.226	5.00	General damage

UDP / Enemy Missile Types

#	Name	Soph	Damage	Accuracy	Accel	Range	Description
1	Type 1	32	52	81	0.032	9.80	General damage
2	Type 2	48	n/a	69	0.064	19.20	Anti-Personnel
3	Type 3	51	n/a	72	0.106	25.30	Damages shields up to 5dp
4	Type 4	59	84	87	0.098	29.50	General Damage
5	Type 5	65	n/a	91	0.158	10.50	Anti-Personnel
6	Type 6	71	74	79	0.170	8.30	Targets weapon system
7	Type 7	73	84	75	0.174	15.20	Targets drive systems
8	Type 8	92	142	58	0.214	7.40	General damage

Notes:

Accuracy is measured in percentage chance of hit

Acceleration is measured in light-speed per second per second

Ranges given are in the duration of fuel aboard (measured in seconds)

APPENDIX V: PANEL ID NUMBERS

APPENDIX V: PANEL ID NUMBERS

The following is a listing of every panel, subpanel and usurper box in **Rules of Engagement**. When a 000 series usurper box's description is followed by a number in parentheses, as in (202), that number indicates the panel number the usurper is linked to.

000	Program Info box (100).	
001	Standard alert box (any).	
002	Create/Edit Star/Planet/Outpost box (205).	
003	Create/Edit Asteroid Field box (205).	
004	Centered Item Info box (205/206).	
005	Add/Edit/Remove Ship selector (206).	
006	Examine Captain/Enemy Docket box (206).	
007	FW & Enemy Ship damage/armament editor/list (206).	
008	Fleet Commander Info (101).	
009	Create Fleet Commander box (101).	
010	Name Game/Set Difficulty box (101).	
	Also Select/Edit Path for Importing Breach 2 Squad Leaders (101).	
011	Center View box (206).	
012	Set Objectives/Victory Conditions box (206).	
013	Item selector (205/206).	
014	Mission & Author Name, Difficulty, Change System box (206).	
015	Mission Briefing (206).	
100	MAIN MENU bar	Help, Game Info, and Quit controls.
101	GAME/MISSION	Access to game sections.
202	CAPTAINS	FW Captain creator/editor.
203	SHIPS	FW Ship creator/editor.
204	ENEMY	Enemy race/force creator/editor.
205	SOLAR SYSTEM	System editor/creator.
206	MISSION	Mission editor/creator.
300	MASTER CONTROL	Main flagship controls, icons to access all main panels, and save-game controls; chronometer and time passage controls.
301	NAVIGATION	Flagship's navigation controls.
302	COMMUNICATIONS	Flagship's communication system.
303	TACTICAL	Flagship's weaponry, defense, and tactical maneuvering controls.
304	DATA RETRIEVAL	Flagship's computer, accessing fleet and ship status, damage control, captain and enemy docket, mission briefing, objectives and evaluation.
401	MARINE DEPLOYMENT	Marine boarding status (303).

APPENDIX VI: IMPORTING COMMANDERS, CAPTAINS, SYSTEMS, ETC.

Converting Breach 2 Squad Leaders

If you own a copy of **Breach 2**, you can convert your existing Squad Leaders into **Rules of Engagement** Fleet Commanders. From the main game panel (101), select **FLEET CMOR**. The list of existing Fleet Commanders will appear, along with a bar of button selections. Activate the **CONVERT (V)** button. A usurper box will appear (010), allowing you to enter the path name where your **Breach 2** Squad Leaders exist.

If you are playing on floppy disks, you will (prior to running **Rules of Engagement**) want to copy the Squad Leaders to your data disk (disk 4 for 5.25" players, disk 2 for 3.5" players) to prevent having to swap disks.

NOTE: **Breach 2** Squad Leaders are stored in files with the file extension .B2L; ie - NAME.B2L.

Use **EDIT PATH (P)** if you wish to alter the path to another directory. A text editing frame and cursor (see *Text Editing Fields* in Part IV for details on operation) appears around the current pathname, allowing you to alter it. If you are satisfied with the current path, or finished editing the pathname and wish to continue with the importing action, use the **DONE (D)** button. If you have second thoughts, press **ABORT (A)** to return to panel 1 0 1 .

For each Squad Leader found in the selected path, a "Create Fleet Commander" box (009) will appear, allowing you to modify the name and select the appearance of the Fleet Commander (see Part V for details on the operation of the "Create Fleet Commander" box).

At any time during the importation process you may use the **ABORT (A)** button on the 009 box to stop importing Squad Leaders. If you do this, the process will be aborted, and the currently displayed **Breach 2** Squad Leader and all others not already converted will not be added to your Fleet Commander list.

APPENDIX VI: IMPORTING COMMANDERS, CAPTAINS, SYSTEMS, ETC

Transferring Builder Items

All of the builder elements (Fleet Commanders, Captains, Enemies, Ships, Solar Systems, and Missions) are stored in separate data files. With the exception of missions, all items of a single type are combined into one data file. These file names are as follows:

RULES.CMD	Fleet Commanders
RULES.CAP	Ship Captains
RULES.EMY	Enemy Races
RULES.FLT	Fleet Ships
RULES.SOL	Solar Systems

Missions are stored in separate files with the file extension .MIS.

Rules of Engagement provides a way you can add builder items from a friend's game, or items you download from a modem. Upon running the game, the program will look for files named XFER.CMD, XFER.CAP, XFER.EMY, XFER.FLT, and XFER.SOL. If it finds one or more of these files, it will merge the contents of the file with the main data file of the same type (ie - merging XFER.CAP with the current RULES.CAP). The "XFER" file will then be deleted.

For instance, suppose you want to give a copy of your enemy races file to a friend of yours who also owns a copy of the game. Make a copy of your RULES.EMY file, renaming it XFER.EMY. Send the file to him and have him copy it onto his disk that contains his copy of RULES.EMY. When he runs the program, your enemy races will be merged with his.

Note that duplicate entries in any of the data files will result if both the "RULES" and "XFER" files contain the same item. This will not cause any problem with the game, but you may want to delete such duplicate entries.

CAUTION! Just because two items have the same does no? mean they are identical. Examine each item before deleting it. Two alien races are both called Martians and two ships are both named Shalmanseer could actually be quite dissimilar. In other cases, the items are virtually identical, but one has been edited slightly. In such cases, we recommend editing one of the duplicate items to change its name, simply to avoid confusion. In cases where there items are exact duplicates, it's best to delete one of them.

Since missions are stored in separate files, you do not need to follow this procedure to transfer missions. Simply copy the new .MIS files onto your disk containing your original mission files (disk 4 for 5.25" players, disk 2 for 3.5" players, or your hard disk directory containing the game).

APPENDIX VII: MISSION DESCRIPTIONS

The following are descriptions of the missions included with the game. Missions are listed in ascending order of difficulty. Difficulty ratings are based on game play at the advanced level.

A Shakedown Cruise

by Maurice Molyneaux

Enemy Race: UDP

Difficulty Rating: Very Easy

Minimum Rank Required: Ensign

Synopsis: In order to confirm intelligence reports indicating that the UDP has been engaging in illegal weapons research, you must intercept vessels carrying UDP waste to the planet Tuoles Laicr'mok. Vessel E01 must be captured, and any other vessels encountered must be neutralized (destroyed or captured).

Strategy: You have lots of time, and two additional ships with qualified Captains, to do the job with. Remember, your orders are to capture ship E01, not destroy it.

Droid Demolition

by Maurice Molyneaux

Enemy Race: FWRP

Difficulty Rating: Very Easy

Minimum Rank Required: Ensign

Synopsis: This is simply a wargame; practice against simulated enemy forces. Old FW ships have been retrofitted for the wargames, and are piloted by disposable android commanders. The ships are old and not fully functional. They carry no missiles and have minimum EBW power. You have only your flagship to command, and the single mission objective is to reach waypoint X01. There is no time limit.

Strategy: You could complete this mission in a few minutes if you simply headed for the waypoint. However, the idea here is to give you experience in various aspects of starship command. There are outposts to capture, ships to capture or destroy, asteroid fields to practice maneuvers with, etc. Be careful not to get too cocky. This AS a "live-fire" wargame, and your ship risks damage, casualties, and, yes, even destruction, if you aren't cautious.

APPENDIX VII: MISSION DESCRIPTIONS

Basree Encounter

by Haywood Nichols

Enemy Race: Basree

Difficulty Rating: Easy

Minimum Rank Required: Ensign

Synopsis: You are ordered to engage and neutralize at least 50% of the Basree enemy fleet that has been spotted in your system.

Strategy: The Basree aren't too swift, so they shouldn't provide too much trouble. Don't try to destroy everything all at once. You will obtain a better mission performance rating if you go for either capturing the ships or convincing them to surrender.

Dreadnought Kill

by Haywood Nichols

Enemy Race: Cybers

Difficulty Rating: Medium

Minimum Rank Required: Ensign

Synopsis: Your cruiser, the FWS Lockee, along with 3 scout ships, are ordered into the Deimos starsystem on a search and destroy mission. A Cyber Dreadnought class vessel has been spotted in the area and your orders are to neutralize it.

Strategy: Your scouts probably won't be able to neutralize the enemy vessel, but they should be able to do some sufficient damage for you to take it out.

Escape/Capture

by Haywood Nichols

Enemy Race: "Anteater"

Difficulty Rating: Medium

Minimum Rank Required: Ensign

Synopsis: The mission into the Twain system to recapture an outpost overrun by the "Anteaters" has not gone as planned. Your flagship, the FWS Pierson, has been damaged. You have only one other operational Destroyer under your command. Intelligence reports indicate that many alien ships are still operational within this system. Your orders are to retake outpost T01 and make your way as quickly as possible to waypoint X01.

Strategy: Start repair on you most vital ship systems. The other destroyer under your command is still in good shape, so use that ship to buy you some time.

APPENDIX VII: MISSION DESCRIPTIONS

First Contact

by Thomas Carbone

Enemy Race: Karipted
Difficulty Rating: Medium
Minimum Rank; Ensign

Synopsis: The invasion has begun! On the outer reaches of the Local Group, in the Eros System, the Karipted have begun their invasion plan. You have been put in command of the FWS Discovery. Initially a mission to seek out and peacefully contact the Karipted, the situation has deteriorated into war. You, along with 3 Dreadnought class ships, must stop them.

Strategy: As per the mission briefing, pay close attention to your captains. Two of them are untrustworthy and must be carefully directed. Try not to lose any of them by their own carelessness.

Heavens Capture (IGS)

by Haywood Nichols

Enemy Race: UDP
Difficulty Rating: Medium
Minimum Rank: 1st Lieutenant

Synopsis: You, in command of the FWS Heavy Cruiser FWS Bond, along with 3 scouts and a cruiser, are hereby ordered into the Eros system on an outpost capture mission. You are ordered to capture Arbest's main outpost "Heavens Gate" (T01) and post at least one FW ship at each indicated waypoint.

Strategy: Remember, in addition to the capturing the outpost, you also need enough FW ships to man the waypoints. You will need to take out some of the enemy ships yourself in order to preserve enough of your fleet to occupy the waypoints.

Hope Defend

by Haywood Nichols

Enemy Race: Alien
Difficulty Rating: Medium
Minimum Rank: 1st Lieutenant

Synopsis: You and your fleet are ordered to aggressively patrol the Hope systems outposts and neutralize at least 80% of all invading forces.

Strategy: Order all your ships to patrol outposts. Use these patrols to keep an eye out for intruders, and your flagship to come to the aid of any encounters.

APPENDIX VII: MISSION DESCRIPTIONS

Out-Gunned

by Haywood Nichols

Enemy Race: Feenzrock

Difficulty Rating: Medium

Minimum Rank Required: Ensign

Synopsis: You are in command of a small scout ship, the FWS Dawson, along with 2 other scouts and a transport. It is rumored that the UDP are holding high level diplomatic meetings with the Feenzrock alien race on the outpost "Blackson". Your orders are to disrupt this meeting by capturing the outpost and neutralizing at least 50% of the enemy forces in the area.

Strategy: You are pretty much out-gunned and out-manned. Give serious consideration to the fact that the ships in your fleet can be ordered to self-destruct, possibly taking out any enemy ships within range. If things get desperate, this may be your only alternative.

Outpost Capture (IGS)

by Haywood Nichols

Enemy Race: UDP

Difficulty Rating: Medium

Minimum Rank Required: 1st Lieutenant

Synopsis: You, in command of the Federated Worlds Heavy Cruiser FWS Bensen, along with 2 scout ships, are ordered into the UDP controlled Phobos system on a capture and recon raid. Your orders are to capture the UDP outpost "Tarmel" and neutralize at least 50% of the enemy forces.

Strategy: Capture the outpost as soon as possible since you may need the repair capability.

Phobos Waypoints

by Haywood Nichols

Enemy Race: UDP

Difficulty Rating: Medium

Minimum Rank Required: Ensign

Synopsis: You, in command of the cruiser FWS Bond and 4 scout ships, are hereby ordered into the UDP controlled Phobos system as a prelude to our planned invasion. Your orders are to capture outpost "Tarmel" and have at least one scout ship hold all three FW waypoints.

Strategy: You have 4 scouts under your command. You must occupy and hold 3 waypoints in addition to capturing the "Tarmel" outpost, so you must be extremely careful with the ships you have. You will likely need to engage some of the enemy ships yourself.

APPENDIX VII: MISSION DESCRIPTIONS

Privateer Prey

by Thomas Carbone

Enemy Race: Oreeginard
Difficulty Rating: Medium
Minimum Rank Required: Ensign

Synopsis: Privateers have been raiding outposts in the Clytios system for some time now. Recently, military arms and supplies have been disappearing, inducing the FWF to get involved. Your mission is to stop and capture a transport ship leaving the Clytios system. You are alone in this mission, but it should be a piece of Oyabeno cake.

Strategy: All is not what it seems. Be cautious.

Scout Capture (IGS)

by Haywood Nichols

Enemy Race: UDP
Difficulty Rating: Medium
Minimum Rank Required: Ensign

Synopsis: You, in command of the Federated Worlds Cruiser the FWS Lockee and a destroyer, are ordered to capture the UDP scout vessel E01 and retrieve computer data packs.

Strategy: You only have one victory condition in this mission, so go right for the enemy.

Trespasser

by Thomas Carbone

Enemy Race: UDP
Difficulty Rating: Medium
Minimum Rank Required: Ensign

Synopsis: You have been given command of the FWS Jouett, a scout class ship. In formation with you are 3 transport tugs owned by the Star Freight Company. These transports are carrying vital supplies for FW fleet ships in the Ivilose system.

Upon entering the Nilock system, your convoy has been sighted by a scout class enemy vessel. Intelligence reports that a message was dispatched to enemy ship E04. It is imperative that the convoy's presence remain secret.

Your orders are to safely escort the 3 transport tugs across the Nilock system to WaypointXOI. In addition, you must seek out and capture enemy ship E04 before it can report back to UDP command.

In order to make the rendezvous at Ivilose, you must complete the mission within 10 hours and 34 minutes.

Strategy: Try to keep your transports headed directly for the waypoint. One or two of the captains may have high aspirations, so keep an eye on them.

APPENDIX VII: MISSION DESCRIPTIONS

Clytios Invasion

by Haywood Nichols

Enemy Race: Nomad

Difficulty Rating: Hard

Minimum Rank Required: Ensign

Synopsis: The Nomads appear to be on the move again. You, in command of the Federated Worlds Cruiser FWS Bond, along with 2 scouts, a destroyer, a cruiser, and 2 heavy cruisers, are ordered to neutralize at least 70% of the alien fleet.

Strategy: Don't jump headlong into battle yourself. Use the ships under your command to soften things up before going in.

Feenzrock Assault (IGS)

by Haywood Nichols

Enemy Race: Feenzrock

Difficulty Rating: Hard

Minimum Rank Required: 1st Lieutenant

Synopsis: Your heavy cruiser, the FWS Frederick, along with 3 scout ships, a destroyer and a heavy cruiser, are ordered into the recently charted Zenoid starsystem. Feenzrocks have been spotted constructing an outpost in the system. Your orders are to invade this system and neutralize 80% of the enemy vessels. In addition, capture of their home base outpost T01, codename "Bradley Vur", is imperative.

Strategy: Intelligence reports that the enemy's vessels are not maintained to our rigid FWS fleet standards. Target their weapon and drive systems during attacks and you should stand a chance.

APPENDIX VII: MISSION DESCRIPTIONS

HyperSpace Heist

by Jim Shelton

Enemy Race: Entymion

Difficulty Rating: Hard

Minimum Rank Required: Ensign

Synopsis: The Entymions have massed a force of ships at Cetus Amicus, notable amongst them are three transports prepared to push the Hyperspace Booster (T01) out of the system. You must stop the Entymions by neutralizing at least 75% of their ships and capturing Transport EOS. The grouped transports are channeling their power through EOS, building up the necessary energy to get the Booster to escape velocity. Because of this, destroying EOS could damage the Booster, so you must capture the ship to prevent this.

Strategy: You have very little time before the Entymions can build up enough power to push the Booster out of orbit. Try to move directly towards the booster, destroying all enemy transports except EOS. The transports are easier to destroy than the Entymion warships, and destroying them will aid you in reaching the 75% neutralization objective quickly.

Kochab Encounter

by Haywood Nichols

Enemy Race: Cybers

Difficulty Rating: Hard

Minimum Rank Required: Ensign

Synopsis: Your flagship, the cruiser FWS Fermin, along with a scout, cruiser and destroyer, are hereby ordered into the Kochab starsystem to push back the flagrant violation of FW space by the Cyber race. The Cybers have recently captured the outpost "Pointerville". Your orders are to retake this outpost, prevent the enemy from capturing any others, and neutralize at least 70% of the invading forces.

Strategy: Keep an eye on and protect your outpost, as well as capturing the "Pointerville" outpost, as soon as possible. Without a base to rearm and repair, it's much harder for the enemy to keep up their attack.

Transport Capture (IGS)

by Haywood Nichols

Enemy Race: UDP

Difficulty Rating: Hard

Minimum Rank Required: Ensign

Synopsis: Intercept and capture the UDP Terror Troop Transport ship that is ferrying troops into this system. Also capture the outpost "Romas" which is waiting for the troops.

Strategy: Keep in mind the specific victory conditions needed to win. Don't waste time, energy, ships and men going after everything in range.

APPENDIX VII: MISSION DESCRIPTIONS

Battle of Evrytion

by Haywood Nichols

Enemy Race: Nomad

Difficulty Rating: Very hard

Minimum Rank Required: Commander

Synopsis: You are ordered into the Evrytion system along with 2 scouts, 3 destroyers and 2 cruisers. Provided you have the necessary rank for command, your flagship will be the Dreadnought FWS Anderson. Long range scanners have picked up a "Nomad" invasion fleet bearing down on this system. Your orders are to intercept and neutralize at least 70% of the alien fleet and capture outpost T03.

Strategy: Try going after the weaker ships in the enemy fleet and steer clear of the enemy's Heavy Cruiser and Dreadnought... if possible. Capture both the independent and the enemy outpost and guard them. This will prevent the enemy from repairing and resupplying their fleet.

Pyxis Outposts (IGS)

by Haywood Nichols

Enemy Race: UDP

Difficulty Rating: Very Hard

Minimum Rank Required: Ensign

Synopsis: You, in command of the Federated Worlds Cruiser FWS Manley and 2 other destroyers, are ordered into the UDP controlled Pyxis system on an outpost capture raid. Your orders are to capture and hold all outposts in that system and neutralize at least 75% of the enemy forces.

Strategy: This is a real tough one. As soon as you capture an outpost, the enemy will attempt to retake it. You need to eliminate some of the enemy ships before you take on all of the outposts. One high sophistication level outpost capture should be sufficient to maintain a supply and repair facility in the system.