BATTLECRUISER 3000AD v2.0

GALCOM COMMANDERS SUPPLEMENT

[redacted]

Fourth Edition 9/99

® Copyright 1989-1999 3000AD, Incorporated. All rights reserved.

3000AD reserves the right to alter the contents of this manual and the product described in this manual at any time and without notice. Unless authorized by the expressed written consent of 3000AD, no part of this document or software may be copied, reproduced, translated, transmitted, or reproduced in any form or by any means, electronically or mechanically for any purpose.

3000AD, Battlecruiser 3000AD, GALCOM, Xtreme Carnage, and associated logos are the trademark and copyright properties of 3000AD Inc.

Other names are trademarks of their respective companies.

3000AD, Inc.
1520 NW 125th Avenue
Unit 10-306
Ft. Lauderdale, FL 33323

TEL	1-954-851-1405
FAX	1-954-851-1407
EMAIL	support@3000ad.com
WWW	http://www.bc3000ad.com
NEWS	alt.games.bc3000ad comp.sys.ibm.pc.games.space-sim

TABLE OF CONTENTS

1. GETTING STARTED

1.0 System Requirements
1.1 Installation
1.2 Sound Setup
1.3 Starting BC3K
1.4 Configuring BC3K
1.5 Main Menu Options

2. STARTING A CAREER IN GALACTIC COMMAND

2.0 Free Flight
2.1 Advanced Campaign Mode
2.2 Xtreme Carnage

3. A BRIEF HISTORY

3.1 History Of Galactic Command, GALCOM
3.2 Galactic Time Line
3.3 Alien Nations
3.4 Alien Castes

4. ENLISTING IN GALCOM

4.0 Tour Of GALCOM HQ starstation
4.1 ROSTER - Enlisting
4.2 MISCON - Choosing A Career
4.3 ENGINEERING - Repair Operations
4.4 TRADCOM - Trading Operations
4.5 NAVITRON - Galactic Course Plotting
4.6 COMMLINK - Communications Link
4.7 LAUNCH BAY - Launch Operations

5. ASSUMING COMMAND

5.0 Commander On the Bridge!
5.1 Command Personnel Check
5.2 Systems Status Check

6. BRIDGE SYSTEMS - BRIDGEVIEWER

6.0 Overview
6.1 Bridge Menu
6.2 Commander's Notes
6.3 Quick Reference Commands

7. BRIDGE SYSTEMS - NID COMPUTER

7.0 System Overview
7.1 Target Selection
7.2 Mode 1 - Navigation Map, NAV
7.3 Mode 2 - Waypoint Tracking System, WTS
7.4 Mode 3 - Probe Link System, PLS
7.5 Mode 4 - Navigation Information Relay, NIR
7.6 Basic Navigation Procedures
7.7 Commander's Notes
7.8 Quick Reference Commands

8. BRIDGE SYSTEMS - TACSCAN COMPUTER

8.0 System Overview
8.1 Target Selection
8.2 Mode 1 - Space Scan
8.3 Mode 2 - Ground Scan
8.4 Mode 3 - Air Scan
8.5 Mode 4 - Support Unit Locator, SUL
8.6 Commander's Notes
8.7 Quick Reference Commands

9. BRIDGE SYSTEMS - CVD COMPUTER

9.0 System Overview
9.1 MODE 1 - Video Link, VID
9.2 MODE 2 - Weapons Select System, WSS
9.3 MODE 3 - Crew Status Display, CSD
9.4 MODE 4A/B - Support Ship Status, SSS
9.5 MODE 5 - ACM Status, ACM
9.6 MODE 6 - Radar Target Mask, RTM
9.7 MODE 7 - Stores Manifest Display, SMD
9.8 MODE 8 - Systems Status Relay, SSR
9.9 Commander's Notes
9.10 Quick Reference Commands

10. TACTICAL SYSTEMS OPERATION

10.0 Shield Specifications
10.1 Hull and Armor Specifications
10.2 Cloaking System Operations
10.3 Tractor Beam Operations
10.4 Probe Deployment Operations
10.5 Commander's Notes
10.6 Quick Reference Commands

11. WEAPON SYSTEMS OPERATION

11.0 ION Disruptor Array, IOD
11.1 Passive Target Acquisition, PTA
11.2 FAst Target Acquisition & Lock, FATAL
11.3 Missile Target Acquisition & Attack Procedures
11.4 Mine Deployment Operations
11.5 Commander's Notes
11.6 Quick Reference Commands

12. FLIGHT DYNAMICS & NAVIGATION

12.0 Flight Controls & Dynamics
12.1 Inter-System Course Plotting
12.2 Intra-System Course Plotting
12.3 Waypoint Tracking
12.4 Docking Procedures
12.5 Orbital Procedures
12.6 Planetfall Operations
12.7 Terrain Following & Avoidance
12.8 Commander's Notes
12.9 Quick Reference Commands

13. NAVITRON COMPUTER

13.0 System Overview
13.1 Galactic Cartography
13.2 Advanced Intra-Stellar Course Plotting

14. LOGISTIX COMPUTER

14.0 System Overview
14.1 Craft Repair Operations
14.2 Cargo Operations
14.3 Power Allocation Procedures

15. TACTICAL COMPUTER

15.0 System Overview
15.1 Crew Operations
15.2 Launch Operations
15.3 Loadout Operations
15.4 MediBay Procedures

16. PERSONNEL SCAN COMPUTER

16.0 System Overview
16.1 Tracking & Locating Personnel

17. COMMUNICATIONS LINK COMPUTER

17.0 System Overview
17.1 Comms Operations

18. TACOPS COMPUTER

18.0 System Overview
18.1 Basic Operation
18.2 The Command Palette
18.3 Setting Waypoints & Orders
18.4 Deployment Operations
18.5 Transporter Operations
18.6 Launching Orbit To Surface Weapons
18.7 Probes Operations
18.8 Direct Orders
18.9 Waypoint Orders

19. PERSONNEL OPERATIONS

19.0 Personnel Roster & Assignments
19.1 Personnel Attributes
19.2 Accommodation & Maintenance
19.3 Medical Operations & Cloning
19.4 Recruiting New Personnel
19.5 Away Team Deployment

20. SECURITY OPERATIONS

20.0 Alert Status Monitoring
20.1 Intruder Alert
20.2 Prisoners
20.3 Guests

21. EMERGENCY OPERATIONS

21.0 Ship Integrity Breaches
21.1 Reactor Core Breach
21.2 Radiation Leaks & Infectious Diseases
21.3 Life Support Systems
21.4 Evacuation Procedures
21.5 Requesting A Tow

22. SHIP ENGINEERING SCHEMATICS

22.0 Design Specifications
22.1 Deck Layout
22.2 Weapon & Defense Systems
22.3 Propulsion & Power Systems
22.4 Power Management
22.5 Primary System Upgrades

23. SUPPORT SHIP COMPLEMENT

23.0 Interceptor
23.1 Shuttle
23.2 Mining Drone
23.3 All Terrain Vehicle

24. GALCOM COMMANDERS GUIDELINES

24.0 Galactic Command Directives
24.1 Galactic Command Ranks & Medals
24.2 Command Operations And Guidelines

25. SMART SPEAK

26. CREDITS

27. TECNNICAL SUPPORT & TROUBLE SHOOTING

27.0 Installation problems
27.1 Video problems
27.2 Sound problems
27.3 Controller Problems
27.4 Windows 95 Configuration

28. APPENDICES

List of Appendix Files On The CD-ROM

APPENDIX A	**KEYBOARD COMMANDS**
APPENDIX B	**EXPERIENCE POINTS**
APPENDIX C	**ARTIFACTS DATABASE**
APPENDIX D	**WEAPONS DATABASE**
APPENDIX E	**CARTOGRAPHY CHART**
APPENDIX F	**CARTOGRAPHY MAPS**
APPENDIX G	**CARTOGRAPHY LINKS**
APPENDIX H	**ATV DAMAGE SPECS**
APPENDIX I	**INTERCEPTOR DAMAGE SPECS**
APPENDIX J	**SHUTTLE DAMAGE SPECS**
APPENDIX K	**BATTLECRUISER DAMAGE SPECS**
APPENDIX L	**BATTLECRUISER POWER ALLOCATION**
APPENDIX M	**ALIEN NATIONS DATABASE**
APPENDIX N	**CASTES DATABASE**
APPENDIX O	**GALCOM RANKS & MEDALS**
APPENDIX P	**SURFACE THREATS DATABASE**
APPENDIX Q	**CRAFTS DATABASE**
APPENDIX R	**STARTATION/STARBASE DATABASE**
APPENDIX S	**TRADE DATABASE**
APPENDIX T	**REPAIR COMPONENTS DATABASE**
APPENDIX U	**FLEET COMMAND & CONTROL**

1. GETTING STARTED

1.0 System Requirements

Battlecruiser:3000AD v2.0 requires the following **minimum** system configuration to run. Once you are satisfied that your system meets these minimum requirements, you can move on to the installation section.

Computer	: Pentium 166
Operating system	: Windows 95/98
2D video card	: Any graphics card with 2MB of memory
3D video card	: 3Dfx Voodoo based 3D graphics card (optional)
Hard drive	: 100 MB (compact install); 165MB (full install)
CD-ROM	: 2x MPC-11 compliant
Memory	: 16 MB
Mouse	: Mouse Microsoft or compatible mouse
Sound card	: Most major sound cards are supported.

A Pentium 200MHz or higher processor, 32MB RAM, PCI or AGP 2D graphics card, a 3Dfx based 3D card, and a joystick controller are highly recommended.

Windows 95/98 Considerations

Due to significant improvements and changes to the engine kernel, you are advised to run the game using a shortcut. If you are running v2.0 purchased from a retailer, the installer has already created these shortcuts for you.

1.1 Installation

Follow these steps to install BC3K on your hard drive. Make sure you have the necessary disk space indicated by the installation program.

- Place the **BATTLECRUISER 3000AD V2.0 CD ROM** in your **CD-ROM** drive.
- Double click on **MY COMPUTER** icon. If your computer does not have this icon, then double click on your **CD-ROM** drive.
- Double click on the **SETUP** icon
- Once the setup program starts, following the on screen instructions to install the program on your computer. Several icons will be created which you can use to run the software or 3DFX versions of the game.

Note: Do NOT install the game to a folder that has a name that exceeds the standard eight characters. Installing to C:\battlecruiser will NOT work, but C:\GAMES\BC3000AD or similar is OK.

Refer to ***Section 27 : Technical Support & Trouble Shooting*** of the manual if you experience any difficulties installing or running the game.

1.2 Sound Setup

Once the installation is complete, select the Sound Setup icon to setup your sound card. You can run it directly by running the Sound Setup icon in the BC3000AD group. This is ***different*** from the **SETUP.EXE** file on the game CD-ROM which installs the game! Follow the prompts and select the digitized card you have installed. If you know your card's configuration, you can manually enter the information or allow the program to auto detect it for you. You will want to **test** the card selected to ensure its operation. Once you have completed the sound configuration, save the selection and exit. If your card is not listed, please consult the FAQ on the website for assistance with setting up your sound card.

Note: The auto detect option may cause certain machines to hang. If this occurs, you will have to reboot the machine. After rebooting, simply run SETUP.EXE from within the installation directory and manually enter the parameters for your sound card.

1.3 Starting The Game

To start BC3K, make sure you have configured the sound card as instructed above. Put the CD-ROM in the drive and double **[LEFT CLICK]** on either the normal software version or 3Dfx version icon in the BC3K install folder on your desktop. The CD-ROM is required to be in the drive at **ALL** times during operation of the game.

Note: If BC3K refuses to start or you get an error message, please refer to Section 27: Technical Support & Trouble Shooting.

1.4 Configuring BC3K

Once BC3K is up and running, the Main Menu will be presented, **[LEFT CLICK]** on **CONFIGURE** or type **[G]** to access the configuration program.

To change an option, **[LEFT CLICK]** on the arrow to the right of the option. Each click will cycle through all possible settings for that option.

Note: Some of these configuration options impact game performance.

- **Digitized Sounds**
  Enable for digitized sound playback.
- **Midi Music**
  Enable for MIDI music playback.
- **Bridge Comms Chatter**
  Enable to hear background personnel comms while on the bridge.
- **Explosion Fragments**
  Determines the type of explosion fragments that are generated when an object explodes. A high setting will impact performance but it looks good.

- **Flight Control**
  Use this option to select your control device. Several devices are supported. If you select a joystick, you will be given the option to calibrate it.
- **Flight Dynamics**
  Select the realistic flight model to add more realism to your flight experience
- **Asteroid Density**
  BC3K dynamically generates asteroid belts on the fly. This setting determines the density of these asteroids when generated. A high density setting will impact performance.
- **Space Object Rendering**
  BC3K employs several rendering methods when displaying 3D objects in space. High settings produce the most visually appealing results but will also impact performance.
- **External Planet Rendering**
  Same options as *Space Object Rendering* but controls the exterior rendering of the 3D planet as viewed in space.
- **External Planet Shadow**
  If turned on the star in the system will cast a shadow on the planet, dividing it into dark and light sides.
- **Background Stars Density**
  This controls the density of the stars in space. The higher the setting, the more stars displayed. A high setting will impact performance.
- **Background Space Debris**
  BC3K automatically generates debris to make up for the monotonous nature of space flight. This, combined with the stars, attempts to alleviate this monotony. The higher the setting the more space debris are generated. A high setting will impact performance.
- **Planetary Cloud Cover**
  BC3K uses texture maps to simulate clouds when on a planet or moon. While this may be visually appealing, it can have an impact on performance.
- **Planetary Object Rendering**
  Same options as *Space Object Rendering* but controls the rendering of objects on the planets and moons.
- **Planetary Night Stars**
  If turned on, stars will be visible in the night sky when on planets or moons.
- **Planetary Terrain Rendering**
  Same options as *Space Object Rendering* but controls the rendering of the surface terrain. High settings produce the most visually appealing results but will impact performance significantly.
- **Planetary Visibility**
  When flying on the surface of a planet or moon, you can use this setting to control your distance visibility. The higher the setting, the farther you can see. A high setting impacts performance. You can also increase/decrease planetary visibility when flying on the planet surface. Check your keyboard commands list.

Once you are satisfied with your selections, click on **SAVE** to confirm your settings or **ABORT** to cancel all changes you have made and return to the Main Menu.

1.5 Main Menu Options

The BC3K Main Menu gives you a number of options described in the following sections. You can **[LEFT-CLICK]** on the desired option or by typing the underlined character on the keyboard.

- **Continue**

  Allows you to continue playing from the most recent game you were playing before you quit BC3K. If one does not exist either because there isn't one in progress or your career has ended, you will be taken to the Roster screen where you can select a new player configuration. If you had a game in progress, it will be loaded and you will be taken to the point at which you exited.

- **Start New Game**

  This option takes you to Roster where you can start a new game.

- **Save**

  This option takes you to Roster where you can save the current game.

  Once the save game screen comes up, the name of your current commander will be displayed along with 10 save game slots on the right. To save the current game, **[LEFT CLICK]** on one of the slots on the right and enter the name of the saved game. Click on **ACCEPT** to saved the current 3D world and the player data files. You will then be returned to the Main Menu. You can then select **CONTINUE** to return to your game in progress

- **Restore**

  This option takes you to Roster where you can restore a previously saved game.

  Once the restore game screen comes up, select the commander whose career your would like to restore. This will display the save game slots on the right. Select the restore game you would like to restore and **[LEFT CLICK]** on the **RESTORE** button. The game data will then be restored and you will be taken directly to the game exactly where you saved it.

  Note: You cannot save/restore a commander whose status is killed in action, missing in action, court-martialed or retired. You can only save/restore the game from the Battlecruiser bridge or Main Menu.

- **Xtreme Carnage**

  The Xtreme Combat simulator is a training computer where you can hone your combat skills.

  Note: Refer to Section 2 : Starting A Career with Galactic Command

- **ConfiGure**

  This option takes you into the **CONFIG** computer where you can configure the game to suit your playing environment. Before you start tinkering with these options, make sure you understand the impact that these settings may have on the game's performance.

- **Quit**

  Selecting this option exits BC3K and takes you to back to the operating system.

2. STARTING A CAREER IN GALACTIC COMMAND

Before you enlist in **GALCOM** and start a career, you have to first figure out how much trouble you plan on getting into. Though GALCOM pays you to do a job, there are times when you will question their policies and methods of solving problems in a crisis situation. If you enlist in a campaign, you will be expected to complete it or face a court martial. If you decide to stay away from policy making issues, then you're better off staying with a normal patrol career. You will be doing your job as you see fit but without the constraints of following orders you do not like. If you ever find yourself facing a court martial hearing due to a large number of violations, you have a 50-50 chance of being dismissed from GALCOM.

For more on this, refer to Section 24: GALCOM Commander's Guidelines.

BC3K is a **very** advanced and complex game. As a result of this complexity, you must find a method of play which is suitable to your style. The BC3K world is truly a dynamic one where events and actions are going on around you all the time where other AI controlled entities called *actors* are oblivious to your existence. Nothing you do affects the grand scheme of things nor does the world revolve around your existence. In short, you don't count for much except to the people you work for.

In the BC3K universe, there are wars being fought, lost and won, alliances forged and broken, every day, all day, all year round. In your travels you will encounter invasion fleets, strike fleets, raiders, hackers, traders, diplomats, and a host of other types of ships and aliens, some friendly and others downright hostile. There are ships using advanced technology to plot routes that take them to the edge of the galaxy and back again. You may be stationed in one part of space oblivious to an invasion being fought light years away but if you were to go to that region, you would witness the invasion or combat strike going on and given the chance to take sides or just go on your way. All this action also takes place on planets and moons as well. Of course, poke your nose where it doesn't belong and you won't live to tell your friends about it.

Added to this dynamic nature of the universe, other actions occurring include asteroid, meteoroid and comet collisions with planets and space objects, the destruction, repair and upgrading of starstations, planetary cities, the upgrading of space and planetary defense systems, etc. The real time processing nature of the BC3K universe also allows you to witness sunrise and sunset based on the time zone for the planet you are on. Most planets and moons also have a variety of climate zones and weather patterns that change as you traverse the surface. Alien nation intelligence also allows them to provide more advanced threats against you based on the amount of damage you inflict on them during your previous whimsical strike sorties.

With the exception of the Xtreme Carnage world (which is smaller, self contained, and doesn't contain anything this complex), the main BC3K world which hosts Free Flight and Advanced Campaign Mode (ACM), contains 91 self contained space regions, 75 planets and 145 moons. All totally populated, belonging to someone, and updated in real time. In short, the BC3K universe never sleeps unless you pause the game. Pause the game with a missile up your pipe and it will be there when you un-pause the game.

The dynamic and unpredictable nature of the game universe allows for never-ending and advanced gameplay. You will never encounter the same situation twice in a row, and no matter what time you enter the universe there is always something to do and one more raider to engage. Even in Advanced Campaign Mode (ACM) where the missions are sent to you via orders from GALCOM, the missions, though scripted, have unpredictable results each time you play. You may, for instance, get a mission to destroy a target in a seemingly quiet region of space and though your adversaries may not be scripted within the mission, you can always count on someone making your life a misery & causing you untold grief. There's nothing worse than having a pair of raiders flying carriers with advanced weaponry warp into the region just when you thought you had the mission licked. Of course, you can also count on other GALCOM ships to show up and help you out. In a region where there is a friendly starstation, you can count on them to launch intercept crafts to deter any attacks by hostile fleets. Naturally, if your travels take you through hostile space, especially one with a hostile starstation, expect to get beat up -- real bad. The next time you establish orbit around someone's planet, be sure to find out who and what is down there.

In BC3K space, everyone can hear you scream.

Now that you get the picture, you have to figure out what mode you'd like to play. BC3K offers three modes of gameplay modes described in the following sections.

2.0 Free Flight

In this mode, you start at Commander rank with a Terran Military designation working for Galactic Command (GALCOM). You will have to adhere to GALCOM rules and regulations. Once you enlist, it is assumed that you have already received and understood your orders via these guidelines and you will not be receiving any further orders from GALCOM.

Your main order of business is to ensure that all GALCOM assets and those of Terran allies are secure and free from attack by hostile forces. Of course, since GALCOM trusts you and isn't keeping tabs on you, you can pretty much do what you want. You're your own commander and are left alone to make or break the rules. You are free to explore the game galaxy and offer assistance where necessary, exploring new worlds and encountering new alien nations, both friendly & hostile. You will need to study the alien nations in BC3K and the sectors that they control. This information is in the ***Alien Nations Database*** appendix file. Failure to learn this information will most likely end in your destruction if you venture into hostile territory. GALCOM pays you a salary every Earth day based on your rank and offers free ship repairs and replacement personnel at the **GALCOM** headquarters (also called GHQ). In ACM mode, your salary is 15% higher.

In BC3K, you rely on Experience Points (EP) for promotion. Certain actions earn you Experience Points which count toward your promotion. As you rise in rank, you will find that your salary and command actions also increase.

Note: Refer to Section 24: GALCOM Commander's Guidelines for more on GALCOM ranks and Appendix B for Experience Points allocation.

Most commanders playing Free Flight will embark on a profit-making career by trading between the numerous starstations and starbases scattered around the galaxy, ignoring their primary duties of maintaining law and order.

Several arms of the GALCOM organization concentrate on the promotion of free trade, science, and technology. For this reason, your GALCOM designation is set to Terran Military. Under this designation, **GALCOM** ships can usually enter most space sectors where people you encounter will not regard you as a threat but as a neutral emissary of GALCOM. We wish you all the best because once they figure out that you have combat capable weaponry, since you will be radar acquired so fast you'd think there was a bullseye on your ship where the GALCOM insignia should be.

2.1 Advanced Campaign Mode (ACM)

Think of ACM as a series of missions built around a campaign in which GALCOM is determined to make your life a living hell and ensure that you earn your keep by getting them out of their messes. This experience is not for the feint at heart. ACM is more complex and involved, so it will be discussed in sections to make the experience a little more pleasurable. Each section below deals with the difference between Free Flight and ACM.

GALCOM designation

In ACM your GALCOM designation is set to Terran Military. This means that you're fair game for every undesirable that's out there. Not to mention the Terran enemies who will attack you regardless of your designation.

Assignment

All options available in Free Flight are also available in ACM except that you are signing up for intense service. ACM gives new meaning to the words 'active duty'. Not only are you expected to go up against incredible (and sometimes impossible) odds most of the time, they also expect you to come out alive and bring their ship back in one piece.

Rewards

The upside to volunteering for ACM duty is that your weekly salary is 15% higher than in Free Flight. Of course you have to live to spend it.

Also in ACM mode, the Experience Points awarded are slightly higher, (as much as 25% higher in some cases) making promotions possible in a shorter period of time than in Free Flight mode.

Diplomacy

Though the state of the galaxy is identical to the state in Free Flight, ACM campaigns sometimes directly affect, and therefore modify, this balance of power. You may find your best friends becoming your worst enemies overnight. As a Terran commander, you inherit all Terran enemies. This means that if GALCOM blunders in its diplomatic moves you'll be in the firing line faster than you can raise your shields. Believe me when I tell you this, it's a wonder the Terrans still have friends considering the number of policy-related blunders they make on an almost daily basis. Of course, you're always stuck in the middle asking yourself if you're really one of the good guys. This is a question you will be asking yourself throughout your entire ACM career.

Tour Of Duty

In an ACM campaign, you get your orders directly from GALCOM. These orders are in the form of Tour Of Duty (TOD) missions which make up the ACM scenario you are playing. These TOD missions sometimes have linear or non-linear branches so that a series of missions may occur in a specific order whereas another TOD mission may branch to another depending on the results of the original TOD. Each set of TOD missions is designed around a particular branch of the scenario story. Some TOD sets can contain up to ten missions before another TOD branch is executed.

TOD missions all have their rewards for success or failure. In some, you will gain Experience Points, medals, finance credits, or all of the above. Do poorly and you may be court-martialed. Of course you don't have to show up for the hearing…

The basic campaign scenario is outlined when you first enlist for ACM duty. It's short and to the point. The parts they conveniently forget to tell you are the parts that are guaranteed to get you and your crew into trouble. Naturally, once GALCOM starts sending you orders it will all begin to dawn on you, but of course by then it's too late.

Patrol Zones

Between TOD assignments, GALCOM may assign you to a specific region of space called a Patrol Zone (PZ). This area includes a space region with all the planets and moons it contains. You are responsible for whatever goes on in that PZ. If a diplomat ship is attacked and destroyed in your PZ, then you are penalized for it by the deduction of Experience Points. This can sometimes lead to loss of rank. Once your PZ is cleared it is no longer your responsibility. Sometimes a TOD mission may occur within your PZ and this is guaranteed to get you into serious trouble if you are not careful. Generally speaking, you are required to protect all friendly assets within your PZ. If a pirate ship or other hostile ship shows up, you have to dispatch it as quickly as possible before a friendly ship shows up and gets attacked. Once your PZ is cleared, you will be informed via satellite communications and you are free to do what you want until your next assignment.

ACM Format

Once you start an ACM career your orders are transmitted to your ship via a secure communications channel. You then access your COMMLINK computer, read the mission specs, and go to see the ship's resident empath. Each ACM mission has ***Mission Orders*** which tell you about the mission, a ***Start Time***, ***Run Time*** and a ***Down Time***. These are discussed in detail below.

Mission Orders: Contains the orders for the mission detailing where the mission takes place and what you need to accomplish in order to complete it.

Start Time: Indicates when the scenario will commence. It will commence at this time whether you make it to the 'theatre' on time or not. Of course, you can't cheat; if you get to the 'theatre' early the scenario starts immediately.

The ***Run Time*** determines how long the scenario will last. Scenario run times can last for several minutes, hours, or even days. You usually have to solve the problem and end the scenario before the time expires. Once it expires, the system enters a resolution phase during which it decides what to do with the actors introduced into the theatre. In most cases, everyone goes back to their base. Of course, knowing your luck, you'll probably end up with a scenario in which the resolution phase decides the hostile actors should stick around and fight to the death; eating into your down time and depriving your crew of their much deserved R&R.

The ***Down Time*** is simply a period during which GALCOM figures out what to do next based on the outcome of the previous scenario. During this period you can repair or upgrade your damaged systems, buy new weapons, treat your injured crew, or seek out and beat up that trader who told you about the secure trade route and got you into one hell of a fire fight. You can pretty much do whatever you want. If you are reasonably confident, you can request your next orders from GALCOM via the bridge menu. This is the only time during which you get to request new orders. If you don't request new orders, GALCOM will automatically send you new orders once this down time expires.

An ACM scenario is a collection of short mission scenarios designed around a common problem. The problem is presented to you when you enlist and the story will unfold as your orders are transmitted. Once an ACM scenario ends, you can still continue to play the game but you will no longer get orders from GALCOM. In short you will exist in a world that is now based on the events that occurred during the ACM scenario. Since the BC3K universe does not shut down, there will always be once more raider or Insurgent out there. No matter what was destroyed, the evolution based model in BC3K allows for the gradual re-creation of all destroyed objects including stations, bases, planetary cities, etc. Planets or moons that were reduced to barren and uninhabitable versions will remain this way, however, due to the fact that the surface texture maps that were replaced during the catastrophic explosion (asteroid, meteoroid, comet impact, or a weapons-based explosion) cannot be reversed.

Once you enter an ACM scenario it cannot be stopped. If you find a nice quiet corner of space to hide out and never respond to your orders the entire scenario will play itself out in its entirety and produce its own results.

Note: The design of BC3K allows for additional scenarios to be introduced to the universe via ACM plug-in missions. BC3K was designed to support up to 100 ACM scenarios. This plug-in nature allows for the introduction of new scenarios, aliens, planets, space regions, ships, and any other element which exists in the current version via ACM scenarios.

2.2 Xtreme Carnage (XC)

Xtreme Carnage is a combat simulator shoot-'em-up. In Xtreme Carnage mode you are flying an Interceptor after being deployed into a hot combat zone by a Battlecruiser. XC has three space regions with a number of planets, moons, and the usual space anomalies.

Each phase is presented in a series of waves of increasing difficulty. There are ten waves in XC. Your mission is simply to destroy as many hostile targets as possible and make it through the tenth wave. At the end of every wave (and, depending on the wave difficulty, sometimes during the wave) your ship will be repaired, re-powered, and re-armed.

At higher waves you will be given wingmen to assist in your mission. If they survive they progress to the next wave with you.

In Xtreme Carnage mode, you still have freedom to ignore your orders and roam the galaxy, enter planets, etc. If you do this, you will effectively lose any experience points that would otherwise have been awarded had you carried out the mission.

Once the wave loads, you will get your orders via the **COMMLINK** computer. Use the arrow keys to scroll the message. When you are done viewing the orders, exit via the spinning logo to return to battle.

If you die in XC, you are returned to the **MAIN MENU** where you have to start over.

3. A BRIEF HISTORY

3.0 History Of Galactic Command (GALCOM)

As the Earth survived each threat to its existence through the passing decades, the need for an alternate home world became more and more apparent. The good old home world has survived global conflicts, catastrophic diseases, comets, asteroids, meteorites, and more, but each challenge has prompted technological advances in order to maintain the integrity of the planet and its inhabitants.

Terrans have always been fascinated by space exploration. Due to their life expectancy such space exploration was limited to the planet's orbit and, later, the moon. Early travel beyond the moon was only possible by robotic sensor probes and data-gathering unmanned spacecraft. Throughout the years, scientists could only observe as planets and moons in the Solar system were bombarded by comets and asteroids. It became obvious that it was only a matter of time before our planet was hit by one of these space objects. Terran databases contained catalogues of every object in the planet's orbit and indeed all comets, asteroids, and meteoroids in the Solar system.

By 1990, a group of asteroids whose orbits cross that of Earth were catalogued and named the Apollo objects. One of these, Eros, was approximately 16km long which is about the size of old New York City. At that time, the chances of one of these objects hitting Earth was considered remote. In mid-1994, Jupiter was bombarded by fragments of a large comet. The effects of this assault were observed by many on Earth and posed some serious questions about the fate of our planet. It is theorized that some of the first living things on Earth were made extinct by a stellar object hitting the planet.

Through the decades, the threat became more and more apparent as several other planets and moons were bombarded by objects which seemed to originate from far beyond the reach of capable sensors. Meanwhile, exploration efforts were concentrated on the search for other life forms within our galaxy. Small meteorites which fell on Earth were found to contain Amino acids which support the existence of living organisms. Speculation about the existence of extra-terrestrial life continued to grow. Fuelled by conflicting accounts of alien abduction and the sighting of extra-terrestrial space craft, mankind continued to search for the existence of other life forms within the Milky Way. Advancements in the fields of neural networks, artificial intelligence, robotics, and light wave transmission allowed mankind to push his knowledge further into the outer regions of the galaxy. However, we still could not overcome the space-time continuum and the subsequent aging process which prevented manned space flight beyond our own star system.

Of the nine planets in the Solar system, only Mars was remotely capable of supporting human life. Scientific colonies and research stations were set up on Mars to study its atmosphere, which was found to be 95% Carbon Dioxide gas and one hundred times thinner that of Earth. It could not readily support human life. As the years went by, special air and water filtration facilities were constructed on the surface of the planet. These provided the proper balance of nitrogen, carbon, and oxygen in the to support human life. Gradually, research stations were constructed which then evolved into small colonies consisting of scientific and defense engineers and their families.

Back on Earth, spacecraft designed to make the Martian journey were constructed. These used improved fuel management and booster rockets to escape the Earth's gravitational pull and solar power to facilitate the journey to Mars. These early journeys were limited to military and research personnel and were usually one-way trips.

On stardate 03.18.2328, the first non-military colony was established on Mars. This facility was open to the commercial traffic of large conglomerates. Aided with technology from research studies, these interests were able to make the planet more habitable by building cities above and below the surface. This led to plans for colonization on a much larger scale. At the end of 2334, after numerous failed attempts and disasters, the new colony was open and fully functional. Additional research stations were later built.

Unfortunately the closest we had come to manned interstellar spacecraft were sophisticated neural androids. These androids had an advanced program which allowed them to gather and analyze data from their travels and send this data back to stations on Earth and Mars. Their life span and mean failure average was twenty five years. In the event that they did encounter other intelligent life within or beyond our galaxy, their memory banks contained data regarding the human race, the location of our home world, etc. By the turn of the century no alien contact had been made. This was due in large part to the vast expanse of the Milky Way galaxy, the limited range of the spacecraft, and the need for faster ships.

At this time, the United Free Nations (UFN) began work on orbital space stations around Mars and Earth. These were designed to facilitate continued space exploration and research. Though it was assumed that military units would be assigned to these installations, it was still not clear how much presence Earth Command (EARTHCOM), the military arm of the UFN, would have on each station.

Both stations were completed within six years.

The star station Starpath, in orbit around Mars, could support up to six thousand personnel and ten spacecraft. Within a year, it was outfitted with defense systems including advanced search-and-detect radar, phased matter shields, and Roton laser arrays. The second star station, Genesis, was designed primarily as a military installation from the onset. It had better defensive and offensive systems and was used to pinpoint the location of Earth Command opposition on the planet's surface. This station was three times the size of Starpath and capable of supporting up to twenty five thousand personnel. It was also the site of the first space-borne shipyard.

Every planet has had its problems and Earth is no different. There were the usual dissidents who were opposed to resources being allocated to develop defense technology as well as those who were convinced that the government was holding back information regarding the discovery of extra-terrestrial life and technology. It was also rumored that the government was using its citizens for biological experiments in deep space travel.

The most powerful opposition to the UFN and EARTHCOM were known as the Insurgents. The ultimate goal of the Insurgents was to cripple the operations of EARTHCOM and force the UFN to disband the organization. Most government organizations were infiltrated by the Insurgents. The computer industry had blossomed out of control and imagination was often all it took to come up with something innovative, brilliant..., and dangerous. As the number of Insurgents increased and their organization became more powerful, some high-ranking Insurgent officials were bold enough to defect to secret bases scattered across the globe.

Several skirmishes erupted between EARTHCOM and the Insurgents which resulted in loss of life. There were rumors of brutality, manipulation, kidnapping, and blackmail by EARTHCOM operatives on Earth and on the evolving Martian and Lunar colonies. The official statement by the government was that the Insurgents were a ruthless group who had no real purpose other than to bring down the UFN for political gain. Nevertheless, support for the Insurgents grew.

In 2899, an unmanned deep space probe in Alpha Centauri sent back sensor data which supported scientific theory that there was life in other parts of the galaxy. Even with advanced technology of the time this sensor data took almost five years to be relayed back to Starpath. Later that same year, a space craft manned by an android known as Arianne was vectored to the source of the probe transmission. The journey would take Arianne five years. It would be an additional five to six years before new data was received from the android.

As technology advanced, new discoveries were made in areas of engine and reactor design. The research division of EARTHCOM also made significant progress in defense technology by designing new shields, lasers, and missile systems. Most of the Apollo objects were used as targets for testing these powerful weapons. In 2907, the first fully-functional Mass Drive Reactor was developed. This reactor used a mineral called Radine as fuel for anti-matter conversion. The reactor was also capable of using energy absorbed from a solar source. Stronger materials for building the external hull of ships were also developed. Technological research had reached a new level.

On approach to Alpha Centauri in 2910, Arianne began transmitting research data back to Starpath. At the same time, space exploration became a flourishing industry. There were now regular commercial trips between Earth, Mars, and the Moon. Several new colonies sprouted up on these worlds. The Insurgents subsequently infiltrated these colonies and continued their crusade against EARTHCOM.

Limited progress was also made in bio-stasis technology using animal experiments. Still, the longest time a primate had survived in stasis was three years.

Experiments using constructive DNA signatures were far more successful. A living organism could now be replicated by using a stored DNA signature. This was adequate for the purpose of cloning biological entities, but useless for extending the life span of the original subject.

In 2915, a nineteen year old student at the University of Biological Research on Earth discovered a method by which a biological entity could be put in stasis indefinitely and restored with the aid of an implanted computer chip. All that was needed was a way to implant the chip without it being rejected by the host body as a foreign entity. The student and all his research equipment were relocated to Mars by EARTHCOM to continue work on this discovery.

In 2919 the Biological and Stasis Regeneration project was concluded with tremendous success. The technology, under the supervision of the EARTHCOM research and development section, was given a Level 10 classification, the highest of any experiment conducted involving non-military personnel. Citing its instability and the need for more extensive tests, EARTHCOM refused to release any further information about the experiment. In short, it was put under lock and key.

The first advanced exploration spacecraft, the Sphinx class GCV-Seeker, departed from Genesis on stardate 01.07.2926 with a crew of two hundred fifty personnel. This craft, though designed for deep space exploration, had the most advanced military defense systems to date and a complement of seventy-five EARTHCOM Marines on-board. The ship's fifteen year mission was to rendezvous with Arianne and seek out life forms within the Alpha Centauri system. It was designed to travel at up to three times the speed of light.

Due to a computer glitch the stasis regeneration computer failed to awaken the crew at the programmed time and they missed their rendezvous with Arianne by seventeen days. Arianne had since continued on to the Sirius star system.

In 2928, GCV-Seeker was intercepted by four alien spacecraft in the vicinity of an unknown planet. The details of the encounter and the return to Earth of the GCV-Seeker and its hosts are still classified.

The Empirians who made first contact with the Terrans were a race of researchers and explorers willing to share their advanced technology with the Terrans. Several reports indicate that this mild-mannered race had previously visited Earth on several occasions. They had made contact with Terrans but due to the instability of the planet's affairs had decided to simply catalogue their discoveries rather than open full diplomatic relations. The arrival of GCV-Seeker at Alpha Centauri was a surprise to the Empirians and though still apprehensive about dealing with Terrans, they decided to renew contact. By the end of 2963 the Terrans had made contact with almost all intelligent life forms in the Milky Way galaxy.

Meanwhile, the Insurgents' conflicts with EARTHCOM and the UFN persisted. The alliances formed with alien nations, the allocation of Earth resources for the maintenance of the resident aliens, and the expenses associated with the space exploration program were all factors that perpetuated the rift. The Earth was still threatened by a depleting ozone layer and yet the UFN had failed to address the problem, instead choosing to continue allocation of resources to space research and the subsidizing of alien nations.

In an effort to save face, the UFN officially declared the Insurgents an outlaw organization in 2965 . All the organization's assets were seized and most members put in confinement at EARTHCOM prison facilities on Earth, Mars, and special colonies on the Moon.

Collaborative studies were conducted with alien nations in technology, religion, and trade. Using Droidan and the Syrion technology, starships were fitted with special Atrian-Alloy hulls capable of using wormholes and flux fields for traversing space. Since unstable flux fields were sometimes dangerous to ships, special structures were built around all the known stable ones. With the help of the Credians and the Syrions, the first accurate galactic navigation's map charted all these intra and interstellar links.

As a result of these advances in technology, intrastellar travel became less tedious and time consuming. Significant advances were also made in cloning, bio-stasis, and propulsion systems..

Intragalactic politics was another area where rapid advances were required. Alien nations had their own unique policies, traditions, and complex systems of government for the Terrans to contend with. Without a thorough knowledge of these issues, it was easy to accidentally offend an alien counterpart which could lead to serious consequences. Alien nations had their own internal problems as well and outside interference was rarely welcome. The balance of power within alien sectors was often threatened by territorial wars.

With progress came new problems. There were pirates and smugglers from all nations. Diplomatic relations became strained for many reasons and were difficult to repair. Meanwhile, splinter groups of the outlawed Insurgents were waging a private war with EARTHCOM forces on every front. It was reported that these splinter groups had formed alliances with rebels from alien nations. Even pirates operated under the guise of the Insurgents. EARTHCOM ships were hijacked and bases were overrun.

EARTHCOM was challenged to maintain law and order in Terran-controlled systems. Impenetrable Insurgent bases and the frequent sorties by pirates and smugglers from all alien nations caused considerable problems for the UFN. Instabilities within alien controlled sectors and the constant threat of war prompted the UFN and the Empirian & Vesperon governments to start investigating co-operative methods of curbing these problems. After five years of diplomatic talks, it was decided that a powerful force of military and research personnel from all respective nations was the answer. Joint military missions would be undertaken. Technology and resources would be shared.

On stardate 05.11.2993, Galactic Command (GALCOM) was formed. Its founding members were the Terrans, Empirians, and the Vesperons. The Genesis star station in Earth orbit, already a 90% military installation, was converted to a fully-functional tactical operations center, and eventually became known as GALCOM HQ (or GHQ). The organization's primary objective was to maintain law and order within its member's regions and to provide assistance to crafts venturing into unknown or hostile territory.

As space exploration progressed, other intelligent life forms were encountered. Some were hostile and others were friendly. As news of the formation of GALCOM spread, opposing factions argued that the stars belonged to no one race and that the division of known space into sovereign regions was unacceptable. Several small wars erupted. During these conflicts, GALCOM craft were sometimes denied access to facilities of non-members while on deep space incursions. Despite this, the UFN and the other governments continued to seek the support of non-member nations and attempted to outline the benefits of defined borders and a military force to maintain law and order in those territories. Most races who did not wish to join remained neutral and maintained a cordial trading relationship with GALCOM members. Strict protocols were established for GALCOM forces travelling through these nation's territories or docking at their space facilities.

On stardate 11.06.2998, contact with the GALCOM research vessel GCV-Stargazer was lost. This ship had been on a routine patrol in the Gammulan quadrant. At first no one knew what had become of the vessel. Then the ship's communications probe was retrieved by another GALCOM ship in the Credian quadrant. This log revealed that the ship had been attacked without warning by a then unknown alien race. The entire crew had perished.

GCV-Recovery and GCV-Starsearch, the most heavily armed and combat ready vessels in the Gammulan quadrant, were dispatched to the vicinity of the Stargazer's last transmission. These two ships were never heard from again.

It is now 3000AD and the galaxy is bracing itself for war. GALCOM is building a large and powerful fleet commanded by a mixture of seasoned combat veterans from its member nations and promising young commanders fresh out of the academy. They are all well armed and confident, and determined to seek revenge for the loss of these three great vessels and the souls they carried.

3.1 Galactic Time Line

2328 : First colony built on Mars. Consisted mainly of military and research personnel but later expanded to include commercial ventures in the areas of biology, cartography, mineralogy, and military research.

2899 : A Terran deep space probe, Voyager 2, discovers extra-terrestrial life in Alpha Centauri. Space research is boosted by 75%. Work begins on new engines, reactors, and space craft components.

2907 : The first long range MassDrive reactor, which used a mineral mined from asteroids as fuel, is developed.

2910 : The android Arianne sends back supporting data of intelligent life from its flyby of Alpha Centauri.

2915 : Scientists continue to explore methods of halting the human body's metabolism in order that it could endure deep space travel. The first stasis experiments are performed on animals.

2919 : Stasis experiments are performed on Terran subjects. It becomes possible to reduce the body's metabolism by stasis. Some subjects were in this form of 'hibernation' for as long as 5 years with no side effects. It becomes possible for a body to remain in stasis indefinitely. By further expanding on this technology, a device is developed which creates the proper conditions within an environment, such as a space ship, that would allows the body's metabolism to progress at its normal rate relative to the distance traveled. This, and the increased speeds of new engines, makes space travel far easier. Travelling vast distances at several times the speed of light, takes a matter of months instead of years. The term light speed (LS) was used in measuring the distance traveled by a spacecraft. Lightspeed is equivalent to the speed of light or approximately 299,800 km/sec.

2925 : The first military research spacecraft is completed. The Sphinx class Battlecruiser, Seeker. This craft was fitted with a MassDrive reactor and Syrian Mark IV engines. With advanced hull design and life support systems this ship could withstand the harsh forces of interstellar space on its journey to Alpha Centauri. It is capable of speeds in excess of several times the speed of light.

2926 : GCV-Seeker is commissioned for deep space travel. Its crew, all veteran astronauts, were hand-picked from advanced nations on Earth. The crew was put in stasis during the long journey. Their mission: to explore Alpha Centauri and 'make contact' with intelligent life.

2928 : GCV-Seeker is intercepted by an alien lifeform. Contact is made with mankind's first extra-terrestrials, the Empirians.

2965 : The UFN declares the Insurgents an outlaw organization.

2967 : The first navigation chart is completed. It divided the galaxy into four quadrants with each being named after the predominant occupying alien nation.

2993 : The situation in the Terran quadrant went from bad to worse and the instability in other quadrants threatens to cause even more problems. EARTHCOM is hard pressed to carry out its duties. Galactic Command, GALCOM is formed.

2998 : GCV-Stargazer, GCV-Recovery, and GCV-Starsearch are lost in the Gammulan quadrant.

3000 : Galactic Command steps up its recruiting campaign as a result of increased conflicts within the Terran quadrant, the disappearance of more vessels in the Gammulan quadrant, and rumors of an invasion by an alien force.

3.2 Alien Nations

The image of important ACM personalities is used as a representation of the appearance of each race. These 'special' people exist in ACM and can be used to create a story line for ACM scenarios. Unlike the Supreme Commander who rarely leaves GALCOM HQ unless on diplomatic missions, the others are Commanders just like the player and have their own patrol zones and tasks scripted in ACM.

Alien Nation	**Terrans**
Homeworld	**Earth / Sol**
Location	**Terran Quadrant : Sector D9**
Prime Attribute	**Research**
GALCOM Member	**Yes**
Tech Level	**3**

The Terrans have evolved into a slightly aggressive nation. They are interested in space travel and allocate huge amounts of resources to research and development of advanced technologies in the areas of space travel and defense systems. The Terrans are waging an unsuccessful war with the Insurgents on Earth and in space. Several GALCOM fleets of Terran ships are on permanent station in Terran and Empirian territories.

The Terrans are currently members of Galactic Command.

Karl Reines, Supreme Commander, Head Of Galactic Command

Mark Stryker, Fleet Commander

Nat Mason, Strategic Commander

Randy Karynia, Tacops Commander

Jack Dearth, Tacops Commander

Alien Nation	**Empirians**
Homeworld	**Centris / Alpha Centauri**
Location	**Terran Quadrant : Sector C8**
Prime Attribute	**Research**
GALCOM Member	**Yes**
Tech Level	**2**

The Empirians have been waging a losing war with pirates and smugglers for decades. Due to their advanced research background, their territories have always been the targets of these undesirables. The Empirian Starforce HQ in orbit around Cronus is the most heavily defended base in the Terran quadrant. However, frequent skirmishes have proven to be costly for the Empirian high command to the point of preventing the construction of additional star stations within their territories.

Then there are the Sla'ti. Long before the Empirian/Terran contact, the Sla’ti had plagued the Empirians in space and on their homeworlds. The sole purpose of the Sla’ti is to profit from technological advances made in the region. Their influence spans the galaxy and while they have some outside alliances, they are hated at home. It is rumored that the high counsel of the Empirian supreme command had ties to the Sla'ti which may be why all attempts to eradicate them have failed. The Sla'ti bases on the Empirian planets Nevuela and Varan are virtually impenetrable. Neither of these planets is considered to be of economic value to the Empirian high command, so after several lopsided skirmishes which resulted in heavy government losses, the planets have been left to their own devices.

Shortly after GALCOM was formed, a Sla'ti vessel captured a Terran transport convoy. Some of the crew were said to have been taken to a labor camp on Varan. As a result, the Terran government consulted with the Empirians and soon after a GALCOM patrol and strike force was dispatched to the region. The fleet's primary objective was to block the Sla'ti shipping routes, capture their ships, and eventually lead a strike on their bases. What at first appeared to be a quick and simple mission turned out to be a war that would last for many years.

Soon, rumors surfaced that contended that the Sla'ti were not responsible for the original attack on the Terran convoy. Rather, it is insinuated that factions within the Empirian government had orchestrated the attack in order to draw GALCOM into deploying troops into the region.

The Empirians also allocate huge amounts of resource to defense research. The Empirians are currently members of Galactic Command.

Ugo Ra-Zin, Strategic Commander

Alien Nation	**Vesperons**
Homeworld	**Canaan / Omicron Eridani**
Location	**Terran Quadrant : Sector B6**
Prime Attribute	**Explorers**
GALCOM Member	**Yes**
Tech Level	**1**

This slightly aggressive race are essentially explorers and traders operating from their home world on Canaan. Their system is isolated from the normal space lanes and they have been trying for years, with little success, to build a stable jump point linking Omicron Eridani and Procyon. This would provide an easier access to the Credian quadrant and the well-traveled trade routes beyond. The jump point in Ramis has exits that end up near Barnard's Star and Alpha Majora. With new technology, the Vesperons thought to build a special jump point that would allow them to direct one of these exit points into Procyon. Unfortunately, once the technology hurdles were surmounted, another problem was discovered. Procyon, because it was isolated, had become a haven for pirates, smugglers, and other undesirable galactic rejects. Vesperon fleets that took the long way around to wage war with the occupants of Procyon were usually unsuccessful. They had to travel too far to refuel, repair, and rearm. This led the Vesperons to try a policy of seeking alliances with other, more capable, alien nations in the hope of defeating the undesirable inhabitants of Procyon. They then could proceed with the development of a special device that would allow them access to Procyon directly from Ramis.

This strategy has been blocked by GALCOM's rejection of the plan. GALCOM claims that no one would gain from annexing Omicron except the Vesperons, and site GALCOM directives that prohibit interference in internal conflicts that were beyond the alliance's jurisdiction. As the system does not belong to the Vesperons, any hostile invasion would be in violation of GALCOM regulations.

The Vesperon government is also accusing the Empirians of condoning the actions of the Sla'ti. To make matters worse, Tau Ceti, the only short link to the Syrion quadrant is a constant source of bounty for pirates who routinely escape either to Alpha Centauri or to Alpha Majora. This prevents any non-military base from being built in the system. The Vesperons claim that Tau Ceti was also the responsibility of the Empirians who they feel should assist in the construction of a military station there. Citing economic constraints, the Empirians declined to participate in the construction of the station. The situation in Tau Ceti remains unchanged. The inhabitants of Procyon aren't budging and the relations between the Vesperons and the Empirians remain strained.

The Vesperons remain committed to gaining control of Procyon and annexing Omicron Eridani to Procyon. They allocate a huge amount of resources to technological and defense research. The Vesperons are currently members of Galactic Command.

V’lith R’ar, Vesperon Military

Alien Nation	**Credians**
Homeworld	**Ronus-IV / Trenis**
Location	**Credian Quadrant : Sector I7**
Prime Attribute	**Explorers**
GALCOM Member	**No**
Tech Level	**1**

The Credians are very advanced in exploration. It is rumored that they have traveled throughout the galaxy and perhaps beyond. They are currently involved in a war with the Zelons over an ancient artifact that was supposedly recovered by a Credian exploration team from the wreckage of a Zelon spacecraft in Tau Ranis. The Credians claim they don't posses this item but the Zelons insist that they have proof that they do. Hostilities broke out over eight months ago and though the Zelons are a small nation they are putting up a brave fight.

The Credians allocate large amounts of resources toward exploration. The Credians are not members of Galactic Command.

Alin Tin, Credian Military

Alien Nation	**Kandorians**
Homeworld	**Lydan / Krynon**
Location	**Credian Quadrant : Sector I5**
Prime Attribute	**Warriors**
GALCOM Member	**No**
Tech Level	**4**

This race is one of the most advanced in warfare. They are extremely aggressive but are rarely involved in prolonged conflicts. They are very close their sister race the Mandorians. They have recently joined forces with the Mandorians to drive Valkerie and Gammulan forces out of the Credian quadrant.

The Kandorians allocate a vast amount of resources toward weapons technology. The Kandorians are not members of Galactic Command.

Z’tar Ka-Hi, Kandorian Military

Alien Nation	**Mandorians**
Homeworld	**Pravis / Cyrian**
Location	**Credian Quadrant : Sector H5**
Prime Attribute	**Warriors**
GALCOM Member	**No**
Tech Level	**3**

Like their sister race the Kandorians, the Mandorians are warriors, but with a less aggressive nature. They have been engaged in a war with the Valkeries for more than ten years over Rinaal, a planet on the edge of the Credian and Gammulan quadrants. Though the Valkeries were the first settlers of Rinaal, limited resources and a catastrophe that destroyed half the planet forced them to abandon it and migrate to Omega Centauri. The Kandorians were able to rebuild the planet and use it for training and research bases. It wasn't long before small colonies were constructed. At present, the planet is fully populated. The Valkeries decided to return to Rinaal and though the Mandorians welcomed them to settle among their people, the Valkeries insisted upon reclaiming the planet as their own and adopting a Valkerie government. War broke out and continues to the present time.

The Mandorians divide their resources between weapons technology and galactic exploration. At present, the Mandorians are not members of Galactic Command.

C’tha Ma, Mandorian Military

Alien Nation	**Zelons**
Homeworld	**Zelana / Lanix-V**
Location	**Credian Quadrant : Sector G5**
Prime Attribute	**Traders**
GALCOM Member	**No**
Tech Level	**0**

The Zelons are a mild race of religious traders who will buy or sell anything if it makes them a profit. They are notorious for securing the largest and most ambitious deals in the space lanes. They are currently at war with the Credians over an ancient artifact they claim was taken by the Credians from the crash site of one of their spacecraft. Due to its strategic location in the galaxy, the Zelon system Lanix V is a very important link to the rest of the galaxy.

The Zelons allocate most of their resources to trading and exploration. The Zelons are not currently members of Galactic Command.

Z’gar, Zelon Military

Alien Nation	**Valkeries**
Homeworld	**Otura-6 / Omega Centauri**
Location	**Gammulan Quadrant : Sector G2**
Prime Attribute	**Warriors**
GALCOM Member	**No**
Tech Level	**3**

The Valkeries are a very aggressive and ruthless race. They do not welcome strangers in their regions and frown upon any neighbor who has access to a technology more advanced than their own. They are sworn enemies of their sister nation the Falkerie and have aided the Gammulans in the invasion of the Falkerie homeworlds. They are currently at war with the Mandorians over Zelana, a planet their ancestors abandoned many centuries before. They are close allies of the Gammulans.

The Valkeries allocate resources toward exploration and weapons technology. The Valkeries are not currently members of Galactic Command.

Z'dan Nad, Valkerie Military

Alien Nation	**Falkeries**
Homeworld	**LV-103 / Alpha Cygni**
Location	**Gammulan Quadrant : Sector G1**
Prime Attribute	**Traders**
GALCOM Member	**No**
Tech Level	**1**

The Falkerie are a mild race of traders and explorers. Their homeworlds are densely populated by citizens of different nations as a result of their travels within the galaxy. The Falkerie planets are very rich in Radine deposits making them extremely valuable. The Gammulans invaded the Falkerie homeworlds in order to seize control of these Radine mines. The Falkerie fought long and hard for many years but were no match for the Gammulans. They are currently under Gammulan rule but a small group of resistance fighters are waging a silent war to liberate their homeworlds.

The Falkerie resources are allocated toward trading since weapons research is forbidden by their Gammulan rulers. They are not currently members of Galactic Command.

Vli Ron, Falkerie Military

Alien Nation	**Gammulans**
Homeworld	**Gamma-1 / Gammula**
Location	**Gammulan Quadrant : Sector F2**
Prime Attribute	**Warriors**
GALCOM Member	**No**
Tech Level	**5**

The Gammulans are the most aggressive and perhaps the most advanced race in the galaxy. They are also the largest and richest nation. For many years the Gammulans preyed on weaker nations and advanced in areas of research and weapons by stealing these technologies. Trading within their territories continues to prosper even though (or perhaps because) they are haven for pirates and smugglers.

The Gammulans have fought three unsuccessful wars with the Syrions and Droidans in an attempt to annex the Alpha Canis star system. In order to acquire sufficient resources to finance another conflict with the Syrions and Droidans, the Gammulans invaded their weaker neighbors the Falkeries who had refused to join in the war against the Syrions and Droidans. They took over the Falkerie worlds thereby controlling over 90% of the Radine deposits in the quadrant. An alliance with the Valkeries assisted the Gammulans in infiltrating the Falkerie defense system in the early stages of the conflict. In order to return the favor, the Gammulans are supporting the Valkerie war effort against the Mandorians over another territorial matter. When GALCOM was formed, the Gammulans were refused membership because of their aggressive nature and general disregard for law and order. As a result, relations between the Gammulans and GALCOM member nations have remained strained for many years.

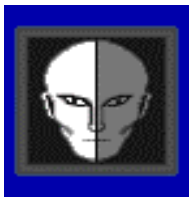
The Gammulans allocate most of their resources to weapons technology. The Gammulans are not members of Galactic Command.

Darien Mane, Head of Gammulan War Council.

Gla Zir, Gammulan Military

Rygan, Gammulan Military

Tanis Veer, Gammulan Military



Alien Nation	**Syrions**
Homeworld	**Sarien / Alpha Canis**
Location	**Syrion Quadrant : Sector E4**
Prime Attribute	**Research**
GALCOM Member	**No**
Tech Level	**1**

The Syrions are highly advanced cyborgs and one of the most intelligent nations in the galaxy. No one knows quite where they came from, and since only Syrions themselves are allowed anywhere near their highly restricted home base, speculation is high. They appear to be mild mannered at first but can become quite aggressive if intimidated. They rarely venture out of their quadrant and when they do it is usually on research and development trips. They refuse to be referred to as cyborgs and think of themselves as organisms that have descended from a higher intelligence. When war broke out with the Gammulans their casualty rates ran at only about 1%. This is because most of their ships were unmanned robots with very advanced systems.

It is not clear how the Syrions allocate their resources but due to their high level of intelligence and the items found at their bases, it can be assumed that they concentrate heavily on all forms of advanced technology. The Syrions are not currently members of Galactic Command.

Tani Shar, Syrion Military

Alien Nation	**Droidans**
Homeworld	**Alteris / Vega Eridani**
Location	**Syrion Quadrant : Sector B4**
Prime Attribute	**Research**
GALCOM Member	**No**
Tech Level	**2**

This race is closely related to the Syrions but the relationship is not clear. Where the Syrions are part machine and part living tissue, the Droidans are all machine. No Droidan has ever been encountered outside the Syrion quadrant. They have been known to join in against the Gammulans in defense of the Syrion quadrant. It is certain that the Gammulans, and pretty much every undesirable entity in the galaxy, are interested in learning the secrets behind the Syrion and Droidan nations. Due to the high level of security within their territories, it is impossible to venture into any restricted section of the Syrion quadrant without being intercepted.

There are those who believe that the Syrions and Droidans are responsible for linking the galaxy with wormholes and flux fields the way it is now. These claims have not been acknowledged by either race.

Mega Byte, Droidan military

3.3 Alien Castes

The alien nations in BC3K belong to several castes with unique attributes and goals. Castes can be either aggressive or harmless and their allegiance to one another can be ally, enemy, or neutral. Certain castes can also be found as crew members serving aboard craft of another caste. For example, a military caste craft might typically contain paramedics, system engineers, flight engineers, and Marines.

Note: See Appendix N, for a detailed description of the various castes.

4. ENLISTING IN GALCOM

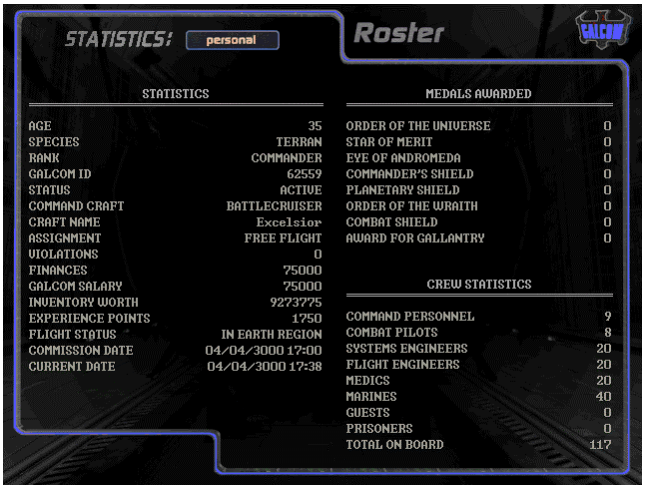
4.0 Tour Of GALCOM HQ starstation

Galactic Command HQ is located at the GALCOM star station in orbit around the Terran home world, Earth. It is one of the most advanced and heavily defended stations in the Terra quadrant. GALCOM handles all combat and tactical operations from this station. It also handles some planetary conflicts in co-operation with EARTHCOM. All new GALCOM commanders take command of their first ship here at GALCOM HQ. Like other star stations, GALCOM HQ has many facilities for use by commanders who dock here.

You can access various sections of GALCOM HQ or station or base you are docked at from the Central Command computer, **CENTCOM**.

You can move from system to system via the spinning GALCOM logo in the top right corner of the screen.

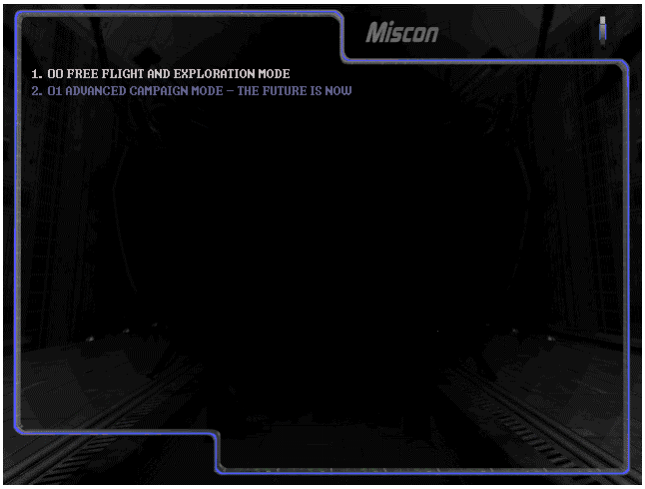
4.1 ROSTER [Enlisting]



When you start the game the first time you will be taken to the **ROSTER** computer where you will create your alter-ego. To create, delete or select a new alter-ego, **[LEFT CLICK]** on one of the buttons on the lower left. If you select an existing alter-ego you may then choose one of your saved games to continue from where you last saved.

When creating a new alter-ego type in your name and press **[ENTER]** then type in a name for your Battlecruiser and press **[ENTER]**. When you are done, **[LEFT CLICK]** on **ACCEPT.**

4.2 MISCON [Choosing A Career]



Once you have selected a player in Roster or have created a new alter-ego, you will be taken to the Mission Control (**MISCON**) computer where you will select your campaign scenario. Select one of the displayed scenario titles and click on it to display your orders. Once you have read your orders, **[LEFT CLICK]** on **ACCEPT**. You entry will then be recorded and your personal stats displayed.

PERSONAL STATS

AGE Your current age which starts at 35.

SPECIES Your species which is always Terran.

RANK Your starting rank is Commander.

GALCOM ID This is a unique number assigned to all new commanders. It references a database of your personal statistics and is also used to determine your security clearance.

STATUS The current status of the selected commander.

- **ACTIVE** Still on active duty.
- **MIA** Contact was lost with your ship in hostile or uncharted territory. This marks the end of your career. A profile with this status cannot be selected to play the game.
- **KIA** Confirmed that you were killed on duty. A profile with this status cannot be selected to play the game.
- **CMA** This flag indicates that you were court-martial for violation of GALCOM regulations. A profile with this status cannot be selected to play the game.

COMMAND CRAFT The type of ship you have been assigned to command.

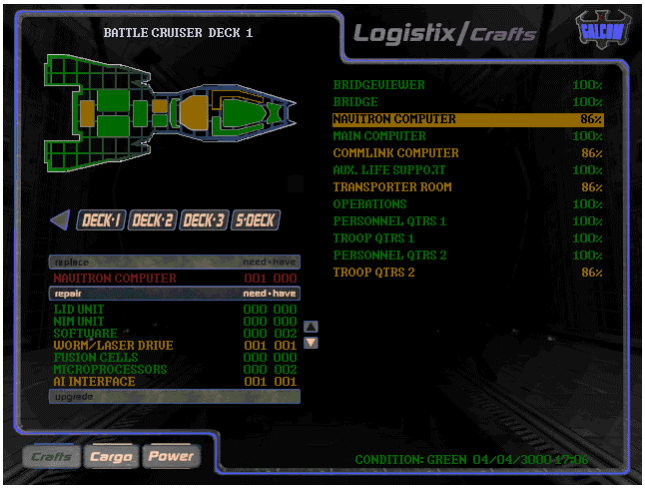
ASSIGNMENT Your current assignment. This is set to Free Flight by default and changes to Advanced Campaign Mode once you start playing an ACM scenario selected from **MISCON**.

VIOLATIONS	Number of reported GALCOM violations. During the game, you will receive violation points each time you violate any of the GALCOM directives.
FINANCES	Your available credits for trading and repairs.
GALCOM SALARY	Every 24 hours, GALCOM transfers your salary credits to your cash reserves as payment for your services. Your salary during an ACM campaign is 15% higher than in Free Flight.
INVENTORY WORTH	The total value of inventory.
EXPERIENCE POINTS	During the course of your career you will be awarded experience points for certain missions or feats that you perform. Experience points are also deducted each time a violation is recorded against you.
MISSIONS TO DATE	Number of completed missions or assignments to date.
FLIGHT STATUS	Your current location.
COMMISSION DATE	The date & time you took command of your ship.
CURRENT DATE	Current date and time.

The number of medals you have won to date, if any, are listed on the right side of the display along with a summary of your ship's crew complement. You can also view the attributes of your ship's personnel. The roster is based on class. This class can be changed by positioning the mouse over the icon marked **PERSONAL** and selecting the desired class from the drop-down menu.

Note: See Section 19: Personnel Operations for more info on personnel attributes and Section 24.1: Galactic Command Ranks & Medals.

4.3 ENGINEERING [Repair Operations]



Every star station and star base has facilities which are capable of performing repairs on docked space craft. At these facilities, you have to pay for all repairs performed except at GALCOM HQ where all repairs are performed free of charge. Sometimes, spare parts may not be available and therefore some damaged systems may not be repaired to 100% functionality.

This engineering computer is identical to the one on your Battlecruiser called the **LOGISTIX** computer.

Docked at a station, all repairs are performed by the station's personnel. On your ship, they are done by your ship's engineers.

Selecting A System For Repair

Once you access the engineering computer, the type of buttons and number depends on the type of ship you are currently docking. If your currently docked craft is a Battlecruiser, there will be buttons representing the Battlecruiser and all its support craft currently on-board. These may include the ship's Interceptors, shuttles, and All Terrain Vehicles (ATVs).

[LEFT CLICK] on one of the listed ships you would like to repair or inspect:

BC	Battlecruiser
INT	Interceptors
SH	Shuttles
ATV	All Terrain Vehicles

Selecting BC displays the schematics for the Battlecruiser and allows you to choose a specific deck on which to perform repairs. The other buttons allow you to perform repairs on any craft that is currently on-board the Battlecruiser.

The Repair screen is divided into three sections. The top left area displays a schematic diagram of the craft and all its systems. The area on the right displays all the crafts systems and their operational condition. The lower left is the orders area used for processing your repair orders.

The condition of the ship's systems are color coded as follows:

GREEN	Operational
BLUE	Already undergoing repairs
YELLOW	Slight or minimal damage. Depending on the damaged component, you should be able to perform a repair
RED	Destroyed system. Replace or upgrade

Repairing The Selected System

To select a system for repair, **[LEFT CLICK]** in the ship schematic or in the systems list on the right.

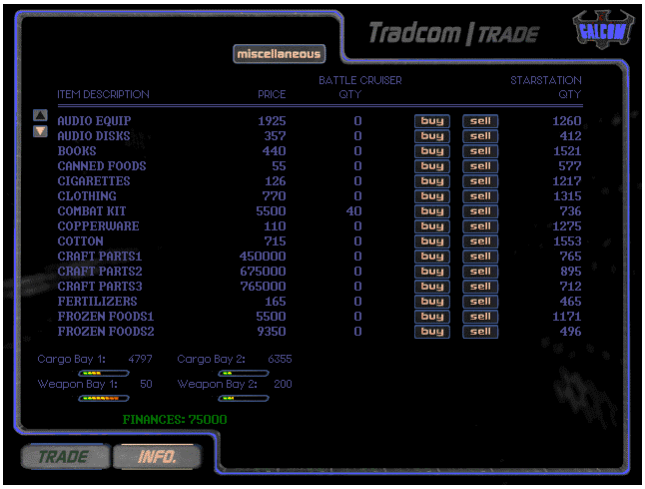
Once you have selected the system that needs repair the computer will display the repair time. You will also be presented with a bill for the repair if the station charges for repairs. To proceed with the repairs, click on the **REPAIR** button. If you don't have sufficient funds for the repair, it will not be performed. If the repair is done, the status of the system will be reset to green and the system will be fully operational.

If a system is badly damaged or destroyed, you can only replace it with a new one. If this is the case, a **REPLACE** option will also appear. Usually replacements take longer to perform and cost more.

You can select another deck or ship to repair by selecting the **LEFT ARROW** button

To exit the **LOGISTIX** computer, select the spinning **GALCOM** logo.

4.4 TRADCOM [Trading Operations]



The **TRADCOM** computer is used for trading transactions and is available when your Battlecruiser or shuttle is docked at a starstation. It is also available when a shuttle or ATV docks at a surface starbase. The STARSTATION or STARBASE QUANTITY column lists items available at the facility you are docked at. The SHIP QUANTITY column lists items you currently have in your cargo bays.

The size of the cargo bays depend on the type of ship that is docked.

The items are listed based on class. This class can be changed by positioning the mouse over the icon marked **MISCELLANEOUS** and selecting the desired class from the drop-down menu.

The available classes are:

MISCELLANEOUS ITEMS	-	Normal trade items
NORMAL MINERALS	-	Normal minerals
REPAIR MINERALS	-	Minerals used for some repair tasks
SPARE PARTS	-	Spare parts for all ships
WEAPONS	-	Weapons
ILLEGAL ITEMS	-	Items deemed illegal by GALCOM
PERSONNEL	-	Personnel for hire roster

The Battlecruiser has two cargo bays, each with a capacity of 7500 units. It also has two weapons bays, each with a capacity of 250 units. Fuel for the nuclear reactor (**RADINE**), shield systems (**PLUTONIUM**),and cloaking system (**IRIDIUM**), are stored in special tanks with storage capacities of 25000, 10000, and 1000 units respectively.

The bottom of the screen displays the available space in your cargo and weapon bays and your current finances. Weapons are only stored in weapon bays and regular cargo are distributed among the two cargo bays. Certain items can only be stored in a specific bay. Each item has a displacement value which determines how much storage space it requires. You can check an item's displacement value and storage bay by moving the pointer to the items buy icon. If an item's displacement value exceeds the currently available storage space, it cannot be purchased.

Note: If your Chief Engineer remembered to a make note about repair parts he requires for pending repair jobs, the amount of the items required will be indicated in the second column next to the item name.

Trading

To purchase an item and have it marked for transfer to the Battlecruiser, **[LEFT CLICK]** on the **BUY** icon. The purchase price will be deducted from your finances and the item will be transferred to your ship if you have sufficient cargo space. To sell an item and have it marked for transfer to the facility, left click on the **SELL** icon. The selling price will be added to your finances and the item transferred to the facility once you exit. You can scroll either list by using the **UP** and **DOWN** arrow icons.

Recruiting Personnel

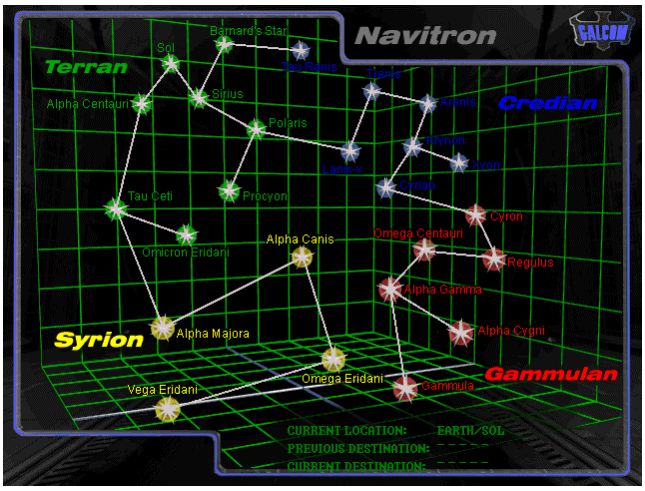
The Battlecruiser can host up to 237 personnel. You can recruit replacement system engineers, flight engineers, medics, and Marines if they die in combat. Selecting the **PERSONNEL** icon will display the current roster of personnel available at this facility for hire. You must have a vacant slot in your personnel file in order to recruit replacement personnel. If you have a vacancy, click on the **RECRUIT** icon to recruit someone in that class. If the deal is valid you will be charged a recruitment fee by this facility which is displayed when your pointer is over **RECRUIT**. You cannot sell or fire personnel. Once you've got them, you're stuck with them until they die.

Planet Information

Clicking on the **INFO** button in Tradcom will display info on your current planet and system.

Note: See Appendix S, for a complete list of trade items.

4.5 NAVITRON [Galactic Course Plotting]



The Battlecruiser 3000AD galaxy contains 25 star systems, 75 planets and 145 moons spread out nearly 100 space regions. Without a map of this galaxy, you would be virtually lost in space. The **NAVITRON** computer is used to plot waypoints to any region you wish to visit.

Note: See Section 13 : Navitron Computer, for more info on the Navitron computer.

4.6 COMMLINK [Communications Link]

The **COMMLINK** computer serves as an internal and external communications link. All messages generated internally by your crew and those from external sources are displayed here. Use the **ARROW KEYS** to scroll up and down the message list. Messages are displayed in the log as they are transmitted, unsorted, with a date/time stamp and the name of the communicating party.

This main computer is also linked to a multi-channel version located on the bridge and cockpits of all crafts.

LOG	-	Displays the current log of messages
STATS	-	Displays your personal stats
CLEAR	-	Allows you to clear the log if you get a low disk space warning

Note: See Section 17 : Communications Link Computer, for more on communications.

4.7 LAUNCH BAY [Launch Operations]

The launch bay interface is where you request launch clearance from Central Command. To leave the computer system interface and enter the launch bay, select **LOG OFF** from the spinning GALCOM logo. Once you've logged off, you will be at the station's pre-launch bay. From here, select **LAUNCH BAY** to enter the launch bay or **LOG ON** to jack back into the Central Computer system.

Once you enter the launch bay, you will see your Battlecruiser undergoing pre-launch preparations by an android.

To launch, move the mouse over the ship and click on **LAUNCH**. You can also select **CENTCOM** to return to Central Command.

5. ASSUMING COMMAND

5.0 Commander On the Bridge!

The Battlecruiser bridge is the main operations area of the ship. As you emerge from the turbo-shaft doorway, your crew come to a state of alert readiness. Greetings all around.

The bridge area is a large area with virtual reality consoles and chairs at various locations on floor and above floor levels. There are some auxiliary personnel, ensigns, already going through diagnostic checks as the station launch ops android issues the launch clearance command allowing the ship's autopilot to launch from the station. While your crew is preparing to brief you on the results of their analysis, you take a few minutes to chat with your command personnel.

5.1 Command Personnel Check

FLIGHT OFFICER

Tommy Brooks
Helm control and other flight related tasks.

NAVIGATION OFFICER

Lanna Kasugi
Navigation and galactic cartography.

COMMUNICATIONS OFFICER

Sandy Crane
Communications.

TACTICAL OFFICER

Kara Moran
Tactical operations including target acquisition and weapons deployment. Deployed support ship command and control.

COMBAT OFFICER

Paul Resnig
Combat operations including Marines and support ships command & control. In charge of 20 combat Marines and 8 pilots.

MEDICAL OFFICER

Allison Weeks
Medical operations including surgeries, vaccinations and cloning. In charge of 20 medics.

CHIEF ENGINEER

Kendrick
Engineering and power allocation operations. In charge of 20 systems engineers and 20 flight engineers.

RESEARCH ENGINEER

Jo Lanix
Research and Development. Artifacts analysis and installation support.

After the briefing and general introductions, Paul, Allison, and Kendrick leave for Operations, MediBay, and Engineering where they are stationed most of the time. You saunter over to your station.

Note: See Section 16: Personnel Scan Computer, for details on tracking personnel and Section 19: Personnel Operations for more info on the ship's crew.

5.2 Systems Status Check

Well, you're the commander of this ship, so naturally, you take your seat at your station and securely fasten your harness. Gently and consciously, you attach the VR console connectors to your temples, insert the tiny personal **COMMLINK** communicator into your right ear and gently lower the COMMLINK microphone over the general vicinity of your mouth. Taking one final look around with your own eyes, you lower the VR visor over your eyes. The system verifies your identity by scanning your eyes and you hear the gentle voice of 'Mother', the ship's central computer, "Welcome Commander…", she says soothingly, "..would you like me to initiate a systems status check?" You respond with a single thought pattern and Mother proceeds to outline the status of each bridge system as she activates and tests each one sending the data to you via your VR console. On a distant subliminal channel, you could hear dozens of internal communications being filtered through the COMMLINK system. That sound always gave you a headache so turn it off and put you main channel on standby so that you can only hear and receive messages directed to by the bridge crew.

…damn it feels good to be back. You slowly reach into your pocket, retrieve your lucky Empirian rabbit's foot and a pair of ivory die. After a brief moment spent fondling these ancient artifacts you hang them above your console.

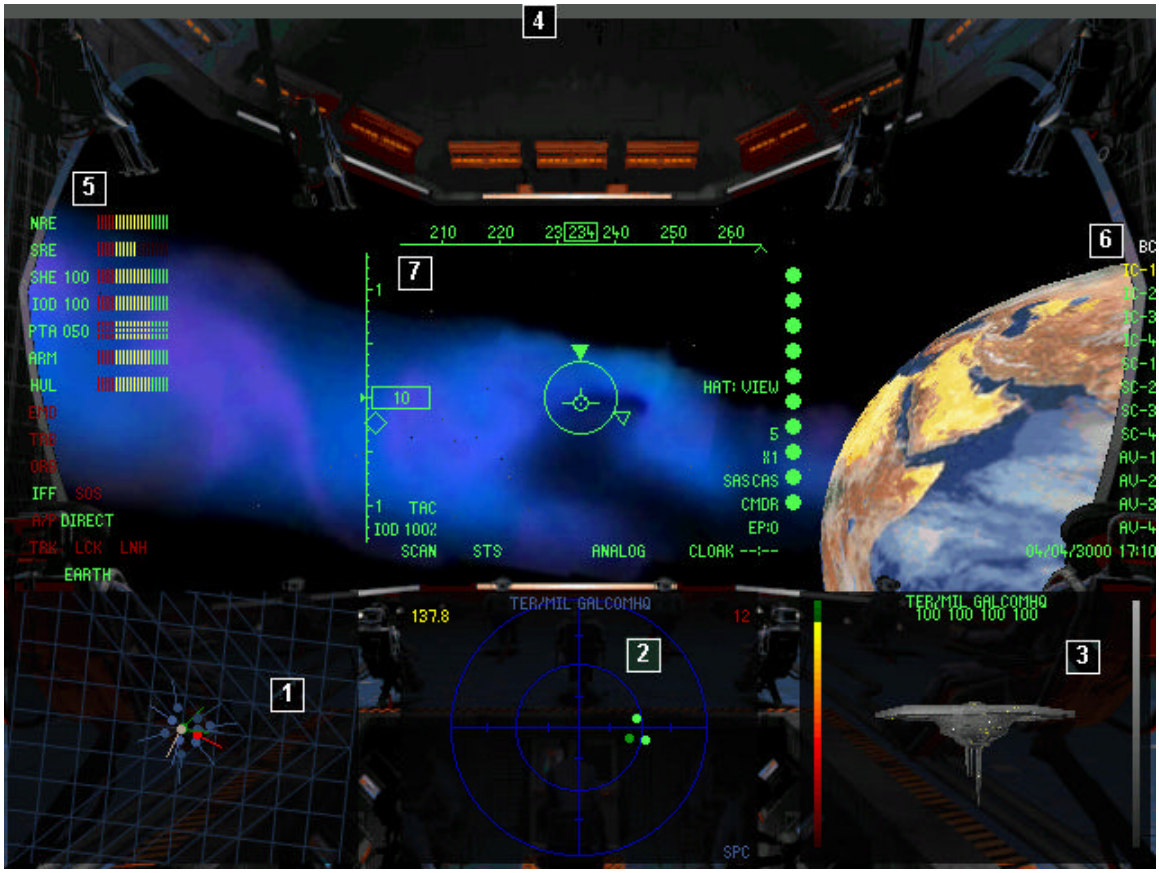
Mother finishes her systems analysis checks and displays a report on the screen just as a message from Allison appeared, reminding you to stop by later for your stasis tests. You quickly scan the archive database. Other than reports of a newly discovered fluxfield in Alpha Centauri, there is nothing new. You decide to proceed with the status checks.

6. BRIDGE SYSTEMS

6.0 Overview

The **BRIDGEVIEWER** is the largest view area on the bridge. The display shows you a view of the outside world but it is not a window into the world in the common sense of the term. The Battlecruiser is a combat ship and therefore has very few portholes which could make it vulnerable to attack. Instead, its main view of the outside world is provided by its internal navigation systems with triangulated data from several GALCOM probes and satellites scattered across the galaxy. If anything should go wrong with the GALCOM Communications & Navigation, COMNAV system, most of the GALCOM ships linked to it would be literally blind and would have to rely on probes launched from the ship for general navigation and tactical data analysis.

There are four main computer systems on the bridge linked directly into a virtual reality sub-system which projects data from these systems directly into your head set visor. Several of the **BRIDGEVIEWER** options can operated using the mouse. The following systems are projected onto the display.



[1] Navigation Interface Display, NID

The **NID COMPUTER** is primarily used for navigation and probe monitoring. The **[J]** key is used to activate the system and put it in command mode. You can use the same key to cycle the various modes and **[SHIFT+J]** to turn it off. You can also **[LEFT CLICK]** in the NID display to access its operating modes.

Note: See Section 7. Bridge Systems – NID Computer

[2] Tactical Scanner, TACSCAN

The **TACSCAN COMPUTER** is used for target acquisition and weapons delivery. The **[K]** key is used to activate the system and put it in command mode. You can use the same key to cycle the various modes and **[SHIFT+K]** to turn it off. You can also **[LEFT CLICK]** in the **TACSCAN** to access its operating modes.

Note: See Section 8. Bridge Systems – TACSCAN Computer

[3] Computer Video Display, CVD

The **CVD COMPUTER** has several modes varying from video link to **NID** and **TACSCAN** targets to personnel options. The **[L]** key is used to activate the system and put it in command mode. You can use the same key to cycle the various modes and **[SHIFT+L]** to turn it off. You can also **[LEFT CLICK]** in the **CVD** to access its operating modes.

Note: See Section 9. Bridge Systems – CVD Computer

[4] Communications Link, CommLink

The bridge also has a link to the main **COMMLINK** communications computer via a multi-line display at the top half of the **BRIDGEVIEWER**. This supports two lines of display and a log of the last fifteen messages transmitted. You can also change the message delay time which determines how long the messages are displayed.

To access the bridge **COMMLINK** menu, position the mouse at the top edge of the screen and **[LEFT CLICK]** on the Grey bar that appears. You can then:
(a) view the last fifteen messages displayed and
(b) change the message delay from one to ten seconds. To clear the display, **[LEFT CLICK]** anywhere on the bridge.

Note: See Section 17: Communications Link Computer

[5] Systems Status Display, SSD

The left side of the main **BRIDGEVIEWER** hosts the **SYSTEMS STATUS DISPLAY** containing several ships systems, some of which you can modify with the mouse. Those systems are as follows.

Nuclear Reactor Status, NRE

This indicator shows the current power output of the ship's nuclear reactor based on the type of reactor installed. If the nuclear reactor ever goes off-line, the ship's systems will shut down causing a severe catastrophe. A breach in the reactor core due to damage or sabotage is the primary cause of nuclear destruction. During times of power shortage, the internal fail-safe system will auto-allocate power to the ship's critical systems (i.e., life support) until the power output reaches a normal level. Power allocation is performed via the **LOGISTIX** computer.

Solar Reactor Status, SRE

This indicator shows the current power output of the ship's solar reactor based on the amount of solar energy that it has converted to power units. The amount of solar power converted by this reactor is based on the status of the solar panels. To extract solar energy, the ship must be at an orientation which allows the rays of the source to hit the panel at an angle that is perpendicular to the surface of the panel. In a severe power crisis, the solar reactor can convert enough power to support the ship's systems until the nuclear reactor is back on line.

Shield Protection Status, SHE

This indicator shows the current level of protection that the shield is providing. The maximum amount of protection depends on the type of shield installed. The higher the shield level, the higher then protection it provides for the hull. If the shield is breached, the weapon hits to the ship will be absorbed by the hull armor.

You can **[LEFT CLICK]** on this symbology to adjust the shield settings.

Ion-Disruptor Array, IOD

This indicator displays the current setting of the ship's main laser weapon system. Arming the weapons system activates the Ion Disruptor Array laser. The strength of the laser intensity determines the amount of damage inflicted on the target. The higher the setting, the slower the recharge rate, and the slower the firing rate.

You can **[LEFT CLICK]** on this symbology to adjust the laser settings.

Passive Target Acquisition, PTA

This indicator displays the status of the ship's **PTA** weapon system which controls the three laser turrets mounted on the ship. When the **PTA** system is activated, it displays the current recharge rate setting and the three bar graphs represent the fore, mid and aft turrets which also fluctuate as the turret fires and recharges. The intensity of the laser turrets can be modified from this display. The strength of the laser intensity determines the amount of damage inflicted on the target. The higher the intensity, the slower the recharge rate, and the slower the firing rate of the turrets. Activating the **PTA** system will arm the weapons system, putting the **BRIDGEVIEWER** in Tactical (**TAC**) mode.

You can **[LEFT CLICK]** on this symbology to turn the **PTA** system on or off or to change the recharge rate. To change the laser intensity, press **[SHIFT+;]** or **[SHIFT+']** on the keyboard.

Armor Protection Status, ARM

This indicator shows the current level of protection provided by the hull armor. The maximum amount of protection depends on the type of hull armor installed. The higher the armor protection level, the higher the protection it provides for the ship. If the armor is breached, the ship's hull will take damage directly and may result in severe damage to systems, and in some cases personnel casualties.

Hull Integrity Status, HUL

This indicator shows the current integrity level of the ship's hull. If the hull is breached, the ship will take damage and may result in severe damage to systems, and in some cases personnel casualties.

Electro Magnetic Disruptor, EMD

The **EMD** is a missile jammer. When activated, it produces interference on the ship's systems and you cannot launch missiles. The **EMD** integrity must be 20% or higher for it to function. The higher the **EMD** integrity, the more effective it is and the higher the probability of it jamming any incoming missiles, causing the missile to fly in a straight line as long as the **EMD** is active.

You can **[LEFT CLICK]** on this symbology to turn the EMD on or off.

Tractor Beam Indicator, TRB

The Battlecruiser tractor beam can be used to capture various types of space-borne objects depending on size and velocity. Once the target is selected, selecting this indicator will activate the tractor beam.

You can **[LEFT CLICK]** on this symbology to turn the tractor beam on or off.

Orbital Profile Indicator, ORB

The Battlecruiser can establish orbit around a planet or moon in order to perform high resolution surface scans from the **TACOPS** computer. This system can be used to establish orbit by selecting it after the desired planet or moon has been programmed into the navigation system.

You can **[LEFT CLICK]** on this symbology to initiate orbital procedures.

Identify Friend or Foe Indicator/Emergency Broadcast, IFF/SOS

The **IFF** indicator is lit when a friendly target emitting an IFF signal is selected on radar. The **SOS** indicator is lit when a ship in the current vicinity is emitting an SOS signal.

Autopilot Indicator, A/P [mode]

You can **[LEFT CLICK]** on this symbology to turn the autopilot on or off, or use **[SHIFT+A]** to change modes. You have control of the craft in **DIRECT** mode and in **AI** mode the ship's pilots assume control.

Threat Warning Indicators, TRK/LCK/LNH

The track warning indicator, **TRK**, is lit when your ship is being scanned on radar. The lock warning indicator, **LCK**, is lit when a hostile target has a lock solution on your ship. The launch warning indicator, **LNH**, is lit when a weapon is launched at your ship.

Current Location

This is the ship's current location in space or on a planet.

[6] Tactical Launch Menu, TLM

The right side of the main **BRIDGEVIEWER** hosts the **TACTICAL LAUNCH MENU** which is used for ship tactical operations.

The **TLM** lists the status of the Battlecruiser and all it's support crafts. The list is also color coded based on the status.

RED	Destroyed, not launch ready or stolen
YELLOW	Docked and undergoing pre-flight launch procedures
BRIGHT GREEN	Docked and launch ready (manned)
DARK GREEN	Docked and launch ready (unmanned)
WHITE	Launched and operational
BLUE	Docked and undergoing repairs in engineering

Moving the mouse over the ships in the list, provides critical info about the craft if has been launched. This info includes the follow and varies based on the ship selected.

PILOT/COPILOT	names and stats of the pilot and co-pilot of the interceptor
PERSONNEL	the number of personnel in the shuttle or ATV
CARGO ITEMS	the contents of the shuttle or ATV cargo bay
WEAPONS	the number of missiles in the interceptor
A/P	auto-pilot status
CONTROL	current flight control state
LOCATION	ship's current location
SHE/HUL/INT	shield, hull/armor and overall ship integrity
HEADING	current heading
ORDERS	current orders being executed
OBJECTIVE	current objective (if any)
LEADER	the name of the ship's launch platform or escorted target
MANOEUVER	current flight dynamics order being executed
STATE	current internal AI state
RANGE TO	ship's range to its current target (if any)
SRE NRE ENGINE	settings for the solar reactor, nuclear reactor, engine
WEA PTA IOD	settings for the weapon systems, PTA, IOD
EMD TRB CLOAK	settings for the EMD, tractor beam and cloaking system
HJ SPD	HyperJump engine charge status and the ship's current speed.

To activate the orders for a ship, move the mouse over the ship name and **[LEFT CLICK]** on it to display the menu. The orders vary based on the type of ship selected.

When the menu is first selected several options are available based on the launch status of the ship and you cannot manipulate it unless it is ready or launched.

It is important to note that when ordering the Battlecruiser from the **TLM**, the auto-pilot **must** be in AI mode for it to carry out the order. The same holds true for all the other crafts.

Below are the menu options and list of orders that can be sent to a craft. This list contains some orders also available in the waypoint setting option of the **TACOPS** computer.

PRE LAUNCH

LAUNCH	Launches craft if ready and manned. For the Interceptor, you can select its mission profile which determines which missile types it is launched with. See the Interceptor's weapons loadout profile in **section 23.0**.
GAG/UNGAG PILOTS	Toggles the pilots communications broadcast.
CREW	Displays the crew currently in the craft.

POST LAUNCH

SWITCH TO	Allows you to switch to and fly the ship.
GAG PILOTS	Toggles the pilots communications broadcast.
TARGET	Selects craft and displays in the **CVD** .
ORDERS	Activates the tactical orders menu for the ship.

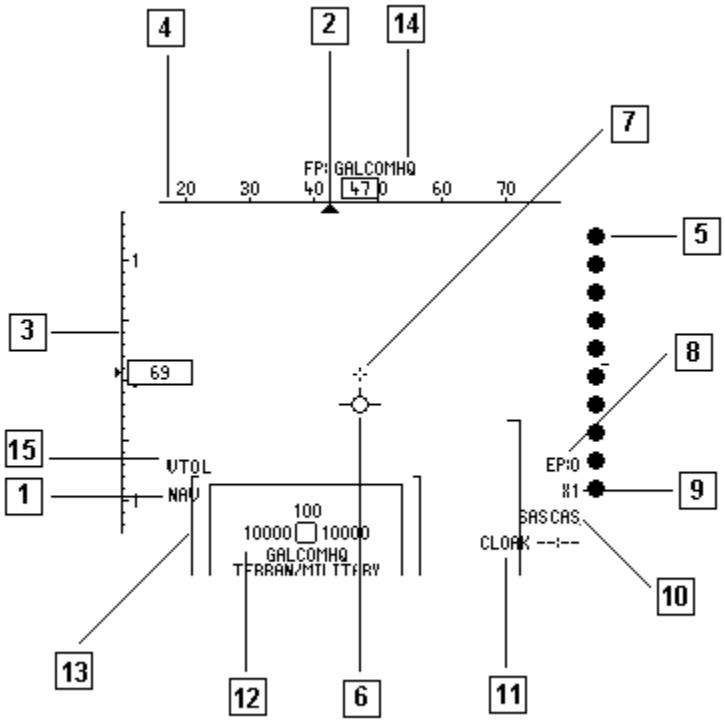
RESUME WAYPOINTS	Follow **TACOPS** waypoints.
FLY TO	Fly to a specific target location. You can select from any number of targets that are added to the dynamic menu including those in a priority list.
JUMP AT	Jump into another space region using the selected jump anomaly.
ESCORT	Escort the selected target.
DEFEND BC	Defend the Battlecruiser.
DEFEND	Defend the selected target.
ATTACK	Attack the selected target.

MINELAY	Lay mines in the region.
MINESWEEP	Clear detected mines in region.
PATROL	Patrol the current region.
HALT	Halt at current location with radio silence.
SAD	Search & Destroy all detected hostiles.
CAP	Combat Air Patrol in planetary region and engage all detected airborne hostiles that come into range.
SEAD	Suppress Enemy Air Defenses in planetary region and engage all detected ground based air defense hostiles that come into range.
COLLECT	Collect the selected mining drone, ATV, cargo pod or deployed team.
DEPLOY	Deploy the selected mining drone, ATV, cargo pod or deployed team.
TOW	Tow the selected target.
DELIVER TO	Deliver the currently towed object to the selected target.
CARGOSWEEP	Patrol region and collect all detected cargo pods until cargo bay is full, then return to base.

[7] Tactical Data Display, TDD

The center portion of the main **BRIDGEVIEWER** hosts the **TACTICAL DATA DISPLAY** which operates in either **NAV**igation (default) or **TAC**tical mode. Pressing **[W]** activates the ship's weapon systems and activates **TAC** mode.

NAV MODE



[1] Operating Mode

Current operating mode, Tactical (TAC) or Navigation (NAV). The ship's afterburner **A/B** or retro-thrusters **R/R** indicators are also displayed above when engaged.

[2] Waypoint Heading Indicator, WHI

This system shows up to three carets. A **solid triangle** is the bearing to the current object selected in the **NID** or **TACSCAN** and designated as an **FPD** flight path target using the **[F]** key. An **open triangle** is the current target selected in the **CVD** and is not a flight path target. A **vertical box** is the current waypoint (if set). When this is displayed, the current waypoint number and your range to it are displayed on the right side of the display below the heading. All carets will peg and flash if at the limits of the heading tape. There is some visual correlation between the **WHI** and the target. It merely indicates the bearing, as read off the **SHIP HEADING INDICATOR [4]**, to the destination. If there is no suitable destination or the bearing is invalid, i.e. if the ship is above the destination, the **SHI** will be invisible or undefined. In space, bearings are computed assuming that Z=0 is aligned with the solar system's orbital plane.

[3] Ship Velocity Indicator, SVI

This is the ship's current velocity based on the current thrust setting. It is represented by the figures on the left of the display. The value will increase or decrease based on the thrust, afterburner, and retro-rocket settings. If the afterburner or retro-rocket is engaged and released, the display will slowly decrease until it matches the current thrust setting.

This setting can be modified with a **[LEFT CLICK]** of the mouse and adjusting it to the desired value.

[4] Ship Heading Indicator, SHI

This is an artificial heading indicator, represented by the bearings at the top of the display. It indicates which direction the ship is pointing. In space there is no defined sense of direction, however, numerous probes and provide space-borne ships with a generic navigation aid.

[5] HyperJump Status Indicator, HSI

Due to the vast expanse of space, ships use hyperspace for long-range traversal. The ship's engine is configured by the Chief Engineer for hyperspace transition. This indicator provides an accurate method of determining the transition time before the ship drops out of hyperspace. This indicator is shown on the right of the display and is represented by 10 green circles. As the ship continues its hyperspace transition, the display will gradually countdown. Once it reaches 0, this indicates that the ship is going to drop out of hyperspace. After each jump, the ship's engine is again configured in preparation for a future HyperJump. During that time, the levels will gradually increase. Once it reaches level 10, this is an indication that the engine is now ready for another HyperJump. Each time you jump into a new space region, your HyperJump charge will be fully depleted and must be allowed to recharge before another HyperJump can be attempted. Each jump consumes 10 units of Radine.

[6] Flight Path Vector

The flight path vector appears when the ship is in motion and shows the direction in which your ship is moving, not where it's pointing. As you maneuver the ship, this indicator automatically adjusts until it is aligned with your current flight direction. When fully aligned, it is at the center of the display and obscures the **LASER TARGET DESIGNATOR**.

[7] Laser Target Designator, LTD

When the ship's primary laser is fired, it flies straight and toward the direction in which the ship is pointing. The **LTD** provides a targeting aid when the **IOD** laser is fired. The **LTD** is coupled to the ship's flight control so that it moves with the ship. It can be de-coupled from the flight controls so that it moves around the system's field of view when selecting a direction of fire. Though visible in both operating modes, the ship's laser cannot be fired unless the weapons system is armed. When the laser is recharged and ready to fire, the designator will be Green, otherwise it will be Red.

[8] Experience Points Level, EP

This indicator shows the accumulated Experience Points.

[9] Time Compression Indicator

This indicator shows the current time compression being used.

[10] Ship/Combat Alert Status, SAS/CAS

The **SAS** and **CAS** indicators are color coded and monitor the internal and external ship conditions. **SAS** monitors events such as intruder alerts, radiation leaks, and life support system breaches. The **CAS** monitors external conditions such as target acquisition, weapons launches against the ship, as well as the presence of hostile forces in the region. Critical alerts such as reactor core breaches, attacks, on the ship are coded in red while other less serious ones such as escaped prisoners, intruder alerts, etc, are coded in yellow. Once the conditions are cleared, the indicators are reset to green.

[11] Cloaking System Status, CLOAK

This indicator displays the status of the ship's cloaking system which cloaks the ship and prevents it from being detected on radar. When the cloaking system is activated, a countdown timer is displayed next to the indicator. This timer shows how much time is left before the cloaking system shuts down due to lack of cloaking fuel.

You can **[LEFT CLICK]** on this symbology to turn the cloaking system on or off.

[12] Tactical Target Designator, TTD

The **TTD** is activated when a target is selected in the **TACSCAN** computer. It is depicted as a small color coded (based on target alliance) box in the display. If the target is within the field of view, its name, race, and caste is displayed below the box. Its overall damage level is at the top and its shield and armor are displayed on the left and right sides of the box respectively. During combat the damage level, shield, and armor levels are updated as the target takes damage or recharges its shields. Once the target's shields are breached, its armor will begin to take damage. Once the armor is completely breached, the object will be destroyed. When a target is selected in the **NID** computer, the **TTD** changes to a small blue box called the **NAVIGATION TARGET DESIGNATOR (NTD)**. If the target is within the field of view, its name is displayed below the box and your approximate range to it is displayed at the top of the box.

[13] Flight Path Designator, FPD

The **FPD** is a navigation aid which enables you to accurately locate the direction of the current navigation target in space. It consists of a series of rectangles pointing in the general direction of the target. It is color coded to assist in accurate orientation of the ship to the target. If the target is within the display field of view but at a great distance, it will be **yellow**. If it is relatively behind your ship and at a great distance, it will be **red**. It will change to **grey** once you are relatively close to the target. The **NTD** of the target will be displayed at the center of the **FPD** if the target is in front of you. The **FPD** will be cleared if the system is switched to **TAC** (Tactical) mode disabling the ability to jump to a target region.

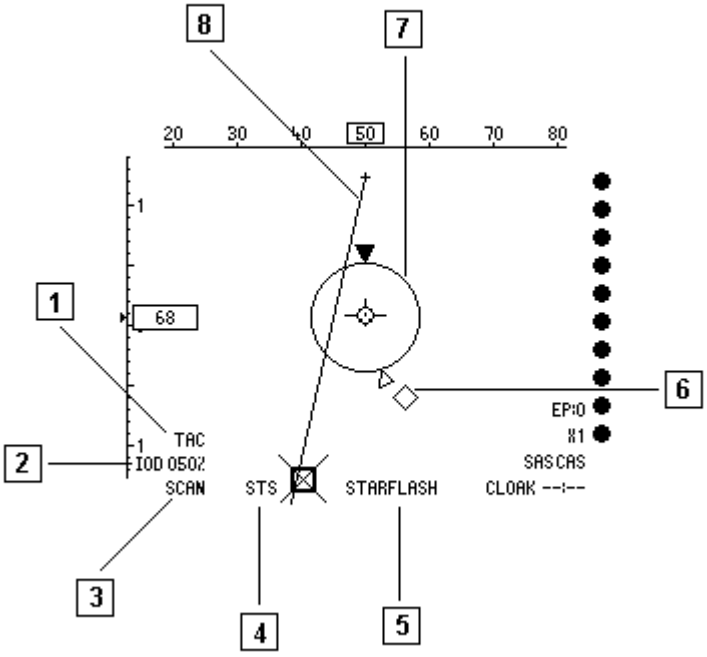
[14] Flight Path Indicator, FPI

When a navigation target is selected and programmed into the navigation computer the current flight path is indicated at the top of the display with the letters **FP** plus the name of the target that is currently programmed into the flight path. The **FPI** is persistent even if the display is switched to **TAC** mode. The current target can be cleared by pressing **[X]**.

[15] Flight Profile

The ship's current flight profile is displayed above the display's operating mode. When in forward flight, **FTOL** is displayed. When vertical takeoff and landing is activated using the **[CAPSLOCK]** key, **VTOL** is displayed.

TAC MODE



[1] Operating Mode

Current operating mode.

[2] Ion-Disruptor Array, IOD

This indicator displays the current setting of the ship's main laser weapon system. Arming the weapons system activates the Ion Disruptor Array laser. The strength of the laser intensity determines the amount of damage inflicted on the target. The higher the setting, the slower the recharge rate, and the slower the firing rate.

[3] Missile Tracking Indicator, MTI

An armed missile has three operating states. When armed using the **[BACKSPACE]** the missile enters into a **SCAN** as the **MISSILE TRACKING DESIGNATOR, MTD** moves around the display in search of a valid target. Once it finds a target within its view and tracking range, the status will change to **TRACK** and finally to **LOCK** once the target comes within the launch range. This is your cue to fire the missile by using the **[SPACEBAR]**.

[4] Missile Class

The currently armed missile class. This can be either Air To Air (ATA), Air To Surface (ATS), Space To Space (STS), or Orbit To Surface (OTS). If the wrong missile is armed this indicator will flash indicating that it cannot be launched. This will happen if you, for example, arm an ATA missile while in space.

[5] Missile Type

The currently armed missile type. Currently armed missile types can be cycled by using the **[BACKSPACE]** key.

[6] Missile Tracking Designator, MTD

Once a missile is armed, its seeker system will start to scan for a valid target as the **MTD** starts moving around the display. During this search, the missile's acquisition state will be set to '**SCAN** mode. Once the weapons computer verifies that the current target is valid target, the **MTD** will be superimposed inside the **TTD** and its state will change to '**TRACK** mode. If the target is a friendly or an invalid target, a flashing **BREAK X** symbol will be displayed over the **TTD**. As soon as the target comes within the valid range of the currently armed missile, the acquisition state will change to **LOCK** as indicator by the **MTI**. At this time, you can press the **[SPACEBAR]** to launch the missile.

[7] Missile Target Acquisition Reticle, MTAR

The **MTAR** is active when a missile is armed. The reticule diameter is dependent on the range of the selected weapon. The greater the range, the larger the diameter of the reticule. The maximum range is pegged at 1100 km. The actual diameter should be used only as a 'guide' to the weapon range. If the selected weapon is the wrong type, such as an ATA missile selected in space, the reticule will change to red and will flash continuously, indicating that the weapon cannot be fired.

Target range is indicated on the reticule by a triangular Target Pointer which moves around the outer edge of the reticule clockwise from the top as range increases. The complete circumference of the circle represents a range of 1100 clicks. If the range is greater than this, the pointer pegs at the top and flashes.

The reticule has two tick marks on its circumference which represent clockwise respectively the minimum and maximum lock range of the current weapon. The goal is to get the Target Pointer between these two marks for a valid lock. It is also assumed that the chance of a missile hit is best if the pointer is exactly midway around the circle between the minimum/maximum marks. In VGA, ticks and pointers are simple lines. In SVGA, open triangles are used for the range limits while a filled triangle represents the Target Pointer.

[8] Target Locator Line, TLL

The **TLL** is used to locate the currently selected navigation or tactical target. If the position of a **TTD** or **NTD** leaves the field of view, the **TLL** and **BREAK X** symbology is activated. The **TTD** or **NTD** rectangle then changes to a thickened box pegged to the edges of the entire **BRIDGEVIEWER**. A flashing **X** is superimposed over the box indicating that it does not reflect the position of the target and that the **NTD** and **TTD** do not have a valid target.

The position of the box is such that an imaginary line drawn from the display optical center through the center of the box intercepts the target. To further clarify the position of the target the **TLL** is drawn from a position in the **BRIDGEVIEWER** above the optical center (indicated by a small **+**) to the target. The position of the target can be triangulated from this information except when the target is abeam (when the lines will be parallel).

When the target is behind the ship, the **TLL/BREAK X** symbology flashes rapidly. The triangulation must be interpreted differently in this case as the target is not in the indicated position in *front* of the ship, but at that position *behind* it. The **TTL/BREAK X** is still valid as a steering cue in this state. The color of the **TLL/BREAK X** is the same as the current **TTD** and **NTD** target.

Target Lead Designator, TLD

Though not shown in the screen shot, the **TLD** is a target acquisition aid which resembles a small broken box. It attempts to predict where the current target would be in the next few seconds. If you were to fire at the box, this is where the target is calculated to be by the time the laser shot reaches it. When dogfighting, try to fire at this box or near it to increase your chances of hitting the target.

System Date/Time

The current game date and time is displayed on the extreme right side of the **BRIDGEVIEWER.**

6.1 Bridge Menu

To activate the bridge **COMMAND MENU**, **[LEFT CLICK]** anywhere on the bridge. The following options will be presented.

- **BC ORDERS**

Allows you to send quick orders to all your support crafts.

ALL CRAFT	sends a **LAUNCH, RTB, ESCORT BC or RESUME WAYPOINTS** order to all Interceptors and shuttles that launched from the Battlecruiser. The success of the command depends on the pilot's ability to carry out the order and also on the state of the Battlecruiser Interceptor launch bays.
ALL SHUTTLES	same as **ALL CRAFT** but only sends the order to deployed shuttles.
ALL INTERCEPTORS	same as **ALL CRAFT** but only sends the order to deployed Interceptors.
ORDERS	same as BC orders in the Tactical Launch Menu

- **CURRENT TARGET**

Allows you to send orders to the currently selected **CVD** target. Unless you have Fleet Command & Control authority which gives you access to other forces, this command will only work on your own support ships.

The type of order sent varies with the ship type and capabilities.

Ship orders are discussed in detail in the **TACTICAL LAUNCH MENU** section on page 47

SWITCH TO	Allows you to switch to and fly the ship.
ORDERS	Activates the tactical orders menu for the ship.
TARGET	Selects craft and displays in the **CVD**.
GAG PILOTS	Toggles the pilots communications broadcast.
CREW	Displays the crew currently in the craft.

- **SYSTEMS**

This menu option gives you access to all the computer systems available on the ship.

TACOPS	Tactical Operations computer	***Section 18***
PERSCAN	Personnel Scanner computer	***Section 16***
LOGISTIX	Logistix computer	***Section 14***
NAVITRON	Navigation computer	***Section 13***
TACTICAL	Tactical computer	***Section 15***
ROSTER	Enlistment computer	***Section 4.1***
MISCON	Mission Control computer	***Section 4.2***
COMMLINK	Communications Link computer	***Section 4.6***
CONFIG	Configuration computer	***Section 1.5***

- **MISSION**

This menu is only relevant to ACM mode.

SHOW STATUS IN CVD	Shows your current mission status in the **CVD** Theatre : space region where mission occurs Start : mission start time End : mission end time Next : time to next mission Vio : number of violations to date Exp : number of experience points to date Rank : current rank Career : current caste
REQUEST NEXT MISSION	If your current mission time has expired, you can request a new mission.

- **SAVE GAME**

This menu allows you to save the 3D gameworld.

- **QUIT/MAIN MENU**

This menu **auto-saves** the 3D gameworld and returns you to the main menu. From the main menu, selecting **CONTINUE** returns to where you left off without having to save the game in progress.

6.2 Commander's Notes

- ✓ Most of the ship's functions are accessible from the bridge.
- ✓ All of the systems available on the bridge can be controlled by mouse or keyboard.
- ✓ Interceptors require two combat pilots in order to launch. If one of them dies during combat, the other is capable of returning to base if he can.
- ✓ A Shuttle will not launch unless it has at least one person in it.
- ✓ When you assign people to a ship or any location on the Battlecruiser, you must give them sufficient time to reach their destination because they have to move through the ship.
- ✓ In order for personnel in the shuttle or ATV to carry out their orders they must have been deployed on the surface. Once deployed, they will attempt to carry out the orders.
- ✓ The bridge systems will malfunction or cease to operate if they take sufficient damage. Every system on the Battlecruiser is linked to the main computer which must remain operational at all times.
- ✓ Activating the bridge menu also pauses the game.

6.3 Quick Reference Commands

AUTOPILOT ON/OFF	A
AUTOPILOT DIRECT OR AI MODE	SHIFT+A
ENGINE ON/OFF	SHIFT+E
REACTOR ON/OFF	SHIFT+R
FULL SHIELD PROTECTION	SHIFT+]
SHIELD OFF	SHIFT+[
INCREASE SHIELD PROTECTION	]
DECREASE SHIELD PROTECTION	[
REQUEST DOCKING CLEARANCE WITH TARGET	ALT+D
EVACUATE SHIP	CTRL+E
REQUEST SOS TOW SHIP	CTRL+S
WEAPONS SYSTEM ON/OFF	W
WEAPONS SELECTION MENU	SHIFT+W
RADAR TARGET MASK	SHIFT+M
NAVIGATION INTERFACE DISPLAY ON/CYCLE	J
TACTICAL SCANNER COMPUTER ON/CYCLE	K
COMPUTER VIDEO DISPLAY COMPUTER ON/CYCLE	L
SELECT PREVIOUS TARGET/WAYPOINT	,
SELECT NEXT TARGET/WAYPOINT	.
ELECTRO MAGNETIC DISRUPTOR JAMMER ON/OFF	E
CLOAKING SYSTEM ON/OFF	SHIFT+C
PASSIVE TARGET ACQUISITION ON/OFF	P
INCREASE PTA TURRET LASER INTENSITY	SHIFT+'
DECREASE PTA TURRET LASER INTENSITY	SHIFT+;
FIRE MAIN IOD LASER	ENTER
FIRE MISSILE	SPACEBAR
CYCLE MISSILES AND MINES	BACKSPACE

7. BRIDGE SYSTEMS - NID COMPUTER

7.0 System Overview

The Navigation Interface Display (**NID**) computer has several modes of operation. It is primarily used for navigation and probe launches.

Pressing **[J]** activates the **NID** computer and puts it in command mode, allowing you to cycle through its operating modes. You can also **[LEFT CLICK]** in the **NID** area of the **BRIDGEVIEWER** to use the menu. The **NID** is linked directly to the ship's navigation and tactical systems and has four operating modes. The modes are: NavMap, Waypoint Tracking System (**WTS**), Probe Link System (**PLS**), and Navigation Information Relay (**NIR**).

7.1 Target Selection

By default, all targets tracked in the **NID** are displayed. You can change the class of target that are scanned by using the **[SHIFT+M]** command. Once the target class list is displayed in the **CVD**, press the number corresponding to the target types you want to filter out. These will be displayed in a low red color.

Once a target is selected the Navigation Tracking Designator, **NTD**, will appear on the **BRIDGEVIEWER** in the general direction of the target and will continue to move with the target as it tracks it. Targets in the **NID** can be cycled by pressing the **[.]** and **[,]** commands and can be viewed and identified in the **CVD** by pressing **[V]**. To cancel a target and clear the radar lock, press **[X]**.

When a target is selected, the Navigation Tracking Designator, **NTD** (blue box) appears in the **BRIDGEVIEWER** and marks the general location of the target. The number above the **NTD** is the target's range and its name appears below the **NTD** box. Its range is also displayed in the top left corner of the **NID** and its closure rate displayed in the top right corner.

7.2 Mode 1 : Navigation Map, NAV

In space, this mode tracks navigation related targets on a grid with your ship at the center. On a planet surface they are tracked on a static topological bitmap of the planet or moon with your ship in the center. In space, targets are represented by color coded dots with stalks pointing away from the center of the display indicating the relative position. On a planet, they are simply dots on the map.

Targets can be selected and cycled by pressing **[,]** and **[.]**.

The radar scan range, depicted by a vertical column of dots on the left of the display, can be increased or decreased by pressing **[Z]** or **[SHIFT+Z]** and **[CTRL+Z]** sets the max zoom.

When on a planet surface, the topology map of the surface is removed as the zoom level is increased to display a view of the object at the current location.

Space Mode:

GREEN	-	Planet
GREY	-	Moon
RED	-	Hazard (comets, meteors, asteroids, blackhole)
BLUE	-	Jump Point
BROWN	-	Worm Hole
YELLOW	-	Flux Field

Planetary Mode:

WHITE	-	Compound targets: cities, bases, sites, etc
GREEN	-	Ground targets: sams, sals, troops, etc
BLUE	-	Airborne crafts
YELLOW	-	Naval crafts
RED	-	Starbases

The **NID** grid in space indicates a flight plane to the target. Chevrons are added to the grid to define which edge of the rectangular grid indicates direction to the target. When the chevrons are pointing up with regard to the display, the ship is pointing towards the target. The chevrons are active only if a target is selected. The selected target can be viewed in the **CVD** by pressing **[V]**.

Vertical stalks are added to the target blips to give a feeling of depth. The stalks are pointing away from the center of the **NID** (your position). Since the grid interferes with this visual depth cue, it is disabled unless a target is selected. Cancel your target to view the grid. **Note:** The stalks are a fixed length and only indicate relative position.

On a planet surface, there is line extending from the center of the map to the edge of the display. This line indicates your current direction of flight.

7.3 Mode 2: Waypoint Tracking System, WTS

When a destination is set in the **NAVITRON** computer, the Navigation Officer plots a course to the destination and stores these as waypoints in the **WTS**. These waypoints can be used by the ship's AutoNav system for the journey to the destination. The **WTS** lists the number of waypoints required to reach the destination, the name of the sector, and system each waypoint is located in.

To program the AutoNav system to fly the ship to a previously selected destination, simply press **[A]** to activate the autopilot. You can abort the journey and clear the waypoint list at anytime, even during flight, by pressing **[SHIFT+X]** in **WTS** mode. Note: This will also clear the current route in the **NAVITRON** computer.

In the cockpit and under AI mode, you can have the ship fly to a target and ignore the current waypoints. Simply select it in the **TACSCAN** or **NID**, press the **[F]** key and engage the auto-pilot if not already engaged. The ship will fly to the target. If you cancel the target, the ship will resume waypoints.

7.4 Mode 3: Probe Link System, PLS

The Battlecruiser can launch and monitor up to 10 probes at one time. Probes are used primarily to explore distant regions. Once a probe is launched, you can use the **TACSCAN** and **TACOPS** computers to link your navigation system to the probe. Probes are very robust but if you launch one into a hostile region there is a chance it will be destroyed.

Probes come in different types and the range determines how many waypoint jumps it can make. During a probe's life, it will take some wear and tear, and if damaged enough it will shut down. A short range probe can make **four** jumps, a medium range probe can make **six** jumps, and a long range probe can make **eight** jumps.

A probe can operate in one of two modes, **NAVSCAN**, **ORBSCAN,** or **TACLINK**. In **NAVSCAN** mode (the default), the probe simply orbits a point in space and reports any and all detected ship movements within the region. In **ORBSCAN** mode, a probe will establish orbit around a planet or moon and send reports on surface activities only. Once a probe is launched, its status will change to **NAVSCAN** or **ORBSCAN** based on its launch target. When you access the region where a probe is located via the **TACOPS** computer, the probe switches to **TACLINK** mode.

Launching a probe

To launch a probe, **[LEFT CLICK]** in the **NID** to activate the menu. Select the **PROBES** option and choose the probe you wish to launch. This menu will only list probes that are available for launch or have been launched. If the probe has not been launched, select the **LAUNCH** command to launch it. Now that the probe has launched, see below on how to program it.

Once the probe is launched, the **PLS** will display statistics such as its status, region, location, or planet name if in orbit, launch date and time, current program, target sector (if in en route), and the number of jumps it can make.

If a planet or moon comes within the flight path of a probe, it will attempt to veer away from its gravitational pull and continue on its journey. A probe will be destroyed if it is hit by an asteroid, meteoroid, comet, or other hazard.

In **NAVSCAN** mode, the probe's radar scanners are active and operate like normal ship radar and can be detected as such. Each time a target comes within range of the probe's radar, it will send a message to the ship. A probe only relays information about dynamic objects such as ships, star stations, comets, and asteroids. When it first enters orbit, the probe will announce the name of the planet or moon.

Programming a probe

You can program a probe and set its destination by using the **JUMP AT** command. You can reprogram a probe to leave its current location and go to another from the **NID** or from **TACOPS** computer.

To program a probe, **[LEFT CLICK]** in the **NID** to activate the menu. Select the **PROBES** option and select the probe you wish to program. You can only program probes that have been launched. The following menu choices are available:

JUMP AT	Allows you to select a valid target for the probe to jump to. If you select a planet or moon, the probe will establish orbit upon arrival. Selecting a jump anomaly will cause the probe to jump into the other region once it reaches the jump anomaly.
NORMAL	This mode reverts the probe to normal operation and cancels **SILENT** modes.
SILENT	This mode prevents the probe from broadcasting tactical data to your ship.
DETACH	This detaches the probe from the ship's computer relay system and destroys the probe. Once you detach a probe, you can replace it.

Detaching/Replacing a probe

Your Battlecruiser can track up to ten probes at a time. In order to replace a probe that is declared obsolete, you need to detach it from the tracking system. This immediately self-destructs the probe and clears the slot. Select the probe from the **PLS** and press **[SHIFT+X]** command or use the **DETACH** command in the menu. Once the probe gets the command, it will immediately self-destruct. A probe is also automatically detached from the ship's tracking system if it is destroyed. When a probe is destroyed, its slot becomes vacant allowing you to launch a replacement. Probes are expendable, once launched they cannot be retrieved.

Remote Region Access – TACLINK mode

You can view a region your probe is in even though your ship is not physically located there by using it's **TACLINK** mode and using the **TACOPS** computer to view the region. Once the probe gets to the region, simply select it from the **NID** and its target menu will now list targets available in the region where it is currently located. You can then select those targets and send the probe to a new region from its current location.

In **TACOPS**, select the probe and select the **VIEW PROBE REGION** option. You will then be able to view that region as long as the probe is active and on-line. You can even send orders to your ships and troops in regions being observed by the probe.

Probe Status

When a probe is selected in the **NID**, the following information is displayed.

STATUS	Current status, *ready, navscan, orbscan*
REGION	Current space region location
PLANET	Current planetary location
DATE	Date of launch
TIME	Time of launch
PROGRAM	Current program, *silent, normal*
TARGET	Current target destination
JUMPS	Number of jumps made / Total number of jumps

7.5 Mode 4: Navigation Information Relay, NIR

This mode shows your region location and the current game date and time. On the planet surface, it also shows your polar co-ordinate position on the planet.

7.6 Basic Navigation Procedures

Basic flight navigation operations can be performed using the **NID** computer. You can fly to any target currently selected in the **NID** either in real space or via hyper space. This procedure will get you to your target either in the current region or in a different region.

- Press **[J]** or **[K]** to put the **NID** or **TACSCAN** into command mode and cycle through to the **NAVMAP** mode.
- Press **[.]** to select any target and press **[V]** to view it in the **CVD**.
- Press **[.]** and **[,]** to cycle through all valid targets until the desired one is displayed in the **CVD**.
- Using flight control keys, orient the ship until the **TLL** becomes visible. Continue to orient the ship until the **TTD** of the target comes into your forward view.
- Apply thrust to your engines using the **[1-9]** keys and fly toward the target. You can also use your HyperJump engines by pressing **[SHIFT+9]**.

Note: See Section 12: Flight Dynamics & Navigation, for more info on navigation.

7.7 Commander's Notes

- ✓ Basic navigation can also be used to fly to targets selected in the **TACSCAN**.
- ✓ If the weapon systems are armed, the **FPD** will not activate causing the ship to not jump to a target region. Press **[W]** to disable weapon systems.
- ✓ Sometimes the **FPD** will be located at an obscure angle, causing it to be displayed outside you field of view. If you are navigating manually, you will have to orient the ship so that the **FPD** appears in front of you.
- ✓ Once you've selected an **FPD** target, you can use the HyperJump engines to travel faster if you are not using the autopilot. To activate the HyperJump engines, press **[SHIFT+9]**
- ✓ The distance from the jump target at which the ship emerges from hyperspace is dependent upon the size of the object in relation to your own ship's size.
- ✓ If the region you are in is cluttered, you can save yourself some time by using the radar filter and disabling all but the **NID** navigation targets. You will then be able to cycle through the jump anomalies more quickly.
- ✓ Sometimes you will end up in null space which is the region between real and hyper space. To make it easy for you to leave, simply cycle through all asteroids (try filtering them out) until you find the fluxfield. Activate the **FPD** and jump through it to return to real space.

7.8 Quick Reference Commands

NAVIGATION INTERFACE DISPLAY ON/CYCLE	J
NAVIGATION INTERFACE DISPLAY OFF	SHIFT+J
VIDEO ID CURRENT TARGET	V
CLEAR CURRENT TARGET	X
CLEAR ALL WAYPOINTS/TARGETS	SHIFT+X
INCREASE RADAR ZOOM	Z
DECREASE RADAR ZOOM	SHIFT+Z
MAXIMUM RADAR ZOOM	CTRL+Z
SELECT PREVIOUS TARGET/WAYPOINT	,
SELECT NEXT TARGET/WAYPOINT	.

8. BRIDGE SYSTEMS - TACSCAN COMPUTER

8.0 System Overview

The **TACSCAN** computer is the heart of the Battlecruiser's weapon system. It is capable of tracking targets in space and in Interceptors, and can also scan airborne & ground targets. Within the display are two circles which give an approximate indication of where the target is located in relation to your ship, and it's the target's bearing. Generally, any target which is within the inner tracking region is in front of you. Anything outside this region and within the outer region is behind you. Your ship is in the center of the display. If a target were at the center point of the **BRIDGEVIEWER** its designator would appear in the center of the **TACSCAN.**

Pressing **[K]** activates the **TACSCAN** computer and puts it in command mode allowing you to cycle through its operating modes. You can also **[LEFT CLICK]** in the **TACSCAN** area of the **BRIDGEVIEWER** to use the menu.

Targets in the **TACSCAN** are identified by color coded dots:

GREEN	-	Friendly
RED	-	Enemy
BLUE	-	Unidentified/Neutral
WHITE	-	Missiles/mines
GREY	-	Disabled craft
YELLOW	-	**FATAL** designated target
CYAN	-	Tractor beam target

8.1 Target Selection

By default, all targets tracked in the **TACSCAN** are displayed. You can change the class of target that is scanned by using the **[SHIFT+M]** command. Once the target class list is displayed in the **CVD**, press the number corresponding to the target types you want to filter out. These will be displayed in a low red color.

Once a target is selected, the Tactical Tracking Designator (**TTD**), will appear on the **BRIDGEVIEWER** in the general direction of the target and will continue to move with the target as it is tracked. The number above the **TTD** is the target's damage condition. The target's name, race, and caste appear below the box while its shield and armor levels appear on the left and right side of the display respectively. The target range is also displayed in the top left corner of the **TACSCAN** and its closure rate displayed in the top right corner. The target can be viewed and identified in the **CVD** by pressing **[V]**. If the target is friendly the **IFF** designator will illuminate. Targets in the **TACSCAN** can be cycled by pressing the **[.]** and **[,]** commands**.** To cancel a target and clear the radar lock, press **[X]**. There are times when the display will become cluttered with targets. You can switch the system into Single Target Tracking (**STT**), mode by pressing **[S]**. This filters out all targets except for the one currently selected.

The circles radiating from the radar blips represent the tactical scanning status of the object. A faster radiating set of circles indicates that the target is aggressively searching for targets. **TACSCAN** can be programmed to filter out these signal emitters by pressing the **[R]** key to put the system in passive mode. However, in passive mode, the audible inbound missile warning beep which sounds when an inbound missile has a positive lock on your ship, is not played.

8.2 Mode 1: Space Scan, SPC

This mode only tracks space-borne targets and is only available in space. It is depicted by the letters SPC displayed at the lower right corner of the display.

Once the TACSCAN is activated it is placed in active scan mode. This means that it will continue to scan the region and display all detected targets as color coded blips.

When another system is placed in command mode, the TACSCAN switches to passive mode. In this mode it does a less frequent search pass making it harder for other radar systems to get a lock solution on your ship.

8.3 Mode 2: Ground Scan, GND

This mode only tracks surface targets and is only available when on a planet's surface. It is depicted by the letters GND displayed at the lower right corner of the display.

8.4 Mode 3: Air Scan, AIR

This mode only tracks air-borne targets and is only available when on a planet's surface. It is depicted by the letters AIR displayed at the lower right corner of the display.

8.5 Mode 4: Support Unit Locator, SUL

This is a special target filter which allows you to track your own BC (blue), Interceptors (cyan), shuttles (yellow), ATVs (green), mining drones (grey) probes (white) and personnel (red) in space or on a planet's surface. This filter also filters out the NID targets so if activated, all but your own resources will be tracked in the NID and TACSCAN. It is depicted by the letters SUL displayed at the lower right corner of the display.

8.6 Commander's Notes

- ✓ When in extended engagements in hostile territory, you want to stock up on ATL and ATL/V missiles. These give you extended range and a stand-off advantage.
- ✓ The Battlecruiser has an advanced Electro-Magnetic Disruptor (EMD) which jams the signals of incoming missiles causing them to lose their lock. First, look at the TACSCAN to determine the missile's heading. Activate the EMD by pressing [E]. Failure to change your ship's location may result in the missile hitting your ship once it reverts to dumb fire mode.
- ✓ All missiles have a lock time which determines how long a missile will scan before it achieves a valid lock. Though you can fire a missile at any time, if you fire before you get a lock, the missile will be launched in dumb mode and fly straight ahead.
- ✓ If the selected target is a friendly, the IFF indicator will start to flash and a flashing **X** symbol will be displayed in the target's TTD.
- ✓ Increasing the intensity of the laser burst results in a slower recharge rate but inflicts more damage on the target.
- ✓ The audible inbound missile warning beep only goes off based on the closest missile to you, no matter how many missiles have a positive lock on your ship. The faster the beeping, the closer the missile is. Take evasive action!

- ✓ As a target's shields take hits, the shield will be depleted and recharged based on the type of target. If the shields are completely breached, they will not recharge in fighters but targets with crew on-board such as cruisers, carriers, stations, etc will initiate repairs to bring the shield system back on-line. Once the shields are breached the target's hull/armor start taking hits and eventually the target will be disabled or destroyed.
- ✓ Switching to **NAV** mode will shut down the weapons system and clear all targets
- ✓ In an extended combat engagement where lasers are used, you can use the Target Lead Designator (**TLD**), to predict where the target will be when you fire your lasers. If you learn to use the system effectively, your kill rate will increase because it is extremely accurate. Once the **TLD** is displayed, you should concentrate on firing in that direction ignoring the target's **TTD** (which simply indicates where the target is currently located).
- ✓ During Interceptor launch operations, it is a common mistake to go on planetary strike missions without the proper armament. Always load up on air to air (**ATA**) and air to surface (**ATS**) missiles if you plan on surface strikes.

8.7 Quick Reference Commands

WEAPONS SYSTEM ON/OFF	W
ELECTRO MAGNETIC DISRUPTOR JAMMER ON/OFF	E
INCREASE MAIN LASER INTENSITY	'
DECREASE MAIN LASER INTENSITY	;
FIRE MAIN LASER	ENTER
FIRE MISSILE	SPACEBAR
CYCLE MISSILES AND MINES	BACKSPACE
TACTICAL SCANNER ON/CYCLE	K
TACTICAL SCANNER OFF	SHIFT+K
VIDEO ID CURRENT TARGET	V
SINGLE/MULTIPLE TARGET ACQUISITION MODE	S
CLOSEST ATTACKER TO MY CURRENT TARGET	B
MY CLOSEST ATTACKER	N
CLOSEST ENEMY TARGET	M
PREVIOUS TARGET	,
NEXT TARGET	.
NEAREST TARGET IN LINE OF SIGHT	/
MATCH CURRENT TARGET'S SPEED	SHIFT+`

9. BRIDGE SYSTEMS - CVD COMPUTER

9.0 System Overview

The Computer Video Display (**CVD**), computer is primarily used for displaying various types of data.

Pressing **[L]** toggles the CVD computer and puts it in command mode allowing you to cycle through its operating modes. You can also **[LEFT CLICK]** in the CVD area of the **BRIDGEVIEWER** to use the menu system. The **CVD** provides video relay to the **NID** and **TACSCAN** and also displays weapons, personnel, and support craft data. It has eight operating modes.

9.1 MODE 1 : Video Link, VID

When a target is selected in the **TACSCAN** or **NID** computers, a video image can be displayed in the **CVD** using **[V]** when either the **NID** or **TACSCAN** is in command mode. Once the target is identified, its race, caste, and type are displayed in the top part of the display. Its shield and armor levels are displayed as vertical bars on the left and right sides of the target's image. These correspond to the values in the target's **TTD**.

A set of three or four additional numbers are also displayed above the object image depending on the type of object. From left to right, these numbers represent the status of the target's ***reactor, engines***, ***weapon systems,*** and ***launch bays***. The fields for certain targets, i.e. shuttles which have no weapons, remains blank. During combat, the integrity of the target can be monitored via the **CVD**. These values make up the target's overall integrity. As the target's systems are breached the indicators will be adjusted to reflect these changes. If a target is destroyed or cleared using **[X]** from the **NID** or **TACSCAN**, the **VIDLINK** will display **NO TARGET**.

ENGINE	-	affects speed and turn performance
WEAPON	-	below 25% integrity, the weapon systems will fail
REACTOR	-	if the reactor is destroyed, the target will explode
LAUNCH BAY	-	below 25%, target will be unable to launch other craft

9.2 MODE 2 : Weapons Select System, WSS

This mode displays the currently loaded missiles in the ship. It displays the missile type and amount currently loaded in the weapons launch pod. To select a missile, press the number corresponding to its position in the list. You can arm and load a missile from here by pressing the number corresponding to it. This is also the screen where you assign **FATAL** targets.

Note: See Section 11: Weapons Systems Operation for more on FATAL.

9.3 MODE 3 : Crew Status Display, CSD

This system is linked directly to the **MEDIBAY** computer system and is used to display the life status of the ship's crew. Use the **[,]** and **[.]** keys to cycle through the list of personnel. The person's image can also be displayed in the NID by pressing **[V]** to show his/her Fatigue Factor and Life Factor. The image can be removed by pressing this key again. When the list gets to the last officer, it will scroll over to the combat pilots. You can also use this mode to disconnect this person's video and comms by pressing **[SHIFT+V]**. The name will be grey indicating that messages from this person will no longer be displayed in the bridge **COMMLINK**. Messages will be sent directly to the **COMMLINK** computer log.

9.4 MODE 4A : Support Ship Status, SSS

This mode allows you to view the status of your Interceptors, shuttles, and ATVs. Use the **[.]** and **[,]** keys to cycle through the list. The name of the craft is displayed at the top of the display and its current status code below the name. Each Interceptor requires two pilots for flight. Once an Interceptor docks, two Flight Engineers are assigned to run diagnostics and systems integrity checks. If the Interceptor passes these tests, then the craft is armed, powered, and declared launch *ready*. If it fails these tests due to damage, lack of weapons, inability to charge it's reactor cells (in the event that the charger is malfunctioning), or otherwise, it is set to *off-line* until repairs are completed by the Systems Engineers.

Changing an Interceptor's weapons profile

You can change the ship's weapons profile by using the **[SHIFT+,]** and **[SHIFT+.]** keys to cycle through the various profiles. This determines the type of weapons with which the computer system will arm the Interceptor. Valid profiles are *intercept*, *patrol*, *search and destroy, escort, combat air patrol,* and *suppress enemy air defenses*. See ***Section 23: Support Ship Complement*** for an explanation of the weapons loadouts for each of these profiles.

Status codes:

DEPLOYED	-	currently deployed
READYING	-	undergoing pre-launch diagnostic checks
READY	-	ready for launch
DESTROYED	-	currently destroyed
ENGINEERING	-	undergoing engineering repairs

The **SSS** also displays the following data for the currently selected craft:

CHARGE	-	current reactor charge
DAMAGE	-	integrity level
MISSION	-	mission profile which also determines weapons loadout
PILOT	-	name of pilot
CO PILOT	-	name of co-pilot

MODE 4B : Support Ship Status, SSS

This mode lists all the ships in MODE 4A on one screen for an at-a-glance look. The entries are color-coded to match those in the **BRIDGEVIEWER** menu.

You can alter an Interceptor's mission profile by pressing **[SHIFT+.]** or **[SHIFT+,]** in Mode 4. This will cause the computer system to arm the Interceptor based on the selected profile.

9.5 MODE 5 : ACM Status, ACM

During an ACM scenario, this mode will display various information about your current mission in the scenario:

THEATRE	-	Region where the current mission is taking place
START	-	The start time of the current mission
END	-	The computed duration of the mission (if any)
NEXT	-	Time until the next mission orders are transmitted
VIO	-	Current number of violations on your record
EXP	-	Current number of experience points on your record
RANK	-	Your rank
CAREER	-	Your career or caste. In ACM this always set to Military

9.6 MODE 6 : Radar Target Mask, RTM

This mode allows you to build a target filter list which is used by the **NID**, **TACSCAN** and **TACOPS** computers. Once a target class is removed from the filter, targets in this class will no longer appear in these systems. To add a class of target to the filter, press the number corresponding to the desired class. This is a toggle, pressing the number again will put the target back in the filter. By default, the radar system tracks all target types. The radar mask can also be activated using the **[SHIFT+M]** hotkey.

CRAFT	Space and air crafts
RADAR EMISSION	Targets with active search radar
TACTICAL	Stations, bases and other similar targets
STRATEGIC	Primary threat systems such as SAMs, personnel etc
FRIENDLY	Friendly targets
ENEMY	Enemy targets
MISSILE/MINE	Missiles and mines
NAVIGATION	Planets, jump anomalies etc
MISCELLANEOUS	Asteroid fields, comets, buildings etc

9.7 MODE 7: Stores Manifest Display, SMD

This mode allows you to view the cargo manifest of the target object selected in the **TACSCAN**. This will not work for all objects and especially if they don't want you to see their stores. You can also use this mode to view the stores of your mining drone when deployed on a planet as well as cargo pods. Use the **[.]** or **[,]** keys to scroll the list.

9.8 MODE 8 : Systems Status Relay, SSR

This mode displays a series of color coded icons showing the various primary systems.

RED	-	Destroyed and inoperable
YELLOW	-	Damaged and possible malfunction
BLUE	-	Damaged and undergoing repairs

NRE	Nuclear Reactor	**SRE**	Solar Reactor
TAC	Tactical Computer	**LOG**	Logistix Computer
NAV	Navitron Computer	**MNC**	Main Computer
SHD	Shield	**HULL**	Hull
ENG	Engine	**REC**	Reactor Core
WEP	Weapons Computer	**COM**	Comms Computer
MLS	Main Life Support	**ALS**	Aux. Life Support
MIN	Mine Bay	**PRO**	Probe Bay
TRA	Tractor Beam Control	**BRV**	Bridgeviewer
EMD	Electro Magnetic Disrupter	**TAC**	Tacops Computer
CLK	Cloaking System	**LAS**	Photon Laser Array
SP1	Solar Panel 1	**SP2**	Solar Panel 2

9.9 Commander's Notes

- ✓ Shuttles and ATVs are not subject to combat preps by flight engineers; therefore the *readying* status does not apply to them.
- ✓ Unless a ship is on *ready* status it cannot be launched.
- ✓ ATVs can only be deployed from shuttles, therefore their status will also show which shuttle they are loaded on and whether the shuttle (it's platform) is ready for launch.
- ✓ All ship systems rely on their condition to ensure peak performance. If a system is damaged it will affect its performance. In the case of computer systems, a damaged sub-system can result in static in the display, out of synch displays, and even data loss and/or corruption. If a system is damaged, go into the LOGISTIX computer and schedule repairs immediately.

9.10 Quick Reference Commands

COMPUTER VIDEO DISPLAY ON/CYCLE	L
COMPUTER VIDEO DISPLAY OFF	SHIFT+L
VIDEO ID CURRENT CREW MEMBER	V
DISABLE CREW MEMBER'S VIDEO/COMMS LINK	SHIFT+V
SELECT NEXT CREW MEMBER	.
SELECT PREVIOUS CREW MEMBER	,
CYCLE PREVIOUS OFFICERS AND PILOTS	SHIFT+,
CYCLE NEXT OFFICERS AND PILOTS	SHIFT+.

10. TACTICAL SYSTEMS OPERATION

10.0 Shield Specifications

During combat engagement, you must always monitor your shield and armor levels. The shield levels can be adjusted to suit your needs. It is very important that the shields are not breached. Once that happens, the ship's hull armor will be compromised and your ship's systems will start to take damage. The higher the shield setting, the more protection it will provide and the more power it will require.

Shields are activated in 4 levels. Each level provides an accumulated degree of protection, i.e. Level 1 provides 25%, Level 2 provides 50%, level 3 provides 75%, and level 4 provides 100%. Note that these are a percentage of the total protection provided by the currently-installed shield system. The maximum amount of protection the shield provides is based on the type of shield installed. When the shield is hit, it absorbs the impact based on the force of the impact and the current protection level. After absorbing the impact, the shield will then attempt to recharge to the current protection level. This recharge rate depends on the amount of power allocated to shield control. Plutonium is used as fuel for the shields. If zero power is allocated or all Plutonium is depleted, shield control will shut down. Plutonium is depleted when the shields absorb an impact as this is needed in order for the shield deflectors to operate. The higher the protection level, the more Plutonium required.

The shields can be operated via keyboard commands. You can also **[LEFT CLICK]** on the SHE indicator on the **HUD** which will bring up a shield strength menu where you can select the desired protection.

The shields only offer protection against weapons fire, they do not protect against collisions.

The ship's shields can be upgraded as follows (from least to most powerful)

SPECTRUM/A
LINEAR SPEC II
LINEAR SPEC III
LINEAR SPEC IV
TACYON ANAGRAM

10.1 Hull and Armor Specifications

The **ARM** indicator on the bridge displays the ship's current hull and armor protection. It is color coded based on the hull & armor condition.

GREEN	Armor operational.
YELLOW	Armor breached with possible malfunction.
RED	Armor severely breached. Protection level is zero.

If the shields are inactive when the ship takes a hit, the armor will provide some protection based upon (a) the force of impact and (b) the amount of protection the armor can provide. If the hull armor is breached, then the ship's hull will take the hit directly and be breached. If the hull armor is completely breached, the ship systems and personnel will start to take damage and injury and will eventually be destroyed.

The ship's armor can be upgraded as follows (least to most powerful)

TITANIUM LEVEL II
TITANIUM LEVEL III
TITANIUM LEVEL IV
TITANIUM LEVEL V

Note: See Section 22: Ship Engineering Schematics, for notes on upgrading ship systems.

10.2 Cloaking System Operations

The Battlecruiser has an advanced cloaking system which shields it from detection. This system uses Iridium crystals for power and also requires that power be allocated to the ship's main weapon systems. If you are engaged in heavy combat or going up against a relentless and powerful target such as another attack carrier or star station, you may want to cloak your ship. While cloaked, the ship is invisible to all radar systems. If you launch support ships or fire weapons while cloaked, it will create a distortion field and your ship will be momentarily visible. Activating the cloak only makes your ship invisible. An incoming missile will lose its lock if you cloak, but it will continue to fly in it's pre-programmed direction until it runs out of steam. Therefore it is best to change the ship's heading and location when you cloak.

The cloak counter displayed in the bottom right of the **BRIDGEVIEWER** gives you an indication of how much time is left before the system runs out of Iridium and shuts down. If at anytime the ship runs out of nuclear power or Iridium, the cloaking system will automatically shut down. The system will also shut down as a result of damage to the systems which control it.

To activate/deactivate the cloaking system press **[SHIFT+C]** or **[LEFT-CLICK]** on the **CLOAK** symbol on the **BRIDGEVIEWER**.

10.3 Tractor Beam Operations

The Battlecruiser has a tractor beam system with which it can tow ships and other large objects. Power must first be allocated to this system before it will operate.

To capture a target, first select it in the **TACSCAN** computer and press **[T]** to activate the tractor beam locking computer. As soon as the tractor beam is activated, you will see the image of the target with a cyan box around it and a series of brackets marking the extents of the object.

In order to capture the object, you must maneuver the ship so that the larger box becomes small enough to be superimposed over the brackets surrounding the object. The range to the target, displayed at the bottom of the display, will start to decrease as you move closer to the target. The tractor beam extends down and to the lower rear part of the ship. So, in order for the target to be captured quickly, the ship must pass over and above it slightly. You will know this because the range will start to decrease. If the range increases, reduce your thrust and orient the ship properly. Once you are moving in the right direction, the range will start to decrease. You must continue to orient the ship so that the object stays within the larger box. Once the proper range is reached and the target is at the optimum orientation, the tractor beam will lock and the target will be captured.

If you captured one of your own ships, you will be prompted to retrieve it. Answering "yes" will bring the ship into the Battlecruiser. You cannot retrieve any other ships in this manner.

Sometimes you will run into ships in distress or perhaps you have defeated a hostile target in combat. You can then tow the ship back to **GALCOM HQ** for a reward. The amount of reward is based on the race, caste, class, and the ship's condition.

Since the shields need to be lowered to activate the tractor beam, raising them will deactivate the tractor beam system. To disengage the tractor beam, press **[T]** again or cancel the target from the **TACSCAN** using **[X]**.

10.4 Probe Deployment Operations

Note: See Section 7.4 Bridge Systems - NID Computer and Section 18: Tacops Computer, for detailed discussions on probe deployment.

10.5 Commander's Notes

- ✓ If you plan on going on any deep space excursions, check the nearby regions for cheap shield and armor upgrades. If you find them, assign your engineering crew to upgrade to the new systems as soon as possible. You cannot perform component upgrades at starstations.
- ✓ During combat, if your shields are breached severely enough to breach your ship's armor, you should jump out of the region immediately because one lucky shot to your reactor core is all it takes to end your career.
- ✓ When you capture a ship in your tractor beam, it will remain immobilized until the tractor beam is disengaged. However, if it is a carrier, transport, cruiser, or other craft with engineering personnel on-board, they will be performing repairs. So don't be surprised if the captive takes off if you activate your shields causing the tractor beam to disengage.
- ✓ Some ships with functional weapon systems will continue to fire at you while captured in the tractor beam. Because of this, you should refrain from capturing hostile ships that have not been disabled.
- ✓ When you cloak your ship, any ship or weapons launch operations will indicate your position to the enemy. Because of this, you should avoid all ship launches and turn off your weapon systems to prevent **PTA** and **FATAL** from firing and indicating your position to the enemy radar systems.
- ✓ Turning off your weapon systems will deactivate both **PTA** and **FATAL** systems.

10.6 Quick Reference Commands

SHIELD OFF	SHIFT+]
SHIELD FULL	SHIFT+[
INCREASE SHIELD PROTECTION	]
DECREASE SHIELD PROTECTION	[
CAPTURE TARGET IN TRACTOR BEAM	T
CLOAKING SYSTEM ON/OFF	SHIFT+C

11. WEAPON SYSTEMS OPERATION

11.0 ION Disruptor Array, IOD

The Battlecruiser's main laser array is a forward mounting Ion Disruptor array beam weapon which was recently upgraded to a Multi-Axial, **MAX**, variant of this proven technology. It's maximum range is approximate target acquisition range is approximately 75 - 100 units. It has a damage factor of 50 units per shot and burst lifetime of 5 seconds. This means that the laser shot is active for 5 seconds during which it will inflict 50 units of damage on any target it hits. The ship's weapon systems must be armed in order to fire the IOD laser.

The laser intensity of the IOD can be modified in increments of 10% up to a maximum of 100% using the **[;]** and **['']** commands. The higher the laser intensity, the more damage inflicted on the target. Each percentage of intensity increases the damage factor by the intensity setting, therefore, if the setting was 50%, the target would get hit at the rate of 50% plus the default value of the default damage factor.

To fire, simply turn the ship toward the target and fire. If you are an experienced commander, you will use a combination of the **TARGET LEAD DESIGNATOR** and the **TARGET LOCATOR LINE**, to lead, acquire, and fire on the target.

When the IOD is fired, it must recharge before it can fire again. The higher the laser intensity, the longer it takes to recharge between bursts. The current setting and recharge time is displayed on the **BRIDGEVIEWER** above the **PTA** indicator. The first value is the current setting and the second value is the recharge state which reads 100% when fully recharged.

In situations where the ship is on a pre-computed flight path but you still want to be able to fire the lasers, you can de-couple the fire control system from the flight control system. This allows the ship to continue on it's course while you manipulate the laser without altering the flight path.

11.1 Passive Target Acquisition, PTA

The Battlecruiser has 3 turret laser arrays in addition to the main **IOD** laser. These are controlled by the Passive Target Acquisition (**PTA**) system. The **FORE TURRET** is mounted on top of the ship, the **MID TURRET** is in the lower mid section and the **AFT TURRET** is mounted in the lower rear section.

The **PTA** system is activated by pressing **[P]**. You can also **[LEFT CLICK]** on the **PTA** symbology on the **BRIDGEVIEWER** to activate or change the setting. The laser turrets, under **PTA** control, will acquire and automatically fire on hostile targets that are in range. The system automatically selects a low recharge setting for the lasers but you can modify them manually using the **[SHIFT+;]** and **[SHIFT+']** commands. The **PTA** turret intensity setting affects both firepower and re-charge rate of the turrets. At min setting, the **PTA** recharges at 1.5 the time but has 1/4 the power and range. The penalty at high fire rates is compensated for by increased rate of fire greatly improving the chances of a hit on smaller objects.

Manual Turret Firing Control

You can also switch to any operational turret for manual fire control. Once you switch to a turret, if it is in **PTA** mode, it will stop firing. The turrets have a different gun-sight from the **IOD**. The left and right line brackets indicate the recharge rate of the turret based on the current power setting. If the turret is re-charging a flashing broken **X** is displayed. The distance between the two brackets determines the recharge time. Once these two brackets meet at the center of the display, the turret is fully charged and ready to fire.

11.2 FAst Target Acquisition & Lock, FATAL

This target acquisition system provides an easy way of attacking targets in the heat of combat using the ship's weapons computer and missile launch systems. Whereas the **PTA** system fires lasers, the **FATAL** system auto-fires Ralix and Vagrant missiles.
To designate a target for the **FATAL** system, select the desired target in the **TACSCAN** and press **[D]** to designate it as a target. This will activate the **FATAL** weapons system and display the Weapon System Select mode of the **CVD**. From the weapons list, enter the number of the missile you wish to use for this target.

When a **FATAL** target is designated, the missile is armed and starts to track the target which is displayed in a yellow **TTD**. Once the target comes within range of the missile, the missile will be automatically launched by the **FATAL** system and guided by it's own internal radar guidance system. If the target is destroyed, it is cleared from the target list.

Once you've assigned a missile to **FATAL**, you will no longer be able to fire it manually. To regain control of a previously assigned missile, remove the target from the list.

You can assign up to eight **FATAL** targets. To cancel a **FATAL** target press **[X]**. Press **[SHIFT+X]** to cancel all assigned **FATAL** targets.

11.3 Missile Target Acquisition & Attack Procedures

The Battlecruiser has the ability to arm and deploy a variety of missile systems from its main weapons pod. This weapons pod can contain up to 20 missiles and can be replenished directly from the weapons cargo bay. The weapons pod can be armed via the **TACTICAL** computer.

The ability to launch missiles effectively is one of the most valuable and important skills to learn when patrolling hostile territory. Learn it well. You must study your missile armament and choose the right missile for the job. Missiles come in many variations and differ in acquisition range, lock time, damage factor, etc.

All missiles have proximity logic which allows them to detonate when they are within a certain range from the target. If a missile in flight does not hit its target or come close enough for the proximity logic to activate, the missile will self-destruct.

In order to launch a missile at a target, you must first acquire and identify the target, then select a weapon. Once the missile gets a launch solution, launch the missile. To launch a missile at a stationary or moving target, follow these instructions:

- Press **[K]** to put the **TACSCAN** in command mode.
- Press **[,]** and **[.]** to cycle all valid targets until the desired target is displayed in the **CVD**. You can view the target in the **CVD** by pressing **[V]**.
- Press **[W]** to turn on the weapon systems. **TAC** should be displayed in the **HUD**.

- Press **[BACKSPACE]** to cycle through your missiles stores and select the desired missile. The Target Acquisition Reticle, **TAR**, should now be visible with the Missile Tracking Designator, **MTD**, whizzing around inside the **TAR** as it searches for a valid target to lock on. You can also access the weapons bay and select a missile manually from the list by pressing **[SHIFT+W]**. Once the list of weapons is displayed, press the number of the desired missile to select & arm it.
- Maneuver your ship until the **TTD** for the target is within the **TAR** and in front of you. You may need to turn off the auto-pilot using **[A]** in order to have manual flight control. Continue to fly toward the target so that it comes within range of the missile and a valid lock is achieved.
- Once the missile achieves a lock, indicated by a flashing **LOCK** symbol in the **BRIDGEVIEWER**, press the **[SPACEBAR]** to launch the missile. If you are not using a missile with **ATL** or **ATL/V** logic, keep the target in view and locked until the missile detonates.

11.4 Mine Deployment Operations

The Battlecruiser can also arm and launch up to 10 mines from its special mine launch bay. Like missiles, these mines are armed via the **TACTICAL** computer. Unlike missiles, deploying mines is a simple matter of cycling through the currently armed weapons using the **[BACKSPACE]** key and pressing **[SPACEBAR]** to launch the selected mine. Once deployed, the mine will operate depending on it's intelligence and type. A crab mine has turrets which fire at targets that come into range and a Leech mine detonates on collision or when an object breaches its proximity sensors. Mines will auto-destruct once their timer expires. The TTD for deployed mines displays the self-destruct timer.

11.5 Commander's Notes

- ✓ There are times when you will find yourself in a skirmish involving several hostile craft. Though you can increase the intensity of your lasers for maximum damage to the target, if the target already has you locked, it will be firing much faster than you. Your best bet is to increase your shields to max, activate the PTA system and reduce the laser intensity of your turrets and main IOD. This way, they will fire faster and the target will be forced to take evasive action with the faster barrage of shots.
- ✓ If you are taking heavy damage and survival is your goal, turn off your weapon systems and activate your cloaking system. Then change your ship's location and heading. Use this trick to escape from the region or, if you have enough Iridium, remain cloaked while your engineers perform repairs to your critical systems.
- ✓ If you had to choose between upgrading your shields or armor due to financial constraints, upgrade your armor. This is because, though your shields will absorb impact, several well placed shots will breach the shields in a single volley and this will cause your ships hull armor to take damage immediately. Once your hull armor is breached, your systems are bound to take significant damage. This will also put your crew at risk.
- ✓ If you are trying to disable a target, you must turn off your **PTA** system so that the turrets don't destroy the target by accident. You can then reduce the intensity of your **IOD** and fire at the target until you disable it.

- ✓ The **PTA** system selects targets based on range and threat priority. It creates a list of all targets within range and fires the turrets at the hostile ones it acquires. This means that sometimes it will run out of 'slots' for all the hostile targets and it will appear to ignore hostile targets that are close by. This is normal and is a flaw in the system. In fact, sometimes its slots will consist of non-hostile targets as the friendly fire avoidance code continues to filter targets. In these instances, hostile targets will continue to fire at you until the system frees up a slot and assigns it to a hostile target. The **PTA** system has 24 slots for target acquisition.
- ✓ If you must use the **FATAL** system, make sure you have an ample supply of Ralix and Vagrant missiles because these are the only ones that it will use due to their advanced independent target acquisition logic and firepower.
- ✓ Mines can come in quite useful in a crisis situation. If you deploy enough of them, they can keep the enemy busy while you carry out your mission or escape from the region. You can also deploy mines around jump anomalies so that hostile targets jumping into the region are immediately engaged before they track you on radar.
- ✓ If your weapons computer takes even the slightest damage during combat, have it repaired immediately otherwise all systems which use that computer, i.e. **FATAL**, **PTA**, etc, will malfunction or cease to operate.
- ✓ If you are in a region which has a friendly or neutral starstation and you are engaged, moving your ship closer to the station will cause it to detect the threat as it chases after you. The station, resources permitting, may launch ships to engage the threats. Don't get too close or you may take hits from the station's turrets.
- ✓ If you have to park in orbit around a hostile planet which has an ODS system in orbit, keep a safe distance away from it because their missiles are deadly and cannot be jammed once launched.
- ✓ A common mistake is to launch an Interceptor and enter a planet only to find that you don't have any air to air (ATA) or air to surface (ATS) missiles. Get in the habit of changing your Interceptor profiles in the **CVD** to match their mission. You can even program the arming of deployed Interceptors by selecting the profile in the **CVD** and recalling the Interceptor. It will be armed with the new weapons for the selected mission profile in time for its next launch.

11.6 Quick Reference Commands

WEAPON SYSTEM ON/OFF	W
WEAPONS SELECTION MENU	SHIFT+W
INCREASE IOD LASER INTENSITY	'
DECREASE IOD LASER INTENSITY	;
FIRE MAIN IOD LASER	ENTER
DE-COUPLE IOD LASER CONTROL	SCROLL LOCK
PTA SYSTEM ON/OFF	P
INCREASE PTA LASER INTENSITY	SHIFT+'
DECREASE PTA LASER INTENSITY	SHIFT+;
DESIGNATE FATAL TARGET	D
CANCEL FATAL TARGET	X
CANCEL ALL FATAL TARGETS	SHIFT+X
SWITCH TO FORE TURRET	F5
SWITCH TO MID TURRET	F6
SWITCH TO AFT TURRET	F7
FIRE MISSILE OR MINE	SPACEBAR
CYCLE MISSILES AND MINES	BACKSPACE
CHANGE INTERCEPTOR MISSION PROFILE IN CVD	SHIFT+, OR SHIFT+.

12. FLIGHT DYNAMICS & NAVIGATION

12.0 Flight Controls & Dynamics

Flying the Battlecruiser, or any ship for that matter, is fairly straight-forward. First, you need to make sure the autopilot is off. If it is on, turn it off by pressing **[A]**. Once you have control of the stick, find a nice relatively unpopulated section of space and experiment by moving the stick as described below. If the controls seem unresponsive or drift when you let go, calibrate it by pressing **[CTRL+J]**. You can also use the keyboard for flight control.

To change your pitch, push the stick **[UP]** and **[DOWN]**. In space, this will not change your altitude but on a planet or moon where gravity is in effect, it will. On a planet you can increase or decrease your altitude by pushing the stick **[UP]** or **[DOWN]**. In space this merely changes your ship's pitch angle as altitude is not affected. You can also use the **[UP ARROW]** and **[DOWN ARROW]** keys to pitch the ship. Notice that there is no change to the Ship Heading Indicator as you pitch the ship.

To yaw the ship, push the stick **[LEFT]** or **[RIGHT]**. This changes your heading but your pitch remains unchanged. You can also use the **[LEFT ARROW]** and **[RIGHT ARROW]** keys to yaw the ship. Notice that the Ship Heading Indicator changes as you yaw the ship left and right.

To roll the ship, press **[BUTTON 2]** while pushing the stick **[LEFT]** or **[RIGHT]**. Rolling the ship will cause you to lose altitude on planets with gravity. You can also use the **[INSERT]** and **[DELETE]** to roll the ship. Notice that there is no change to the Ship Heading Indicator as you roll the ship.

To move the ship forward you must apply thrust by pressing **[1-9]** on the keyboard or by using your stick's throttle wheel. This causes the ship to accelerate forward. You can also use your stick's throttle control if it has one. Once thrust is applied, the ship will start to move as indicated by the Ship Velocity Indicator. You can also fine tune your thrust for precision approach using the throttle wheel or by pressing the **[-]** and **[+]** keys. The ship's max speed is 1500 mps (meters per sec) The afterburner and retro-rockets go at 1.5 times this amount. These speeds are also affected by the amount of damage to your ship's engines. Also, the more you use your afterburner and retro-rockets, the more fuel you burn.

You can stop the ship or cause it to move backwards by applying retro-rockets using the **[TAB]** key. Pressing **[0]** (Zero) and holding it or moving your throttle all the way back will cause the ship to reduce thrust and eventually come to a halt.

Note: If you have a joystick with a throttle, it will have precedence over keyboard thrust controls. You can restore keyboard controls by moving the throttle all the way back and using the keyboard for thrust controls.

Vertical Take Off & Landing, VTOL

Your ships also have **VTOL** capability which allows them to take off from a fixed spot and maintain a sustained hover in the air. This feature is made possible by the rotation of the ship's thrust vectors to initiate forward or upward thrust. The thrust vectors are configured for upward thrust by pressing the **[CAPSLOCK]** key.

Activating VTOL mode causes a new symbology to appear in the cockpit. This symbology is represented by a box with a pair of carets on the left, right and bottom sides. The carets on the left and right sides indicate the ship's collective pitch and the carets on the bottom represented the ship's yaw movement.

In **VTOL** mode, the ship's controls operate differently. You increase or increase your vertical speed and subsequently your altitude, by pressing and holding the **[`]** and **[TAB]** keys. Your forward thrust, though minimal, can be increased by pushing the stick forward and decreased by pulling it back. The higher the movement, the higher the speed change. You can also use the throttle on your stick to control vertical speed. The carets will change indicating variations in the ship's pitch and yaw angle. They will eventually center on the **VTOL** box as the trim is centered. You can also press and hold the **[NUMERIC 5]** key to center the trim and auto-hover at a steady speed and altitude.

While hovering, you can press joystick **[BUTTON 2]** and move the stick **[FORWARD]** and **[BACK]** in order to control your pitch attitude. You would need to do this in order to attack targets from a stationary position.

Note: If a throttle axis is available, it has more authority than [`] or [TAB]. For best results with a throttle axis, use the throttle for center trim and use the keys to adjust vertical speed. Hold down the keys to build up vertical speed. When the keys are released the vertical speed will return gradually to zero.

Matching A Target's Speed

You can match the current **CVD** target's speed by using the **[CTRL+`]** command. This is a toggle and when active displays an **M** symbol in the HUD near the speed indicator. If you have a target in front of you, you can match its speed by issuing this command. If you need to close or increase the distance from the target, use the normal afterburner and retro-rocket keys, **[`]** and **[TAB]**. The match target speed command has no effect when the autopilot is off.

The **M** caret will constantly adjust your set speed but pegs at 0 and 1500 kps (kilometers per sec). It's very useful and makes dogfighting easy. Once you're on a target's six, it prevents you from overshooting and maintains your distance from the target. All you need to do is keep the target in your sights and fire when in range.

Note: If you change the target, it leaves the region, cloaks, gets towed, is blown up, or does a HyperJump, this command will be cancelled.

12.1 Inter-System Course Plotting

You can plot a course to any location or target within the current region or to other regions. The simplest method is to select the target in the **NID** or **CVD** and fly to it manually by using normal thrust controls. This is useful for short hops or in cases where you have insufficient fuel or power to initiate a HyperJump.

However, there are times when you will want to let the ship's **AUTONAV** computer take over and fly the route to the target. The procedure is simple:

- Press **[W]** to turn off the weapon systems if on. **NAV** should now be displayed in the **HUD**
- Press **[J]** or **[K]** to put the **NID** or **TACSCAN** in command mode and cycle through to the **NAVMAP** mode if using the **NID**
- Press **[.]** to select any target and press **[V]** to view it in the **CVD**.
- Press **[.]** and **[,]** to cycle through all valid targets until the desired one is displayed in the **CVD**.
- Press **[SHIFT+9]** to activate the HyperJump engines and fly the ship to the region. If the engines are not charged, you will have to wait and then try again.

Once the target, distance, power and transit related computations are complete, the ship will start to orient itself to face the target destination. Once it computes a flight path, a hyperspace jump anomaly will form a short distance from the ship. The ship then engages it's HyperDrive engines and flies straight into the anomaly and enters hyperspace. While in hyperspace, you can still go about your normal tasks. You cannot drop out of hyperspace once it's committed. In hyperspace, nothing is real and even though you would seem to fly into things, you cannot collide with them since they are not real. Once the transition ends, the ship will emerge a short distance from the destination and the jump anomaly will collapse. The HyperJump system then shuts down and will begin to recharge as indicated by the HyperJump Status Indicator.

12.2 Intra-System Course Plotting

There are times when you will want to leave the current region or even the system. You will use the same procedure are described above but in this case, you will need to select a jump anomaly such as a wormhole, fluxfield, or jump point in the **NID** computer. Once the ship reaches the anomaly, it will enter and then emerge on the other side of the anomaly. Using the method, you will be able to travel to any region or starsystem in the entire galaxy.

To travel to another region, follow the procedure above but you can only select jump anomalies in the **NID** computer's **NAVMAP** mode.

- Press **[W]** to turn off the weapon systems if on. **NAV** should now be displayed in the **HUD.**
- Press **[J]** to put the NID in command mode and cycle through to the **NAVMAP** mode.
- Press **[.]** to select any target and press **[V]** to view it in the **CVD**.
- Press **[.]** and **[,]** to cycle through all valid targets until the desired one is displayed in the **CVD**.
- Press **[F]** to program the target to the **AUTONAV** flight computer.
- Press **[F]** again to activate and lock the Flight Path Designator to the current flight path. The **FP : TARGET** symbol will appear in the top-center of the **BRIDGEVIEWER**, displaying the name of the jump anomaly leading to the target region.
- Activate the AUTONAV computer by pressing **[A]** . If the target is a jump anomaly, the ship will enter it and emerge on the other side.
- Once you emerge on the other side, deactivate the autopilot with **[A]** and re-arm your weapon systems using **[W]**.

Note: See Section 13 : Navitron Computer, for more info on advanced navigation.

12.3 Waypoint Tracking

You have the ability to follow waypoints created using the **TACOPS** computer. If the ship is under pilot AI control, then they will attempt to visit each waypoint, carry out the order assigned, and move on to the next waypoint. Once the final waypoint is reached, they will return to base unless otherwise instructed.

When you take manual control of a craft, you have the ability to follow the waypoints created for it. You will notice a waypoint designator on the top right corner of the **HUD** (inverse color) and the range in km (kilometers) to the waypoint. The current waypoint being tracked is indicated by a vertical box below the heading indicator. Fly toward this heading in order to reach the waypoint.

If you have the autopilot on and the pilots have flight control thereby following a waypoint pattern, you can still cycle targets in the **NID** or **TACSCAN** and view them in the **CVD**. The current target will be designated with an open triangle. If you turn off the autopilot and make this target the current destination, and then engage the autopilot again this will over-ride the current waypoint and the ship will fly to the target. In order to resume following the original programmed waypoint, destroy or cancel the current target using **[X]** and the autopilot will resume the original waypoint pattern.

You can dynamically alter a ship's waypoint pattern by activating **TACOPS** and either moving the waypoint location or changing its order. The **HUD** will reflect the new waypoint location and range which the ship, under pilot control, will now follow.

In the cockpit and under AI mode, you can have the ship fly to a target and ignore the current waypoints. Simply select it in the **TACSCAN** or **NID**, press the **[F]** key and engage the auto-pilot if not already engaged. The ship will fly to the target. If you cancel the target, the ship will resume waypoints.

Note: See Section 8: Bridge Systems – TACSCAN Computer for more details.

12.4 Docking Procedures

There are starstations scattered around the galaxy. There are also starbases on the surface of some planets and moons. You can dock with, trade at, and perform repairs to your ship at any friendly or neutral facility.

Stations will usually refuse docking clearance if there are hostiles (or inbound missiles) in the region. This is so that the launch bays are used by its own fighters as they engage the enemy in the region. Once the region is safe, you will be allowed to dock as normal.

In space, you can dock your Battlecruiser, Interceptor, or Shuttle with a starstation.

On a planet or moon surface, you can dock your Interceptor, Shuttle, or ATV with a starbase.

If you dock while you have a ship in tow, you will be asked by the station if you would like to deliver the towed object to the station. If you say “yes”, then the ship will remain at the station when you launch. If there was a reward, this will be credited to your account. If you say “no”, then the ship will remain in tow when you launch from the station.

You can also dock an Interceptor or Shuttle with the Battlecruiser provided that the docking bays for the ship are operational. If the shuttle is towing one of your own crafts, the towed craft will also be docked automatically if the shuttle is under AI control. If towing your craft using the Battlecruiser tractor beam, once captured, you will be prompted to bring the craft on-board. If you say “yes” and the docking bay supporting the ship is operational, the ship will then be docked. If you say “no”, the captured ship will remain in space.

To dock with a target :

- Press **[K]** to put the **TACSCAN** in command mode.
- Press **[.]** to select any target and press **[V]** to view it in the **CVD**.
- Press **[.]** and **[,]** to cycle through all valid targets until the desired one is displayed in the **CVD**.
- Using normal flight controls, fly toward the target until you are within 25 clicks from it. If you are a long distance away, you may want to HyperJump to the target and then cruise towards it at low speed.
- Monitor your range to the target as indicated by the values in the top left corner of the **TACSCAN** computer. Once you are within 25 clicks of the target (based on size of target), request docking clearance by pressing **[ALT+D]**. If clearance is granted, your ship will automatically dock and you can log into the facility’s **CENTCOM** unit as normal.

12.5 Orbital Procedures

Orbital procedures are not implemented in the game because you do not need to be in orbit to perform actions on the planet. To simulate an orbit around a planet or moon, simply HyperJump to the planet (or approach manually, but be cautious so that you are not pulled by its gravitational field) and the autopilot will stop the craft at a safe distance.

Then, kill your engines (don’t forget to shut your joystick throttle too!) and clear any targets you currently have selected in the **NID** or **TACSCAN**. The **MODE 1** of the **CVD** should read **NO TARGET**. You do this so that if you switch out of the ship, the autopilot does not engage and possible fly to, the currently selected target. You can also turn on the autopilot and give it the **HALT** order from the orders menu. That’s it, you are now in orbit.

12.6 Planetfall Operations

You can fly to and enter the atmosphere of any planet or moon in the galaxy. The procedure is simple. Simply locate the planet or moon visually or by selecting it in the **NID**. Once you've located it, use normal flight controls and fly directly toward it. Continue to fly toward it until your ship is captured in the planet or moon's gravitational field. A short external camera transition sequence will occur after which your ship will be located within the atmosphere. Controls will then be handed over to you by the flight computer once the planetfall procedures are completed.

To leave a planet or moon's atmosphere, pitch the ship upward and apply sufficient thrust to breach the planet or moon's escape velocity. Once this is breached, the ship will leave the planet and after an external camera transition, will be located in space. Controls will again be handed over to you by the flight computer once orbital breach procedures are completed. You can also press the **[O]** key when you want to immediately engage orbital breach procedures when above 45,000 feet.

One of the worst things that can happen to you when on a planet is if your ship is too damaged to achieve enough thrust to breach the planet's escape velocity. If you cannot attain this thrust level, your ship will never reach the 45,000 feet minimum altitude required to engage orbital breach procedures. If this happens, you have several choices. You can either:

(a) scuttle the craft and send a rescue team of Marines to the surface to protect the survivors until an evacuation plan gets underway,
(b) using the **TACOPS** computer, you can beam survivors back to the ship using the transporters,
(c) using the **TACOPS** computer, you can send a shuttle down to the surface to evacuate personnel, or
(d) using the **TACOPS** computer, you can send a shuttle down to the surface to tow the downed craft back to the Battlecruiser.

Flying down to the surface of a planet or moon can be an enjoyable experience. There are scores of objects to see, places to visit, and beautiful terrain. If you fly around long enough, you will witness night and day complete with sunrise, sunset, night stars, etc. You will also witness variable weather and terrain conditions such as desert, temperate, polar, etc. The visibility on gaseous planets and moons is limited and at night you can use your ship's infra-red visual aid to guide you. Most planets and moons are divided into hostile, friendly, and neutral sections.

AUTO-LANDING SYSTEM

You can use the auto-landing system by pressing the **[SHIFT-E]** key when on a planet. The system works only in AI mode (not **DIRECT** mode) so while landing is in progress you cannot cancel AI mode (but you can cancel auto-landing using **[SHIFT-E]**). Once on the ground you can take off again by pressing **[SHIFT-E]**. If the ship does not have a waypoint set or does not have some target (in the **NID** or **CVD**) for the AI system to follow, takeoff will not work correctly because the ship does not accelerate.

While you're busy gawking at the terrain, remember, hostile planets don't like unwelcome guests. Every red dot you see on TACSCAN radar has a missile or laser tracer with your name painted on it. If you have a mission to accomplish, stay low, keep it quiet, and pack a lot of long range, high profile air to air (ATA) and air to surface (ATS) missiles. If you plan to enter a planet which has an Orbital Defense System (ODS) platform in orbit, wait until it is on the other side before you enter the planet. Some ODS platforms have the capability to fire missiles at targets within the atmosphere, so if it sees you before you enter the planet, it will still try to attack you from orbit where it stands an even greater chance of hitting you – hard. Since you can't select a target in orbit if you're on the surface, you will have to find a way to take out the ODS before it takes you out.

12.7 Planetary Terrain Following & Avoidance

The support ships have a terrain following and avoidance model which allows them to follow the surface terrain without crashing into the ground or into mountains. It's not 100% fail-safe especially at high speeds. To use, activate the autopilot and the ship will fly a low altitude, making course corrections to avoid collisions with the ground and other terrain features such as hills etc. If you have waypoints programmed, the autopilot will fly the pattern, using the TFA model. When you make planetfall, the autopilot assumes an altitude of 250 ft MSL and engages the terrain following and avoidance model. The TFA model is disabled during manual flight control but can be enabled by putting the /A parameter in the BC3K startup .BAT files. Under manual control, if you fly too close to the ground and are in danger of colliding with it, the computer system will sound a warning and a pull-up cue will also appear in the HUD.

12.8 Commander's Notes

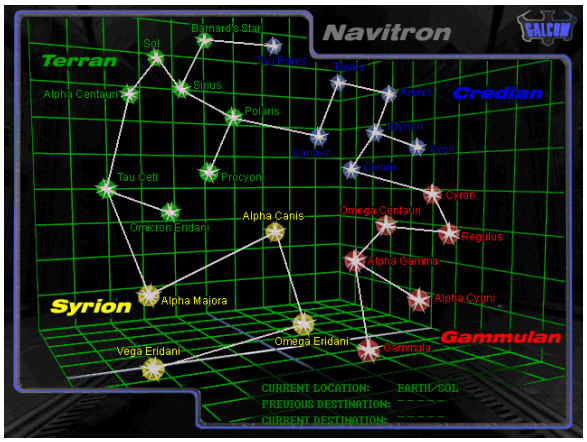
- ✓ Sometimes when using fluxfields, your ship may jump and emerge in the current system. This is because jump points have multiple end points one of them being your last region location.
- ✓ If you dock at a friendly station which does not permit illegal items, any illegal items will be confiscated. You will then be fined a hefty fee for the act and a violation logged on your record.
- ✓ You don't always have to dock with your Battlecruiser to trade. You can use the shuttle to make trade runs with stations, leaving the Battlecruiser in space.
- ✓ If you're going to be sending shuttles down to the surface of a hostile planet, remember to send down an Interceptor escort with Escort as the mission profile.
- ✓ Don't forget to select a mission profile which includes surface missiles when planning to send an Interceptor to the surface of a planet or moon.

12.9 Quick Reference Commands

ENGAGE ORBITAL ENTRY/BREACH	O
REQUEST DOCKING CLEARANCE	ALT+D
HYPERJUMP	SHIFT+9
WINGS LEVEL/AUTO HOVER	NUMERIC 5
YAW LEFT/RIGHT	LEFT/RIGHT ARROW
ROLL LEFT/RIGHT	INSERT/DELETE
PITCH UP/DOWN	UP/DOWN ARROW
THRUST FACTOR	1-9
FULL STOP	0 (HOLD)
FINE TUNE THRUST	+ / -
AFTERBURNER/VTOL UP	`
RETRO ROCKETS/VTOL DOWN	TAB
VTOL/HTOL	CAPSLOCK

13. NAVITRON COMPUTER

13.0 System Overview



The galaxy is divided into four QUADRANTS. The top left section is the **TERRAN** quadrant. The top right section is the **CREDIAN** quadrant. The lower right section is the **GAMMULAN** quadrant. The fourth, lower left section, is the **SYRION** quadrant. Each quadrant contains a number of **STARSYSTEMS** which are also divided into **REGIONS**. The entire galaxy is linked via wormholes, jump points, and fluxfields.

When the **NAVITRON** is activated, it displays the full-screen galactic map and a smaller system map based on your Current Location in the galaxy.

It also displays:

CURRENT LOCATION	-	Current **REGION/SYSTEM** location
PREVIOUS DESTINATION	-	Previous **REGION/SYSTEM** destination
CURRENT DESTINATION	-	Programmed **REGION/SYSTEM** destination

[RIGHT CLICK] the mouse anywhere in the display to remove the smaller system map. The main galactic map shows the various starsystems in their relative positions within the galaxy.

To activate a system map and view the regions within it, **[LEFT CLICK]** on the system map. The internal region links in the system map are displayed by red (wormhole), yellow (fluxfield), and blue lines (jump point). The regions themselves are represented by spherical icons.

13.1 Galactic Cartography

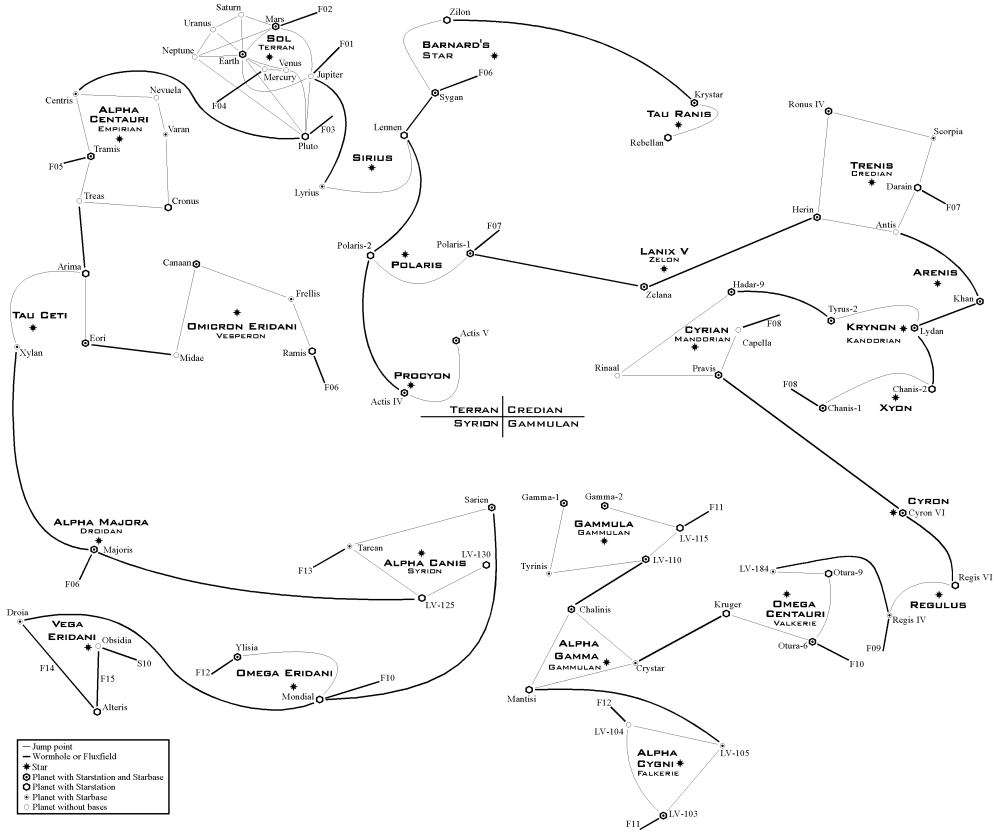
The Galaxy in Battlecruiser: 3000AD is made up of 25 major habitable systems, containing 75 planets, 145 moons, and several spatial anomalies. The entire galaxy is evenly divided into four quadrants.

Starsystems are primarily linked by wormholes though some fluxfields have been reported to provide links into certain starsystems. This means that in order to move from a region within a starsystem to another region within another starsystem, you have to locate a region with a wormhole that will provide the link to the destination. For example, you can only go from the Sol system to Alpha Centauri via a wormhole located in the Pluto region in Sol.

The regions within the starsystems are linked via jump points, therefore, you can jump from Earth to Pluto region using a jump point and from Pluto to the Centris region in the Alpha Centauri starsystem.

Note: See Appendix F for a large scale map of the entire galaxy.

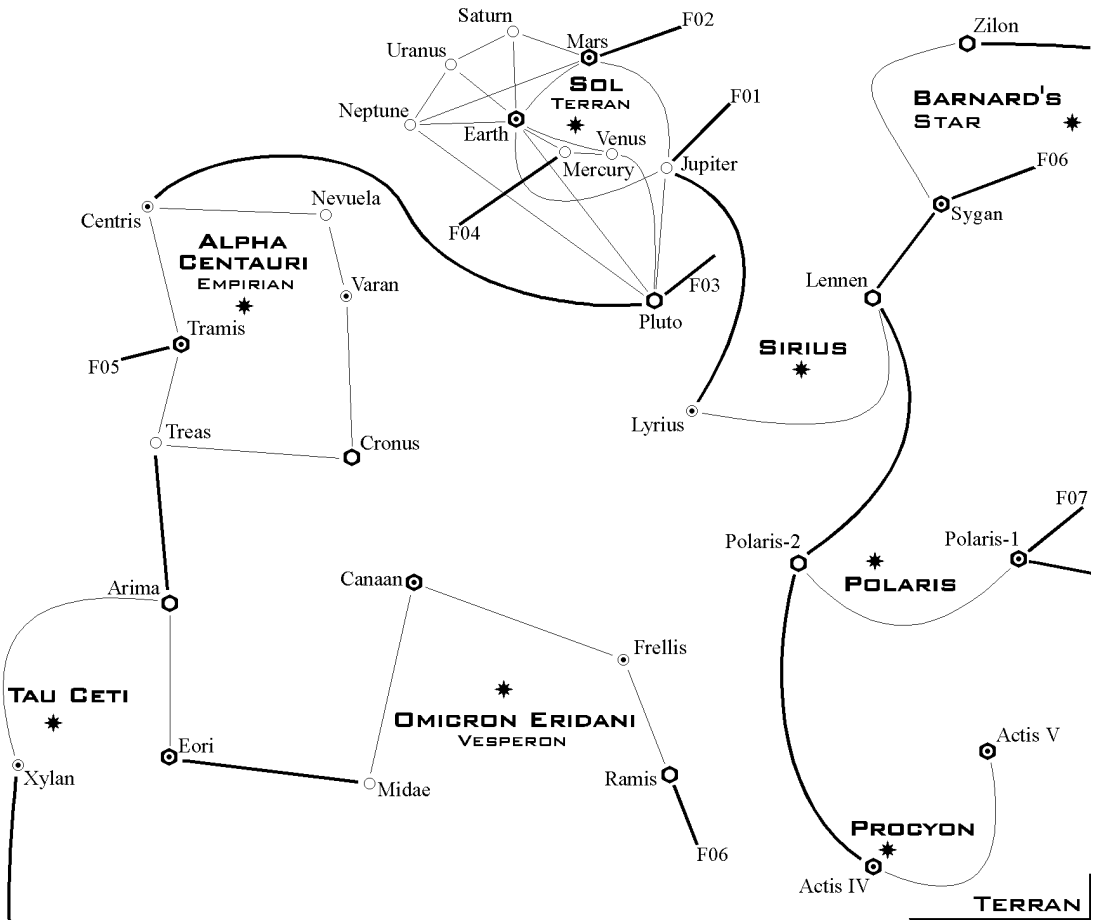
The principle star systems within our Galaxy are shown in the following diagram, which highlights how they are linked to one another. Your start location is in the Sol system (near the top left of this diagram).



Quadrant Format:

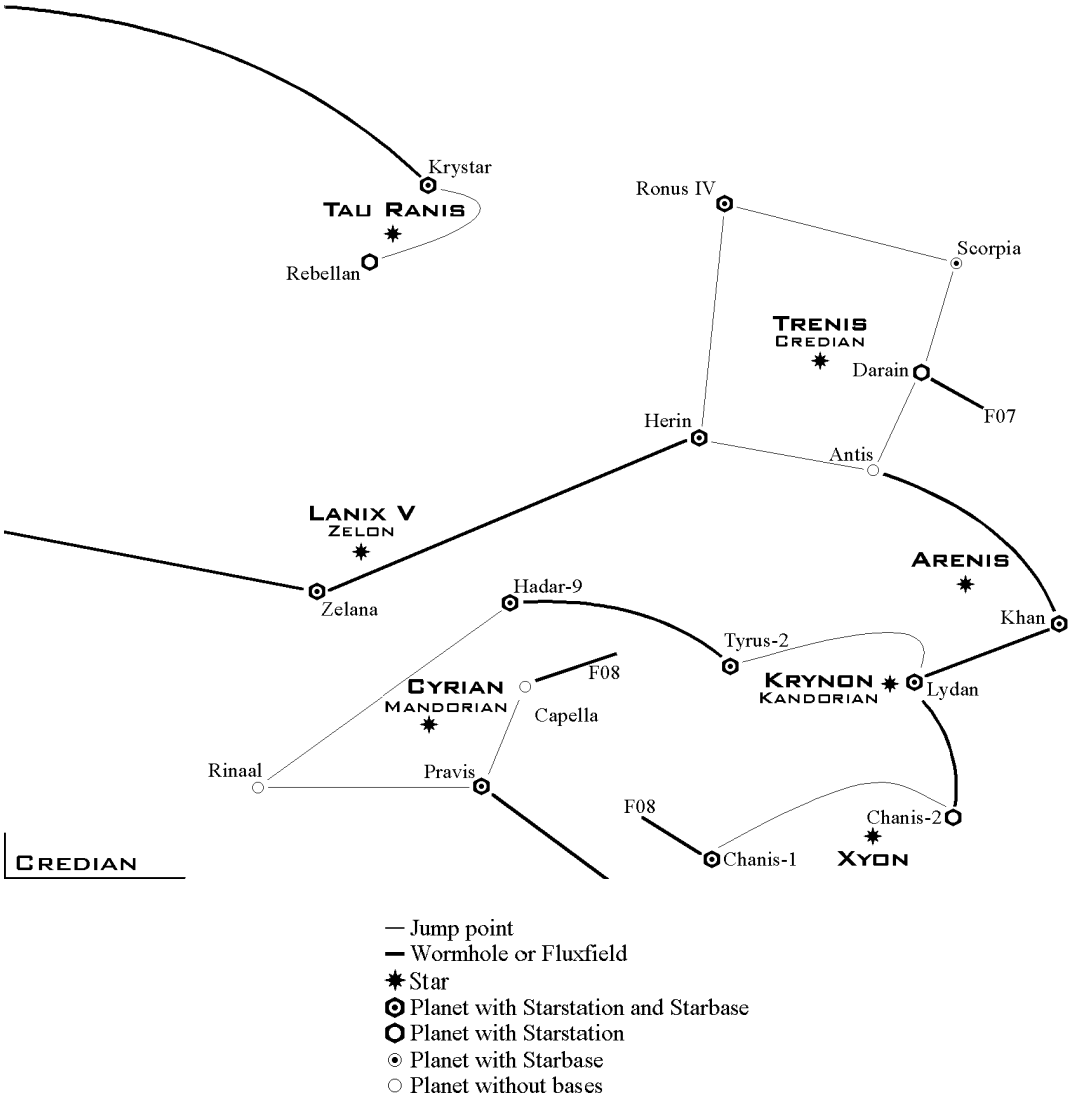
Terran	**Credian**
Syrion	**Gammulan**

TERRAN QUADRANT



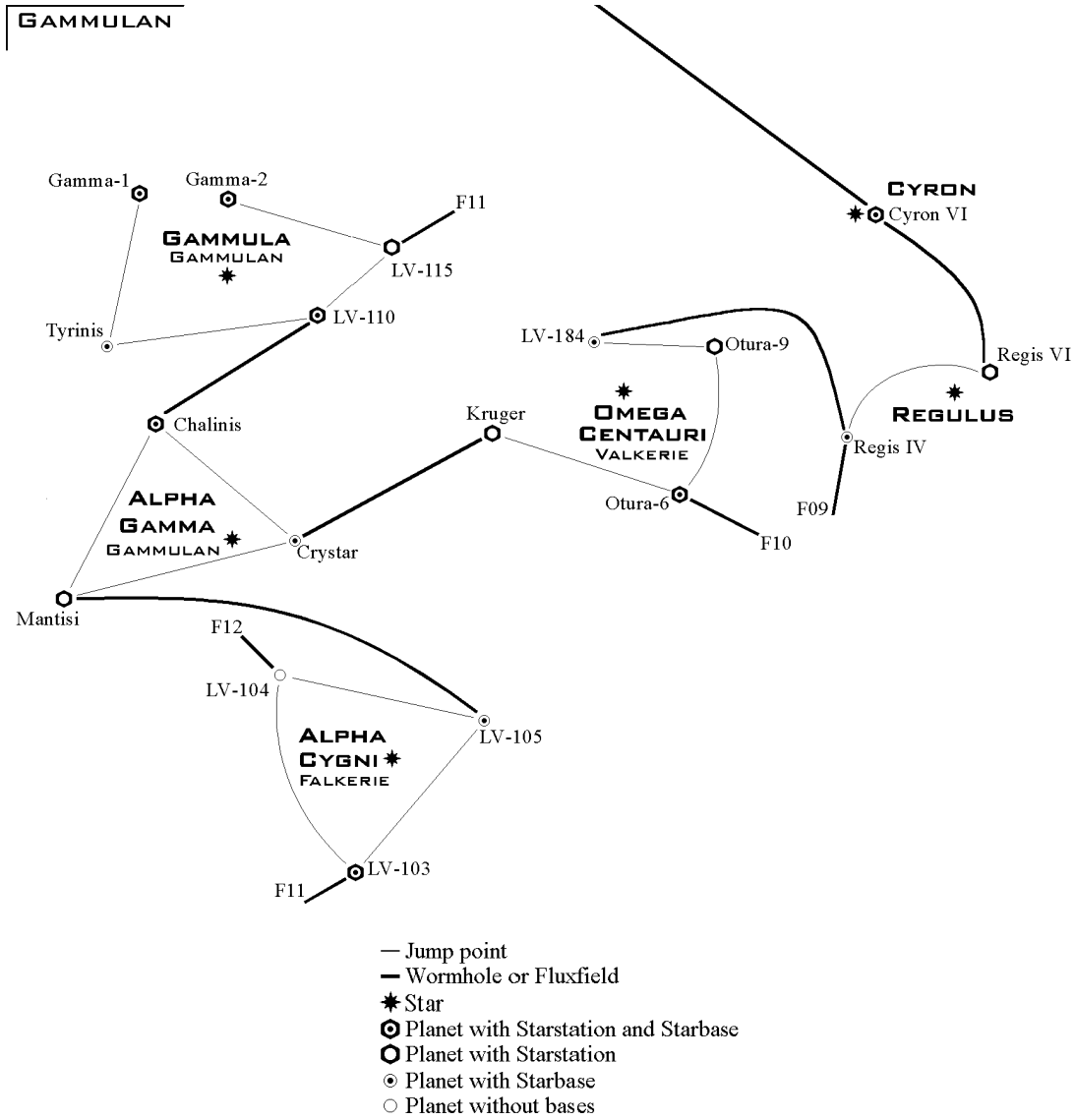
The Terran Quadrant is home to the founding members of **GALCOM**: the Terrans, Empirians, and the Vesperons. Despite its large military presence, this quadrant has it's fair share of hot spots, notably Tau Ceti, which provides a haven for raiders and assassins, control of which is hotly contested by the Vesperons; and Barnard's Star, which provides the main strike base for the Terran Insurgent faction. The systems of Polaris and Procyon, however, form a refuge for scientists and traders from many alien races.

CREDIAN QUADRANT



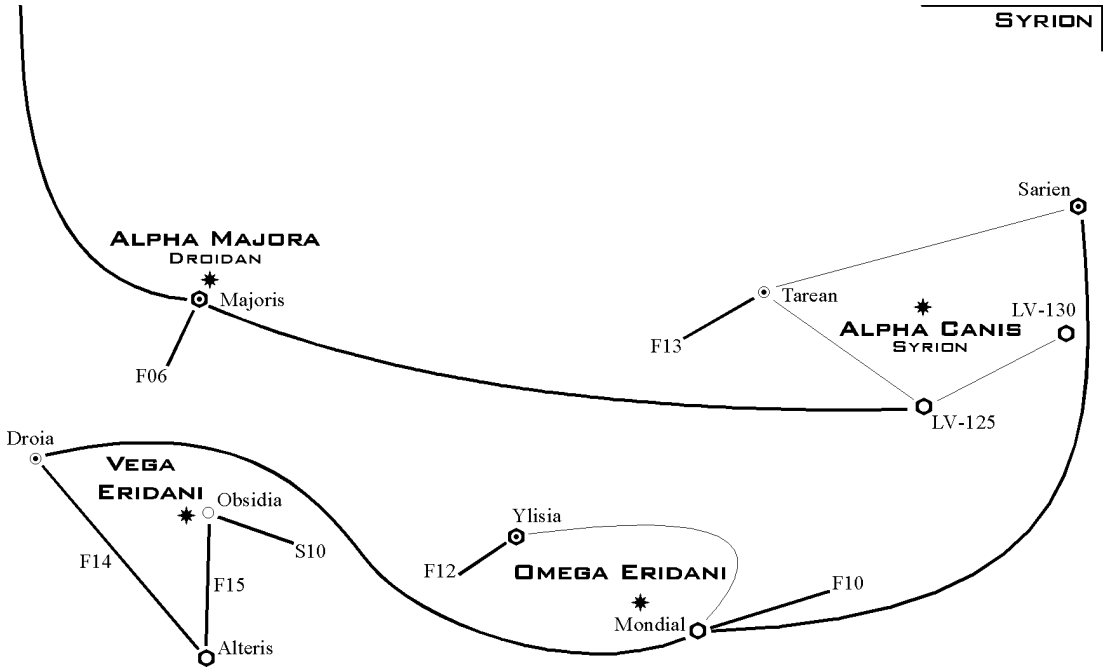
The Credian Quadrant is home to the Credian, Mandorian, Kandorian, and Zelon races. Next to the Gammulan Quadrant, this is the most militarized area of the galaxy with most of the Star Stations and Star bases found here owned by their respective government's military. The somewhat isolated system of Tau Ranis is the main haven for scientists and traders, whilst the Arenis and Xyon systems are the only places in the quadrant left to the mercy of pirates and raiders.

GAMMULAN QUADRANT



Named after the galaxy's most aggressive race, this quadrant is home to their comrades the Valkerie, and also the enslaved Falkerie race who are ruled by a puppet Gammulan government. Highly militarized, travelers here can be sure of a less-than-cordial greeting. All systems in this quadrant are occupied by the mighty forces of the Gammulan/Valkerie Alliance.

SYRION QUADRANT



— Jump point
— Wormhole or Fluxfield
✸ Star
Planet with Starstation and Starbase
Planet with Starstation
Planet with Starbase
Planet without bases

The Syrion Quadrant contains the greatest mysteries of all the quadrants. Home to the cyborg Syrion and robotic Droidan races, whose origins are surround in secrecy. Mindful of their privacy, these two races monitor all traffic in this quadrant closely, and can prevent travelers from penetrating into it any further than allowed.

Jump Anomalies

JUMP POINTS: Due to the vast expanse of the galaxy, advanced technology was used to create jump points. These transport the ship through hyperspace to emerge at the other end of the jump point. These devices are reasonably safe to use and have only one entry point and one exit point. Jump point links are displayed as connecting blue lines. If you call up the Sol system map, you will notice that the Saturn region is linked to the Earth region by a jump point.

FLUX FIELDS: Flux fields are natural phenomenon which effectively function as jump points but some have multiple entry and exit points. Once you enter a flux field you have no way of knowing where your ship will emerge. Flux fields are displayed as connecting yellow lines extending from the planetary region to the boundaries of the system map. This means that the exit point is outside the currently displayed system. If you call up the Sol system map, you will see a flux field originating in Mars, another in Jupiter and a third in Mercury. Flux fields can have one or more exit points which link several regions. In a flux field, the ship takes no damage and will emerge safely. Flux fields appear and disappear at random. It is still not known what causes a flux field to appear or disappear. The entry points of a flux field includes the originating point itself. This means that sometimes it would seem that entering a flux field did not work. It may have simply deposited you back at the point at which you entered. Some flux fields have end points in black holes which make them dangerous. Flux fields can link both regions and starsystems making it possible to hop across the entire galaxy. For example, the fluxfield in Sygan (Barnard's Star) will take you across the galaxy to Majoris (Alpha Majora).

WORMHOLES: These anomalies are a natural phenomenon which exist in various parts of the galaxy. Wormholes are the gateway to other star systems within the galaxy. They are highly unstable and will likely cause some damage to a ship as it passes through. Wormholes only have a single entry and exit point and are displayed as connecting red lines. Unlike flux fields, you can always tell from what system a wormhole originates. This is displayed at the end of the wormhole line. If you call up the Sol system map you will see a wormhole originating from the Jupiter region and another from the Pluto region. The names at the end of the wormhole lines indicate that one connects to Alpha Centauri and the other in Sirius. Since you know that wormholes always connect star systems together, you can deduce that those two wormholes link the Sol system to the Sirius and Alpha Centauri systems. The wormhole paths are shown as Grey lines on the full screen galactic map linking the starsystems.

13.2 Advanced Intra-Stellar Course Plotting

To plot a course from your current location to another starsystem do the following:

- Display the system map for the destination and **[LEFT CLICK]** on it.
- Locate the destination system and then **[LEFT CLICK]** on it to set it as your destination. The **CURRENT DESTINATION** now displays the name of the region you have selected and the starsystem in which it is located.

The destination is now programmed into the ship's auto-navigation system, **AUTONAV**. Exit, return to the bridge, activate the autopilot and the flight computer will compute & plot all the routes required to take the ship to the programmed destination. The flight and navigation data will be displayed in the **NID** for the duration of the trip. During flight, you can cancel all waypoints using **[ALT+X]** . To exit the **NAVITRON** computer, select the spinning **GALCOM** logo.

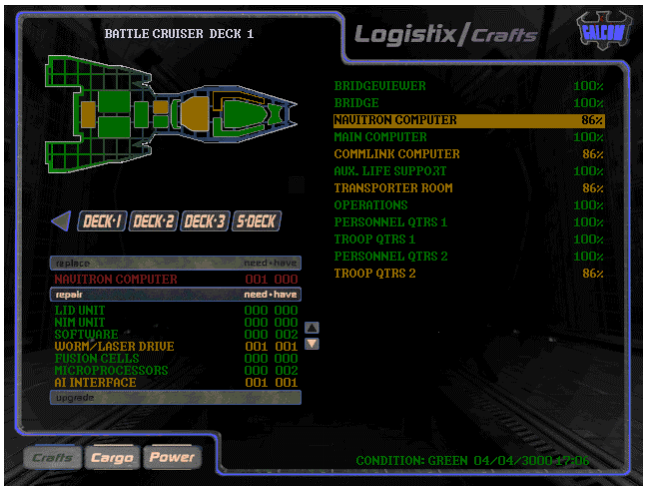
14. LOGISTIX COMPUTER

14.0 System Overview

The Logistix computer is the backbone of the ship's engineering operation. It is identical to the version found at starstations. From this computer, you can schedule repairs, access power management systems, and check your current cargo & spares inventory. If this computer is badly damaged, you will not be able to use it without first repairing it. Since the program runs in real time, repairs will only be commenced when you exit this computer and return to the bridge. Some repairs take longer than others, and without system engineers you cannot perform any repairs. Without the Chief Engineer being on-station to supervise these repairs, some will take longer to perform or may not be performed at all.

Activating the **LOGISTIX** computer displays three options, Crafts, Cargo, and Power:

14.1 Craft Repair Operations



To access this area of the computer, **[LEFT CLICK]** on the **CRAFTS** button.

Once you login, on the left side of the screen you will see buttons representing the Battlecruiser and all its support craft.

On the right you will see the list of System Engineers, their current repair task and completion time. The current game date and time plus the Ship Alert Status condition are also displayed.

Selecting A System For Repair

[LEFT CLICK] on one of the listed ships you would like to repair or inspect:

BC	-	Battlecruiser
INT	-	Interceptors
SH	-	Shuttles
ATV	-	All Terrain Vehicles

Selecting **BC** displays the schematics for the Battlecruiser and allows you to choose a deck on which to perform repairs. The other buttons allow you to perform repairs on any craft that is currently on the Battlecruiser.

The screen is divided into three sections. The top left area displays a schematic diagram of the craft and all its systems. The right displays all the crafts systems and their operational condition. The lower left is the orders area used for processing your repair orders.

The condition of the ship's systems are color coded as follows:

GREEN	-	Operational.
BLUE	-	Already undergoing repairs.
YELLOW	-	Slight or minimal damage. Depending on the damaged component, you should be able to perform repairs on this system.
RED	-	Destroyed system. Replace or upgrade.

Repairing The Selected System

To select a system for repair, **[LEFT CLICK]** in the ship schematic or in the systems list on the right.

Once you have selected the system that needs repair, the computer will display the system's component list divided into three columns. The first column lists the components that comprise the system. The second column lists the quantity of this component necessary to repair the system. The third column lists the number of units of the component you currently have in stock.

If you have the components which are required to perform the repairs, the **REPAIR** button above column will be lit and active. If the system can be upgraded, then **UPGRADE** will be lit on the bar at the bottom of the screen. If a system is badly damaged or it is destroyed, you may only replace it with a new one. If this is the case and you have a replacement unit, the **REPLACE** option will also appear and be lit. Usually replacements take longer to perform.

To proceed with the repairs, click on the **REPAIR** button and the following data will be displayed:

COMMENCED	-	Start date/time of repair task.
COMPLETION	-	Estimated date/time to task completion.
OPR STATUS	-	System's current operation status.
COMPLETED	-	Repair task percentage completion.
ASSIGNED	-	Number of systems engineers assigned to this repair task.
STANDBY	-	Number of available Systems Engineers.
STATUS	-	Current repair status.

Next, you must assign Systems Engineers to this task. To do this, **[LEFT CLICK]** on the **[UP ARROW]** next to the ASSIGNED field to assign the desired number of engineers. Once you have assigned engineers, the repair status will also change to SCHEDULED. The system color code will change to blue indicating that it is currently undergoing repairs. This will also cause the start and completion times to be updated. The more engineers you assign, the more rapidly the repairs will be completed. You can reduce the number of engineers thereby increasing the repair completion time. To do this, **[LEFT CLICK]** on the **[DOWN ARROW]** next to the STANDBY field. To complete the task, **[LEFT CLICK]** on the large grey arrow under the STATUS field.

You may wish to replace a system if it cannot be repaired or if repairs would take too long to perform. The first line of the display always indicates a replacement system. If you wish to replace a system and you have a replacement, the **REPLACE** option would be available. Simply click on it and assign engineers to do the replacement as explained above.

The damage status of the engineering lab and the health of the engineers also determines the speed at which repairs are performed. These values add additional time to the stated estimated repair completion time. If the engineering lab is destroyed all the equipment will be lost and no repairs can be performed. All repairs in progress will be terminated or suspended.

If you later wish to modify the repair task for a system, select the system again and select the desired repair task. If you remove all engineers, then the task will be **SUSPENDED** and it's color code change to white. The components already allocated to the task will not be returned to stock. Once you assign engineers again, the task will resume as previously scheduled.

If you start repairs on an Interceptor you will not be able to launch it until those repairs are either completed or cancelled. You can access the systems status of launched Interceptors, but you will not be able to perform any repairs on them.

Clearing Radiation

There are times when certain systems will become damaged and leak radiation. If a deck is radiated, a flashing indicator will be displayed. You will need a Radiation Control Unit (**RCU**), to clear radiation on a deck. Simply select the Clear Radiation prompt when displayed and one **RCU** will be used to clear the radiation from the entire deck. These units are disposable and used only once per deck.

Repairing & Replacing Support Ships

You can repair Interceptors, Shuttles, and ATVs using the above procedure. To select a ship, **[LEFT CLICK]** on the large grey arrow to the left of the listed decks to return to the main login screen where you can then select another class of ship to repair.

If you lose an Interceptor, Shuttle or ATV, you can replace it by buying and selecting a replacement. You will then be given the option to replace the lost craft if you have a replacement. You cannot replace an Interceptor if the escape pod is still active and flying around.

Note: See Section 22 : Ship Engineering Schematics, for info on the ship's deck layout and design.

14.2 Cargo Operations

This option allows you to view your entire ship's cargo inventory. A class list is displayed at the top of the screen with the list of items in that class listed on the left of the screen. The cargo and weapons bay capacity indicators are listed on the right of the screen.

The items are listed based on class. This class can be changed by positioning the mouse over the icon marked **MISCELLANEOUS** and selecting the desired class from the drop-down menu.

The classes are:

MISCELLANEOUS ITEMS	-	Normal trade items.
NORMAL MINERALS	-	Normal minerals.
REPAIR MINERALS	-	Minerals used for some repair tasks.
SPARE PARTS	-	Spare parts for all ships.
WEAPONS	-	Weapons.
ILLEGAL ITEMS	-	Items deemed illegal by GALCOM.
PERSONNEL	-	Personnel for hire roster.

The Battlecruiser has two cargo bays with a capacity of 7500 units each. It also has two weapon bays each with a capacity of 250 units. Fuel for the nuclear reactor (Radine), shield systems (Plutonium) and cloaking system (Iridium) are stored in special tanks with storage capacities of 25000, 10000, and 1000 units respectively.

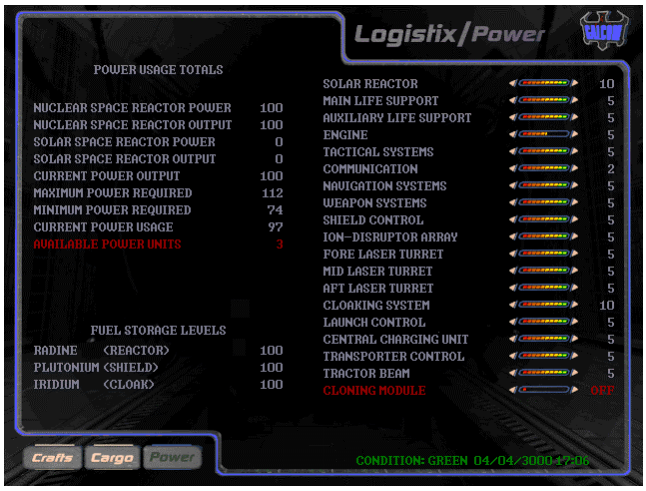
Weapons are only stored in weapon bays. Regular cargo is distributed among the two cargo bays. Certain items can only be stored in a specific bay. Each item has a displacement value which determines how much storage space it requires.

Simply click on the category you wish to access. Click on the arrows to scroll the list.

There are times when you may want to jettison some cargo into space. To do this, you would **[RIGHT CLICK]** on the item to display a small menu. Here, you can select how many units of the item to eject into space.

Note: See Appendix S, for a complete trading database

14.3 Power Allocation Procedures



Power management on the BattleCruiser is one of the most important and critical aspects of its operation. Without power, most of the ship's systems will shut down. The nuclear reactor is responsible for providing power for the operation of all the ship's systems. It uses Radine crystals for fuel. Its operation and ability to provide maximum power is dependent upon it's condition.

If the nuclear reactor is damaged, it will not be able to reach its operational peak and therefore produce less than 100 units of power. The reactor can be upgraded to better models which offer better fuel consumption and increased power output in excess of 100 units.

The status of the reactor core and its cooling system also affects the nuclear reactor's operation. If these systems are severely damaged or destroyed, the reactor will shut down. If the reactor core is destroyed, it will cause a fusion reaction which will destroy the entire ship.

If the nuclear reactor cooling system is destroyed, the logic control system will automatically shut down the nuclear reactor to prevent overheating. It then attempts an auto-power reallocation.

The ship has an auxiliary solar reactor which converts solar power retrieved by the solar panels to raw power. When the ship is close to a solar source, the solar panels automatically convert this to power and stores it in an internal battery. This power is then added to the total amount of power available to the ship. Once the solar batteries are exhausted, they will automatically be recharged again when the ship is near a solar energy source. The status of the solar panels determines the amount of solar energy extracted.

Power Allocation

When you login to this screen, displayed are the ship's current power usage, its fuel storage levels and the power grid itself. The current game date/time and Support Ship Status condition is also displayed.

NUCLEAR REACTOR POWER	-	Maximum power output.
NUCLEAR REACTOR OUTPUT	-	Current power output.
SOLAR REACTOR POWER	-	Maximum power output.
SOLAR REACTOR OUTPUT	-	Current power output.
CURRENT POWER OUTPUT	-	Total power output (nuclear + solar).
MAXIMUM POWER REQUIRED	-	Maximum power required if all systems at maximum.
MINIMUM POWER REQUIRED	-	Minimum power required if all systems at minimum.
CURRENT POWER USAGE	-	Current power used by all systems.
AVAILABLE POWER UNITS	-	Power units available for allocation. This indicator will flash if this value reaches critical levels.

The amount of power allocated to a system determines its operation. The number to the right of the display is the minimum setting allowed for the system. If you allocate zero units of power to a system, it will shut down immediately taking all systems connected to it down with it. A system that is shut down will blink intermittently until power is allocated to it.

To increase/decrease the power allocation for a system, **[LEFT CLICK]** on arrows to the left and right of the indicator.

Note: See Section 22 : Ship Engineering Schematics, for notes on power management.

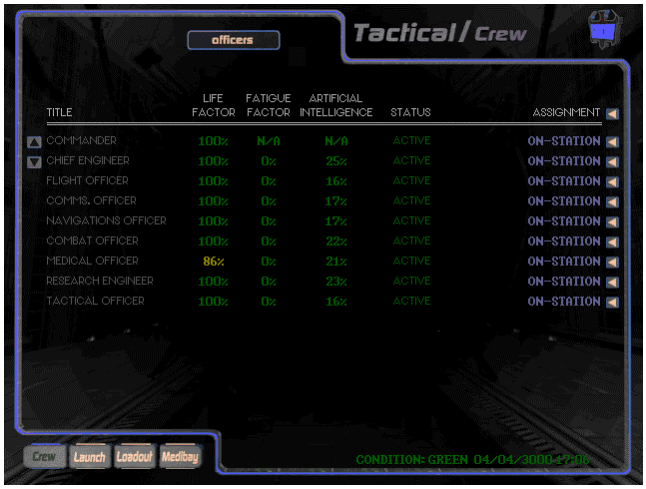
To exit the **LOGISTIX** computer, select the spinning GALCOM logo.

15. TACTICAL COMPUTER

15.0 System Overview

The Tactical Computer is used for a variety of tactical-related operations. These include weapons loadout, personnel resource management, and support ship operations. If this computer is badly damaged, you will not be able to use it without first repairing it. Since the program runs in real time, time related operations will be commenced when you exit this computer and return to the bridge.

15.1 Crew Operations



To access this area of the computer, **[LEFT CLICK]** on the **CREW** button. Once you login, the main screen will contain several columns of data. Some fields can be modified and others are read-only. The Ship Alert Status, **SAS**, is displayed on the lower right corner of the display.

The personnel roster is based on class. This class can be changed by positioning the mouse over the icon marked **OFFICERS** and selecting the desired class from the drop-down menu.

The screen only displays 10 items at a time. If a class contains more than ten rows, use the **UP** and **DOWN** arrows to the left of the list to scroll through the list.

The Life Factor, Fatigue Factor, Artificial Intelligence, and Status of each person, is listed next to the person's name. You can monitor a person's vital signs from this screen regardless of whether or not they are on the ship.

Note: See Section 19 : Personnel Operations, for a discussion on personnel attributes.

Assignments

Anyone aboard the ship can be tracked from this computer and you can use this info to find their current location. By default, the right-most column displays the **ASSIGNMENT** of the personnel listed. This indicates what they are doing and where they are assigned.

Officers are always on-station to indicate that they are on-duty, regardless of their current location on the ship.

Pilots are set to either pilot or co-pilot assignments.

Systems Engineers that are not working on a specific task are listed as on-station meaning they are available for assignment. The system will show the location of Engineers who have been assigned specific tasks.

Flight Engineers are similar to Systems Engineers but are assigned to Interceptors when they are working on them (i.e. running diagnostics, arming them, etc.).

Medics, like officers, are on-station when they are available for work.

Marines are listed as off-duty when they are hanging around wasting time. Once they are assigned a task, the specific task will be listed. Marines can be assigned a *searching* order but a location cannot be specified. They will pick a search location based on a path from their current location.

Guests can be assigned anywhere though they won't carry out any tasks.

Prisoners, and ***Intruders***, do not have assignments and therefore cannot be manipulated. Prisoners are usually confined to the detention hold unless they escape.

Changing Assignments

You can change the assignment of some of the personnel on the ship if you **[LEFT CLICK]** on the arrow next to the desired person's assignment. The type of available assignments varies with the person's profile. For instance, you can assign Marines to search the ship for intruders, but this assignment is not available to officers.

When you change a person's assignment and the new assignment requires them to go to another location on the ship, you must give that person time to move from the current location to the destination. Sometimes the trip may take longer than others, especially if a direct route to the target location has been damaged. The entire ship is linked by a myriad of corridors, turbo-shafts, and moving walkways and it takes time to plot and travel a route to a destination.

Locations

To view a person's physical location in the ship, **[LEFT CLICK]** on the arrow next to the **ASSIGNMENT** button to display their **LOCATION**. There are dozens of locations on the ship. During operation of the ship, people move around dynamically as they go about their business. You cannot change a person's location unless you change their assignment.

Note: See Section 22 : Ship Engineering Schematics, for a discussion on the ship's layout.

15.2 Launch Operations

To access the Launch Operations area of the computer, **[LEFT CLICK]** on the **LAUNCH** button. Once you login, the main screen is split up into three distinct regions. The top left displays the status of the current craft which defaults to **INT-1** representing Interceptor 1.

This area contains several fields which can be modified only if the craft is on-board the Battlecruiser.

Below the status area is the system diagnostics area which lists the status of the specific ship's components.

This data is accessed directly from the LOGISTIX computer and is color-coded accordingly. The attributes of the available combat pilots are listed on the right side of the display. The Ship Alert Status is displayed on the lower right corner of the display. You can select a ship to access by moving the mouse over to the icon marked **INT-1** to display the drop-down menu.

Flight Status

The ship's status contains several fields which can be modified if the ship is currently docked.

FLIGHT STATUS: This displays the status entered into the computer by the Flight Engineers. When an Interceptor docks, two flight engineers are assigned by the Flight Officer to run diagnostics on the ship and assess its flight status. During this period, the ship's status code is set to **READYING** and the completion time displayed. If the ship fails diagnostics due to damaged systems, its code is changed to **ENGINEERING**. It is loaded on a ramp and shuttled down to engineering so that the Systems Engineers can fix the problem. Sometimes the ship's code will be set to **OFFLINE** to indicate a non-engineering related problem. The cause of this can be a variety of things including a failed power allocation procedure, absence of Flight Engineers, pilots, etc. Correcting the problem updates the status. If an Interceptor is destroyed, cannot be located anywhere in the galaxy, or the pilots have ejected, its status will be set to **DESTROYED**. If the ship passes the diagnostics check, its reactor batteries are then re-charged, armed, and its code updated to **READY**. It can then be launched.

FLIGHT ENGINEERS: This option allows you manually assign Flight Engineers to an Interceptor. If the Flight Officer is not on-station when an Interceptor docks, the craft will go off-line until you manually assign flight engineers to the ship. The pilots will attempt to ready their own craft, however this will take longer than normal. You can only assign 2 Flight Engineers to a craft. To assign Flight Engineers, **[LEFT CLICK]** on the arrows next to the option.

ASSIGNMENT: The Combat Officer maintains a database of profiles which determine the armament and default orders for Interceptors. Each profile determines the type of weapons that are loaded on the Interceptor when the profile is selected. This provides a faster method of arming an Interceptor for combat launch. Valid profiles are **INTERCEPT**, **PATROL**, **SEARCH & DESTROY**, **ESCORT**, **COMBAT AIR PATROL**, **SUPPRESS ENEMY AIR DEFENSES,** and **STRIKE**. To change a profile, **[LEFT CLICK]** on the arrow next to the option.

Note: See Section 23 : Support Ship Complement for a list of profile loadouts.

AUTOARM: This option allows the weapons computer system to automatically select and assign weapons to an Interceptor. If this option is on, the system will scan the ship's weapons bays and arm the craft with the weapons required by the mission assignment profile. If a required weapon is not found or not available, the weapons computer will attempt to locate a weapon of similar characteristics. If this fails, then no weapon will be allocated. If autoarm is off, it is your responsibility to arm the Interceptor prior to launch. You can also load your own selection of weapons from the loadout screen as discussed later in this section. To change the autoarm option, **[LEFT CLICK]** on the arrow next to the option.

PILOT/CO-PILOT: Each Interceptor requires 2 Combat Pilots to fly it. Using this option, you can select pilots for each of the craft's pilot seats. To assign pilots, **[LEFT CLICK]** on the arrow next to the option.

Diagnostics

This section displays the damage status of the ship's systems. They are color-coded as they are in the LOGISTIX computer.

OPERATIONAL AVERAGE: This determines if the ship is fit for launch. It is an average of the ship's systems.

REACTOR CHARGE : After the craft passes diagnostics, its reactor batteries are recharged using the Interceptor Chargers. The condition of these chargers determines how much charge the batteries will have and how long it will take to charge back to its maximum limit. The higher the charge, the more power available to the ship's systems. If the chargers are not available then the craft will not be re-charged until the chargers are available. The Combat Officer will rarely allow a ship with less than 50% charge to launch. Under these circumstance, the flight status of the craft will be set to **OFFLINE** until the reactor is charged.

Pilot Attributes

The pilot attributes are listed on the right side of the display. This data includes the life factor, fatigue factor, artificial intelligence level, dogfighting skill, bombing accuracy, combat missions flown, and combat kills.

Moving the mouse cursor over the name of the pilot will display his/her image.

You can also assign pilots to the currently-selected craft from this area. To assign a pilot, make sure that the pilot or co-pilot position on the left of the screen is vacant. If it is, **[LEFT CLICK]** on the arrow next to the pilot to assign him/her to the craft.

15.3 Loadout Operations

This section of the **TACTICAL** computer allows you to load cargo and weapons into ships and to direct personnel to the transporter room for deployment.

Transporter Operations – Loading Personnel

To assign personnel to the transporter, **[LEFT CLICK]** on the **TRANS** icon and the again on the **TEAM** icon. This will reveal 10 boxes representing the number of people that can be transported at any time. An empty slot will have the words '*available'* written inside, otherwise it will list the name or designation of the person in the slot.

The ship's personnel class is listed on the right side of the display. The officers class is the default listing.

To change the personnel class, move the mouse over the **OFFICERS** icon to reveal the drop-down class selection list.

To assign a person to the transporter, simply **[LEFT CLICK]** on the name and it will appear in one of the available slots in the transporter. To remove that person, **[LEFT CLICK]** on the slot that he/she occupies.

Once you assign a person to the transporter you have to wait until they actually move to that location before they can be deployed. Use the **PERSCAN** computer to monitor their movement.
Once they make it to the transporter, you can then deploy them onto a planet surface using the **TACOPS** computer.

Marines go through a phase called *prep for combat* when they are assigned to the transporter or shuttles for away missions. During this phase, they grab their gear, go through a pre-launch briefing, and then proceed to the designated launch vehicle. You can save time by pre-setting them to this mode so that they are always on standby and ready for deployment at a moment's notice. Once they leave for the designated location you can then check the **PERSCAN** computer to make sure they have arrived before launching the craft or activating the transporter.

Transporter Operations – Loading Cargo

You can load cargo items in the transporter.

Though you will not see the container itself on the transporter slots, it is similar to someone packing a container and putting the container on the transporter.

Once the transporter is activated, any container in it will also be deployed.

This allows you to deploy rations, weapons, etc to deployed personnel or when you have a mission to deliver items to another party on another ship or station, or on a planet's surface.

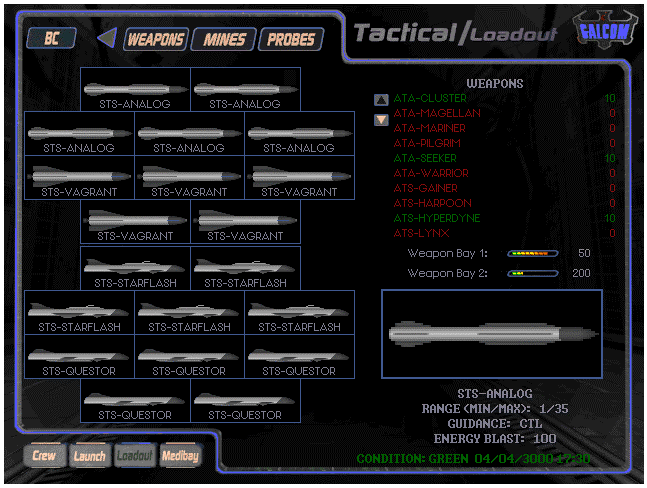
To load items from your cargo or weapon bays into a container which will later be put on the transporter for deployment, **[LEFT CLICK]** on the **CARGO** icon. The display will change and resemble the one used for trading. You can display the cargo classes if you **[LEFT CLICK]** on the **MISCELLANEOUS** icon. Use the **ARROW KEYS** to scroll the list of items to reveal the desired items. Then again use the **ARROW KEYS** next to the item to add or remove items from the cargo manifest.

Once the cargo container reaches the limit of 1500 units you will no longer be able to add items. Later, you will be able to deploy this container using the **TACOPS** computer. If you deploy the container on the surface of a planet it will contain all the items that were packed into it. If you encounter a cargo container on the planet surface you can bring it back to the ship. You can unload the cargo container using this feature as described.

Note: See Section 18 : TacOPS Computer, for more notes on transporter operations.

Loadout Options - Battlecruiser

To exit the transporter options and return to the main selection screen, **[LEFT CLICK]** on the **ARROW** icon then **[LEFT CLICK]** on the **BC** icon to access the loadout options for the Battlecruiser. From this screen, you can load weapons, mines, or probes into the ship's bays.



To load missiles into the Battlecruiser, **[LEFT CLICK]** on the **WEAPONS** icon to reveal the weapon loadout screen.

You can load missiles from the ship's weapon bays to the weapon launch bays using the method described in the transporter options above.

The Battlecruiser has two independent weapon launch bays, each capable of carrying 10 missiles for a total loadout of 20 missiles.

The ship also has a dedicated mine and probe launch bay which can carry 10 mines and 10 probes. You cannot launch a missile, mine, or probe unless it is loaded into the correct weapon launch bay.

To load a missile, select it from the screen on the right and then **[LEFT CLICK]** to transfer it to one of the weapon launch slots. To reverse the operation, simply **[LEFT CLICK]** in one of the weapon launch bay slots to transfer the missile back to the weapon bay.

Select the **MINES** or **PROBES** icon to load these items into the ship's bays.

Once these items are loaded into the respective bays, they can then be launched. Sometimes loaded items may malfunction or disappear due to damage sustained by the bays. Moving your mouse over a missile, mine, or probe will also reveal it's specifications.

Notes: See Appendix E, for the various weapon specifications.

Loadout Options - Interceptors

To exit the Battlecruiser loadout options and return to the main selection screen, **[LEFT CLICK]** on the **ARROW** icon then **[LEFT CLICK]** on the **INT** icon to access the loadout options for the Interceptors. Select the desired Interceptor from this screen to load weapons into its weapon bays.

An Interceptor has two independent weapon launch bays, each capable of carrying 5 missiles for a total loadout of 10 missiles.

To load missiles into the Interceptor, use the procedure described above for the Battlecruiser.

Loadout Options - Shuttles

To exit the Interceptor loadout options and return to the main selection screen, **[LEFT CLICK]** on the **ARROW** icon then **[LEFT CLICK]** again. From the main screen **[LEFT CLICK]** on the **SH** icon to access the loadout options for the shuttles. Select the desired shuttle from this screen to load cargo, teams of personnel, or mining drones into it.

To load cargo into a container manifest, **[LEFT CLICK]** on the **CARGO** icon. By now you should be familiar with the steps required to transfer items from the ship's cargo. The shuttle has a maximum capacity of 1500 units. You will be able to deploy a cargo container with the items you have loaded into the shuttle.

There are times when you will collect cargo containers dropped by other ships. Once the shuttle collects these containers, come to this screen and transfer the items to the Battlecruiser cargo bay, or you can dock the shuttle at a starstation or starbase and sell them.

The shuttle can carry one ATV and one mining drone for planetary deployment. This limits the available cargo space in the shuttle. Move the mouse over to the **ATV** or **DRONE** icon on the right side of the screen above the bay storage display area to reveal a drop-down list. You can select which vehicles to load on the shuttle.

The **UNLOAD ALL CARGO** icon is used to transfer the entire contents of the shuttle cargo bay to the Battlecruiser cargo bay. If there is insufficient space in the Battlecruiser's cargo bay, some items will remain in the shuttle.

To load teams of personnel, **[LEFT CLICK]** on the **TEAM** icon. Use the same procedure previously discussed to transfer personnel to the shuttle. The shuttle can carry a maximum of 20 personnel.

To transfer previously-mined minerals from the drone to the Battlecruiser, select the **DRONE** icon. This screen displays drone information which includes the drone's current *status*, it's operational *level*, and it's *assignment*. You can access any drone by selecting the drone icon on the left side of the screen.

The **UNLOAD ALL CARGO** icon is used to transfer the entire contents of the mining drone to the Battlecruiser cargo bay. If there is insufficient space in the Battlecruiser's cargo bay, some items will remain in the drone.

The **JETTISON ALL CARGO** icon is used to transfer all cargo items to the ship's incinerator. Using this option destroys all the items, leaving the drone empty.

Loadout Options – All Terrain Vehicles (ATVs)

To exit the shuttle loadout options and return to the main selection screen, **[LEFT CLICK]** on the **ARROW** icon then **[LEFT CLICK]** again. From the main screen **[LEFT CLICK]** on the **ATV** icon to access the loadout options for the ATVs. Select the desired vehicle from this screen to load cargo or teams of personnel into it.

Operation of this screen is identical to that of the shuttle. Use the **CARGO** icon for cargo transfer operations and the **TEAM** icon for personnel transfers.

The ATV has a maximum cargo space of 500 units and can carry up to 4 people.

The **UNLOAD ALL CARGO** icon is used to transfer the entire contents of the vehicle to the Battlecruiser cargo bay. If there is insufficient space in the Battlecruiser's cargo bay, some items will remain in the vehicle.

15.4 MediBay Procedures

All injured personnel are sent to the **MEDIBAY** to be treated for all ailments ranging from fatigue to infection to radiation. Sometimes it is necessary for you to manually send someone to the MediBay for treatment by changing their assignment. The Medical Officer uses Vacpaks to administer vaccines for infections and Medpaks to cure several low-level ailments. Surgery is a high-end procedure which includes using various high tech equipment and methods. Medics are also on hand to assist the **MO** in her assignments. Medics also roam the ship in search of injured personnel who they either treat on the spot or have transferred to MediBay.

To access the medical bay facility of the ship, **[LEFT CLICK]** on the **MEDIBAY** icon to display a list of personnel already there. The person's *Life Factor* and *Fatigue Factor* will assist you in determining the extent of the person's injuries.

To treat someone for an injury, **[LEFT CLICK]** on that person's name to reveal several options.

TREAT: Select this option to treat the person. This uses 1 Medpak. Several Medpaks may be required depending on the injury.

CLONE: Sometimes your key personnel will die. These key personnel include your eight officers and combat pilots. If this happens, you can clone the person using stored their DNA sample. To clone someone, first make sure that the Cloning Module has power to operate. Then select this option to commence cloning. The percentage of completion will be displayed. If the cloning module does not have power or is off-line cloning will be suspended until the problem is resolved. Cloning personnel restores their original DNA. This means that all acquired skills, attributes, and memory gained up to the time of death, are lost.

RELEASE: Use this option to release someone from MediBay after their treatment is completed.

VACCINATE: Use this option to vaccinate someone who has an infection. If the person is not infected, this option will not be available.

To exit the **TACTICAL** computer, select the spinning GALCOM logo.

16. PERSONNEL SCAN COMPUTER

16.0 System Overview

The **PERSCAN** computer is used to locate and track all people on-board the ship. It shows their location and assignment in real time and is updated every 15 seconds. The system uses computers at various locations on the ship to locate non-crew members. Guests, prisoners, and intruders are located in this manner. The system uses a tracking device (part of their neural implant) to locate the ship's own crew regardless of where they are (on or off of the ship).

16.1 Tracking & Locating Personnel

The display is divided into 9 sections, each section representing a personnel class. The sections are: Officers, Combat Pilots, Medics, System Engineers, Flight Engineers, Marines, Guests, Prisoners, and Intruders.

Each section is divided into up to four columns. These columns display a person's Life Factor, Fatigue Factor, current location, and assignment. The attributes are color-coded to match the person's vital stats as monitored by the ship's medical computers. Green indicates a person that is OK or only slightly injured (head ache, flesh wound, fatigue induced stress, etc); yellow indicates a high degree of injury (fractured or broken limbs, excess bleeding, radiation, infection, etc) and red indicates severe injury or death. A cyan color code indicates that the person is currently on assignment to a task or location.

Since the system is updated in real time, you are able to monitor the ship as people move from one location to the next.

Note: A person's location is different from the assignment. The location is where the person is physically located. The assignment is where the person has been assigned perform an operation. Assigning a person to a shuttle, for instance, will only change the location to the 'shuttle' once the person reaches the shuttle and is physically located there. Once you assign a person to a location, you have to wait for them to travel through the ship and get to the location, assuming that they can.

To exit the **PERSCAN** computer, **[LEFT CLICK]** anywhere on the screen or press the **[ESCAPE]** key.

17. COMMUNICATIONS LINK COMPUTER

17.0 System Overview

The **COMMLINK** computer is the main system used for communications. It logs all internal and external messages generated by the crew on the ship or people from other locations outside of the ship.

Each of the crew members has a communications device as part of their neural implant. Even if they are away from the ship any communications that they send, using a miniature communications decoder, will be relayed back to the ship. This allows personnel on distant planets to communicate directly with the ship. All messages are stored in a database log which can be reviewed or deleted when full. This log can get corrupt and even erased if the ship's computer systems take damage.

17.1 Comms Operations

To view the communications file, **[LEFT CLICK]** on the **LOG** icon and use the **ARROW** icons to scroll the list up or down. The person who sent the message and the time it was sent are displayed in the header above the message. **[LEFT CLICK]** on the **STATS** icon to view your current statistics. This information is identical to that displayed in the **ROSTER** computer.

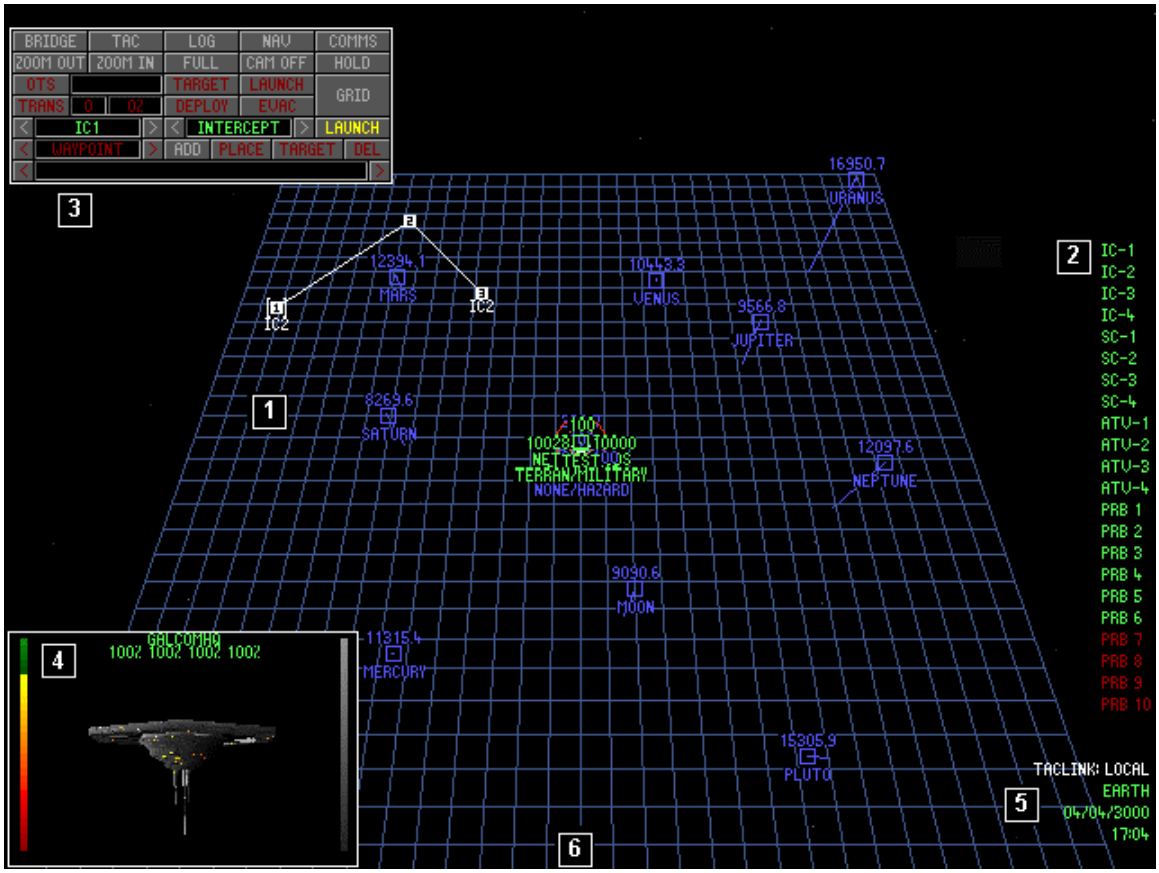
The **CLEAR** icon is used to clear the contents of the log file and create a new log. Use this only if you get a warning that there is insufficient disk space to grow the log file.

To exit the **COMMLINK** computer, select the spinning GALCOM logo.

18. TACOPS COMPUTER

18.0 System Overview

The **TACOPS** computer is one of the most critical computer systems on the Battlecruiser. It is also the most complex. If you have a planet targeted in the **CVD** when you start **TACOPS**, it will automatically display the surface view of the planet; otherwise, **TACOPS** defaults to space view.



Using this computer, you are able to control your ship's complement of crafts and troops, launch probes, as well as monitor the tactical situation in space and on a planet surface. It can also be used to launch Orbit To Surface weapons against planet-based targets from orbit.

The **TACOPS** computer operates in two modes: space or planetary and in both modes, the orientation is such that North is toward the top of the screen.

18.1 Basic Operations

On activation, a grid **[1]** is displayed on the screen and the **TTD** for all targets in the region are visible. These can be toggled by pressing the **[SPACEBAR]**.

The **TACTICAL LAUNCH MENU**, **[2]**, allows probe and ship launch operations. Moving the mouse over an item, displays it's operating stats. It also contains the **OPTIONS** menu used for target filtering (**[LEFT CLICK]** and drag bar to scroll) and other options. The **MISCAM** menu allows you to track missiles, **ZOOM TO** allows you to zoom to a selected target. The **FLEET** menu provides Fleet Command & Control access (if you have authority) as explained in Appendix U. The **PRIORITY** menu allows you to prioritize targets in a quick access menu.

On the lower right side of the display **[5]**, are **(a)** the currently tracked target selected from the map **(b)** the **TACLINK** status (displays **LOCAL** if not linked to a probe, otherwise displays name of probe region) of the radar system **(c)** the name of the space or planet/moon region being viewed and **(d)** the current game date and time (set to that of the planet/moon being viewed if applicable) and **(e)** the current planetary co-ordinates at the mouse cursor location (only when viewing a planet/moon in observe mode).

You can access your **COMMLINK** communications log if you move the mouse to the bottom of the display **[6]** and **[LEFT CLICK]** to display it.

When the camera **[4]** is active, it will display an image of the currently selected target. When the mouse is initially located inside the camera box, the view can be rotated by dragging with the right button. The view can be zoomed by pressing both buttons and moving the mouse back and forward.

Space Scan

Moving the mouse over a **TTD** cluster will display a list of targets at the current location. You can then select the **ZOOM TO** menu option to view that location at a higher zoom factor. You can **[LEFT CLICK]** anywhere on the display to zoom to that region. You can then use the **PLUS**, **MINUS**, **HOME**, and **END** keys to fine-tune the zoom factor. You can also **[LEFT CLICK]** and with the button pressed down, drag the mouse **UP**, **DOWN**, **LEFT** or **RIGHT** to change the current view. You can also use the zoom box in the **COMMAND PALETTE** to zoom to a specific area. To return to the bridge, activate the **COMMAND PALETTE** and select the **BRIDGE** icon.

Planetary Scan

Locate the planet and **[LEFT CLICK]** on it to zoom. Then select **OBSERVE** to bring up the topology map which displays the defined regions showing the race/caste that control that region. The red dots are the zoned areas of interest and the names are displayed as the mouse hovers over them. If a zone contains a starbase which you can dock your support ships at, it will blink steadily and the name will be similar to **ZBASE1**.

[LEFT-CLICK] on the zone to display the map at that location and the areas of interest within. You can then **[LEFT-CLICK]** again to display the objects at that location. Any area that contains a starbase, military/naval base, nuclear/solar reactor or weapon site, will blink on the map. All others are either cities or factories.

You can **[LEFT-CLICK]** on any object on the map, to zoom directly to it and activate the tracking camera if the object is moving.

[RIGHT-CLICK] will zoom to the previous view level and all the way back to the topology map. All the normal Tacops zooming/viewing commands used for space scan, also apply. To return to space mode, activate the **COMMAND PALETTE** and select the **SPACE** icon.

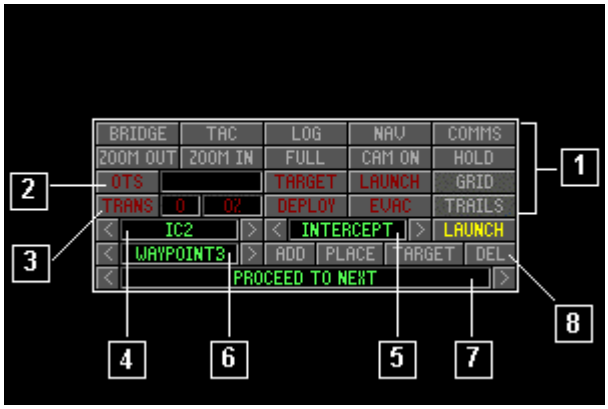
Important View Control Keys

[LEFT/RIGHT CLICK]	Zoom in/out at current mouse location
[HOME/END]	Zoom in/out at current mouse location (click first at location)
[PLUS/MINUS]	Zoom in/out at current mouse location (click first at location)
[ARROW KEYS]	Rotate/pitch display
[SHIFT+ARROW KEYS]	Pan display (click first at location)
[LEFT CLICK+HOLD BUTTON]	Pan display by dragging while holding button
[RIGHT CLICK+HOLD BUTTON]	Rotate display by dragging while holding button
[NUMERIC 5]	Reset display to default zoom/view settings
[F10]	Camera view of selected target
[F1]	Return to **TACOPS** from target camera view

Note: You have to use the arrow keys on the numeric keypad

18.2 The Command Palette

All of the advanced operations of the **TACOPS** computer are performed using the **COMMAND PALETTE**, (**CP**). To activate the **CP**, position the mouse cursor on the left, top, or right edges of the display and **[LEFT CLICK]**. To remove it, **[LEFT CLICK]** on any area outside the **CP** or just **[LEFT CLICK]** anywhere in the display.



Certain options on the **CP** are disabled based on its current operating mode. For example, since you cannot launch **OTS** weapons at a space target, this option will be disabled if **TACOPS** is in space mode.

18.2B The Options Menu

This menu contains several options which can be toggled, including a Radar Target Mask that is independent of the ship's current **RTM** settings. Some objects have several flags, so for instance, to remove an Orbital Defense System from the display, you must toggle both **RADAR** and **STRATEGIC** flags. If an object is filtered out, it will be completely removed. So if you filter out *navigation* targets, then these types will **not** be available in subsequent menus and you won't be able to order ships to jump via navigation targets. However if the navigation object is in the *recently observed*, *ordered* or *priority lists*, it can be specified from there. You can still select an object even if you have it's **TTD** hidden. Also, the planet surface will be hidden if you hide all objects.

Miscellaneous Icons

[1]	**BRIDGE/SPACE**	Returns to space mode or the bridge.
	TAC	Launch **TACTICAL** computer.
	LOG	Launch **LOGISTIX** computer.
	NAV	Launch **NAVITRON** computer.
	COMMS	Launch **COMMLINK** computer.
	ZOOM IN/OUT/FULL	Zoom controls using fixed zoom box.
	CAM ON/OFF	Target camera.
	HOLD/UPDATE	Used to freeze or update AI processing.
	TRAILS	Toggles the display of flight path trails
	GRID	Toggles the display grid on/off.

Orbit To Surface weapons

[2]	**OTS BOX**	Displays number of OTS missiles loaded.
	TARGET	Allows target selection for current missile.
	LAUNCH	Launch locked missile.

Transporter Operations

[3]	**TRANSPORTER BOX**	Displays number of personnel/cargo in transporter.
	DEPLOY	Deploy personnel currently in transporter.
	EVAC	Evacuate selected personnel using transporter.

Unit Operations

[4]	**UNIT BOX**	Currently selected **ready** unit.
[5]	**PROFILE/TEAM BOX**	IC loadout profile or shuttle/ATV personnel count.
[6]	**WAYPOINT BOX**	Waypoint for current unit.
[7]	**ORDERS BOX**	Waypoint orders for current unit.
[8]	**ADD**	Add a new waypoint for the current unit.
	PLACE	Position current waypoint on the map display.
	TARGET	Select a target for current waypoint order.
	DEL	Delete the current waypoint.
	LAUNCH	Launch **ready** unit (Interceptor or shuttle).

18.3 Setting Waypoints & Orders

Waypoints and orders can be created for all units. The waypoint line/box on the map is color-coded depending on the type of unit selected. Interceptors are green, shuttles are yellow, and units deployed by the shuttle (such as ATVs and personnel) are blue. The currently selected waypoint for a unit is displayed in white.

To create a waypoint, first select the desired unit by using the **ARROW** icons on either side of the **UNIT BOX** to cycle through the list of available units. If a unit name is displayed in red, it is not available for deployment but you can still set waypoints for it as normal. Personnel in the shuttle or ATV are assigned as teams. If there are people in these crafts, then you will be able to assign waypoints for them as a team.

If the unit is an Interceptor, its current weapons loadout will be displayed in the **PROFILE/TEAM BOX** otherwise the number of people in the ATV or shuttle will be displayed. You can use the **ARROW** icons to cycle through and change the weapons loadout profile. The loadout should reflect the mission you are about to undertake. It is pointless to use a loadout of space weapons if the unit is going on a surface mission. If the ship is ready to launch, the **LAUNCH** icon will be yellow and you can launch it without waypoints if desired.

Once you've defined unit parameters, you need to actually create the waypoints for it. You can do this either before or after it has been launched. Make sure you are working with the correct unit then **[LEFT CLICK]** the **ADD** icon. This will create a numbered waypoint in the **WAYPOINT BOX** starting from number 1 if it is the first one created. You can create up to **eight** waypoints per unit. To change the default order, cycle through the valid waypoint orders using the **ARROW** icons on either side of the **ORDERS BOX**.

To position the waypoint marker on the space or planetary map, **[LEFT CLICK]** on the **PLACE** icon and drop the **WAYPOINT DESIGNATOR**, **WD** at the desired location on the map. As you drag, the distance (KM) from the previous waypoint, is displayed. The position of waypoints on the map can be changed by selecting the waypoint in the waypoint box and pressing **PLACE** icon again. You can then move the waypoint to any location on the map. You can also select the waypoint from the map and drag it to a new location.

When you are deploying personnel currently in an ATV, shuttle, or transporter, you can create separate waypoints for the vehicle and the team of personnel. You have to create waypoints for the vehicle first and then the team that it is deploying. Once the vehicle deploys the team, the team will attempt to carry out their assigned waypoint orders.

To delete a waypoint, cycle through the list in the **WAYPOINT BOX** and press the **DEL** icon.

The **TARGET** icon is used for waypoint orders which require a specific target to be selected, these include *strike*, *escort,* and *deliver/collect cargo* missions. After pressing **TARGET**, position the waypoint over desired target on the map and **[LEFT CLICK]** to select it as the waypoint target.

All crafts will enter the planet at the location of the first waypoint. This is also the case if you are flying the ship manually and you enter a planet that contains a waypoint set. This ingress method is useful when you want to enter a planet/moon at a specific location rather than an arbitrary location selected by the game.

Hovering the mouse over a waypoint will display the current orders set for it.

Note: When you set waypoints in a space or planet region, they are only relevant to that region. Therefore, if you jump to another region, all the waypoints set in the current region will be cleared unless you have an active probe in there.

18.4 Deployment Operations

Interceptors

Any Interceptor that is launch-ready can be launched from **TACOPS** with or without setting waypoints.

Select the desired craft, create waypoints & orders for it if needed, and launch it. Once deployed, the pilots will fly to the assigned waypoints and attempt to carry out the orders defined for each waypoint. If an Interceptor is launched without waypoint orders the pilots will go into Search & Destroy mode. Don't forget to check the ship's weapons loadout profile prior to launch.

Shuttles

Any shuttle that is launch ready can be launched from **TACOPS** with or without setting waypoints.

Each shuttle requires a crew of at least one in order for it to launch. Shuttles can be used for cargo operations and to deploy troops, ATVs, or mining drones. Select the desired craft, create waypoints & orders for it if needed, and launch it. Once deployed, the shuttle will fly to the assigned waypoints and attempt to carryout the orders for each waypoint. Unless a shuttle has orders which require it to remain at the final waypoint, it will return to the ship once the orders for that last waypoint are completed.

Personnel

Personnel can be deployed or evacuated using the shuttles, ATVs, or the transporter.

To deploy personnel use the transporter, shuttle, or ATV. When using a vehicle, create a ***deploy team*** waypoint order and place the waypoint at the desired location. The shuttle will fly to the location and deploy everyone that's currently on-board. You can also create waypoints for teams of personnel that are in vehicles. If you do, once they are deployed they will attempt to travel to and carry out the waypoint orders.

To evacuate personnel from the surface using the shuttle, locate the personnel then press and hold the **[CTRL]** key and **[LEFT CLICK]** the **TTD** of each person to mark for extraction. Create shuttle waypoints near the personnel and set the *extract team* waypoint order. Once launched, the shuttle will travel to each waypoint, wait for 5 minutes, and collect anyone near that waypoint that is 'marked' for evacuation. You can also create a waypoint with the *evac* order for the deployed team. They will then travel to the waypoint location and wait until extracted. Once the shuttle has collected personnel from the last waypoint, unless it has orders to remain at the location, the shuttle will return to the ship. Personnel are transferred to the Battlecruiser once the shuttle has docked.

Deployed personnel can auto RTB to their platform if the platform is a shuttle provided that the shuttle has not itself docked since deploying the personnel. They can only auto to their deployed platform, therefore, if shuttle 1 deployed them, they can't auto RTB to shuttle 2.

To deploy or evac personnel using an ATV, use a shuttle to deploy the ATV and then create the appropriate waypoint orders for the ATV and the team it's deploying.

To deploy or evac personnel using the transporter, see **Section 18.5**

When selecting personnel for evac, you may want to use the **HOLD** icon to freeze the AI update to prevent the personnel from moving out of the current map view.

Mining Drones

Shuttles can carry one mining drone which can then be used for mining a planet's surface for valuable minerals. To deploy a drone, create a waypoint for the shuttle as normal with the ***deploy drone*** order. The shuttle will deploy the drone which will then start to mine the surface until it is retrieved. Use the *extract drone* order to retrieve the drone. It can take up to 8 hours for a drone to mine enough minerals to fill to 100% capacity though you can retrieve it at any time. Once the drone is back in the Battlecruiser you can transfer the minerals to the cargo bay.

All Terrain Vehicles

Shuttles can also carry one ATV for use in attacking hard surface targets. ATVs can also carry up to four personnel which it can also deploy at strategic locations on the planet surface. To deploy an ATV, create a waypoint for the shuttle as normal with the ***deploy atv*** order. The shuttle will deploy the ATV as required. Use the *extract atv* order to retrieve the ATV. Once you have deployed an ATV, you can create waypoint orders for it and the team it's carrying.

18.5 Transporter Operations

Before using the transporter, first make sure that it is operational and has power. The number of personnel currently at that location is displayed in the **TRANSPORTER BOX**.

To select a deployment area on the surface, press the **TRANS** icon to activate the **TRANSPORTER DEPLOYMENT DESIGNATOR**, **TDD** which will now be anchored to the mouse cursor. Then, **[LEFT CLICK]** on the map to select the desired deployment area. For precision deployment, remove the **CP** and zoom in to the desired location. Activate the **CP** and select **TRANS** again. You can then place the **TDD**. The size of the **TDD** is based on the current zoom level.

To deploy personnel or cargo currently in the transporter, **[LEFT CLICK]** the **DEPLOY** button and all personnel currently in the transporter will be transported to the location of the **TDD**. If there is any cargo, a cargo pod containing the items will also be deployed.

You can create waypoints for the team of personnel currently in the transporter. Once transported, the team will attempt to locate their waypoints and carry out orders, otherwise, they will remain exactly where they were deployed. Marines without orders will go into a *Search & Destroy* mode.

To evacuate personnel from the surface using the transporter, locate the personnel then press and hold the **[CTRL]** key and **[LEFT CLICK]** the **TTD** of each person to mark for extraction. Then **[LEFT CLICK]** on the **EVAC** button and selected personnel will be beamed back to the ship. Freeze action using the **HOLD** button in order to do this with ease.

18.6 Launching Orbit To Surface (OTS) Weapons

Using special Orbit To Surface (**OTS**) weapons, you can attack surface targets from space. First, **[LEFT CLICK]** on the **OTS** button to cycle through the list of **OTS** missiles in the ship's weapon bays. Once the desired missile is selected, the **TARGET** icon will be lit and turn yellow displaying the **OTS TARGET ACQUISITION RETICLE** anchored to the mouse cursor. You can now **[LEFT CLICK]** on the map to position the **TAR** over the target area. The size of the **TAR** is based on the specifications of the selected weapon. If the **TAR** is too large on the screen, use the zoom controls to change the map viewing level. Once you've placed the **TAR** on the map, the missile will attempt to acquire a launch solution. Once this happens, the **LAUNCH** icon will be lit and turn yellow indicating that the weapon can now be launched by clicking the launch icon.

On launch, the missile will fly to the planet, enter the atmosphere, and fly to the programmed location. You can track the missile from its **CVD** camera as it flies to the planet. Once it reaches the planet, it will airburst at a certain altitude and detonate, inflicting damaging or destroying all targets within the selected area. Upon detonation, use the normal view keys to pan the view. Use **[F1]** to return to the bridge. Like missiles, there are various types of **OTS** weapons. Choose the right one for the job.

18.7 Probe Operations

You can also launch probes from the **TACOPS** computer. The probe 'slots' are listed on the right side of the screen with the name of the probe's current region in brackets. These slots represent the ten probes that can be loaded and tracked at any one time. The slots are also color-coded to represent the state of the probe. A vacant slot, due to a probe being destroyed or detached, is colored red while an available probe is colored green. A launched and available probe is colored white and one in flight with pending orders is colored yellow.

To launch a probe, **[LEFT CLICK]** on the slot and select the **LAUNCH** command. Once launched, the probe will appear on the display near the ship. Now that the probe is launched, you can again select its orders box to access its programming codes. To have the probe jump to another space region, you select **JUMP AT** then **NAVIGATION** and finally any of the listed jump anomalies. To send a probe to orbit a planet in the current region, you select the desired planet or moon from the **PLANETS** or **MOONS** sub-menu. You can use a probe to view a different space region than the one your ship is located in by using the **VIEW PROBE REGION.** This puts the probe in **TACLINK** mode and you will be able to view the region and give the probe commands from that region. Use the **VIEW LOCAL REGION** to return to a view of your current region. These commands are accessible from the probe menu and are only available once the probe has jumped out of the local region. If you're in **TACOPS** when a probe jumps to another space region, it will automatically update to view the new region.

Note: See Section 7.4 : Probe Link System for more info on probe operations

18.8 Direct Orders

If you **[LEFT CLICK]** on an object, the view position will be set to that object, fully zooming to it and displaying the **TACTICAL ORDERS MENU, TOM**, for that object based on it's type and also you Fleet Command & Control status. The game is paused when the **TOM** is activated allowing you to carefully select the desired order.

Note: See Appendix U : Fleet Command & Control for a detailed overview

18.9 Waypoint Orders

This section provides an explanation of the waypoint orders that can be used when setting unit waypoints. Each order also indicates the type of units for which it is valid.

All units (except the Battlecruiser) will revert to *return to base* order when they have reached the final waypoint. To prevent this, set the last waypoint order in the list to *wait for instructions*.

Proceed To Next **[All units]**

The unit will not do anything at this waypoint. It will simply move on to the next waypoint if any.

Wait For Instructions **[All units]**

The unit will hold at this waypoint and wait for further instructions.

Halt **[All units]**

The unit will hold at this waypoint, wait for further instructions and maintain radio silence.

Repeat Actions **[All units]**

Allows the unit to repeat the entire pattern of waypoint orders beginning with the first waypoint.

Intercept **[Interceptor/Personnel/ATV]**

The unit will engage and seek to destroy all hostile air or space craft it detects in the vicinity of the waypoint. It will also pursue the enemy if necessary. This waypoint is used for the defense of a 'wide area'.

Strike **[BC/Interceptor/Personnel/ATV]**

This waypoint requires a valid target. The unit will strike this target only and either return to base or proceed to the next waypoint upon completion. If equipped with **ATA/STS** weapons, the crew will defend themselves if engaged without requesting weapons clearance. AI controlled crew will only make one pass at the target. If the craft does not have the appropriate weapon, the pilots will simply move on to the next waypoint.

Patrol **[BC/Interceptor/Personnel/ATV]**

The unit will seek to protect the area along the flight path from enemy incursion. It will not attempt to locate or destroy any hostile ground targets or space structures. Valid targets are air/space craft only. The crew will never stray very far from the flight path to chase hostile threats. This waypoint is used for the defense of a 'localized area'.

Search & Destroy **[BC/Interceptor/Personnel/ATV]**

This is a combination of *Intercept* and *Patrol*. The unit will actively engage & attempt to destroy all detected ground/space units and air/space craft regardless of class.

Suppress Enemy Air Defenses **[Interceptor/Personnel/ATV]**

The unit will actively search for & engage targets capable of attacking aircraft. These include Surface to Air Missile, **SAM** and Surface to Air Laser, **SAL** units as well as space-borne Orbital Defense Systems, **ODS**.

Escort **[BC/Interceptor/Personnel/ATV]**

This waypoint requires a valid target. The unit will protect the craft they are escorting from hostile attacks. The unit will stay as close as possible to the escorted craft and will not engage any craft which do not pose an air/space threat to the escorted craft.

Combat Air Patrol **[Interceptor]**

This waypoint is used to provide air/space support to other units. The unit will only search for hostile air & radar units to destroy around the vicinity of the waypoint.

Tow **[BC/Shuttle]**

This waypoint requires a valid target which will be towed when captured in the tractor beam.

Minesweep **[BC/Interceptor]**

The unit will fly to the vicinity of the waypoint and destroy any hostile mines it finds.

Minelay **[BC]**

The unit will fly to the vicinity of the waypoint and lay a random type mine.

Deploy/Extract Team **[Shuttle/ATV]**

The unit will deploy/extract the current team as instructed. It will extract all personnel that have been marked for evacuation.

Deliver/Collect Cargo **[Shuttle/ATV]**

The unit will deliver/collect the cargo as instructed.

Deploy/Extract ATV **[Shuttle]**

The shuttle will deliver the ATV as instructed. There is a separate command for each ATV to be extracted.

Deploy/Extract Drone **[Shuttle]**

The shuttle will deploy/extract the drone as instructed. There is a separate command for each mining drone to be extracted.

19. PERSONNEL OPERATIONS

19.0 Personnel Roster & Assignments

The Battlecruiser has a default complement of 117 personnel and can carry up to 237 personnel. Each person on the ship has a station that he/she staffs. The station is deemed unmanned if the crew member responsible for it's function is not on-station. During the normal course of the game, various messages are sent from these crew members only when they are on-station. For gameplay reasons, several personnel-related tasks that are based on their AI level are disabled. If the person responsible for a station is not on-station, you would not be able to access that area. For example if the Chief Engineer was not on-station, you would not be able to access the LOGISTIX computer because Engineering is his responsibility. However, there are several actions and verbal prompts that you will only receive if that person is on-station. This depends on the AI level of that person as you will see below.

The list below shows the systems for which crew members are responsible. There are other low-level actions that are processed by the system. For simplicity reasons, these are not displayed here.

If on-station, in good health, and based on AI, personnel will perform their tasks based on response times. The higher a person's AI the lower the response time to carry out a task. This, however, does not affect tasks which depend on an AI level for operation, such as engineering tasks, flight engineers, etc. The AI levels provided here are the optimum required if the response is to be at its fastest. For example, the Combat Officer will assign Flight Engineers to docked Interceptors as soon as is required if his AI is at 50 or above, otherwise, there will be a short delay while he decides what to do. If he is not on-station, the Flight Engineers will still get assigned but at a rate determined by the game.

Commander

You, the player, assume the role of the Commander of the ship. When you access certain systems, you are in fact either delegating duties to your crew or overriding their decisions and task assignments.

When you are in command of the ship and actually flying it, you are assuming the role of the Flight Officer. Similarly, scheduling repairs, plotting a navigation course, assigning pilots, assigning strike orders, etc, all simulate you assuming the roles of the Chief Engineer, Navigation Officer, Combat Pilot, Tactical Officer, and so on. In flying an Interceptor, you assume the role of the pilot or the co-pilot depending on which view you select when you switch to the ship.

If any of these people die, you can still perform their tasks to a certain degree which simply simulates you doing the work directly or assigning it to a junior officer. If, for instance, a pilot dies in an Interceptor with you in manual control, only the person whose alter-ego you assumed will die, your primary persona, the Commander, is safely on-board the Battlecruiser.

You, as Commander of the Battlecruiser, can die… and if you die, regardless of the current state of the crew, the game will end.

It is imperative that you monitor your vital signs. Whatever you do, you should never take your Commander alter-ego off the ship because you stand the danger of getting killed. During a manual evacuation procedure, be sure to put your alter-ego in one of the shuttles before self-destructing the ship or the game will end if you die when the ship explodes.

Intruders on your ship will make it their priority to kill you on sight. Once you have intruders on-board, move your alter-ego around the ship and keep Marines close by at all times. If an intruder gets to you, there is a good chance that you **will** be killed.

Note: The rule is simple: if you want to continue playing the game, keep your alter-ego alive and healthy.

Flight Officer **Tommy Brooks**

The Flight Officer, **FO**, is responsible for flying the ship and is simulated when the ship's autopilot is activated. If a course is plotted by the Navigation Officer, the **FO** will use the computed waypoints to take the ship to the plotted destination. The higher his AI the better his flight and evasive skills.

Navigation Officer **Lanna Kasugi**

The Navigation Officer, **NO**, has the task of knowing exactly where the ship is and for plotting courses across the galaxy. She will use the destination computed in the Navitron computer to plot waypoints for the Flight Officer to use in reaching the destination. The higher her AI, the shorter the time taken to plot the waypoint course to the desired destination. A very low AI will result in erroneous courses and sometimes she will not even know how to plot the course.

Comms Officer **Sandy Crane**

The Comms Officer, **CMO**, is responsible for monitoring all internal and external communications on the ship's communication channels. She is also responsible for maintaining contact with launched probes and processing the data received. She also maintains communications with away teams.

Tactical Officer **Kara Moran**

The Tactical Officer, **TO**, is responsible for all tactical-related operations on the ship. She can monitor external tactical activities and report on status based on who is attacking what, what got destroyed, or is breaking off attack, etc. This includes all the ship's assets as well as ships engaging them. She can also send vector intercept commands to combat pilots so that they can engage threats effectively. She also monitors shield status and will sometimes adjust the settings based on current situation. During combat engagements, keeping the Passive Target Acquisition (**PTA**) systems on a target-priority schedule, is also her job. She also has the authority to automatically instruct Flight Engineers to arm the ship's weapon systems when empty.

Combat Officer **Paul Resnig**

The Combat Officer, **CO**, has the following tasks which he performs automatically during the normal operation of the ship.

Marines take 15-30 minutes longer to prepare for deployment if not on-station
Interceptors take 15-30 minutes longer to reach ready status if not on-station

Assignment of Flight Engineers	50
Assignment of Combat Pilots to ready craft with vacant operator	35
Assignment of Marines to search for escaped prisoners	75
Auto loading of missiles, mines & probes once bay is empty	15
Auto-prepping of Marines for combat	35

Medical Officer **Allison Weeks**

The Medical Officer, **MO**, has the following tasks which she performs automatically during the normal operation of the ship.

Treatment of injured personnel in **MEDIBAY**	25
Auto-cloning of dead personnel in **MEDIBAY**	75
Detection of radiation on ship.	65
Detection of infection on ship.	50
Detection of radiation/infection on crew in docked craft.	75
Reports when ship's Nutripak supply is low	25
Reports when ship's vaccine supply is low	25
Reports when ship's medicine supply is low	25
Auto-assigning of medics to search ship for injured personnel	15

Chief Engineer **Kendrick**

The Chief Engineer, **CE**, has the following tasks which he performs automatically during the normal operation of the ship.

Repairs/upgrade by System Engineers will take longer if off-station
Repair/upgrade completion time is based on his AI and that of the assigned engineers

Auto-assignment of System Engineers to repair tasks	15
Ejects nuclear reactor in case of breach.	100
Upgrades systems when upgrade detected.	75
Auto-repair of JAC if damaged (artifact)	100

Research Engineer **Jo Lanix**

The Research Engineer, **RE**, has the following tasks which she performs automatically during the normal operation of the ship. The primary task is for her to be able to analyze alien artifacts brought on-board the ship. If she cannot analyze these artifacts, they cannot be used.

She can also detect unsafe levels of dangerous and high volatile minerals such as Krytonium, Uranium, Strontium, etc.

When an artifact is first brought on-board, you will not be able to use it if the Research Engineer is not on-station or is unable to analyze it. Each time an artifact is brought on-board, it takes a random time between 30 and 60 minutes for the Research Engineer to analyze it based on her AI level. When this analysis is complete, the item becomes available for use and must be installed if applicable. The higher the Research Engineer's AI, the shorter the time taken to complete the analysis. This time also depends on the fatigue and life factors. The required AI factor for the analysis of all artifacts is listed below. If the Research Engineer does not have this AI level, she will not be able to analyze the artifact and you will be unable to use it.

Upgrade artifacts such as **TACYON ANAGRAM SHIELD** and the **KARANIAN MARK IV REACTOR** are only available as upgrades in **LOGISTIX** after they have been analyzed. The installed flag for all others is set only when they have been analyzed. This means that the **HYPERSION SUBSPACE DEVICE**, for instance, cannot be used until analyzed even though it's on the ship.

Monitoring of dangerous mineral levels on ship	25
Hyperion SubSpace Device	75
Tacyon Anagram Shield	65
Trans-Matrix Cloaking Device	75
Karanian Mark IV Reactor	65
R.A.N.D.O.M weapon	100
R.A.N.D.O.M decoder	100
Enhanced Nav Module	50
Celestial Orb	50
Just Another Cyborg, J.A.C	85
Phased Array IOD	85
Auto-repair of JAC if damaged (artifact)	100

Flight Engineers

The 20 Flight Engineers are responsible for the tactical operations of the Interceptors. This includes systems analysis, weapons arming, reactor battery charging, etc. When these crafts dock, they are checked for system malfunctions. If repairs are required the craft is sent to engineering for repairs. Once engineering repairs are completed, the ship then goes through a quick inspection before being declared flight ready. The average AI of all engineers assigned to a task determines the completion time.

Systems Engineers

The 20 Systems Engineers are responsible for all operation repairs on the Battlecruiser. The average AI of all engineers assigned to a repair task determines the repair/upgrade completion time.

Marines

The Battlecruiser can accommodate up to 40 Marines. These troops are used for tactical strikes on planet surfaces or on-board other ships. They are also used as security personnel on-board the ship. If the Combat Officer is on-station, a team of Marines will be assigned to security detail if a security breach occurs on the ship.

Combat Pilots

The 8 Combat Pilots assigned to the Battlecruiser fly the Interceptors and are each assigned callsigns. Flight duty is assigned by the Tactical Officer. The default callsigns are Scorpion, Nightwing, Hellraiser, Roamer, Lace, Rogue, Shadow, and Starfire. All Interceptor pilots are fully trained and therefore they can serve as either pilots or co-pilots. Each pilot has a unique personality which determines how he/she acts when on assignment. In addition, pilots have additional attributes which are not monitored for other personnel. These include Dog Fighting and Bombing Accuracy skills.

Hellraiser

Lace

Nightwing

Roamer

Rogue

Scorpion

Shadow

Starfire

Medics

The ship has 20 medics who work in the **MEDIBAY** and roam the ship tending to injured personnel. These personnel are assistants to the Medical Officer. Medics will usually roam the ship in search of injured personnel for on the spot treatment or for transport to the **MEDIBAY**.

19.1 Personnel Attributes

The vital signs for all crew members and passengers on the ship are monitored by a neural implant. The data most important to you in monitoring the stats of people on the ship are as follows:

AI : The *Artificial Intelligence* attribute determines the person's ability to perform his/her duties. In the case of combat pilots it determines the amount and rate at which a pilot's Dog Fighting and Bombing Accuracy skills increase. It also determines a pilot's ability to complete a mission. This attribute, for the co-pilot, determines his/her ability to detect, report, and counter hostile launches. A person's Life Factor and Fatigue Factor also affect a person's AI level.

FF : The *Fatigue Factor* represents the amount of physical and emotional stress a person has endured. A high value indicates a tired individual. Degradation of this factor for pilots, is based on the number of combat missions flown, the length of combat time, and the amount of time this person has been on station. The FF will improve (decrease) when a person is taken off duty and allowed to rest. The rate of decrease is also dependent on the value of the Life Factor. A lower Life Factor will result in a slower decrease in the Fatigue Factor. Sending the crew member to the MediBay will improve the FF rating more rapidly.

LF : The *Life Factor* monitors a person's vital signs. It decreases as the person takes injury during combat. Like the Fatigue Factor, it also determines the person's ability to perform his/her duties. It affects a pilot's effectiveness in combat. Once this value reaches zero the person is dead. It is also used to determine the rate at which the Fatigue Factor drops. The lower the Life Factor, the slower the Fatigue Factor will decrease even during resting periods. The LF will improve more rapidly if the person is sent to the MediBay and treated.

DF : The *DogFighting* skill (pilots only) determines the level of flight combat maneuvers that the pilot can utilize in a combat environment. The higher this skill the greater the chance the pilot has of predicting and countering an enemy's next move. It also determines the number of solutions this person processes during a combat engagement.

BA : The *Bombing Accuracy* skill (pilots only) determines the level of ground target acquisition that the pilot can utilize when attacking ground targets. The higher this skill the faster the pilot can detect, identify, acquire, and destroy ground targets.

CM : The *Combat Mission* attribute (pilots only) is a record of the number of missions this pilot has flown. Each time an Interceptor is launched, this value is updated for both pilots. The number of missions flown and the length of the combat time affects the pilots' fatigue factor.

CK : The *Combat Kills* attribute (pilots only) is a record of the number of targets destroyed by the pilot. This subsequently increases their AI factor.

19.2 Accommodation & Maintenance

All personnel on-board the ship have their permanent quarters where they sleep and spend their down time. Personnel with specific departments also spend their time at these location when they are on-station. During the course of the game, personnel will move around the ship to various locations. Since the entire ship is linked by turbo-shafts and corridors, sometimes these can become damaged preventing personnel from moving to their destination. Personnel moving around the ship will also become injured if their location takes damage. If personnel become trapped at a particular location, they will continue to take injury at a slow rate until the location is repaired and all personnel are cleared from the area. You can track personnel movement around the ship from the **PERSCAN** computer.

Personnel eat **Nutripak** supplements for food. They came in various flavors and types. If you even wondered what a chemically-treated steak looked like, ask your crew. Each person consumes **three** rations of Nutripak a day. Since food is responsible for a person's health, the Life Factor of a starving person will slowly decrease until he/she dies of starvation. When personnel are hungry, they will leave their current location and go to the galley (Deck 1) for food. If they don't find any rations, they will return to their stations and check periodically until the stock is replenished. Guests and prisoners also eat Nutripaks. In the case of prisoners, the food is brought to the detention hold.

Most frequented locations:

OFFICERS QUARTERS	Living area for the ship's officers.
PERSONNEL QUARTERS	Living area for medics, engineers, guests, etc.
TROOP QUARTERS	Living area for Marines.
OPERATIONS	Main work location of Tactical Officer. Also used for combat briefing.
BRIDGE	Main work location of all officers assigned to the bridge.
MEDIBAY	Main work location of the Medical Officer and medics.
RESEARCH LAB	Main work location of the Research Engineer.
ENGINEERING	Main work location of the Chief Engineer and Systems Engineers.
FLIGHT DECK	Main work location of the Combat Pilots and Flight Engineers.
TROOP DEPLOYMENT BAY	Location where Marines and other away team personnel prepare.
GALLEY	Personnel will visit this area when hungry.
LIBRARY	Personnel will occasionally visit this area to increase AI.
FITNESS CENTER	Personnel will occasionally visit this area for recreational purposes.
PSIDECK	Personnel will occasionally visit this area for entertainment purposes.

19.3 Medical Operations & Cloning

Personnel can become injured under a variety of circumstance including combat injury, radiation, infection, or being located at a badly damaged area of the ship. The Medical Officer and her crew of medics are responsible for treating all forms of ailment that may afflict the ship's crew. Radiation usually occurs during a reactor core breach or severe damage to certain systems or the exposure of certain minerals stored in the cargo bay. Once radiation is detected, it is imperative that engineers be dispatched immediately to clear it using Radiation Control Units (**RCU**) otherwise the radiation will spread from deck to deck and quickly contaminate the entire ship. Infections are just as deadly but are usually contracted by a returning away team or if a virus is injected into the ships air ducts by intruders. Radiation and infection can be transferred from person to person so it is important that infected personnel be transferred immediately to the MEDIBAY where they can be quarantined and the contamination contained. The Life Factor of contaminated personnel will drop faster than normal combat induced injury depending on the type of radiation or virus infection.

Normally injured personnel will automatically proceed to the MEDIBAY to be treated if their Life Factor reaches or falls below 15. Sometimes medics will run into injured personnel and treat them on the spot or have them transported to the **MEDIBAY** for advanced treatment based on the injury. Personnel will also go off-station if their Life Factor reaches or falls below 10 or if their Fatigue Factor reaches or exceeds 90.

Medpaks are used to treat severely injured personnel while other minor drugs and treatment are used to treat minor injuries. Minor injuries, and in some cases severe ones, can be treated by leaving the person in the **MEDIBAY** for a period of time. If the Medical Officer is on station, the treatment will be faster than if left to the lesser-qualified medics. In extreme cases, Medpaks can be used to treat all forms of ailments. They are faster and each unit increases a person's Life Factor by 25%. Vacpaks are used only to treat infections.

A person's Fatigue Factor can also be reduced by sending them to the MEDIBAY for a period of time. The reduction at this location is faster than if the person were in their personal quarters.

The ship's officers and combat pilots are valuable assets and can cause logistics problems if they die. The DNA signatures of these personnel are stored in the MEDIBAY. If one of these key people dies a clone can be created from the stored DNA. One important point to remember is that when a person is cloned they are created from the DNA stored when they were assigned to the ship. This means that they lose all acquired memory and skills they gained up to the point of death. Cloning someone can take upward from 15 minutes to 8 hours and requires operation of the Cloning Module.

19.4 Recruiting New Personnel

Since only officers and pilots can be cloned, if you lose other personnel such as Marines, medics, or engineers, you can recruit replacements at most starstations. Though GALCOM routinely assigns personnel to combat duty aboard various ships, in instances where you cannot find replacements for free, you will be charged a recruiting fee by the station for the new personnel. You can only recruit replacement personnel when a position becomes available because you cannot carry extra personnel on-board.

19.5 Away Team Deployment

There are times when you will send personnel to planets or moons on away missions. In such cases, each person will require a Combat Kit which contains rations for 8 hours, weapons, ammo, and a portable jetpack. Regular personnel don't take as much gear as Marines.

The rations contained in the Combat Kit will last for up to 8 hours. Once personnel run out of rations, they will begin to starve and eventually will die if left unattended. Since food drops are not supported in the game, you will have to bring personnel back to the ship so they can eat. If personnel return to the ship with unused items, the items are returned to the cargo bay.

Marines, unlike other personnel, have to take several steps before they are ready for deployment and this occurs during the 'prep for combat' phase. Actions include grabbing their gear & weapons from their quarters and proceeding to Operations for a tactical mission briefing. Once they have completed these actions, the Marines then proceed to the shuttles or transporter for deployment.

Once personnel are deployed on the surface they will choose to travel either on foot or by their portable jetpack if they brought one.

Though regular personnel can be sent to the surface, it is always advisable to send a Marine escort with them in case they run into hostile forces on the surface. If you have available ATVs on-board, you can also deploy them and let the Marines use them for combat operations. This will reduce the risk of combat injury and cause their Fatigue Factor to increase at a slower rate.

Combat deployment requires extensive planning and the utilization of Marines, ATVs, shuttles, and Interceptors. For excursions into heavily defended areas, Marines with jetpacks can be used to soften the target area under *Search & Destroy* orders, and ATVs can take out radar sites or similar targets under *Suppress Enemy Air Defenses* orders while Interceptors provide ground or air support under *Combat Air Patrol* or *Search & Destroy* orders. A shock team under *Strike* orders can be used to attack the target directly once defenses in the vicinity have been neutralized. It is common to deploy and extract personnel using shuttles or the transporter as the battle progresses.

Even though personnel have protective clothing and breathing apparatus when deployed, there is always a chance that some will be exposed to severe radiation or infection on the planet. If this happens there is a good chance that they will infect the ship. You should monitor the vital signs of personnel using the TACTICAL computer before extracting them. Once you extract infected personnel, transfer them to the MEDIBAY immediately for treatment and quarantine any infected decks by relocating all personnel to safe areas until the contamination has been contained.

20. SECURITY OPERATIONS

20.0 Alert Status Monitoring

The ship has an internal klaxon and several alert indicators which monitor the tactical integrity of the ship. Though alert conditions do not affect the performance of the crew, they serve as an indicator that something has gone wrong which requires your immediate attention. The ship's klaxon will sound and alert conditions updated under several circumstances including the detection of hostile threats, target acquisition of the ship by another craft, hull, shield, or reactor core breaches, and even the detection of radiation or infection on the ship. If any of the alert conditions is lit, you must investigate and fix the problem immediately or risk the loss of personnel or even destruction of the ship.

The Combat Alert Status, **CAS**, monitors external conditions such as the presence of hostile forces or the detection of a radar lock solution on the ship (usually accompanied by the flashing track, lock, or launch threat warning indicators).

The Ship Alert Status, **SAS**, monitors internal ship conditions such as intruder alerts, escaped prisoners, hull, shield, or reactor core breaches as well as radiation leaks and virus infections.

Since the ship's computers monitor the alert status, you have no control over them, therefore you cannot turn them on or off. If you think you have fixed the problem, as in the case of an **SAS** warning, but the indicator remains lit, keep looking because the system is fail-safe is not prone to error.

20.1 Intruder Alert

Even though the ship is usually secure from unwanted intrusion, there are times when you will be boarded by hostile forces who are then identified by the security computers as intruders. You stand a greater chance of being boarded if a hostile transport, cruiser, or carrier is in the vicinity. You cannot prevent your ship from being boarded, though it has been reported that under certain circumstances you cannot be boarded if the ship is cloaked and if the AI of the boarding party is too low for them to break the transporter security codes.

Once you're boarded, however, your problems will multiply because now you have a combat situation within your own craft. Unlike escaped prisoners who rarely have access to weapons, intruders usually bring their own weapons to wreak havoc inside your ship. Remember one thing: if a hostile force is brave enough to board a carrier such as yours you can always assume that they know what they're doing and that they have the weaponry to make their point.

As we've discovered, intruders are smart, brave, and confident enough to take on your Marines.

Their number one goal is to first sabotage the ship's systems and then kill the Commander [you] if possible. They will rarely make a beeline for the bridge being the most accessible section of the deck; but they will if they are close enough. The sabotaging of the ship's systems will usually cause widespread panic in the ship resulting in the loss of critical systems, and in some cases, personnel. Intruders will usually kill anyone they encounter and since only Marines, officers, and pilots carry arms on-board the ship, medics and engineers are sitting ducks if they encounter intruders.

Once you're notified that intruders are on-board, you should first assign Marines to search duty if the Combat Officer has not already done so and then track the Marines via the PERSCAN computer. If you notice any intruders near the location of your alter-ego, you must relocate him immediately or face the consequences. Refrain from relocating personnel during intruder alerts because in their quest to move to the new location they may encounter intruders and be killed.

The healthier and smarter the Marines, the faster they will locate the intruders and kill them. Marines will sometimes take prisoners depending on the aggressiveness of the intruders. Usually combat is to the death. Severely injured intruders will attempt to escape from one deck to another. The success of your Marines against intruders is dependent on their attributes, weapons, and the number of intruders they're going up against. Marines will never shy away from a fight even if they are outnumbered. This usually means that most end up being dead heroes. If you notice a Marine up against incredible odds, you can manually relocate him or send more Marines to his location.

If the intruders ship is still in the vicinity, they will usually attempt to beam off your ship if outnumbered or severely injured. Otherwise, they will either steal one of your shuttles or Interceptors and escape or fight to the death as they play cat and mouse with your Marines. If they do steal one of your ships, you stand little or no chance of getting it back and you will not be able to replace it unless it is destroyed or the intruder docks somewhere with it.

Intruders will always attempt to treat their injuries by going to MEDIBAY. If you can predict this from PERSCAN then you can assign Marines to MEDIBAY and hope that they get there before the intruders do.

Intruders are normal people and therefore are subject to the same injury, radiation, and infection conditions that can affect your crew. If you ever have intruders on your ship getting rid of them should be your number one priority.

20.2 Prisoners

Though your Marines can sometimes take intruders as prisoners, in some cases, other GALCOM ships may beam prisoners to your ship for transportation to penal facilities. Sometimes, and especially during ACM scenarios, you will take hostile personnel prisoners as well.

The detention hold is a secure area protected by a very advanced force field. Prisoners are immediately escorted to the detention hold where they are held until you deliver them to a penal facility on a starstation or until another ship picks them up. If the ship's computers take severe damage during combat, there is a chance that the force field may shut down allowing the prisoners to escape. Sometimes they will escape regardless of whether or not the detention hold is damaged.

Once prisoners escape, unlike intruders, their main goal is to leave the ship using any means possible, sabotaging critical systems (to keep your crew busy) along the way. They will usually access a terminal and find the location of the shuttle or Interceptor bays. If they succeed in reaching one of these crafts, they will immediately commandeer it and leave the Battlecruiser provided that the craft in question can be launched (i.e. on ***ready*** status). Prisoners rarely kill personnel but sometimes will, especially if they encounter Marines who are not interested in taking them prisoners again.

If the security of the detention hold is ever breached, send Marines to the location to thwart any escape attempts and fix the breach immediately. Prisoners are normal people and therefore are subject to the same injury, radiation, and infection conditions that can affect your crew.

Docking at a starstation will cause all prisoners to be transferred to the station. You will be awarded 2 experience points per prisoner.

20.3 Guests

From time to time you will bring diplomats, traders, survivors, dignitaries, etc, on-board your ship. These people are classified as guests and should be treated with the utmost respect. Guests are never trouble for you so your primary task is to keep them alive until you get them to their destination or until they leave your ship by other means.

Intruders will sometimes target guests in order to kill them, just to embarrass and cause you more problems. It is always wise to give your guests some protection by sending them to a location where Marines can reach them quickly if intruders board your ship.

Guests are normal people and therefore are subject to the same injury, radiation, and infection conditions that can affect your crew.

21. EMERGENCY OPERATIONS

21.0 Ship Integrity Breaches

During combat, your shields and armor may be breached causing the ship's hull to take damage. A powerful impact can damage your ship's systems, locations, and injure or kill personnel at those locations. System malfunction can range from unstable displays to the display of incorrect data. Repeated damage to certain systems, including shields, reactor, cloaking system, and even minerals stored in the cargo bay can cause radiation leaks on the ship.

If your ship's armor is breached under any circumstance, your first option is to break off the engagement and leave the area. If your Chief Engineer is smart enough and available he will initiate repairs to critical systems once they take damage. Sometimes you may want to direct him to repair a specific system. In any case, you should seek a quiet portion of space and immediately initiate repairs. You can always head for the nearest friendly starstation for assistance or send out a priority one SOS call in extreme circumstance. Follow the normal procedure for relocating personnel who are injured or exposed to radiation.

21.1 Reactor Core Breach

If the reactor core is breached from excessive damage, the Chief Engineer may or may not jettison it. You do not have manual control over this, so you cannot jettison the core. If he fails to jettison the core, you can attempt repairs and at the same time tend to injured personnel. However, once the core is breached, it will most certainly explode over a period of time. Once your reactor core is breached, you can always expect the worst. If you feel that you have a chance of surviving, you should load personnel on to shuttles, ATVs, and Interceptors then launch these craft. The fewer people on-board the ship, the fewer things you have to worry about. However, don't send all your Systems Engineers away or there will be no one to do repairs or clear radiation. Once you've evacuated important personnel, you may then go about repairing the ship and taking steps to contain any radiation detected.

21.2 Radiation Leaks & Infectious Diseases

Radiation can occur from severely damaged systems. Once radiation breaks out on a deck, the only solution is to relocate and quarantine personnel to other parts of the ship and immediately assign Systems Engineers to clear the radiation using Radiation Control Units (**RCU**).

Always make sure that you have an ample supply of Radiation Control Units on-board. Without them you will not be able to clear the radiation.

Once a disease epidemic breaks out on the ship it will spread like radiation but more slowly, depending on the type of virus infection. Again, you must relocate and quarantine infected personnel and immediately treat them with Vacpaks. Though Medpaks can be used to treat other ailments associated with the side-effects of infections, they cannot cure the infection itself. Only Vacpaks will do the job.

Always make sure that you have an ample supply of Medpaks and Vacpaks on-board.

21.3 Life Support Systems (LS)

The ship's Life Support Systems are designed to maintain the normal atmospheric conditions to support life on-board the ship. If these fail, personnel will slowly die. The regular maintenance of the Life Support Systems should be at the top of your engineer's list of priorities. Ignoring a 35% breach in an LS unit to repair a 20% breach in your weapons array will usually lead to trouble if the Life Support unit takes further damage and quits altogether. If an LS unit fails all personnel should be immediately relocated and quarantined until it is repaired.

The main Life Support System supports the following areas of the ship:

BRIDGE
OFFICERS QTRS
MEDIBAY
DETENTION HOLD
CORRIDORS
TURBO-SHAFTS

The auxiliary Life Support System supports the following areas of the ship:

TRANSPORTER ROOM
PERSONNEL QTRS 1 & 2
TROOP QTRS 1 & 2
TROOP DEPLOYMENT BAY
INTERCEPTOR BAYS 1, 2, 3, & 4
FLIGHT DECK
OPERATIONS

If any of these systems are breached then personnel will take some injury. The state of the **LS** units determines the rate of increase and reduction of the Life Factor and Fatigue Factor respectively.

Since shuttles, ATVs, and Interceptors have their own **LS** units, you can temporarily relocate personnel to these ships (there is no need to launch them) until the Battlecruiser **LS** units have been repaired.

21.4 Evacuation Procedures

There may come a time when you will need to evacuate the crew and scuttle the ship. Sometimes, as in the case of uncontrollable radiation leaks or infections, you will have time to plan the evacuation. At other times, especially when in hostile territory and faced with incredible odds, you have no time to plan. The destruction of the ship can be a quick and sudden event. A well-placed missile or laser shot can completely rip the ship's hull apart resulting in the decompression of the decks. A breach in the reactor core can cause it to reach its fusion threshold causing an immediate rupture in the core and an explosion which not many of your crew will get to hear -- because they'll be dead.

The decision to evacuate one's ship is not an easy one for any hard core commander. Though you may think that this is a game and if you die you can start over, it's important to note that if you play this game long enough, you will get that deep-seated feeling of responsibility for your ship & crew. This alone can cause you to think twice about evacuating the ship. It can also lead to the destruction of your ship and the death of a fine crew. The game keeps an internal clock and if you end up triggering an evacuation after playing for a day or two, you will never know what it's like to have played for weeks on end with a crew that has grown and evolved with you. This is the kind of experience I created in the game and if you make yourself responsible for your ship and it's crew, you may never find yourself listening to an evacuation klaxon. Your time would be better spent seeking ways to resolve the problem and at the same time save your ship and crew.

Once you have decided that there is no other way out and must evacuate the crew, you have two options once you tap **[CTRL+E]**. You must make a decision before the timer countdown expires and ship commits to a self-destruct mode.

In **AUTO** mode, personnel are automatically vectored to available shuttles, ATVs, and Interceptors. Your alter-ego is usually the first off the ship because if for some reason he perishes, you won't be needing a replacement ship. Once the support ships are full of personnel, they are launched. No cargo is transferred. The ship then self-destructs and all personnel left behind will die along with it. In you fail to make a decision before the timer commits, it will default to this mode of evacuation.

In **MANUAL** mode, you have to access the **TACTICAL** computer and direct personnel to ships that are ready to launch. In this mode, you get to choose who goes and who stays and the amount of cargo you want to salvage. You can even use the transporters to deploy excess personnel to a planet or moon so that you can later come back and get them if you are given a new ship. Power allocation procedures are usually ignored during an evacuation status. This allows the Flight Engineers or crew to manually operate the launch bay doors even in the event that there is a power failure preventing their operation. Unfortunately, if there is no power allocated to the Transporter it cannot be used.

At the end of every evacuation procedure, GALCOM will send out a ship to pick up the survivors and take them to the nearest friendly station. The status of the crew will be displayed indicating the survivors. If you left any personnel on planets, or ships flying around, you will have to go back and get them once you get your new ship.

You will get three ship replacements during your career. The third time you lose a ship you will be assigned to a desk job and your status set to retired, **RET**.

If you do not have any support ships with which to evacuate your alter-ego and have no power routed to launch control which allows the ships to launch, you and the crew will perish when the ship explodes. That event will mark the end of your career and you will be listed as Killed In Action, **KIA**.

If you evacuate your ship when you are under court-martial, **CMA** orders, the trial will proceed before you are assigned a new ship. If you are found guilty, that's the end of your career.

21.5 Requesting A Tow

In circumstances where your ship is disabled but the damage is not bad enough to warrant an evacuation, you may request a tow ship. This service is handled by independent contractors for a fee.

Once you send out the tow request using the menu and select a destination station, the tow fee is deducted and a transport ship is dispatched from the station to your location. If you leave the region before the tow ship gets there it will leave and you won't get a refund. Once the tow ship gets to the region your ship will then be captured by the tow ship which then flies to the station. You will not have any flight control during a tow. If the station is not there, then the tow ship will release your ship and leave. You won't get a refund but you can request another tow for an additional fee. If all goes well, the tow ship will dock at the station where you can perform repairs as normal.

The fee for a tow is 500,000. If you are located in a hostile region when you made the call an additional fee will be added.

If you request a tow and a valid station is not found, you will be listed as Missing In Action, **MIA**, until a station becomes available. You can then request the tow again for an additional fee.

If you request a tow when you are under court-martial, **CMA** orders, the trial will proceed once your ship is delivered to the station. If you are found guilty, that's the end of your career.

22. SHIP ENGINEERING SCHEMATICS

22.0 Design Specifications

The Galactan class Battlecruiser was designed to replace the aging Constellation class variant which proved its worth during the Vesperon-Empirian conflict of 2990. It was the most advanced ship in the Terran fleet until the Gammulans developed the Stormcarrier. The Galactan class was the answer to the Stormcarrier and to a lesser extent, the Vesperon-built Violon. Though smaller than it's counterparts, and with fewer support ships and crew, the Galactan class Battlecruiser is faster, more maneuverable, and has a far superior propulsion and environmental system. To date, there are 6 Galactan class Battlecruisers of the 8 that were originally built. All remain on active combat duty around the galaxy.

An extensive coverage of this advanced spacecraft is beyond the scope of this manual. A supplement, entitled ***Battlecruiser Technical Specifications,*** will contain extensive discussions of the ships design and layout as well as blueprints of the various decks and support craft.

Role

The Battlecruiser is primarily a military ship with powerful strike capabilities. It is capable of deep space incursions and can operate independently, without visiting a starstation, for extended periods. Though designed for military use, several of the ships currently in the GALCOM fleet are used for deep space exploration & stellar cartography in hostile regions of space.

Crew Complement

The ship is designed to carry a crew complement of 117 with facilities to support up to 237. Its life support systems are capable of maintaining a suitable living environment for the entire crew and can also be adapted, in special areas, to suit the environment of other non-Terran lifeforms. Food duplicators are used to create a variety of food types which are dispensed in specially-designed Nutripaks containing an entire day's meal. A hydroponic plant is available and is used to create a variety of Terran vegetables, roots, and fruits in a controlled environment.

Enlisted officers include a Flight Officer, Navigation Officer, Communications Officer, Tactical Officer, Combat Officer, Medical Officer, Chief Engineer, and a Research Engineer.

Support personnel include a complement of 40 combat-trained Marines with qualifications such as space walking, engineering, combat weaponry, communications, and class 2 survival techniques. They are also certified jetpack flight pilots as well as trained in the use of surface combat vehicles. Most have seen combat under a variety of conditions in different worlds and have been known to survive for weeks with minimal supplies.

A team of 8 combat flight-trained pilots are also part of the complement. These hotshots are also trained in a variety of areas including light weapons, communications, and class 1 survival techniques.

Other support personnel include a team of 20 Systems Engineers, 20 Flight Engineers, and 20 medical personnel handling system repairs, pre/post flight routines, and medical operations respectively.

Support Ship Complement

The Battlecruiser hosts 4 Solarian class combat Interceptors, 4 shuttles, and 4 All Terrain Vehicles used for a variety of missions including combat, search and rescue, as well as covert operations. It contains four independent launch bays for the rapid deployment and extraction of Interceptors and one bay for shuttle launch operations.

All craft are designed to operate in the most severe space and planetary environments and to sustain stress beyond the normal 1g limit. Interceptors and shuttles are capable of landing on a variety of surfaces using Vertical Take Off and Landing (VTOL) vents located underneath the crafts. The ATVs can travel up to 50 mph on the most severe and rugged terrain.

Interceptors are manned by two pilots though the craft can be operated in emergency situations by either pilot. Shuttles can carry up to 10 passengers with a significant cargo load, or 20 passengers without cargo. Both craft types are outfitted with auto-tracking computers capable of returning them to the Battlecruiser without pilot intervention. The ATV is designed to carry up to 4 personnel and has a small cargo capacity.

Interceptors are armed with forward-firing missile launch bays which can be configured to carry a variety of space and planetary weapons. They are also fitted with a single laser-firing weapons array. Hull armor protection and shields are standard. Shuttles are unarmed and have minimal shields but have a high yield armor plating. ATVs are also armed with a single laser-firing weapons array and dual forward-firing missile launch bays. They have thicker armor and a slightly better shield rating.

Each support craft has the usual array of sophisticated equipment including radar, communications, navigation, and threat warning systems.

22.1 Deck Layout

The ship has three vertically stacked decks and a pair of deck extensions called sub-decks. Each deck hosts a variety of areas and systems. All decks of the ship are linked via turbo-shafts and motorized walkways. The dynamic movement code which handles personnel movement around the ship uses turbo-shafts for movement between decks. Walkways are not modeled because they are local to the decks they are on and reduce the amount of time required to move from one part of the deck to another. The main walkway conduit stem runs from the bridge to the security-locked entrance to the reactor room. A total distance in excess of 2000 feet end to end.

22.2 Weapon & Defense Systems

The ship's primary weapon system is a Multi Axial phased array ion disruptor with an impact capability of 25 units per burst. **MAX** can be configured to fire at variously configured levels of up to 100 bursts per second. The faster the configured burst rate, the longer the recharge time and the slower firing.

There are three turrets mounted on the fore, aft, and mid sections of the craft. Each can be controlled manually or configured for fire control by a Passive Target Acquisition, **PTA**, system capable of assigning threat targets based on priority and proximity to the ship. It also has advanced friendly fire avoidance capabilities as well as the ability to fire a sustained burst at a specific target in a wide arc.

The ship has the ability to carry a variety of missile-configured projectiles for space to space encounters. Missiles are stored in two independent weapon bays capable of carrying a variety of space- and surface-configured weapons. A rapid load rail enables the system to replenish the weapons pods directly from the weapons bay where they are stored. Each weapon pod can arm and rapid launch up to 10 missiles. The weapon bays can store hundreds of missiles based on size and storage requirements. A dedicated computer system called FAst Target Acquisition and Lock (FATAL) can be configured to prioritize and launch missiles at detected threats.

Defense systems include a standard Spectrum shield array system with a 360-degree planar matrix configuration capable of protecting the entire ship without the need for independent sub-systems. The design allows the shields to be upgraded to any class which can be configured to use a planar matrix configuration. All shields that are designed to work with planar matrix configurations require Plutonium for operation of the field strength modifier.

A Titanium Class II hull armor is also standard and can also be upgraded at any facility certified to handle class 4 spacecraft.

A cloaking device designed to work with a planar matrix-capable system is also standard. Using Iridium crystals for power, the device creates a space distortion field around the ship by replacing the ships signature with a replica of contained space. This is akin to masking the ship with a false image of the space that would otherwise be visible if the ship weren't there to block it. This technology deceives radar scanners, doppler configured scanning systems, and indeed the naked eye into seeing the false image projected by the system instead of the ship. If you place an object on a white sheet of paper, the region covered by the object is no longer visible unless you lift up the object to reveal the space it occupied. If you were to take a photographic image of the section the object is to occupy, store it, place the object in the same location and place the stored image over the object, you would no longer see the object. The cloaking system does the same thing by taking a 360 multi-axial snapshot of the space occupied by the ship and projecting this image over the ship's profile thereby rendering it invisible. The ship still occupies time and space and therefore is still subject to impact.

The ship also has mine launch capabilities and can be configured to deploy a variety of mines including the popular Crab and Leech variations.

22.3 Propulsion & Power Systems

The ship has an advanced nuclear reactor combined with a nuclear-capable, propulsion-based engine both of which can be upgraded to more advanced variations. The nuclear reactor uses highly-volatile Radium crystals for core injection. At full capacity, the core can produce maximum power required to power the entire ship for weeks on end using stringent power allocation procedures. The reactor core has a fail-safe emergency eject system which can be used to jettison the core under breach conditions. A backup solar reactor converts solar energy to power if the nuclear reactor is taken off-line. The converted power is stored in batteries which can then be used to power the ship. A fully charged battery can provide maximum power to the ship for 48 hours before recharging is required.

The engine can achieve a propulsion burst rate up to the speed of light and up to five times that during hyperspace travel. The Guardran type dynamic foil maintains a containment field around the ship which stabilizes the hull during light speed breaches. During these transitions, the environment inside the ship is maintained at acceptable levels and the Guardran system maintains a sustained 1g gravity field throughout ship. If the Guardran system failed, the environment within the ship would prove to be fatal for the crew especially during hyperspace breaches.

22.4 Power Management

Power management on the Battlecruiser is one of the most important aspects of it's operation. Without power, most of the ship's systems would shut down. This would spell disaster.

The Battlecruiser can store up to 25,000 units of **Radine**, 10,000 units of **Plutonium,** and 1,000 units of **Iridium**.

The nuclear reactor is responsible for providing power for the operation of all the ship's systems. It uses Radine crystals for fuel and its operation and ability to provide maximum power is dependent upon its condition. Hence, if the nuclear reactor is damaged, it will not be able to reach it's operation peak and will produce fewer power units.

The status of the reactor core and its cooling system also affect the nuclear reactor's operation. If these systems are severely damaged or destroyed, the reactor will shut down. There are worse things to worry about, however. If the reactor core is destroyed, it will cause a fusion reaction which will destroy the entire ship.

If the nuclear reactor cooling system is destroyed, the logic control system will automatically shut down the nuclear reactor to prevent overheating. It then attempts an auto-power reallocation using any available power.

The ship has an auxiliary solar reactor which converts solar power retrieved by the solar panels to raw power. When the ship is close to a solar source, the solar panels automatically convert this to power which is stored in a battery within the solar reactor. This power is then available for allocation. The condition of the solar panels determines the amount of solar energy stored. The solar reactor can convert and store up to 100 units of power.

The amount of power allocated to a system determines its operation. A system is considered off line if it has zero power units allocated.

The ship’s HyperJump engines consume 10 units of Radine with each jump.

Note: See Appendix L : Battlecruiser Power Allocation for more info

22.5 Primary System Upgrades

The engine, reactor, shields, and armor can be upgraded. An upgraded system results in better performance and, in the case of shields and armor, higher protection. Upgrades in the form of artifacts (which are only available in ACM mode) are also available for the ship's navigation, weapons, and defense systems. Most upgrades can be performed on-board by the engineers or at adequately equipped starstations. If your artifact or some higher level component is damaged or destroyed, depending on the component, you may only be able to replace it by first downgrading to a lesser component and then try to upgrade it.

ENGINE

STARCRY/S
CRUMICRON
DIRINGER
OMICRON/1
NUMEGA

REACTOR

LATTIS/NB
MEGATRON
LATTEX/NB
TANIS SPEC
EYESTAR
TRELLIS
KARANIAN MARK IV (ARTIFACT)

SHIELDS

SPECTRUM/A
LINEAR SPEC II
LINEAR SPEC III
LINEAR SPEC IV
TACYON ANAGRAM (ARTIFACT)

ARMOR

TITANIUM LEVEL II
TITANIUM LEVEL III
TITANIUM LEVEL IV
TITANIUM LEVEL V

NAVIGATION, DEFENSE & WEAPONS

HYPERION SUB-SPACE DEVICE
ENHANCED NAV MODULE
TRANS-MATRIX CLOAKING DEVICE
PHASED ARRY ION DISRUPTOR

Note: See Appendix C : Artifacts Database for more info on artifacts.

23. SUPPORT SHIP COMPLEMENT

23.0 Interceptor

The Solarian class Interceptors on the Battlecruiser are used for space and planetary combat operations. They are capable of space and planetary flight in a variety of environments. These crafts are housed in independent docking bays and moved over to the launch bay when ready for deployment. Because each one has its own bay, the Battlecruiser can only have 4 craft on active duty. The main Battlecruiser cargo bay is capable of storing spare Interceptors which can replace destroyed ones. Repair operations can be performed at starstations and starbases or by on-board systems engineers. All pre- and post-flight operations are performed by on-board flight engineers.

Personnel

Requiring two pilots at launch, the craft can be piloted from either the pilot or co-pilot seat. If either pilot dies, controls and view will be locked to the surviving pilot's station. The Interceptor's on-board computer monitors the vital signs of the pilot during flight and relays this information to the co-pilot station.

Power Systems

The Interceptor has a single rechargeable reactor which provides full power to all its systems. Power-draining systems such as shields and lasers can significantly reduce the operation time of the craft if adequate power management procedures are not exercised. Once the reactor charge is drained, the ship will be rendered powerless and cannot be controlled. The reactor is charged from special chargers on the Battlecruiser.

Flight Controls

The flight and navigation controls are identical to those used in the Battlecruiser, though the craft behaves differently. Capable of space and planetary flight, the Interceptor's engines and computer systems automatically configure based on the environment under which the craft is operating.

Planetary Operations

For planetfall operations, flying directly into a planet or moon will cause the ship to re-configure its systems as the ship succumbs to the gravitational pull of the planet or moon. Once planetfall is established and all the systems have adjusted, manual control is restored to the pilots. To leave the planet, the craft must be capable of reaching sufficient thrust in order to breach the planet or moon's escape velocity. At an altitude of 45,000 feet or higher pressing the [O] key configures the system for space environment. Once the craft has flown beyond the planet or moon's gravitational pull, control is restored to the pilots. If a craft cannot attain enough thrust to reach the required altitude, it will not be able to attain orbit.

Emergency Operations

The front part of the Interceptor is a self contained module which can be ejected using the **[CTRL+E]** command. If the integrity of the craft should fall to critical conditions, the computer system will sound a klaxon with an eject recommendation. Failure to eject will result in the destruction of the ship and the death of both pilots once the nuclear core explodes.

Upon a successful ejection of the module into space, the main body shell of the craft will self-destruct. A homing device in the module will automatically send a signal to the Battlecruiser announcing its location and status. Using data feedback from the Battlecruiser computer systems, the module is capable of locating and docking with the Battlecruiser. Upon successful retrieval, surviving pilots are taken to MediBay for post-flight checks. The computer system in the module is retrieved for analysis and the module itself is discarded.

If the module is ejected on a planet or moon, it will fall to the ground under gravity (if applicable). Damage at speed of impact determines the survival of the occupants. Once the module lands, the pilots will be able to leave the craft and await extraction once the Battlecruiser receives the location of the ejected module. Surviving personnel emitting an IFF beacon can also be tracked using the **SUL** mode of the **TACSCAN**.

The module has rations that can sustain the pilots for a period of 8 hours. It also contains protective suits in case the pilots chose to exit the craft in hostile environments. The pilots carry standard issue sidearms which may be used to defend their location should they come under attack by hostile forces.

Defense & Weapon Systems

The Interceptor hull is covered with high definition protective armor. It also has a protective shield which creates a 360 degree field around the craft when activated. Like every system on the craft, the shield draws its power from the main reactor cell and will automatically deactivate during power loss conditions. The weapon bay can carry up to 10 stand-off missiles of varying types. The main weapon system is a photon charged particle system (similar to the Ion Disruptor on the Battlecruiser) which also draws power directly from the reactor cell. Like the shields, engines, and computer systems the photon system will deactivate during a total power drain.

Weapon Loadout Profiles

Because the craft can carry a variety of missiles the Battlecruiser weapons computer system has pre-programmed specific weapons loadouts which select a profile based on the desired combat operations. Profiles can be selected from the **TACTICAL** or **CVD** computers on the Battlecruiser. These weapon profiles can be over-ridden by the flight engineers who will then load the requisitioned missiles requested by the combat officer.

Strike [planet]

2 X MARINER
2 X MAGELLAN
2 X LYNX
2 X MAVERICK
2 X HARPOON

Intercept [space]

4 X FIRESTAR
4 X QUESTOR
2 X PERSEUS

Patrol [space/planet]

4 X QUESTOR
2 X MAVERICK
2 X CLUSTER
2 X WARRIOR

Search & Destroy [space/planet]

4 X FIRESTAR
2 X QUESTOR
2 X SPYDER
2 X SEEKER

Escort [space/planet]

2 X QUESTOR
4 X STARSEEKER
2 X CLUSTER
2 X GAINER

Combat Air Patrol [planet]

4 X WARRIOR
2 X MARINER
4 X HYPERDYNE

Suppress Enemy Air Defenses [planet]

3 X HARPOON
3 X HYPERDYNE
2 X GAINER
2 X WARRIOR

Pilot Cockpit Systems

The Interceptor has the same systems as the Battlecruiser, though some features are only available on the Battlecruiser. Operation of the other systems is identical.

[1] Navigation Interface Display, NID & Tactical Scanner, TACSCAN

The **NID** and **TACSCAN** computers share this display. The commands to access each one remain unchanged. Though the pilot does not have viewing access to the **NID**, **TACSCAN,** and **CVD** at all times, the co-pilot does.

[2] Computer Video Display, CVD

Identical to the Battlecruiser though some of the operating modes are not present in this craft.

[3] System Status Schematics, SSS

This display monitors the status of the 14 primary systems on the craft. When a system is damaged, a yellow dot corresponding to the system will flash in the display. A destroyed system flashes a red dot. Each dot corresponds to an icon displayed in the Systems Status Relay mode of the **TACSCAN** computer as follows:

NRE	Nuclear Reactor	**TAC**	Tacscan Computer
NAV	Navigation Computer	**MNC**	Main Computer
ENG	Engine	**NID**	NID computer
CVD	CVD computer	**COM**	Comms Computer
MLS	Main Life Support	**ILD**	ILD Computer
EMD	Electro Magnetic Disrupter	**HUD**	Heads Up Display
LAS	Photon laser array	**HID**	HID Computer

The vertical bars on either side of the ship schematic represent the shield status. When the shields are on, the bars are Green. They are Red if the shields are destroyed.

[4] Inbound Launch Display, ILD

Monitors the status of outbound missiles you launch (square) and inbound missiles launched at you (diamond). The ship is at the center of the display. The **ILD** range is 5km.

[5] Hull Integrity Display, HID

Monitors the status of the hull armor. A Yellow readout indicates a minor breach and Red signals a severe breach.

[6] Systems Integrity Display, SID

Monitors the overall integrity of the craft. A Yellow readout indicates a minor integrity compromise while Red indicates a severe compromise. During a severe breach, the pilots should start considering ejecting from the craft.

[7] Reactor Power Display, RPD

Displays the current amount of reactor power. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[8] Laser Power Display, LPD

Displays the current amount of photon particle charge for the primary laser system. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[9] Shield Power Display, SPD

Displays the current amount of shield power. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[10] Armor Protection Display, APD

Displays the current amount of armor protection. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[11] Multi Function System, MFS

This is a cluster of indicators which monitor various ship systems.

EJT	Eject Warning	**ORB**	Orbit Approach Indicator
TRK	Radar Track Warning	**MSL**	Missile Stores Depleted
LCK	Radar Lock Warning	**LAS**	Laser Power Depleted
LNH	Missile Launch Warning	**PWR**	Power Level Warning
SYS	Systems Failure	**IFF**	Friend Or Foe Indicator
EMD	Electro Magnetic Disruptor jammer		

[12] Communications Link, CommLink

Cockpit **COMMLINK** computer.

[13] Heads Up Display, HUD

This is main viewing area of the cockpit. All systems and indicators are identical to those on the Battlecruiser, though they may be displayed at different areas of the HUD.

Note: When within a planet's atmosphere, a unique indicator similar to the thrust indicator appears on the right side of the HUD. This indicator monitors the ship's altitude above the ground immediately below the craft. During flight, the computer attempts to calculate your altitude as you fly. The faster you are flying, the higher the degree of inaccuracy.

Co-Pilot Cockpit Systems

The co-pilot, though a backseat pilot, has access to all the ship's systems including dedicated displays for the **NID**, **CVD,** and **TACSCAN** computers.

Several of the indicators available in the pilot's station are available here though located on different consoles.

[1] System Status Schematic, SSS

The System Status Schematic display in the co-pilot station has a pair of digital readouts for the shield and armor levels.

[2] Critical Systems Analysis Display, CSAD

The **CSAD** system, unique to this station, has graduated readouts for all the ship's critical systems. It also monitors the Life Factor and Fatigue Factor levels for both pilots.

[3] Shield Level Display, SLD

This system, unique to this station, monitors the status of the ship's shields. The digital displays underneath the **SLD** monitor the power and integrity levels.

23.1 Shuttle

The Battlecruiser is capable of carrying 4 shuttles used for space and planetary deployment and extraction operations. Like the Interceptors, the shuttles are capable of space and planetary flight in a variety of environments. These crafts are housed in a single docking bay and moved over to a special shuttle launch bay when ready for deployment. The main Battlecruiser cargo bay is capable of storing spare shuttles which can replace destroyed shuttles. Repair operations can be performed at starstations and starbases or by on-board systems engineers. All pre- and post-flight operations are performed by on-board flight engineers.

The shuttle can carry 20 personnel, 2000 units of cargo, 1 mining drone, and 1 ATV.

Personnel

A shuttle requires a single pilot for operation. If the pilot dies, the controls and view will be locked to the pilot station but another occupant will have to assume the controls since the cabin is connected to the main passenger cabin area.

Power Systems

The shuttle has a single rechargeable reactor which provides full power to all its systems. Strict power management procedures must be exercised in order to extend the operation time of the craft. Once the reactor charge is drained, the ship will be rendered powerless and cannot be controlled. The reactor is charged from special chargers on the Battlecruisers.

Flight Controls

The flight and navigation controls are identical to those used in the Battlecruiser though the craft behaves differently. Capable of space and planetary flight, the craft's engines and computer systems automatically configure based on the environment under which the craft is operating.

Planetary Operations

For planetfall operations, flying directly into a planet or moon will cause the ship to configure its systems as the ship succumbs to the gravitational pull of the planet or moon. Once planetfall is established and all the systems have adjusted, manual control is restored to the pilot. To leave the planet, the craft must be capable of reaching sufficient thrust in order to breach the planet or moon's escape velocity. At an altitude of 45,000 feet or higher, pressing the **[O]** key configures the system for space environment. Once the craft has flown beyond the planet or moon's gravitational pull, control is restored to the pilot. If a craft cannot attain enough thrust to reach the required altitude, it will not be able to reach orbit.

Emergency Operations

The shuttle does not have a self-contained eject module. Pressing the **[CTRL+E]** eject sequence will cause all personnel currently on-board to die when the craft self-destructs.

If the integrity of the craft should fall to critical conditions, the computer system will sound a klaxon with an eject recommendation. Failure to eject will result in the destruction of the ship and the death of all passengers once the nuclear core explodes.

In the event of a shuttle evacuation surviving personnel emitting an IFF beacon can be picked up and evacuated using the **SUL** mode of the **TACSCAN**.

Deployment Operations

The shuttle is primarily used for personnel and cargo deployment and extraction operations. They can also be used to deploy and extract mining drones & ATVs. Deployment is performed by entering the planet's atmosphere, hovering over the desired drop zone, and deploying/extracting either personnel, cargo, or a mining drone by using the deployment menu. Extracted personnel will climb into the main cabin, cargo will be transferred to the cargo bay, and the mining drone & ATV will be stored in special compartments. If you capture a cargo pod with the tractor beam while flying the shuttle, you will be able to scan it's contents in the **CVD**.

You can also perform deployment operations by using waypoints in the **TACOPS** computer.

Towing Operations

The shuttle can tow objects such as other ships and can also tow rather than collect cargo pods. If you try to dock a shuttle that it towing one of your ships, you will be prompted to dock both crafts. If it is not one of yours, the shuttle will escort the BC.

Mining Drone Deployment

Once a mining is deployed, it will rove the planet surface at random, pause to mine, and then move on to another site. You can monitor its capacity via the **TACTICAL** computer and extract it when it's full. If you have space in the shuttle, you can extract the drone using the deployment menu, transfer it's mineral content into the shuttle, and re-deploy the drone.

All Terrain Vehicle Deployment

Shuttles are used to drop ATVs into hot zones. Once they are dropped, they will immediately follow any programmed waypoints created in **TACOPS**. Like the drone, you can transfer cargo between the shuttle and the ATV when the ATV is on-board. To dock an ATV you are driving with the shuttle, simply target the shuttle and press **[ALT+D]**.

Personnel Deployment

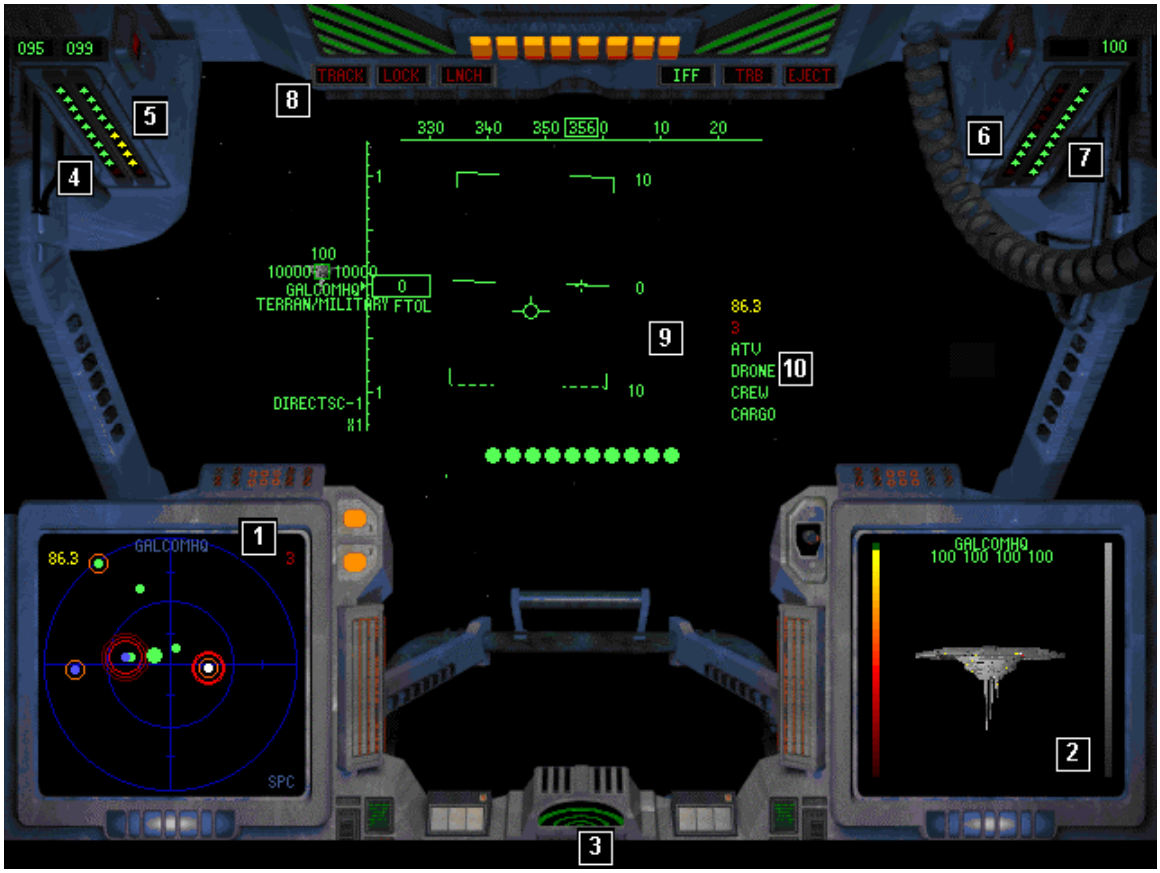
You can also deploy/extract personnel. Once deployed, they will immediately follow any programmed waypoints created in **TACOPS**. You can also transfer personnel & cargo between the shuttle and any ATV on-board the shuttle using the shuttle menu.

Defense & Weapon Systems

The shuttle hull is covered with low definition protective armor. It also has a low rating protective shield which creates a 360 degree field around the craft when activated. Like every system on the craft, the shield draws its power from the main reactor cell and will automatically deactivate during power loss conditions.

The shuttle is unarmed. You are advised to deploy it with an Interceptor escort when going to hostile planets.

Pilot Cockpit Systems



[1] Navigation Interface Display, NID and Tactical Scanner, TACSCAN

The **NID** and **TACSCAN** computers share this display. The commands to access each one remain unchanged.

[2] Computer Video Display, CVD

Identical to the Battlecruiser, though some modes are not present in this craft.

[3] Communications Link, CommLink

Cockpit **COMMLINK** computer.

[4] Reactor Power Display, RPD

Displays the current amount of reactor power. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[5] Systems Integrity Display, SID

Monitors the overall integrity of the craft. A Yellow readout indicates a minor integrity compromise while Red indicates a severe compromise. During a severe breach, personnel should consider abandoning the craft.

[6] Shield Power Display, SPD

Displays the current amount of shield power. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[7] Armor Protection Display, APD

Displays the current amount of armor protection. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[8] Multi Function System, MFS

This is a cluster of indicators which monitor various ship systems.

TRACK	Radar Track Warning	**IFF**	Friend Or Foe Indicator
LOCK	Radar Lock Warning	**TRB**	Tractor Beam
LNCH	Missile Launch Warning	**EJECT**	Eject Warning

[9] Heads Up Display, HUD

This is main viewing area of the cockpit. All systems and indicators are identical to those on the Battlecruiser, though they may be displayed at different areas of the HUD.

Note: When within a planet's atmosphere, a unique indicator similar to the thrust indicator appears on the right side of the HUD. This indicator monitors the ship's altitude above the ground immediately below the craft. During flight, the computer attempts to calculate your altitude.

[10] Deployment Menu

This menu is used to deploy and extract personnel, cargo pods, and auxiliary crafts as well as transfer personnel and cargo between the shuttle and ATV or mining drone currently loaded in the shuttle. To select a menu option, **[LEFT CLICK]** on it to reveal the available options.

ATV Select **DEPLOY** to drop the currently loaded ATV to the surface. To collect the ATV, select **EXTRACT**. Use **CARGO** to display the cargo contents and for transfer operations. Use **TRANSFER** to put the selected items in a pod and deploy it in space on the planet, or to transfer them to the docked ATV. Use **COLLECT** to collect the currently targeted cargo pod. You can easily locate cargo pods by filtering out all targets except the *friendly* (5) and *miscellaneous* (9) types. You can also **SWITCH TO** the ATV and drive it once it is deployed.

DRONE Select **DEPLOY** to drop the drone, **EXTRACT** to collect it, **TARGET** to target it, **SHOW CARGO** to display the cargo and **UNLOAD DRONE CARGO** to transfer to the shuttle.

CREW From the list, **[LEFT CLICK]** on each person you'd like to deploy, then use **TRANSFER TO** and assign them to an away team or the docked ATV. Then use **AWAY TEAM** to either assign them from *away team status*, back to the shuttle, transfer to the loaded ATV or to **DEPLOY** them as part of an away team. You can then use the **DEPLOYED TEAMS** menu to send orders to the selected deployed team members.

CARGO From the list, **[LEFT CLICK]** to select the items you would like to transfer to a cargo pod for deployment or the ATV.

ORDERS Order menu for the craft. Use this to give the craft orders and then turn on the auto-pilot AI mode so that it can carry out the order.

23.2 Mining Drones

Mining drones are used for mining planets and moons for various types of minerals. They are loaded in shuttles and deployed or extracted using the shuttle deployment menu. A mining drone, once deployed, will mine a surface and extract any useful minerals it detects. Once it's filled to capacity, you can then extract it and transfer its cargo to the shuttle cargo bay or to the Battlecruiser cargo bay once the shuttle docks. A mining drone will usually take about 8 hours to fill to 100% capacity. The Battlecruiser can carry any number of mining drones in its cargo bay but only 4 can be active and loaded in shuttles at any time.

23.3 All Terrain Vehicle, ATV

The Battlecruiser is capable of carrying 4 ATVs used for planetary deployment and extraction operations. They are suited only for surface combat operations and combat troop deployment in areas where Interceptors are unable to operate. These crafts are housed in a single docking bay and loaded into shuttles for deployment. The main Battlecruiser cargo bay is capable of storing spare ATVs which can replace destroyed ones. Repair operations can be performed at starstations and starbases or by on-board systems engineers. All pre- and post-flight operations are performed by on-board flight engineers.

The ATV can carry 4 personnel and 500 units of cargo.

Personnel

An ATV requires a single driver for operation. If the driver dies, controls and view will be locked to the driver station but another occupant will have to assume the controls since the cabin is connected to the main passenger cabin area.

Power Systems

The ATV has a single rechargeable reactor which provides full power to all its systems. Strict power management procedures must be exercised in order to extend the operation time of the craft. Once the reactor charge is drained, the ship will be rendered powerless and cannot be controlled. The reactor is charged from special chargers on the Battlecruisers.

Driving Controls

Driving and navigation controls are identical to those used in the Battlecruiser, though the craft behaves differently since it operates only on the ground. Use speed control keys, **[~]** and **[TAB]** to set speed (throttle works also). The direction of travel is dependent on the direction of the turret target designator. Use the joystick to control the position of the designator.

Planetary Operations

The ATV can be deployed on the surface by a shuttle hovering at a safe altitude not exceeding 10 feet in order to avoid damage to the ATV and its cargo. It can also be deployed using the shuttle cockpit menu.

Emergency Operations

The ATV does not have a self-contained eject module. Pressing the **[CTRL+E]** eject sequence will cause all personnel currently on-board to die when the craft self-destructs. If the integrity of the craft should fall to critical conditions, the computer system will sound a klaxon with an eject recommendation. Failure to eject will result in the destruction of the ship and the death of all passengers once the nuclear core explodes.

In the event of an ATV evacuation, surviving personnel emitting an IFF beacon can be picked up and evacuated using the **SUL** mode of the **TACSCAN**.

Deployment Operations

The ATV is primarily used for personnel and cargo deployment & extraction operations. Deployment operations are conducted via the deployment menu. Extracted personnel will climb into the main cabin and cargo will be transferred to the cargo bay.

Defense & Weapon Systems

The ATV hull is covered with low definition protective armor. It has a low rating protective shield which creates a 360 degree field around the craft when activated. Like every system on the craft, the shield draws its power from the main reactor cell and will automatically deactivate during power loss conditions.

The main weapon system is a photon charged particle system (similar to the Ion Disruptor on the Battlecruiser) which also draws power directly from the reactor cell. Like the shields, engines, and computer systems, the photon system will deactivate during a total power drain.

The weapon bay can carry up to 10 all-purpose Radix stand-off missiles. It can be automatically re-armed by either docking the shuttle (with ATV inside) on the BC or by transferring missiles from it's own cargo bay by pressing the **[BACKSPACE]** key when all missiles in it's weapons bay have been fired. The number of missiles is indicated in the HUD.

Driver Cockpit Systems

[1] Navigation Interface Display, NID and Tactical Scanner, TACSCAN

The **NID** and **TACSCAN** computers share this display. The commands to access each one remain unchanged.

[2] Computer Video Display, CVD

Identical to the Battlecruiser, though some modes are not present in this craft.

[3] Communications Link, CommLink

Cockpit **COMMLINK** computer.

[4] Reactor Power Display, RPD

Displays the current amount of reactor power. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[5] Laser Power Display, LPD

Displays the current amount of photon particle charge for the primary laser system. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[6] Shield Power Display, SPD

Displays the current amount of shield power. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[7] Armor Protection Display, APD

Displays the current amount of armor protection. A Yellow readout indicates 35-50% power remaining and Red indicates 1-15% power remaining.

[8] Multi Function System, MFS

This is a cluster of indicators which monitor various ship systems.

TRACK	Radar Track Warning	**MSL**	Missile Depletion Warning
LOCK	Radar Lock Warning	**LAS**	Photon Laser Array
LNCH	Missile Launch Warning	**EJECT**	Eject Warning
IFF	Friend Or Foe Indicator		

[9] Heads Up Display, HUD

This is main viewing area of the cockpit. All systems and indicators are identical to those on the Battlecruiser, though they may be displayed at different areas of the HUD.

Note: When within a planet's atmosphere, a unique indicator similar to the thrust indicator appears on the right side of the HUD. This indicator monitors the ship's altitude above the ground immediately below the craft. During flight, the computer attempts to calculate your altitude as you fly. The faster you are flying, the higher the degree of inaccuracy.

[10] Inbound Launch Display, ILD

Monitors the status of outbound missiles you launch (square) and inbound missiles launched at you (diamond). The ship is at the center of the display. The **ILD** range is 5km.

[11] Hull Integrity Display, HID

Monitors the status of the hull armor. A Yellow readout indicates a minor breach while Red signals a severe breach.

[12] Systems Integrity Display, SID

Monitors the overall integrity of the craft. A Yellow readout indicates a minor compromise while Red indicates a severe compromise. During a severe breach, the pilots should consider ejecting from the craft.

[13] Deployment Menu

This menu is used to deploy and extract personnel and cargo. To select a menu option, **[LEFT CLICK]** on it to reveal the available options.

SHUTTLE Select to switch to a deployed shuttle

CREW This menu is identical to the one in the shuttle but it only handles personnel in the ATV. You can only deploy, extract and order away teams.

CARGO This menu is identical to the one in the shuttle but it only handles cargo in the ATV. You can only deploy cargo items in a cargo pod or extract cargo pods from the planet.

ORDERS Order menu for the craft. Use this to give the craft orders and then turn on the auto-pilot AI mode so that it can carry out the order.

24. GALCOM COMMANDERS GUIDELINES

24.0 Galactic Command Directives

The Terran military structure is a complex myriad of laws procedures and tons of paperwork. This is a list of Terran goals. For military personnel, its simple: do not fire unless fired upon; if fired upon then terminate with extreme prejudice. Short and simple.

1. Gain more member nations for Galactic Command.
2. Allocate resource units to build additional starbases, starstations, and defense systems within the Terran quadrant.
3. Protect all Terran assets and those of GALCOM member nations against hostile acts. These include the protection of all bases, stations, and ships operating within the Terran quadrant and their allies.
4. Provide tactical assistance to the Empirians in Alpha Centauri and the Vesperons in Omicron Eridani.
5. Protect the trading lanes from hostile forces and ensure that all registered transports have safe passage through GALCOM controlled territories.
6. Maintain a combat-ready reaction force in key regions which provide entry into the Terran quadrant. These include Polaris, Tau Ceti, and Barnard's Star.
7. Maintain a combat-ready reaction force in Procyon and prevent the Vesperons from violating directives and waging war on the occupants of that system.
8. Maintain a combat-ready reaction force in Lanix-V and prevent the Credians and Zelons from destroying a key connection to the Terran quadrant. The ultimate goal is to stop the war between these parties.
9. Be prepared to provide tactical assistance to the Mandorians and Kandorians in the war effort against the Valkerie and Gammulans (if they request it).
10. Maintain an elite deep-cover covert force within the Gammulan quadrant to assist the Falkerie underground movement liberate that nation from Gammulan rule.

24.1 Galactic Command Ranks & Medals

The Terran government has a unique ranking and medal award system for the GALCOM military section. The starting rank is Commander and Experience Points are required to increase your rank. Medals are awarded based on merit only. You can gain medals only while playing ACM but you increase in rank in both Free Flight and ACM.

Salary is paid every 24 hrs and deposited directly into a credit account. You will not get paid if your status is set to court-martial or if you have negative Experience Points.

The table below shows the number of Experience Points required to reach a certain rank and the salary level for that rank.

	Rank	Experience Points	Salary
Highest	SUPREME COMMANDER	200,000	500,000
	TACOPS COMMANDER	100,000	300,000
	STRATEGIC COMMANDER	50,000	200,000
	FLEET COMMANDER	25,000	125,000
Lowest	COMMANDER	0	75,000

Medals are awarded based on merit and usually on completion of ACM missions. Some high-order medals require some lower-order awards before they can be awarded.

	Medals	Required
Highest	ORDER OF THE UNIVERSE	2 x STAR OF MERIT
	STAR OF MERIT	2 x EYE OF ANDROMEDA
	EYE OF ANDROMEDA	2 x COMMANDER'S SHIELD
	COMMANDER'S SHIELD	2 x PLANETARY SHIELD
	PLANETARY SHIELD	2 x ORDER OF THE WRAITH
	ORDER OF THE WRAITH	2 x COMBAT SHIELD
		2 x AWARD FOR GALLANTRY
	COMBAT SHIELD	
Lowest	AWARD FOR GALLANTRY	

24.2 Command Operations And Guidelines

As a high-ranking officer, your ship and crew are your responsibility. Your main task is to carry out the orders of GALCOM to the best of your ability. Your patrol zone is your responsibility and anything happening in there is directly linked to your record of service.

From time to time, there will be a lull in your operational service and during this time, and as long as you are not on active combat duty (assigned patrol zone status), you are free to pursue other activities which help further promote the Terran government, the human race, as well as peace & stability in allied regions.

Exploration

As a commander, you are free to explore the galaxy and report back to GALCOM on your findings such as new civilizations, lifeforms, hostile force concentrations, and most importantly, first-contact situations.

Trading Operations

Trading is the primary role of most space-faring ships in the galaxy. Thousands of light years are spanned each day by trading ships that go between space starstations and planetary starbases. Due to the dynamic nature of trading itself and the diverse nature of items that can be traded, traders are usually the target of criminals and other hostile castes. By scouting the trading routes and making your presence known in those areas, hostile castes will refrain from ambushing trader transports and other diplomatic ships that use those routes. As a commander, you are allowed to trade items to distant regions in order to assist in the promotion of free trade amongst the intelligent inhabitants of the galaxy. What you buy or sell is the sole property of GALCOM since you will be operating on behalf of the Terran government.

Fleet Operations

Several high profile missions require the assembly of a fleet with a high-ranking officer in command. If you are assigned to a fleet operation in which you outrank the lead officer, you are to immediately assume command of that fleet until further orders to the contrary are received. Subsequently, if you do not outrank the highest ranking officer you are to follow instructions and commands as necessary in order to facilitate the smooth & rapid completion of the assigned mission. If you fail to follow orders from a high-ranking officer (usually in ACM), you will be court-martialed.

In BC3K, you **cannot** assume command of a fleet but you can be assigned to one and receive commands from its leader when carrying out an ACM mission.

Salvage & Rescue Operations

From time to time, you will come across or receive distress signals from ships that are in trouble either from hostile attacks or other conditions which prevent them from operating as normal. You are to respond to these distress calls and render any and all assistance to the ships. Frequently, you will need to tow ships back to the nearest starstation. You will gain experience points for such actions and in some cases, receive credits for hostile ships that are delivered.

Diplomacy

You are not a diplomat. Don't pretend to be. You are a seasoned commander and representative of Terran worlds and the human race. You are a warrior. However, even warriors can 'play nice' and as such you are expected to adhere to common diplomatic protocols when dealing with other species and castes. If diplomacy fails, you have one of the most powerful ships in the known galaxy with an experienced crew. Use them.

Violations and Court Martial

One day, you're going to do something wrong and you're going to get a violation. You can get violations by attacking friendly assets, trading weapons or advanced systems to the enemy, trading in illegal items, and consistently ignoring distress calls within range of your scanners. Stack up enough of them (10) and you're going to be court-martialed. Once you get the order to report for a court-martial hearing, you are to immediately proceed to Galactic Command HQ in orbit around Earth for a hearing. If you are found innocent, you will be returned to active duty. If you are guilty, you will get a dishonorable discharge from **GALCOM** and never get to command another military craft again.

25. SMART SPEAK

Battlecruiser 3000AD® is the most advanced and complex title in the genre. It has been developed from years of research and development by a team of experienced developers. It may seem intimidating at times but all you have to do is spend some time playing it and you will be rewarded with the most enjoying experience you can imagine.

After a mishap resulting in it's premature release in 1996, 3000AD decided to enhance the technologies and do a re-release, especially after all the good reviews that started appearing after a free version was released to the public early in 1998. BC3K v2.0 incorporates almost two years worth of technological and gameplay advancements.

I hope you enjoy playing Battlecruiser 3000AD as much as we have enjoyed developing it. The sequel, Battlecruiser 3020AD®, with over 45 new features and enhancements, has been in development for almost a year and is scheduled for a 1999 release. Check the web site regularly for more news.

Have fun and help make the galaxy a safe place!

Derek K. Smart, Ph.D.
Designer/Lead Developer
President, 3000AD, Inc.

26. CREDITS

PROGRAM CONCEPT & DESIGN **PROJECT MANAGEMENT** **LEAD DEVELOPMENT** **PRODUCER**	Derek K. Smart, Ph.D.	
3000AD DEVELOPMENT TEAM	Derek K. Smart, Ph.D. H. P. Rushworth Gerhard Skronn Jim Marinis	
3D WORLD OBJECT DATABASE, **2D SCREENS & ANIMATIONS**	Jack Snyder Tory Paradise Henry Borasso	James Dargie Jodi DeGeorge Phil Robb
ADDITIONAL ARTWORK	Crista Forest Chris Morack	
MUSIC & SOUND/FX	Sound Planet George Sanger	Mike Goodis Dave Govet
QUALITY ASSURANCE	Derek K. Smart, Ph.D.	
MANUAL	Derek K. Smart, Ph.D.	
MANUAL LAYOUT/FORMAT ASSISTANCE	Paul Cooper Andrew Vogel	

These people are the ones who dedicated their free time and effort into testing this game which is now touted as one of the most complex and difficult-to-test titles to date. 3000AD extends its thanks to them and those not mentioned, for their time and dedication to this project. Especially to Robert Hentschke, a.k.a. Pandora, for all those bugs that none of us ever thought existed.

Aaron Leiby	Jon Ballinger
Andre Frey	Kenneth Riehle
Anthony Kenitzki	Kevin 'Torch' Hart
Bill Bradley	Lawrence 'Celsius' Smith
Bill Waldheim	Mano Faber
Bruce Durham	Marc Gagnon
Bud Wacaser	Marc Ward
Cato Dolvik	Nicholas Dogris
Chris Snowden	Norman Wanzer
Dara Gault	Paul Cooper
Darryl Coombs	Philip 'Bishop' Hansen
Doug Blue	Ralph 'Major Havoc' Hilton
Eric Pinnel	Rick Gridley
Giancarlo Lenzi	Robert Baldwin
Hector Socas Navarro	Robert Curran
James Cobb	Robert 'Pandora' Hentschke
Jerry Masty	S. Fong
John 'Andergum' Anderson	Thomas Slone
John Bach	Todd 'Picaso' Hyland
John Howell	Travis Oates
John Minton	Wayne 'Saint' St. Onge
John Stegenga	….and everyone else that joined later on.

27. TECHNICAL SUPPORT & TROUBLE SHOOTING

27.0 Installation problems

If you have problems installing the game go through the following checklist

- ✓ Ensure that your system meets at least the **minimum** system specifications and that the drive you are installing to has sufficient disk space to hold the game.
- ✓ Ensure that the install folder name is 8 characters or less.
- ✓ BC3K is only supported under Windows 95/98 using a properly configured shortcut. The game is not supported under OS/2, Unix or Windows NT.
- ✓ Ensure that you have installed the latest drivers for your graphics and sound cards. Please contact your hardware manufacturer to see if there are updated drivers for your card.
- ✓ Shut down all programs running in the background. This includes virus checkers, disk or system monitors, as well as the Windows 95/98 Find Fast scheduling program.
- ✓ Read the FAQ available in the BC3K install folder or at the website.

27.1 Video problems

2D Video Card (All brands)

BC3K supports over 85 types of 2D chipsets. When the game starts, it will attempt to auto-detect your card's chipset and use it. It may sometimes fail to do this accurately. If this happens and when the game starts the graphics are corrupted or simply fail to display, then you know there's a problem.

A list of supported graphics card chipsets is on the FAQ available in the BC3K install folder or at the website.

3D Video Card (3DFX only)

BC3K v2.0x **only** supports Voodoo based 3Dfx accelerator cards. If you have problems running the 3DFX version make sure that you have the latest drivers for your card. You need Glide v2.43 or higher and you **must** run the game from a Windows 95/98 shortcut. For the latest drivers, please contact the manufacturer.

If you continue to have problems with your 3Dfx card, then please read the FAQ for troubleshooting assistance.

27.2 Sound problems

Most sound problems are related to incorrect configurations. If you have a PnP sound card with legacy support, you may have to run the utility that came with it in order to run BC3K. You can test or change your sound card by going to a full-screen DOS session and running the SETUP.EXE program from the BC3K install folder.

If you are having problems setting up your sound card, please read the FAQ.

27.3 Controller Problems

BC3K supports a wide variety of joysticks and may not support some of them. If you have a plain joystick, go to the CONFIG menu and configure it to use a plain joystick. If you select an incorrect joystick in CONFIG or if you don't plug it in properly, you will be greeted by a black screen. To solve this problem, delete the SETUP.CFG and the JOYSTICK.SET files. Restart the game and try again.

If your stick is not supported in the CONFIG menu, use this chart to determine which compatibility mode to use based on the features of your stick. So for instance if you have a Sidewinder Pro, you would chose the CH F16 Combat Stick due to the button, throttle and hat switch configurations.

	BUTTONS	THROTTLE	HAT
2 button stick	2	no	no
4 button stick	4	no	no
Thrustmaster	4	no	yes
CH Flight Stick	2	yes	no
CH Fighter Stick	4	yes	no
CH Flight Stick PRO	4	yes	yes
CH F16 Combat Stick	4	yes	yes (2)

If you are having problems setting up your joystick, please read the FAQ.

27.4 Windows 95/98 Configuration

When you installed BC3K, two shortcuts for running the game were created. If you accidentally delete these you can recreate them by using the steps described in the FAQ.

28. APPENDICES

THE APPENDICES ARE LOCATED IN ADOBE ACROBAT FILES IN THE DOCS FOLDER ON THE CD-ROM. THE INSTALL PROGRAM CREATES SHORTCUTS TO EACH OF THESE FILES.

APPENDIX A	KEYBOARD COMMANDS
APPENDIX B	EXPERIENCE POINTS
APPENDIX C	ARTIFACTS DATABASE
APPENDIX D	WEAPONS DATABASE
APPENDIX E	CARTOGRAPHY CHART
APPENDIX F	CARTOGRAPHY MAPS
APPENDIX G	CARTOGRAPHY LINKS
APPENDIX H	ATV DAMAGE SPECS
APPENDIX I	INTERCEPTOR DAMAGE SPECS
APPENDIX J	SHUTTLE DAMAGE SPECS
APPENDIX K	BATTLECRUISER DAMAGE SPECS
APPENDIX L	BATTLECRUISER POWER ALLOCATION
APPENDIX M	ALIEN NATIONS DATABASE
APPENDIX N	CASTES DATABASE
APPENDIX O	GALCOM RANKS & MEDALS
APPENDIX P	SURFACE THREATS DATABASE
APPENDIX Q	CRAFTS DATABASE
APPENDIX R	STARTATION/STARBASE DATABASE
APPENDIX S	TRADE DATABASE
APPENDIX T	REPAIR COMPONENTS DATABASE
APPENDIX U	FLEET COMMAND & CONTROL